

## Feasibility study

16 June 2014

Reliance Restricted

Final report



*In cooperation with:*

Nederlandse Organisatie voor toegepast-natuurwetenschappelijk onderzoek TNO  
Imperial College Business School  
Aalto University

# Contents

|   |           |
|---|-----------|
| <b>Introduction</b>   | <b>5</b>  |
| 1. Introduction   | 6         |
| <b>Advisers' assignment</b>   | <b>7</b>  |
| 2. Advisers' assignment   | 8         |
| <b>Executive summary</b>  | <b>11</b> |
| 3. Executive summary  | 12        |
| <b>Purpose of the Project</b>   | <b>13</b> |
| 4. Current state of hospitals   | 14        |
| 5. Objectives of the Project realization                                      | 16        |
| <b>Health care sector and its impact on the Project</b>                       | <b>17</b> |
| 6. Health care policy   | 18        |
| 7. Payment mechanism and flow of funds  | 19        |
| 8. Expected future trends   | 22        |
| <b>Due diligence on the current status of UNB - Financial analysis</b>        | <b>25</b> |
| 9. Financial statements overview  | 26        |
| 10. Revenue analysis  | 28        |
| 11. Cost analysis   | 31        |
| 12. Adjusted EBITDA   | 33        |
| <b>Due diligence on the current status of UNB - KPIs analysis</b>             | <b>35</b> |
| 13. Completed hospitalizations  | 36        |
| 14. Outpatient care   | 40        |
| 15. Diagnostic examinations   | 45        |
| 16. Other KPIs  | 51        |
| 17. Key UNB terms with HICs   | 55        |
| <b>Technical assessment</b>   | <b>57</b> |
| 18. Introduction and methodology  | 58        |
| 19. Phase 1: Technical assessment of modification options of the current UNB  | 68        |
| 20. Phase 2: Technical assessment of Options replacing the Existing Hospitals | 71        |
| 21. Phase 3: technical assessment of the preserved hospital status            | 74        |
| 22. Next step: detailed technical analysis of the preferred options           | 77        |
| <b>Financial Assessment</b>   | <b>87</b> |
| 23. Definition of Financial Options and the Method of their Assessment        | 88        |

## Contents

|   |     |
|---|-----|
| 24. Risk Analysis                                       | 90  |
| 25. Modelling Approach                                  | 95  |
| 26. Key Financial Model Assumptions                     | 98  |
| 27. Analysis of Financial Affordability                 | 105 |
| 28. Value for Money Analysis                            | 116 |
| 29. Analysis of the Impact on the State's Balance Sheet | 118 |
| 30. Summary of Financial Assessment                     | 121 |
| 31. Criteria for the Selection of Candidates for PPP    | 124 |

## Legal assessment 127

|  |     |
|--|-----|
| 32. Structure of the Final report  | 128 |
| 33. Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal   | 129 |
| 34. Assessment of the current legal framework and the need/options of amending it  | 140 |
| 35. Analysis of legal consequences of the Project in terms of (i) Slovakia's international commitments, (ii) Slovak Constitution, and (iii) Slovakia's generally binding legal regulations | 173 |
| 36. Assessment of legal consequences of termination of the operations of the existing health care providers  | 186 |
| 37. Assessment of potential consequences for legal relations to existing assets  | 206 |
| 38. Assessment of legal consequences of Project implementation in terms of building regulations  | 217 |
| 39. Assessment of the risk associated with potential bankruptcy of the private partner   | 230 |
| 40. Assessment of legal aspects of the proposed payment mechanism between partners   | 240 |
| 41. Assessment of exit strategies and options of modifying the project by the private and the public partner   | 250 |
| 42. Analysis of state aid in relation to the preferred Project model   | 258 |
| 43. Analysis of the applicable methods of public procurement of a hospital PPP project   | 269 |
| 44. Proposals of realistic legal structures and tools enabling implementation of the preferred model   | 286 |

## Technical assessment appendices 289

|  |     |
|--|-----|
| 45. Phase 1 options scoring  | 290 |
| 46. Phase 2 options scoring  | 295 |
| 47. Phase 3 options scoring  | 300 |
| 48. Petržalka profile assumptions details  | 304 |
| 49. General description of the AFM   | 309 |
| 50. Productivity, performance and healthcare infrastructure - moving towards a networked model of care | 333 |

# Contents

|  |            |
|--|------------|
| <b>Financial assessment appendices</b> | <b>351</b> |
| 51. Selected KPIs details              | 352        |
| 52. Model outputs                      | 358        |
| <b>Abbreviations</b>                   | <b>388</b> |
| 53. Abbreviations                      | 389        |

## Introduction

---

### 1. Introduction

## Introduction

The development of hospital health care provision has recorded a great leap in recent years. This has mainly been caused by the progressive introduction of new highly specialized diagnostic and therapeutic procedures, introduction of a comprehensive electronisation of hospitals and improved process management. In context of this development, hospitals in Slovakia are run with a relatively low level of productivity, mainly due to their outdated infrastructure and poor logistics arrangements.

The intention of the Ministry of Health of the Slovak Republic ("MZ SR" or "Client") is to identify a relevant way of building a hospital with links to related educational and research facilities through public-private partnership ("PPP").

The complex construction of a new University Hospital in Bratislava is expected to create a new generation hospital in the city. MZ SR attaches great importance to the development of modern health care delivery models both within the new hospital, as well as in terms of integration of care between this hospital, other hospitals in the city or in the wider European region, and with other levels of care.

The strategic objectives of MZ SR, in connection with the new hospital construction, are to provide a much higher **efficiency** (more output while maintaining cost levels), sustainable **quality** (of healthcare provision) respecting the principles of **flexibility**, so that the integrated facilities and services will be able to respond to changes in demographic development and epidemiology at increased economies of scale and economies of scope.

The basic framework of the proposed solution is defined as follows:

- The solution should include healthcare provision, education and R&D functions,
- The project should demonstrate greater efficiency and quality of provided healthcare,
- No additional public funding for construction and operation should be expected (except for the standard funding available through public health insurance),
- The project should not require any government warranty or guarantee
- All types of risks (legal, economic, market, financial, operational, organizational, behavioral, political, social and other) should be identified and minimized according to the priorities of MZ SR.

## **Advisers' assignment**

### **1. Advisers' assignment**

## Advisers' assignment

The Feasibility Study ("Study") related to the construction of a University Hospital in Bratislava ("Project") is based on the Agreement on the provision of advisory services from 10 March 2014 ("Agreement"), which was signed between the Client and a consortium of Ernst & Young Financial Advisory, s.r.o. ("EY") and Ruzicka Csekes s.r.o. ("RC CMS"), hereinafter collectively referred to as "Consortium".

The study was a joint effort of the Consortium and their subcontractors, who took part in the creation of its individual parts.

The Consortium worked with the following technical and legal advisors:

- Nederlandse Organisatie voor toegepast-natuurwetenschappelijk onderzoek TNO ("TNO")
- Imperial College Business School ("IC BS")
- CMS Cameron McKenna LLP ("CMS")
- Aalto University ("Aalto")

The Consortium, together with those advisors, are collectively referred to as "Advisers" within the Study.

The Study aims to assess the feasibility of the Project based on the following strategic objectives of the Client:

- Improve efficiency level of provision of healthcare services provided at the University Hospital Bratislava ("UNB").
- Improve quality of healthcare services provided at UNB.
- Ensure long-term flexibility (ability to respond to potential future changes) of services provided at UNB.
- Increase economies of scale and economies of scope of services provided at UNB.
- Cover the capital and operational expenses from revenues generated by UNB.

Client would like to achieve these strategic objectives by the following means:

- Through the construction of a new University Hospital in Bratislava providing a full range of medical, educational and possibly also R&D services.
- Procurement of the Hospital through PPP model.

### Primary tasks of the Advisers included:

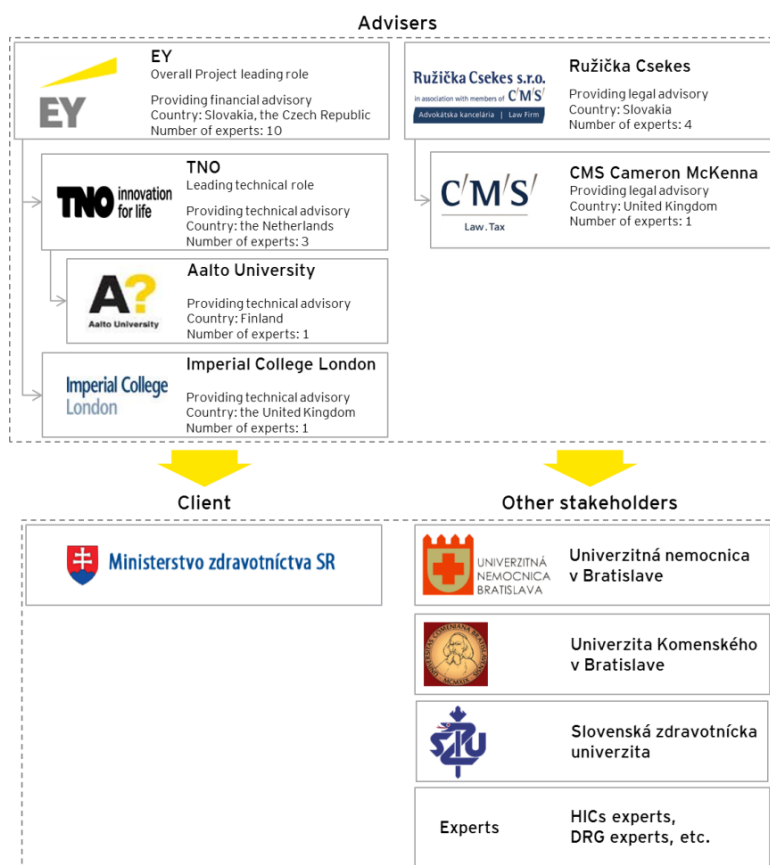
- Analysis of options to improve the current condition of UNB and identify preferred option (in particular option with the preservation or replacement of the existing Hospital by a new University Hospital) that would provide the most benefits at the lowest cost to MZ SR in compliance with the basic framework.
- Assess the possibility of different options that would ensure the implementation of MZ SR's strategic objectives. The main criteria for assessing the preferred option are the following:
  - 1 Acceptability for Client in terms of:
    - a.) risks mitigation on the part of the State,
    - b.) minimizing the need for public support and impact on the public debt
  - 2 Ensuring the feasibility of the Project in terms of its sufficient attractiveness for a private partner and his financing bank (in case of PPP).
  - 3 The resulting option must be legally viable.
- On the basis of the Appendix 1 of the Agreement, following competencies and duties arise in connection with the preparation of the Study for the Consultants:
  - The main task of EY is the supervision of the individual parts of the Study and comprehensive coverage of Study delivery, in addition to the financial and economic analysis of the current business model of UNB, the financial analysis of the Project implementation options via a traditional form of a series of public contracts ("PSC"), via PPP procurement and via a Specific option defined by the MZ SR to create an economic model of the new hospital.



## Advisers' assignment

- TNO, IC BS and Aalto are to carry out the technical analysis of the different options of improving the current condition of UNB. Additionally, they are also in charge of identifying the preferred option (in particular the option to preserve or replace the existing hospital by a new University Hospital) and subsequently elaborate on the technical aspect of the preferred option (Abstract functional model, further referred to as "AFM") to develop an appropriate solutions framework for this purpose and provide a basis for assessment of future tenders for the implementation of the new hospital solution afterwards.
- RC CMS, in close cooperation with CMS and the technical and financial consultants, are to analyze the legal patency and practical feasibility of the chosen option based on the results of the technical and the financial analysis.
- In addition to working closely with the Client, the Consultants also worked with the current UNB and other entities. List of the key stakeholders is shown in the graphic below.

### Key stakeholders



- The Feasibility Study provides comprehensive information on the issues analyzed in accordance with the Agreement on the provision of advisory services signed between the MZ SR and EY and RC CMS. The technical options assessment (including assumptions and calculations) was carried out in cooperation with TNO and IC BS subcontractors.
- The Advisers are aware that their Report may serve as a basis for MZ SR decisions, or further examination, analyses or actions that MZ SR will take in connection with the new UNB. However, the Client shall have sole responsibility for the final decisions made on the basis of the Advisers' output.
- The materials used as a basis for the Advisers' work, the procedures and preliminary results of their work were discussed and consulted on a continuous basis with the Client. The Client, with his knowledge and capabilities, agreed with the Advisers' assessment, inputs and outputs, as well as the provided consulting work and he did not

## Advisers' assignment

have any comments on approach and procedures performed by the Advisers, which were not taken into account by the Advisers.

- It should be noted that by virtue of the complexity and uniqueness of this pilot project in Slovakia and Central Europe there is a risk of only investors interested in the Project in case of full PPP (i.e. complete transfer of risk, design, construction and operation, including health services to the private partner). Therefore it is very important to focus on the initial phase (market sounding<sup>1</sup>) and on the selection of convenient investors.

---

<sup>1</sup> Market sounding is a way of assessing the reaction of the market to a proposed requirement and procurement approach, in order to bring supplier perspectives to public sector procurements at an early stage.

## **Executive summary**

---

### **1. Executive summary**

## Executive summary

Firstly, the Consortium of advisers evaluated the defined options from the technical, operational and economic performance point of view by using a criterion of effect of funds expended. Consequently, the most preferable solution was evaluated in terms of financial viability of individual options of implementation.

The main task for the Advisers was to compare individual options (i) PSC (i.e. complex realization of the Project, including financing, by the public sector) and (ii) PPP option in variant with complete transfer of risks to the private partner, risk construction, demand and operation, including medical services. The final part of the Feasibility study reviews the legal aspects of the option, which appears to be technically and financially the most advantageous in terms of "Value for money" analysis.

Based on the technical assessment of the modification of current UNB, the most preferred option is the alternative of the new hospital before alternatives of "Do nothing", "Do minimum" or "Refurbishment" (note: individual options are described in more detail in the main text of the Study). The technical assessment of the options of replacement of the existing hospitals, after considering the operational as well as the economic aspect, recommends the option where hospitals in Staré Mesto, Kramáre and Ružinov are to be replaced, while the hospital in Petržalka should be remained and refurbished.

Mainly because of strategic and national security reasons, the model of simultaneously operating the new hospital and the hospital in Petržalka, both providing complete medical services, was evaluated as the preferred option. This option (called nUNB) was therefore the subject of the subsequent financial and legal analysis. From an isolated technical perspective it may be appropriate to review the services provided in the new hospital.

Based on financial assessment from the point of view of (i) financial affordability, (ii) Value for money and (iii) debt burden, when considering the related risks, as the most preferable way of realization of the nUNB appears the PPP option. The main arguments supporting this option are (i) possibility of achieving higher effectiveness of the Project as a result of transfer of key risks to the private partner and (ii) elimination of the need of indebting the state as the only financing party of the investment for construction of the new hospital in volume exceeding EUR 300m.

For successful implementation of PPP option it is further necessary to comply with the following conditions:

- ▶ Sufficient preparation of the Project before starting the selection process,
- ▶ Adequate risk allocation between public and private sector ensuring optimal balance of benefits and risks for both sides,
- ▶ Transparency of the selection process,
- ▶ Ensuring sufficient competition in the selection process,
- ▶ Maximum cooperation of MoH and definition of its project management and clear responsibility definition,
- ▶ Ensuring the support of a strong advisory team.

Further, it is necessary that MoH will be prepared to accept changes in legislation (e.g. changes in payment mechanism, changes in minimum staff and material equipment requirements for various types of healthcare facilities, changes in competences of the medical staff).

A necessary condition for any viable option of the Project is the readiness of the Slovak Government to accept the need for financial commitment from the state. The only difference is in the form of expenditure (expenditure form or balance sheet form) and the total estimated amount.

Based on the legal assessment we consider the PPP option viable provided the the above mentioned assumptions are complied with. However, in terms of structures that will ensure the attractiveness and bankability of the Project this will be a very challenging option that will have significant impact on the existing relationships within the Slovak health care sector. Considering the traditionally negative perception of private elements in the health care sector in Slovakia, which can lead to significant legal obstacles to the feasibility of the Project, we consider as essential to receive a support of the professional public for ensuring continuous and uninterrupted delivery of health care. Therefore, it appears appropriate to consider the usage of a model, which through the participation of the State in the implementation of the Project increases the probability of getting support for the Project from the key stakeholders and mitigates the risk of insufficient performance of the Project and motivates the State to exercise responsible control of the Project and of the company realizing the Project.

## **Purpose of the Project**

1. Current state of hospitals
2. Objectives of the Project realization

## Current state of hospitals

### Current status

- ▶ Currently the Slovak hospitals can be characterized as follows:
  - Slovak hospitals lag behind the hospitals in other developed countries in applying the latest knowledge to the provision of services and suffer from lack of possibilities of introducing new diagnostics and treatments which would increase the quality of the services provided.
  - Oversized premises, technical shortcomings and unsuitable internal functional arrangement of hospitals, impose limits on the possibilities for modernization and increasing efficiency and productivity.
  - The occupancy rate on acute beds in Slovak hospitals is significantly below the average of selected European countries. This low efficiency is driven mainly by inappropriate hospital design, low asset utilisation and an inappropriate functional model.

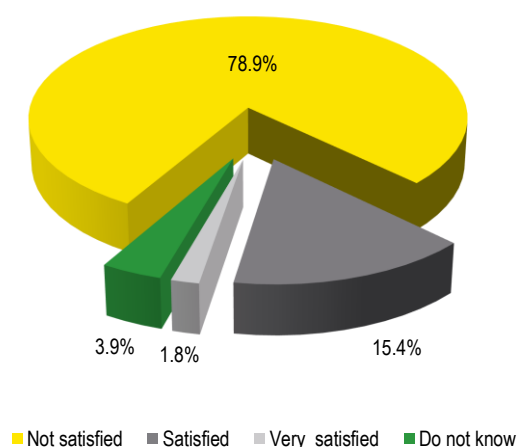
- ▶ As a consequence of the above mentioned status:

1. *The healthcare system in Slovakia provides a low quality of care for its end customers.*

- ▶ According to the recent opinion poll prepared by FOCUS agency on satisfaction with health care: (i) 78.9% of respondents are unsatisfied with the status of health care system in Slovakia, (ii) only 15.4% are satisfied and (iii) only 1.8% are very satisfied as depicted in the chart below.

#### Overview of satisfaction with the status of healthcare in FY14

Source: FOCUS agency



- ▶ According to the survey of VŠZP, the UNB is in the bottom of the consumer satisfaction ranking.

- ▶ In FY09, the three major hospitals of UNB (Petržalka, Kramáre and Ružinov) reached only 55% to 62% consumer satisfactions. In FY12, the hospital as whole was ranked at 48<sup>th</sup> place among all Slovak hospitals, reaching only 58% consumer satisfaction. The results are shown in the table below.

#### UNB hospitals ranking in the survey of VŠZP

| Rank | Hospital             | FY09 | FY13 |
|------|----------------------|------|------|
| 30   | Podunajské Biskupice | 72%  | n/a  |
| 58   | UNB (as a whole)     | n/a  | 58%  |
| 59   | Petržalka            | 62%  | n/a  |
| 60   | Kramáre              | 62%  | n/a  |
| 80   | Ružinov              | 55%  | n/a  |
| 88   | Staré mesto          | 52%  | n/a  |

Source: VŠZP

#### 2. *Infrastructure of Slovak hospitals is economically unsustainable in its current state*

- ▶ Slovak hospital buildings are old, often in a bad technical state. According to the last comprehensive study (FY04) on Slovak state hospitals, an average hospital has 34.5 years.
- ▶ In FY04, according to this study, only c. 12% of buildings were constructed in the last decade, c. 41% of facilities had 10-30 years and c. 22% of facilities had over 50 years.
- ▶ Since no new general hospitals were built in Slovakia in the last ten years (not taking into account reconstructions or building of small private hospitals), the average age of a Slovak hospital is 44 years as of today.
- ▶ Slovak hospitals do not reach the international standards and most hospitals have too large areas of land with a large number of buildings.
- 3. *Slovak hospitals generate loss in most cases. Losses and accumulation of debt, followed by inability of individual hospitals to cover ordinary operating expenses, lead to the need of state aid to keep the hospitals in operation.*
- ▶ In spite of the fact that hospitals received higher share of resources from health insurance companies ("HICs") in the last years, their economic situation remains negative.

## Current state of hospitals

### Due liabilities (principal) in the health care sector

| Currency: EUR m  | FY09A        | FY10A        | FY11A        | FY12A        | FY13A        |
|--|--------------|--------------|--------------|--------------|--------------|
| State owned hospitals  | 115.5        | 209.4        | 69.4         | 141.8        | 246.8        |
| Hospitals delimited to municipalities and HTU and trans. to non-profit co. | 77.5         | 75.8         | 80.9         | 71.4         | 72.1         |
| Hospitals trans. into joint-stock co.                                      | 0.0          | 0.1          | 0.1          | 0.1          | 0.0          |
| HICs   | 0.2          | -            | -            | -            | -            |
| <b>Total</b>   | <b>193.2</b> | <b>285.2</b> | <b>150.5</b> | <b>213.3</b> | <b>318.9</b> |
| <b>Bail out</b>  | <b>130.0</b> |              | <b>300.0</b> |              |              |

Source: MoH

- ▶ Due liabilities of state hospitals reached EUR 247m at Dec13 as it is shown in the table above.
- ▶ State hospitals need state aid almost every third year. In FY11, the government released EUR 300m for the reduction of debt. Two years before it was EUR 130m.

#### 4. The investment gap

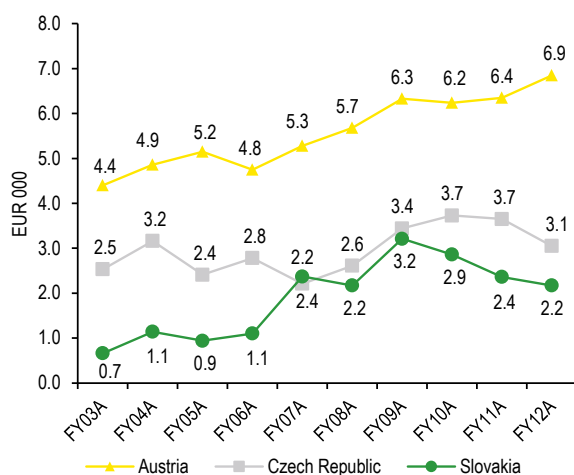
- ▶ When calculated on a macro level, in comparison with the Czech Republic the estimated "investment gap" reached EUR 137m per year, in comparison with Austria it was almost EUR 441m per year.
- ▶ The investment gap is calculated by gross capital formation per person employed in the health care sector. This indicator tells us about how much capital was added in health care per person employed in a given year. It is normally used in macroeconomics as a parameter for assessing the technological changes, as well as growth potential, productivity and competitiveness.
- ▶ As depicted in the chart below, Slovakia spent EUR 2.2k on gross capital formation per employed in health care in FY12, which is lower than in the Czech Republic (EUR 3.1k) and much lower than in Austria (EUR 6.9k).

### Need for change in paradigm

- ▶ Investments in reconstruction of the existing buildings reach the limits of production possibilities and Slovakia needs a concept of development of new modern patient-oriented hospitals with significant reduction of capacity of inpatient care units and a significant increase in their quality, safety and utilisation.
- ▶ Investments into the nUNB will be of material importance to the change in paradigm of health care provision in Slovakia.
- ▶ The key priority by the development of the new hospital is:
  - to provide for a much higher productivity (more procedures while keeping the current level of costs),
  - sustainable quality ( of health care provision) while adhering to the principles of
  - flexibility, so as the integrated facilities and services are able to react to changes to the demographic development and epidemiology.

### Gross capital formation per person employed in healthcare

Source: Eurostat



## Objectives of the Project realization

### Objectives of the Project realization

- ▶ Drawing from the conclusions stated above, the overall aim of the Project is to replace the current UNB by a new university hospital, which will follow the latest knowledge development in relation to models of health care provision and will be embedded in the local healthcare economy and provide care following modernized pathways.
- ▶ The nUNB should be a demonstration of what is possible to achieve in the Slovak economic, social and political context, drawing on the current optimum centralization of services in an acute hospital, compared to the decentralized services in local community facilities. It should also show how these services can be delivered to maximize quality, safety and economic effectiveness and be a hub for R&D and educational activities.
- ▶ The development of the nUNB should be seen as an inevitable catalyst for wider transformation in the performance of regional health care services. Investment in the currently under-developed community and primary care sectors is therefore as critical as investment in a new hospital if the aim of achieving a fully integrated high quality health service model is to be achieved.
- ▶ General characteristics of the Project should fulfill the following:
  - The nUNB functioning within, and as the central coordinating point, of a networked regional model of health care services delivery.
  - The nUNB providing good quality health care, attaining European standards and benchmark averages for quality, safety and patient satisfaction, at the lowest possible cost to the Slovak public.
  - The nUNB complying with conditions of proximity, accessibility and affordability of appropriate care, identical to or more stringent than those imposed on state-owned hospitals.
- ▶ We understand that the success of this Project should represent a key precedent that will support transformation of the Slovak health care system towards the state as desired by the Slovak government.



## **Health care sector and its impact on the Project**

---

1. Health care policy
2. Payment mechanism and flow of funds
3. Expected future trends

## Health care policy

### Health care policy

- ▶ The health care system in Slovakia is based on universal coverage, compulsory health insurance based on a competitive insurance model and basic health care services package.
- ▶ Health care, with exceptions, is provided to insured individuals as benefits-in-kind (paid for by a third party). After fulfilling certain explicit criteria, there are no barriers to entry to the health care provision and health insurance markets.
- ▶ Health policy results from the interplay between MoH (legislator), the HICs (purchaser) and the Health Care Surveillance Authority (supervisor). Health policy is influenced by providers, as well as by professional and labour union organizations. Patient organizations have only little influence on the formulation of health policy.

### External environment

#### High wages of doctors (and nurses)

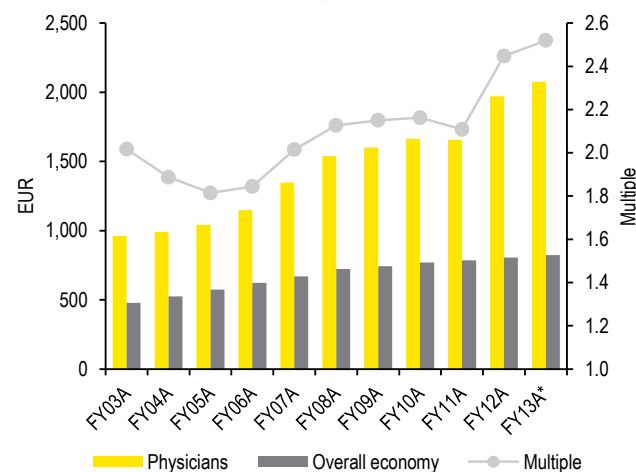
- ▶ Wages will be one of the decisive criteria for hiring new health care professionals to the nUNB, mainly if these people will be from abroad.
- ▶ After the strike of doctors, in Dec11, a parliament approved legislative changes by which doctors in hospital starting with FY12 have a guaranteed minimum wage not lower than 1.05 times of the average wage in the Slovak Republic for a novice practitioner and at least 1.60 times of the average wage for a physician with specialization.
- ▶ From Jul12, the wage of a doctor without specialization is minimally 1.2 times the average monthly wage in SR and a doctor with specialization has 1.9 times the average wage.
- ▶ At the beginning of FY14, the salaries coefficient determined by law, according to which the basic salaries (excluding overtime pay) will be determined, is at least 1.25 multiple of the average wage for a doctor without specialization and 2.1 multiple for specialized doctors.
- ▶ In the next year there should be an increase of the coefficient to 2.3 multiple of the average monthly wage in SR for specialized doctors.

#### Unfair financing of hospital care

- ▶ The same treatment for the same diagnosis is reimbursed differently, depending on the department where the patient is hospitalized. Departments receive the same amount of resources regardless of the financial demands of the diagnosis. The same care is funded differently in each hospital.

### Average monthly salary in SR development

Source: SOZZASS, Statistical Office of the Slovak Republic



\* Data for physicians based on 9m13A

### Legislative norms on personnel

- ▶ In Slovak legislation there are several complicated norms on minimum staff requirements. These norms push hospitals into creating non-effective organizational structures and thus overall inefficiency.

### Doctors managing hospitals

- ▶ According to data from Dec13, out of 147 inpatient facilities in Slovakia (hospitals, specialized centers) in 40 % of them the managers are doctors.

### Waiting lists

- ▶ Waiting times in current situation are too long, therefore it is necessary to change the processes or to build new surgery theatres. The nUNB can reduce waiting lists.
- ▶ In Apr13 there were 10,611 insured persons on the waiting lists of all HICs. Out of these, 7,778 were in VŠZP (233 per 100,000 insured), 2,709 in Dôvera (189 per 100,000 insured) and 124 in Union (28 per 100,000 insured).

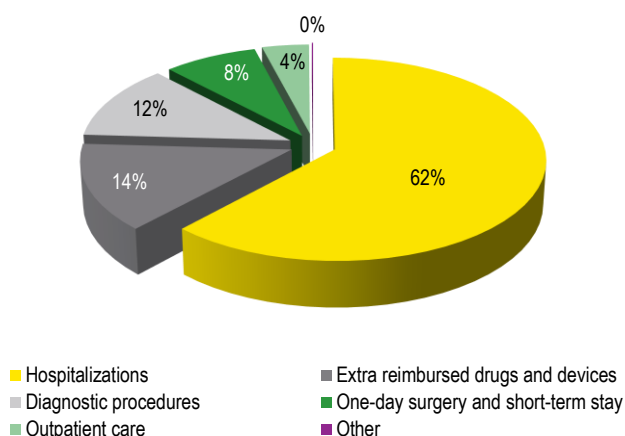
## Payment mechanism and flow of funds

### Flow of funds

- ▶ Contracts with HICs are essential for UNB from the point of view of revenues generation. Except for certain regulated framework, the conditions of contracts related to payment mechanism and pricing conditions are freely negotiable between HICs and the provider (hospital).
- ▶ Income of hospitals is generated from 2 sources:
  - on average, more than 95% of revenues come from HICs based on the type of care provided (as depicted in the chart below) and
  - less than 5% are from direct payments from patients (for better room, food or for health care not reimbursed by HICs).

Average percentage of income based on type of care

Source: Statements of HICs



- ▶ Since almost all revenues come from HICs, it is vital for a hospital to have a good contract with all HICs having significant share in their region. This concerns not only being contracted by each HIC, but also what types of payment mechanisms, prices, and volume of reimbursed care are contracted, or what are the conditions agreed upon.
- ▶ HICs are not obliged to contract every provider. (refer to: Regulation of contracts with HICs).
- ▶ The type of payment mechanisms, prices, and volume of contracted care (if part of the contract) are subject of negotiations between HICs and providers.
- ▶ Payment mechanisms and prices are regulated only for few types of care, majority of prices is freely negotiable.

### Regulation of contracts with HICs

- ▶ HICs are not obliged to contract every provider. Conditions given in legislation define the basic rules, but it is up to each provider to negotiate specific conditions with each HIC.

#### Minimum network of providers

- ▶ Legislation defines the obligation of HIC to contract a minimum network of providers as follows:
  - Contract the minimum number of beds according to the specialization in each region,
  - Create and contract its own fixed network of providers, which means to have a contract with at least one provider in each district or district directly neighboring to this district under meeting specified criteria,
  - Contract the providers at least in the extent of the minimum public network. HICs are obliged to contract a provider in the terminal network of providers, i.e. in the list of specific hospitals, which, based on the Regulation of the Slovak Government belong to the minimum public network.

#### Criteria for conclusion of contracts with HICs

- ▶ HIC is required to establish and publish on the official notice board or other public place and on its website at least once per nine months the criteria for conclusion of contracts relating to the:
  - Personnel, material and technical equipment of the health care provider,
  - Quality indicators that are used to monitor selected areas of health care,
  - Certificates and indicators of quality.
- ▶ The HIC is required to establish a ranking of health care providers based on their ability to meet the above-mentioned criteria and take this ranking into consideration when concluding contracts.
- ▶ Quality indicators are being developed to assess the following areas of health care provision:
  - Access to health care,
  - Efficiency of the use resources,
  - The effectiveness and appropriateness of health care,
  - Perception of the health care by the person to whom the health care is provided,
  - Health care outcomes.

## Payment mechanism and flow of funds

### Current payment mechanisms

- ▶ To ensure sustainable revenues of nUNB, it is necessary to contractually determine the payment mechanisms, prices and volume of care to be reimbursed with each HIC.
- ▶ When fulfilling the above-mentioned criteria, HIC has a freedom to selectively contract providers to procure health care for its insured.
- ▶ The structure of the payment mechanism depends on the agreement between the contractual parties, except for few exceptions defined by MoH, e.g. reimbursement of outpatient pharmaceuticals, medical devices and ambulance and emergency services.
- ▶ More than 95% of revenues for hospitals come from HICs. Revenues from HICs are determined by payment mechanisms defined in contracts between HICs and health care providers, which may vary depending on type of care provided, but the differences on the market within specified type of health care are minimum.
- ▶ Hospitals in Slovakia usually provide the following types of health care while each type is reimbursed via separate payment mechanism.
  - Primary care,
  - Specialized outpatient care (“ŠAS”),
  - Inpatient care (“UH”),
  - Diagnostic examinations (“SVLZ”),
  - Urgent outpatient care,
  - Outpatient pharmaceutical care.
- ▶ Important part of the contract is the volume of the contracted care. For some types of care, there exist maximum agreed upon limits on volume of care that would be reimbursed by HICs.
- ▶ If the hospital provides more care, HICs will not pay for that care in a given period of time. Some HICs have modified this rule and they repay the above-limit care, but with lower price. Volume of care is therefore the most important part of each HIC contract and can effectively be the most decisive factor if it is set too low.

### Payment mechanisms for hospitals in 2013

| Type of healthcare                               | Regulated centrally | Used payment mechanisms                     | Description   |
|--|---------------------|---|---|
| Primary care (GPs, pediatricians, gynecologists) | no                  | 1. Fixed capitation payment (approx. 83%)   | Fixed monthly payment for each insuree registered for primary care with given provider  |
|  |                     | 2. Variable capitation payment (approx. 6%) | Monthly payment for each insuree registered for primary care with given provider, amount set based on performance criteria  |
|  |                     | 3. Fee for services (approx. 11%)           | Extra payment for few specified services, mostly preventive care  |
| Specialized outpatient care                      | no                  | 1. Fee for services                         | Based on list of services with weights (in points), issued by MoH, but used voluntarily; negotiations on price per point between HICs and providers   |
|  |                     | 1A. Limitation on monthly revenue           | One HIC limits the overall monthly revenue paid as fees; once provider reaches monthly limit, provided services are no longer reimbursed  |
|  |                     | 1B. Degressive fee                          | Two other HICs set monthly limit on revenues, but once the limit is reached, provided services are reimbursed with lower price per point; this lower price is different based on performance criteria of provider   |
| Inpatient care                                   | no                  | 1. Per-diem payments                        | A few types of hospitalization are paid with per-diem payment, mostly long-term hospitalizations in internal medicine or psychiatry   |
|  |                     | 2. Per case payments                        | Most hospitalizations are paid with per case payment: broadband DRG system is used – HICs negotiate with providers prices for each specialization; the prices differ between providers and should reflect case mix index of usually hospitalized patients; within the payment everything is included except for labs and imaging services and few expensive medical devices |
|  |                     | 2A. Monthly budget                          | Some HICs limit monthly revenue of providers for hospitalization  |
|  |                     | 2B. Hospitalization planning                | One HIC manages elective hospitalizations to fit virtual budget for providers   |
|  |                     | 3. Fee for services                         | One-day surgeries and surgeries with short-term stay (less than 3 days) are paid based on list of fees for provided services  |
| Diagnostic examinations                          | no                  | Fee for services with monthly budget        | Based on list of services with weights (in points), issued by MoH, but used voluntarily; negotiations on price per point between HICs and providers; HICs limit monthly revenue of providers paid as fees   |
| Urgent outpatient care                           | yes                 | Capitation fees                             | Fixed monthly fees per capita in region   |
| Outpatient pharmaceutical care                   | yes                 | Maximal prices for pharmaceuticals          | Outpatient pharmaceutical services can be provided by hospital, however it is rare (provided by hospital pharmacy); pharmaceuticals for outpatient care are reimbursed based on list issued by MoH, the maximal margin for pharmacy based on pharmaceutical prices is regulated   |

Source: HPI

## Payment mechanism and flow of funds

### Implementation of DRG (Diagnosis related groups)

- ▶ Move to DRG will substantially change the payment mechanism for inpatient care. At the time nUNB would start operation, DRG should be introduced in Slovakia. Since many details are not yet known, it represents uncertainty for the Project. MoH should publish a roadmap and details on the implementation of DRG.
  - ▶ On national level, activities have already been initiated for introducing DRG as a payment mechanism for inpatient services. The process of implementation is governed by HCSA, where German DRG was chosen as a base case.
  - ▶ Currently, preparation phase is in progress and it is expected that DRG will be used as payment mechanism from Jan16. There are still many unresolved issues concerning the form of implementation, therefore the impact on providers and HICs is difficult to assess.
  - ▶ DRG will change the way how HICs will pay for inpatient care. Instead of the combination of payments for UH and short-term hospital stay ("OHV"), hospital stays will be classified by the characteristics like diagnoses, age, gender, procedures, etc. into almost 1,000 DRG groups.
  - ▶ Every group is defined so that it contains similar hospital stays in terms of medical similarity as well as small variations in costs.
  - ▶ For each DRG, relative weight is determined based on average costs of hospitalizations within each group in previous period of time. To calculate the average costs correctly, it is necessary that the hospitals included in a sample strictly follow the rules of data reporting.
  - ▶ Currently, these data are not available and significant number of hospitals will have to adjust their accounting system to be able to provide these data. It will be a difficult task and it is not known, if it will be realized in such a period of time and quality that these data will be usable for calculation of relative weights in individual groups. In case this task will not be accomplished, German relative weights could be used instead.
  - ▶ The payment for a hospital stay will then be calculated as a multiple of relative weight and base rate, the result of which represents a price for inpatient services. The base rate can be the same for every hospital and HIC, but can also be freely negotiable.
  - ▶ In other countries applying the DRG approach, the aim was usually to achieve a unified base rate within few years.
- ▶ This base rate is also better for MoH in order to be able to predict the impact of DRG on Slovak health care system.

## Future trends

### Implementation of DRG

- ▶ Implementation of DRG is a substantial system change that will influence the production patterns and cash flow of each hospital in Slovakia.
- ▶ Implementation of DRG will dramatically change the future situation of hospitals in Slovakia. The change will be evident in several areas:
  - Change in production patterns of hospitals,
  - Higher production,
  - DRG up-coding,
  - Unclear impact on individual hospitals.

### Change in production patterns of hospitals.

- ▶ DRG is forcing the hospitals to produce their services at unit costs, which are below the national average.
- ▶ The hospitals will quite quickly realize, which production is not economically convenient for them and will change their production structure towards more profitable DRG groups.

### Higher production

- ▶ Overall increase in production is observed in countries after implementation of DRG. This is due to the character of DRG – the higher the production of a hospital, the lower the unit costs and the higher the profit per DRG case.
- ▶ On macro level, this is corrected by lower base rate of the DRG group with the 1,000 relative weights. The result is that the hospitals are producing more, for less.

### DRG up-coding

- ▶ This is a commonly observed phenomenon and describes the situation, when hospitals up-code the patients and create more complicated cases, than they really are. This leads to higher profits in these DRG cases.

### Unclear impact on individual hospitals

- ▶ The impact of DRG on individual hospitals is blurred. It depends on the DRG roadmap that was not presented yet by MoH.
- ▶ The key questions to be solved in this roadmap are as follows:
  - Will there be a unified base rate or individual at the beginning of implementation? If individual, will it be based on historical budgets?
  - If yes, how many years the transition period will last to implement the unified base rate? Will the base rate be unified also among HICs?

### Workforce of the future – where to get it?

- ▶ Emigration of doctors from Slovakia, especially to the Czech Republic and Western Europe, significantly exceeds immigration, while the country also faces aging of medical professionals.
- ▶ Foreign students, majority of which return to their home countries, currently represent more than one quarter of medical graduates, one third of Slovak graduates plan to leave abroad after finishing their studies.
- ▶ To tackle the problem of lack of qualified workforce in health care sector and to offset the brain drain the following should be addressed:

#### 1 Supporting immigration of doctors from abroad

- Initialization of campaign targeted at attracting medical professionals from abroad;
- Two major criteria for selection of countries to be targeted: language barrier, wages gradient
- Most promising countries: Ukraine, but also Romania, Bulgaria, Balkan countries.

#### 2 Increasing retention of doctors and medical graduates

- More effective financial remuneration based on work quality and productivity, but also
- Support of self-realization, education and social recognition of doctors and improvement of work conditions.

#### 3 Motivating of doctors to return back to Slovakia

- To motivate doctors to return, it is not sufficient anymore to consider only the factors important for retention. An interesting pull factor could be for example offering leading positions to the returning staff.
- At the same time, return of professionals would not only bring new knowledge, experience and working culture, but could also motivate others to stay/ return.

## Future trends

### Changing legislation on staffing norms

- ▶ MoH should prepare more flexible and up-to-date personnel norms to create more consumer focused and efficiently functioning hospitals.
- ▶ Changing legislation on staffing norms is essential to improve management of processes and human resources.
- ▶ Minimum personnel and equipment requirements are part of quality regulation – they regulate the structure (staff and equipment) necessary for health care provision.
- ▶ Enforcement of the regulation is the responsibility of the permission-issuing authority. The norm is not yet fully effective and hospitals are bound only by the staffing regulation. The Edict of MoH<sup>2</sup> related to the material equipment is valid and effective and often changed.

### Pros and cons

- ▶ Because of its rigidity the staffing norm hinders the introduction of innovative methods of achieving the very same objectives the regulator had in mind.
- ▶ Probably no hospital in Slovakia strictly adheres to the Edict. Working practice, however, evolved to organization of work, which nevertheless ensures the smooth provision of health care. Norm is sometimes too strict, e.g.:
  - Demands very high number of nurses in the pediatrics / neonatal departments,
  - Demands high number of medical elderlies during night shifts,
  - Does not formally allow sharing duties between departments (one doctor per night shift for more departments).
- ▶ On the other hand, the norm does not provide a minimum number of doctors in the department of surgical type (who are required to establish a surgical team).
- ▶ Norm regulates minimum number of health care workers in various departments. Such breakdown may not reflect actual internal organization and patient flow in the hospital.
- ▶ The actual organization of work in departments is based on more detailed breakdown, i.e. care units. Care units may have different modes, and can induce requirements for additional staff beyond the norm.

- ▶ On the other hand, doctors from related medical fields might utilize beds in the same common department with the same type of nursing care (floating beds). Merger of related departments (surgical, internist) is one of the possible means to enhance production efficiency.

### Necessary changes

- ▶ To improve management of processes and human resources in Slovak hospitals, following changes are necessary:
  - Provide more flexibility to hospital management, who bears the responsibility for ensuring the proper provision of medical care.
  - Focus the regulatory effort on processes and outcomes rather than structure.
  - Replace the breakdown by departments with breakdown by department-clusters enabling duty sharing.
  - Mitigate the rigidity of the provisions especially for medical elderlies and nurses in neonatal/children departments.

### Specialized health care centers and outpatient care

- ▶ New, value based health care services, provided by highly specialized centers, will be tough competition for the nUNB.
- ▶ Value based health care is defined by high focus on health condition, treatment by a highly specialized team, with high clinical quality and high production efficiency. Value based health care services in outpatient care will decrease the demand for hospital care.
- ▶ Currently, these teams of professionals are part of the university hospitals, but many of them are leaving to work in their own specialized centers. In the future, this shift will dramatically influence the available workforce in hospitals.
- ▶ The new specialized centers provide a high level clinical quality, but also show high level of consumer satisfaction in other areas such as (i) time effectiveness, (ii) consumer oriented approach and (iii) post-surgery care. This all may lead to more outpatient and less hospital care in the future.

<sup>2</sup> The Edict of MoH from 10 September 2008 No. 09812/2008-OL on minimum requirements on personal provision and material-technical equipment of individual types of healthcare facilities as amended

## Future trends

### Health care accreditation

- ▶ In order to develop a modern high quality services providing hospital, it is advisable to obtain valuable international accreditation.
- ▶ Joint Commission International (JCI) helps health care organizations around the world to improve their performance and outcomes. JCI is a member of International Society for Quality in Health Care (ISQua) and the leader in international health care accreditation. No other health care accreditor has as many sets of standards approved as JCI.
- ▶ ISQua accreditation provides assurance that the standards, training, and processes used by JCI to survey the performance of health care organizations meet the highest international benchmarks for accreditation entities. JCI's hospital accreditation is designed to:
  - Ensure a safe environment that reduces risk for care recipients and caregivers
  - Offer quantifiable benchmarks for quality and patient safety
  - Stimulate and demonstrate continuous, sustained improvement through a reliable process
  - Provide accredited hospitals with public recognition of their achievements and commitment to excellence
  - Provide accredited academic medical centers with public recognition of their achievements and commitment to excellence
  - Improve outcomes and patient satisfaction
  - Enhance efficiency
  - Reduce costs through standardized care
- ▶ JCI's standards are challenging, achievable, and focused on the safety and quality of patient care. These standards have been settled by advisory panel composed of experienced physicians, nurses, administrators, and public policy experts, who guide the development and revision process of the JCI accreditation standards. JCI standards are grouped by functions related to providing patient care:
  - i. related to providing a safe, effective, and well-managed organization,
  - ii. for academic medical center hospitals only,
  - iii. related to medical professional education and human subjects research programs.
- ▶ These standards apply to the entire organization as well as to each department, unit, or service within the organization. They are available in the international public domain for use by individual health care organizations and by public agencies in improving the quality of patient care. Specific areas addressed include:
  - International Patient Safety Goals
  - Patient access and assessment
  - Patient care and continuity of care
  - Patient rights and responsibilities
  - Patient record and information flow
  - Patient services and contracts
  - Patient and family education
  - Patient anesthesia and surgery
  - Improvement in quality and patient safety
  - Infection control and facility safety
  - Human resource management
  - Governance and leadership
- ▶ Based on above mentioned information, JCI accreditation should strengthen the position of nUNB as a new generation hospital and fulfill the strategic objectives of MZ SR in terms of much higher efficiency, sustainable quality of healthcare provision respecting the principles of flexibility.



## **Due diligence on the current status of UNB - Financial analysis**

---

1. Financial statements overview
2. Revenue analysis
3. Cost analysis
4. Adjusted EBITDA

## Financial statements overview

### Profit and loss statement (statutory)

| Currency: EUR 000                               | FY11A         | FY12A         | FY13A         |
|---|---------------|---------------|---------------|
| Revenues from services                          | 127.2         | 135.0         | 150.6         |
| Revenues from state funds                       | 93.8          | 3.7           | 3.3           |
| Other revenues                                  | 30.7          | 6.7           | 21.5          |
| <b>Total revenues</b>                           | <b>251.7</b>  | <b>145.3</b>  | <b>175.4</b>  |
| Adjustments - bailout / revaluation / other     | (114.0)       | (0.0)         | (13.9)        |
| <b>Total revenues - adjusted</b>                | <b>137.8</b>  | <b>145.3</b>  | <b>161.5</b>  |
| Personnel costs                                 | (99.0)        | (109.4)       | (116.3)       |
| Consumption                                     | (52.2)        | (55.9)        | (56.1)        |
| Services  | (11.0)        | (10.2)        | (10.8)        |
| Other expenses                                  | (12.9)        | (10.9)        | (10.9)        |
| <b>EBITDA</b>                                   | <b>76.6</b>   | <b>(41.0)</b> | <b>(18.7)</b> |
| <b>EBITDA - adjusted</b>                        | <b>(37.4)</b> | <b>(41.1)</b> | <b>(32.6)</b> |
| Depreciation                                    | (12.1)        | (11.2)        | (10.1)        |
| Financial costs                                 | (0.7)         | (0.0)         | (0.0)         |
| Income tax                                      | (0.2)         | (0.1)         | (0.1)         |
| <b>Net profit / (loss) after tax</b>            | <b>63.6</b>   | <b>(52.3)</b> | <b>(28.9)</b> |
| <b>Net profit / (loss) after tax - adjusted</b> | <b>(50.3)</b> | <b>(52.4)</b> | <b>(42.8)</b> |
| EBITDA margin                                   | 30.4          | (28.2)        | (10.7)        |
| EBITDA margin - adjusted                        | (27.1)        | (28.3)        | (20.2)        |

Source: Clients

### Balance sheet

| Currency: EUR 000           | Dec11A        | Dec12A        | Dec13A        |
|-----------------------------|---------------|---------------|---------------|
| <b>Non-current assets</b>   | <b>121.4</b>  | <b>112.4</b>  | <b>117.2</b>  |
| Inventories                 | 2.3           | 2.8           | 3.2           |
| Trade and other receivables | 20.5          | 22.9          | 24.8          |
| Trade and other payables    | (44.2)        | (83.9)        | (122.8)       |
| Suppliers                   | (28.3)        | (45.3)        | (67.0)        |
| SSHI                        | (10.2)        | (25.6)        | (46.6)        |
| Other liabilities           | (10.3)        | (13.0)        | (9.2)         |
| Accruals and deferrals      | (0.4)         | (0.7)         | (0.6)         |
| <b>Net working capital</b>  | <b>(21.8)</b> | <b>(58.9)</b> | <b>(95.3)</b> |
| Cash and cash equivalents   | 11.6          | 2.9           | 3.4           |
| LT provisions & liabilities | (4.8)         | (5.7)         | (6.2)         |
| Payables to state fund      | (9.7)         | (6.8)         | (4.5)         |
| Bank loans                  | (1.1)         | (1.1)         | (1.1)         |
| <b>Net debt</b>             | <b>(3.9)</b>  | <b>(10.7)</b> | <b>(8.4)</b>  |
| <b>Shareholder's equity</b> | <b>95.7</b>   | <b>42.7</b>   | <b>13.6</b>   |

Source: Client

### Profit and loss statement

Tables on the left provide an overview of the reported financial statements (Profit and loss statement and Balance sheet) of UNB for FY11A, FY12A and FY13A.

#### Revenue

- UNB's reported revenue was fluctuating in the reviewed period when decreased from EUR 251.7m (one-off effect of state funds) in FY11A to EUR 145.3m in FY12A.
- In FY13A the revenue increased by EUR 30.1m (20.7%) to EUR 175.4m caused mainly by one-off revenue of EUR 13.8m from revaluation of land and increase in production (volume effect of EUR 4.9m) and pricing (price effect of EUR 7.5m) as better prices for admissions were agreed with HICs.

#### Net profit / (loss)

- UNB net profit in FY11A was EUR 63.6m (net profit margin of 25.3%), which was mainly affected by the transfer from state fund of c. EUR 114m to cover the accrued liabilities of the UNB. After eliminating the one-off effect, the UNB resulted in net loss of EUR 50.3m.
- In FY12A the UNB resulted in net loss of EUR 52.3m (net profit margin of 36% without any major one-off items) and in FY13A in net loss of EUR 28.9m (net profit margin of 16.5%, mainly affected by revaluation of lands that were not on the balance sheet by EUR 13.8m). Without the effect of the revaluation the net loss is EUR 42.8m.
- Adjusted net profit margin is slightly improved from negative 36.5% (FY11A) to negative 36% (FY12A) and in FY13A resulted in negative 26.5% mainly due to the effect of higher HIC revenue.

### Balance sheet

- Total assets of the UNB as at Dec11A were 156.2m and consisted mainly of (i) tangible assets of EUR 120.1m (77.5%), (ii) trade and other receivables of EUR 20.5m (13.1%) and (iii) cash of EUR 11.6m (7.5%).
- The composition of assets as at Dec13A was: (i) tangible assets of EUR 117m (78.6%), (ii) trade and other receivables of EUR 24.8m (16.7%), (iii) cash of EUR 3.4m (2.3%) and (iv) inventories of EUR 3.2m (2.2%).

#### Non-current assets

- Non-current assets consist mainly of (i) lands of EUR 40.2m, (ii) buildings of EUR 27.8m, (iii) assets under construction of EUR 29.7m.
- Non-current assets as at Dec13A increased from EUR 112.4m in Dec12A to EUR 117.2m. This was

## Financial statements overview

mainly caused by revaluation of its lands by EUR 13.8m which is also reflected in the revenue.

### Net working capital

- ▶ Net working capital was decreasing during the whole period under review when decreased from EUR 21.8m as at Dec11A to EUR 58.9m as at Dec12A and to EUR 95.3m as at Dec13A. The decrease was caused mainly by:
  - Increase in trade payables from EUR 28.3m as at Dec11A to EUR 45.3m as at Dec12A and to EUR 67m as at Dec13A due to UNB's financial difficulties and subsequent inability to pay its suppliers on time, and
  - Increase in liabilities for SSHI which increased from EUR 10.2m (Dec11A) to EUR 25.6m (Dec12A) to current EUR 46.6m (Dec13A) due to the same reason.

### Net debt

The table below presents the reported net debt adjusted by debt like items that has been identified.

#### Net debt adjustments

| Currency: EUR 000        | Dec11A        | Dec12A        | Dec13A        |
|--------------------------|---------------|---------------|---------------|
| <b>Net debt reported</b> | <b>(3.9)</b>  | <b>(10.7)</b> | <b>(8.4)</b>  |
| Adjustments              | (10.2)        | (25.6)        | (70.1)        |
| Aged trade payables      | n/d           | n/d           | (24.1)        |
| SSHI                     | (10.2)        | (25.6)        | (46.6)        |
| Deferred CapEx           | u/q           | u/q           | u/q           |
| <b>Net debt adjusted</b> | <b>(14.1)</b> | <b>(36.4)</b> | <b>(79.1)</b> |

Source: EY analysis

- ▶ UNB has reported net debt as at Dec11A of EUR 3.9m which mainly consisted of other payables of long term provision of EUR 4.5m, other payables of EUR 9.7m EUR and cash of EUR 11.6m.
- ▶ As at Dec12A, the net debt increased by 6.8m (174%) to EUR 10.7m mainly due to bad economy, as the cash of UNB decreased by EUR 8.8m which was slightly offset by decrease in payables to state fund by EUR 2.9m.
- ▶ Net debt as at Dec13A decreased by 2.3m (21.5%) to EUR 8.4m, compared to Dec12A. Mainly as a result of lower payables to state fund as the UNB is settling its liability from repayable financial aid received in FY11A from government.
- ▶ As at Dec13A short-term trade payables of EUR 24.1m which were overdue more than 180 days has been identified. Similarly UNB had a liability from social security and health insurance towards Sociálna poisťovňa of EUR 46.6m. Both these items appear to be debt like items and therefore we have adjusted the reported net debt.
- ▶ The adjusted net debt as at Dec13A accounted for EUR 79.1m without considering the deferred CapEx as there have been no major capital expenditures in

buildings in recent years. Based on the discussion with management extensive investments are required to keep the buildings in operation.

- ▶ The increase in current debt since the last injection of state funds in 2011 indicates that another funding from government may be required.

### Shareholder's equity

- ▶ Equity decreased from EUR 95.7m as at Dec11A to EUR 42.7m in FY12A and to EUR 13.6m as at Dec13A caused by net losses during fiscal years.

## Revenue analysis

### Revenue breakdown by hospitals

| Currency: EUR 000         | FY11A          | FY12A          | FY13A          | % of total FY13A |
|---------------------------|----------------|----------------|----------------|------------------|
| Ružinov                   | 49,202         | 47,993         | 54,846         | 31.3             |
| Kramáre                   | 33,779         | 34,562         | 44,510         | 25.4             |
| Petržalka                 | 35,125         | 43,198         | 45,786         | 26.1             |
| Staré mesto               | 16,262         | 16,405         | 26,637         | 15.2             |
| Podunajské Biskupice      | 3,088          | 3,006          | 3,430          | 2.0              |
| UNB HQ                    | 114,262        | 114            | 145            | 0.1              |
| <b>Total UNB revenues</b> | <b>251,717</b> | <b>145,280</b> | <b>175,354</b> | <b>100.0</b>     |

Source: Client

### Revenue breakdown by type

| Currency: EUR 000            | FY11A            | FY12A          | FY13A           | % of total FY13A |
|------------------------------|------------------|----------------|-----------------|------------------|
| Revenue - HICs               | 119,380          | 127,031        | 143,129         | 81.6             |
| Revenue - rentals            | 2,909            | 2,866          | 2,538           | 1.4              |
| Revenue - patients           | 2,037            | 2,304          | 2,203           | 1.3              |
| Revenue - testing of drugs   | 581              | 416            | 288             | 0.2              |
| Other revenue                | 126,810          | 12,663         | 27,196          | 15.5             |
| <b>Total UNB revenues</b>    | <b>251,717</b>   | <b>145,280</b> | <b>175,354</b>  | <b>100.0</b>     |
| <b>Adjustments</b>           |                  |                |                 |                  |
| Infusion of state funding    | (113,720)        | -              | -               | -                |
| Revaluation of fixed assets  | -                | -              | (13,845)        | 99.7             |
| Revenues - sale of FA        | (10)             | (11)           | (18)            | 0.1              |
| Revenues - sale of material  | (13)             | (8)            | (18)            | 0.1              |
| Revenue from credit notes    | (217)            | -              | -               | -                |
| <b>Adjustments total</b>     | <b>(113,961)</b> | <b>(18)</b>    | <b>(13,881)</b> | <b>100.0</b>     |
| <b>Adjusted UNB revenues</b> | <b>137,757</b>   | <b>145,261</b> | <b>161,473</b>  | <b>n/a</b>       |

Source: Client

### Revenue analysis

Tables on the left present the revenue breakdowns by hospitals and by revenue type as well as adjusted revenue by one-offs incurred during FY11A, FY12A and FY13A.

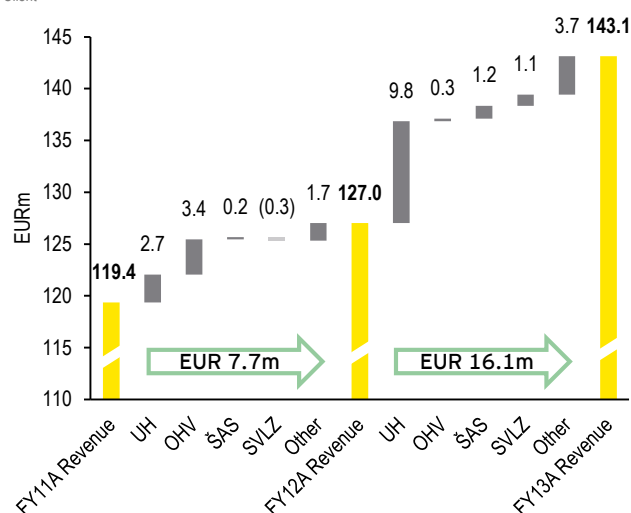
- C. 31% of UNB revenue in FY13A was generated in the Ružinov hospital, which is the biggest UNB hospital in terms of number of admissions and beds, followed by Petržalka (26.1%) and Kramáre (25.4%).
- During FY11A the state granted an infusion of cash to cover UNB debts of EUR 113.7m out of which EUR 23.7m is repayable financial aid. This revenue is considered to be one-off revenue.

### Revenue from HICs

- The main portion of revenue is represented by revenue from HICs which in FY13A represented EUR 143.1m (81.6% of total revenue), in FY12A EUR 127m (87.4%) and in FY11A EUR 119.4m (47.4%).
- Composition of HICs revenue is presented on the next pages with detailed split into revenue streams and into five UNB hospitals.
- The increase of HICs revenue between FY12A and FY11A by EUR 7.7m (6.4%) was mainly caused by (i) increase in revenue from one-day cases by EUR 3.4m (volume driven – EUR 3.6m), (ii) increase in revenue from admissions by EUR 2.7m (price driven – EUR 5.4m offset by negative volume effect – EUR 2.7m) and (iii) other revenue by EUR 1.7m.

### HICs revenues development FY11A-FY13A

Source: Client



## Revenue analysis

- In FY13A the HICs revenue increased by EUR 16.1m (12.7%) which was mainly caused by increase in (i) revenue from admissions by EUR 9.8m (both volume – 3.2m, and price – EUR 6.6m driven as UNB agreed on better prices with HICs), (ii) outpatient revenue by EUR 1.2m and (iii) diagnostics by EUR 1.1m.
- According to management the FY13A production represents almost the full capacity of the UNB and almost any further revenue increase can be driven only by increase in prices.

### Adjusted revenue

- We have adjusted the revenue by one of transactions that occurred during the periods under review. The main adjustments were (i) infusion of state funding in FY11A of EUR 113.7m, (ii) revenue from credit notes in FY11A of EUR 0.2m, (iii) revaluation of fixed assets in FY13A of EUR 13.8m

The table below presents the average price per production unit in 4 main revenue streams:

- 1 Inpatient care (admissions – UH)
- 2 One-day care (OHV)
- 3 Outpatient care (ŠAS points)

### 4 Diagnostics and labs (SVLZ points)

#### Average prices of production units by revenue main streams

| Currency: EUR                     | FY11A | FY12A | FY13A |
|-----------------------------------|-------|-------|-------|
| UH Revenue per UH                 | 948   | 1,019 | 1,102 |
| OHV revenue per OHV               | 289   | 280   | 275   |
| ŠAS revenue per 1000 ŠAS points   | 19.0  | 19.4  | 21.8  |
| SVLZ revenue per 1000 SVLZ points | 7.1   | 7.1   | 7.0   |
| HIC revenue per UH                | 1,514 | 1,671 | 1,808 |

Source: Client

#### KPI ratios

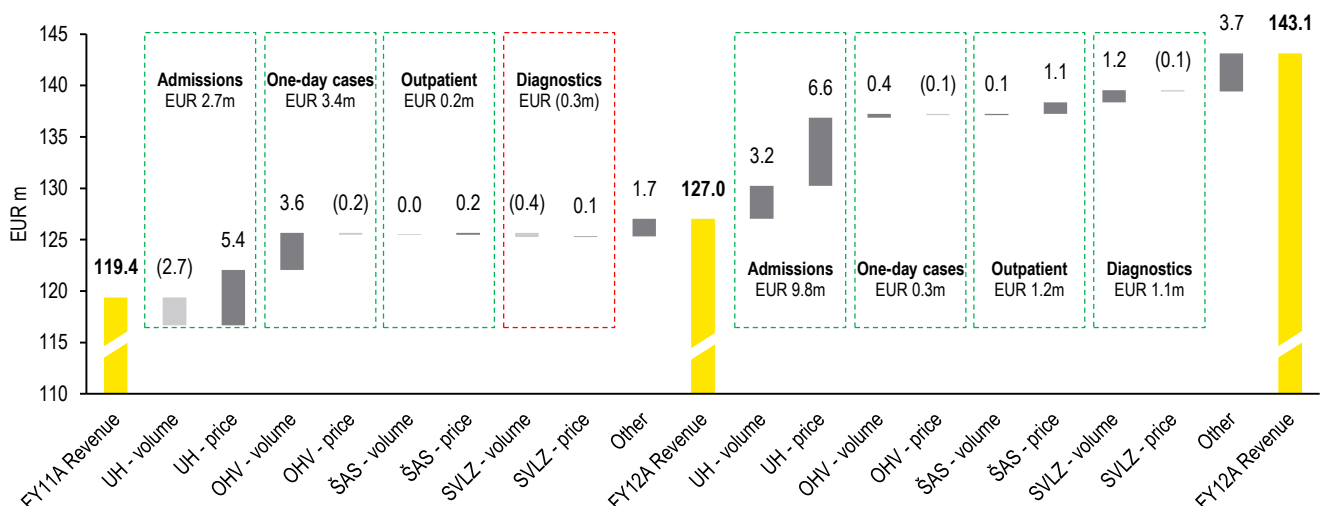
| Units: various                                | FY11A | FY12A | FY13A |
|---|-------|-------|-------|
| UH revenues per bed in EUR 000 (FY11A p.l.)   | 28.3  | 27.3  | 28.6  |
| Total personnel costs per bed in EUR 000      | 37.5  | 41.5  | 44.3  |
| Payroll (FY11A p.l.) per bed in EUR 000       | 37.5  | 37.9  | 38.3  |
| No of. UH per employee                        | 13.3  | 12.7  | 13.2  |
| UH revenue in EURk per employee (FY11A p.l.)  | 12.6  | 12.1  | 12.5  |
| UH revenue in EURk per physician (FY11A p.l.) | 69.3  | 65.7  | 67.7  |
| UH revenue in EURk per nurse (FY11A p.l.)     | 34.6  | 31.8  | 32.7  |
| FY11A p.l.: Payroll as a % of HIC revenue     | 82.9  | 82.2  | 77.4  |
| FY13A p.l.: Payroll as a % of HIC revenue     | 82.9  | 86.1  | 81.3  |

Source: EY analysis

Notes: "FY11A p.l." – price level of 2011

### Structure of revenue from HICs

Source: Client



## Revenue from Health insurance companies

### Overview of HICs revenues by hospitals FY11A-FY13A

| Currency: EUR 000               | FY11A         |               |               |               |              |                | FY12A         |               |               |               |              |                | FY13A         |               |               |               |              |                |
|---------------------------------|---------------|---------------|---------------|---------------|--------------|----------------|---------------|---------------|---------------|---------------|--------------|----------------|---------------|---------------|---------------|---------------|--------------|----------------|
|                                 | Ru            | Kr            | Pe            | SM            | PB           | Total          | Ru            | Kr            | Pe            | SM            | PB           | Total          | Ru            | Kr            | Pe            | SM            | PB           | Total          |
| Admissions (UH)                 | 27,854        | 19,010        | 18,191        | 7,991         | 1,721        | <b>74,768</b>  | 27,590        | 19,499        | 20,290        | 8,233         | 1,819        | <b>77,433</b>  | 30,796        | 22,120        | 22,692        | 9,462         | 2,189        | <b>87,259</b>  |
| One-day cases (OHV)             | 1,190         | 424           | 1,149         | 49            | -            | <b>2,812</b>   | 2,893         | 767           | 2,497         | 74            | -            | <b>6,232</b>   | 3,098         | 907           | 2,391         | 93            | -            | <b>6,490</b>   |
| Outpatient care (ŠAS)           | 2,934         | 1,440         | 2,738         | 1,218         | 381          | <b>8,712</b>   | 2,854         | 1,543         | 2,853         | 1,260         | 402          | <b>8,913</b>   | 3,466         | 1,741         | 3,163         | 1,383         | 401          | <b>10,155</b>  |
| Diagnostics (SVLZ)              | 2,348         | 3,442         | 2,140         | 2,841         | 447          | <b>11,220</b>  | 2,277         | 3,203         | 2,337         | 2,760         | 311          | <b>10,886</b>  | 2,802         | 3,254         | 2,304         | 3,359         | 226          | <b>11,946</b>  |
| Special med. mat. (ŠZM)         | 3,785         | 1,949         | 1,987         | 945           | 24           | <b>8,690</b>   | 4,191         | 2,227         | 2,747         | 937           | 17           | <b>10,120</b>  | 4,866         | 2,466         | 3,134         | 1,206         | 12           | <b>11,684</b>  |
| Drugs                           | 1,977         | 276           | 1,142         | 415           | 18           | <b>3,829</b>   | 2,124         | 354           | 1,816         | 433           | 10           | <b>4,738</b>   | 1,478         | 376           | 602           | 228           | 4            | <b>2,688</b>   |
| Blood                           | 518           | 609           | 1,463         | 121           | 9            | <b>2,720</b>   | 577           | 670           | 1,633         | 120           | 15           | <b>3,014</b>   | 604           | 717           | 2,132         | 151           | 16           | <b>3,619</b>   |
| Anesthesia                      | 151           | 115           | 160           | 18            | -            | <b>444</b>     | -             | -             | -             | -             | -            | <b>-</b>       | -             | -             | -             | -             | -            | <b>-</b>       |
| V.A.C.                          | 41            | 11            | 59            | -             | -            | <b>111</b>     | 43            | 14            | 116           | 6             | -            | <b>179</b>     | 28            | 34            | 113           | 11            | -            | <b>186</b>     |
| Transplantation                 | 217           | 508           | 1,852         | -             | -            | <b>2,577</b>   | 215           | 778           | 1,780         | -             | -            | <b>2,773</b>   | 193           | 458           | 2,326         | -             | -            | <b>2,977</b>   |
| Breast milk                     | 109           | -             | 10            | -             | -            | <b>119</b>     | -             | -             | 10            | -             | -            | <b>10</b>      | -             | -             | 11            | -             | -            | <b>11</b>      |
| Extra. fin. difficult med. care | 475           | 389           | 818           | 123           | 2            | <b>1,807</b>   | 314           | 403           | 841           | 125           | 0            | <b>1,684</b>   | 349           | 436           | 927           | 163           | -            | <b>1,874</b>   |
| Capitation                      | -             | 13            | -             | -             | -            | <b>13</b>      | -             | 13            | -             | -             | -            | <b>13</b>      | -             | 14            | -             | -             | -            | <b>14</b>      |
| Stationary                      | 106           | -             | 26            | 17            | -            | <b>150</b>     | 13            | -             | 36            | 17            | -            | <b>66</b>      | 21            | -             | 44            | 26            | -            | <b>90</b>      |
| Surgery bonus                   | -             | -             | -             | -             | -            | <b>-</b>       | -             | -             | -             | -             | -            | <b>-</b>       | 453           | 353           | 350           | 35            | -            | <b>1,191</b>   |
| Reconciling difference          | 1,926         | 909           | (1,646)       | 190           | 28           | <b>1,409</b>   | (449)         | 161           | 1,136         | 160           | (39)         | <b>969</b>     | 1,208         | 652           | 802           | 201           | 82           | <b>2,944</b>   |
| <b>Total</b>                    | <b>43,633</b> | <b>29,096</b> | <b>30,090</b> | <b>13,930</b> | <b>2,631</b> | <b>119,380</b> | <b>42,643</b> | <b>29,633</b> | <b>38,092</b> | <b>14,126</b> | <b>2,536</b> | <b>127,031</b> | <b>49,361</b> | <b>33,528</b> | <b>40,990</b> | <b>16,318</b> | <b>2,931</b> | <b>143,129</b> |
| VšZP                            | 31,950        | 20,949        | 23,869        | 10,914        | 2,180        | <b>89,862</b>  | 32,643        | 21,870        | 28,187        | 11,112        | 2,153        | <b>95,966</b>  | 37,072        | 24,853        | 29,924        | 12,695        | 2,424        | <b>106,969</b> |
| Dôvera                          | 8,093         | 5,913         | 6,495         | 2,352         | 377          | <b>23,230</b>  | 8,609         | 6,213         | 7,127         | 2,328         | 376          | <b>24,653</b>  | 8,957         | 6,133         | 8,431         | 2,717         | 380          | <b>26,618</b>  |
| Union                           | 1,664         | 1,325         | 1,371         | 474           | 46           | <b>4,879</b>   | 1,840         | 1,389         | 1,641         | 526           | 46           | <b>5,443</b>   | 2,124         | 1,890         | 1,834         | 704           | 46           | <b>6,598</b>   |
| <b>KPIs - paid</b>              |               |               |               |               |              |                |               |               |               |               |              |                |               |               |               |               |              |                |
| No. of UH                       | 27,124        | 20,543        | 20,369        | 8,841         | 1,986        | <b>78,863</b>  | 25,044        | 20,269        | 19,742        | 8,865         | 2,095        | <b>76,015</b>  | 26,479        | 20,361        | 20,653        | 9,429         | 2,246        | <b>79,168</b>  |
| No. of OHV                      | 4,697         | 1,300         | 3,621         | 117           | -            | <b>9,735</b>   | 11,834        | 2,252         | 7,993         | 199           | -            | <b>22,278</b>  | 12,162        | 2,674         | 8,543         | 232           | -            | <b>23,611</b>  |
| No. ŠAS points (m)              | 153.1         | 80.7          | 136.8         | 66.1          | 22.0         | <b>458.8</b>   | 148.5         | 80.9          | 136.0         | 71.2          | 23.2         | <b>459.7</b>   | 148.6         | 80.7          | 139.6         | 74.5          | 22.6         | <b>466.0</b>   |
| No. of SVLZ points (m)          | 318.1         | 512.2         | 309.6         | 388.0         | 60.6         | <b>1,588.5</b> | 314.4         | 475.8         | 314.6         | 396.0         | 31.9         | <b>1,532.7</b> | 403.9         | 496.8         | 288.6         | 486.2         | 22.5         | <b>1,698.1</b> |
| Number of beds                  |               |               |               |               |              | <b>2,638</b>   |               |               |               |               |              | <b>2,638</b>   |               |               |               |               |              | <b>2,626</b>   |
| Admissions (UH)                 |               |               |               |               |              | <b>91,989</b>  |               |               |               |               |              | <b>92,228</b>  |               |               |               |               |              | <b>95,363</b>  |

Source: Client, EY analysis

Pozn: Ru – Ružinov, Kr- Kramáre, Pe – Petržalka, SM –Staré Mesto (Old Town), PB – Podunajské Biskupice.

## Cost analysis

### Cost breakdown by hospitals

| Currency: EUR 000       | FY11A          | FY12A          | FY13A          | CAGR%      |
|-------------------------|----------------|----------------|----------------|------------|
| Ružinov                 | 56,604         | 59,176         | 61,911         | 4.6        |
| Kramáre                 | 44,817         | 47,623         | 49,858         | 5.5        |
| Petržalka               | 48,262         | 54,397         | 55,560         | 7.3        |
| Staré mesto             | 19,550         | 21,458         | 22,266         | 6.7        |
| Podunajské Biskupice    | 5,108          | 5,878          | 6,055          | 8.9        |
| UNB HQ                  | 13,752         | 9,090          | 8,645          | (20.7)     |
| Unreconciled difference | (179)          | (129)          | (127)          | n/a        |
| <b>Total UNB costs</b>  | <b>187,914</b> | <b>197,492</b> | <b>204,169</b> | <b>4.2</b> |

Source: Client

### Cost breakdown by type

| Currency: EUR 000       | FY11A          | FY12A          | FY13A          | CAGR%      |
|-------------------------|----------------|----------------|----------------|------------|
| Personnel costs         | 98,978         | 109,363        | 116,338        | 8.4        |
| Wages and salaries      | 71,818         | 79,714         | 84,513         | 8.5        |
| SSHI and other          | 27,160         | 29,649         | 31,825         | 8.2        |
| Material                | 45,458         | 48,221         | 49,720         | 4.6        |
| Drugs                   | 14,838         | 15,579         | 14,482         | (1.2)      |
| Medical tools           | 21,763         | 22,955         | 24,507         | 6.1        |
| Blood                   | 3,833          | 4,623          | 5,162          | 16.1       |
| Food                    | 2,232          | 2,287          | 2,676          | 9.5        |
| General material        | 2,792          | 2,776          | 2,893          | 1.8        |
| Utilities               | 6,761          | 7,681          | 6,359          | (3.0)      |
| Repair and maintenance  | 3,278          | 3,101          | 3,646          | 5.5        |
| Services                | 7,709          | 7,064          | 7,174          | (3.5)      |
| Depreciation            | 12,135         | 11,170         | 10,062         | (8.9)      |
| Other                   | 13,774         | 11,021         | 10,996         | (10.6)     |
| Unreconciled difference | (179)          | (129)          | (127)          | n/a        |
| <b>Total UNB costs</b>  | <b>187,914</b> | <b>197,492</b> | <b>204,169</b> | <b>4.2</b> |

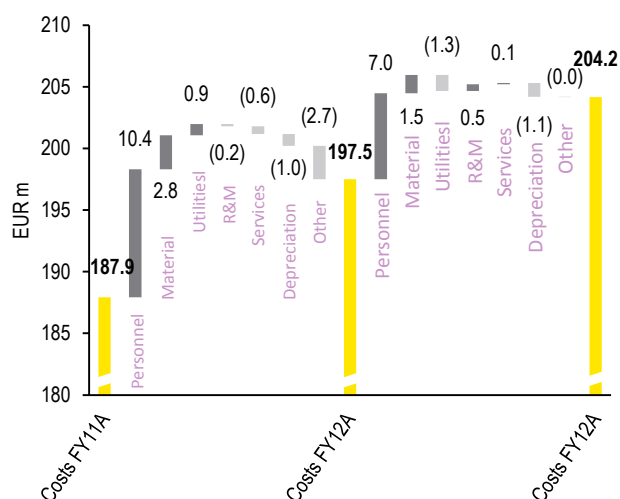
#### KPI

|                               |       |       |       |
|-------------------------------|-------|-------|-------|
| Payroll costs per UH          | 1,255 | 1,439 | 1,470 |
| Payroll per 1 EUR HIC revenue | 0.8   | 0.9   | 0.8   |
| Material costs per UH         | 576   | 634   | 628   |
| Drugs costs per UH            | 188   | 205   | 183   |

Source: Client

### Cost bridge between FY11A and FY13A

Source: Client



### Cost analysis

Tables on the left present the cost breakdowns by hospitals and by cost type in FY11A, FY12A and FY13A.

► On the total costs, Ružinov contributed by c. 30% in each of the periods under review, followed by Petržalka with c. 27% in average and Kramáre with c. 24%.

► Between FY12A and FY11A total costs increased by EUR 9.6m (5.1%), an increase of EUR 6.7m (3.4%) was also reported in FY13A compared to previous year. The most significant increases were reported in following items:

#### a.) Personnel costs

► The most significant portion of total costs are personnel costs which represent 55% on total costs in average, and its portion increased from 52.7% in FY11A to 55.4% in FY12A and to 57% in FY13A.

► As depicted on the bridge on the left the most significant impact on increase of costs had the personnel costs. Personnel costs are analysed in details on the next page.

#### b.) Material costs

► Material costs, which represented c. 24% on total costs, were growing by CAGR of 4.6% between FY11A and FY13A when material costs increased by EUR 2.8m (6.1%) in FY12A and by EUR 1.5m (3.1%) in FY13A. The main changes are as follows:

1 Consumption of **medical tools** increased by EUR 1.2m (5.5%) and by EUR 1.6m (6.8%) between FY11A to FY12A and from FY12A to FY13A respectively. This was caused by increasing production in one-day cases, outpatient care and diagnostics.

2 Costs of consumed **blood** increased by CAGR of 16.1% in the reviewed period which is in line with (i) increasing number of surgeries by 2,040 (4.3%) in FY12A compared to FY11A and 3,491 (7%) in FY13A compared to FY12A and (ii) increase in revenue on haematology department and outpatient care units by EUR 0.9m (16.3%) and EUR 1.6m (25.1%) respectively.

3 On the other hand, UNB managed to decrease its costs on **drugs** through monitoring the consumption and negotiation of better prices with distributors of drugs which was reflected in decrease between FY13A and FY12A by EUR 1.1m (7%). Drugs costs decreased from EUR 205 per UH to EUR 183.

#### c.) Utilities

► Utilities decreased in FY13A compared to FY12A by EUR 1.3m (17.2%) which was mainly caused by (i) decrease of negotiated price of gas with supplier (SPP) with positive impact on gas costs by EUR 1.1m (16.7%) and (ii) lower consumption of water by 136k m<sup>3</sup> which caused saving of EUR 0.3m (4%).



## Personnel costs

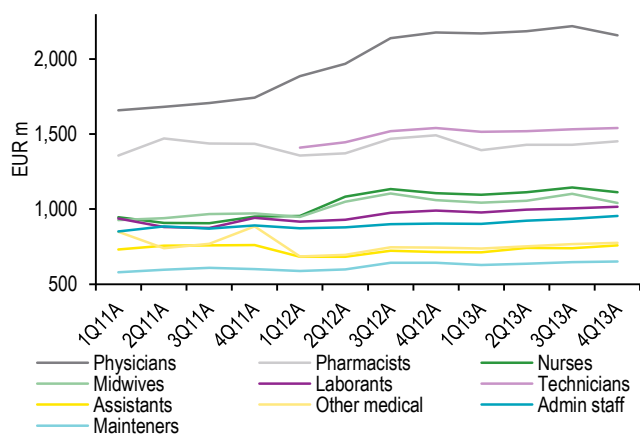
### Personnel costs by employee categories

|                                 | FY11A        |               | FY12A        |                | FY13A        |                |
|---------------------------------|--------------|---------------|--------------|----------------|--------------|----------------|
| Currency: EUR 000               | FTE          | Wages         | FTE          | Wages          | FTE          | Wages          |
| Physicians                      | 1,078        | 21,972        | 1,097        | 26,896         | 1,108        | 29,033         |
| out of it: with attestation     |              |               |              |                | 324          |                |
| Pharmacists                     | 31           | 529           | 32           | 539            | 32           | 548            |
| Nurses                          | 2,162        | 24,056        | 2,266        | 29,083         | 2,297        | 30,756         |
| Midwives                        | 111          | 1,264         | 80           | 1,003          | 85           | 1,078          |
| Laborants                       | 125          | 1,363         | 131          | 1,496          | 133          | 1,595          |
| Technicians                     | -            | -             | 80           | 1,426          | 82           | 1,500          |
| Assistants                      | 404          | 3,989         | 217          | 1,824          | 218          | 1,929          |
| Other medical staff             | 318          | 2,569         | 475          | 4,091          | 501          | 4,553          |
| Admin staff                     | 411          | 4,310         | 396          | 4,229          | 379          | 4,224          |
| Maintenance workers             | 1,275        | 9,111         | 1,198        | 8,867          | 1,179        | 9,051          |
| <b>Total UNB</b>                | <b>5,915</b> | <b>69,164</b> | <b>5,971</b> | <b>79,454</b>  | <b>6,012</b> | <b>84,265</b>  |
| Unreconciled difference         |              | 2,653         |              | 261            |              | 247            |
| <b>Total wages and salaries</b> |              | <b>71,818</b> |              | <b>79,714</b>  |              | <b>84,513</b>  |
| Social insurance                |              | 24,706        |              | 27,203         |              | 29,318         |
| Social security costs           |              | 2,077         |              | 2,073          |              | 2,136          |
| Other social ins. & costs       |              | 378           |              | 373            |              | 372            |
| <b>SSH and other</b>            |              | <b>27,160</b> |              | <b>29,649</b>  |              | <b>31,825</b>  |
| <b>Total personnel costs</b>    |              | <b>98,978</b> |              | <b>109,363</b> |              | <b>116,338</b> |

Source: Client

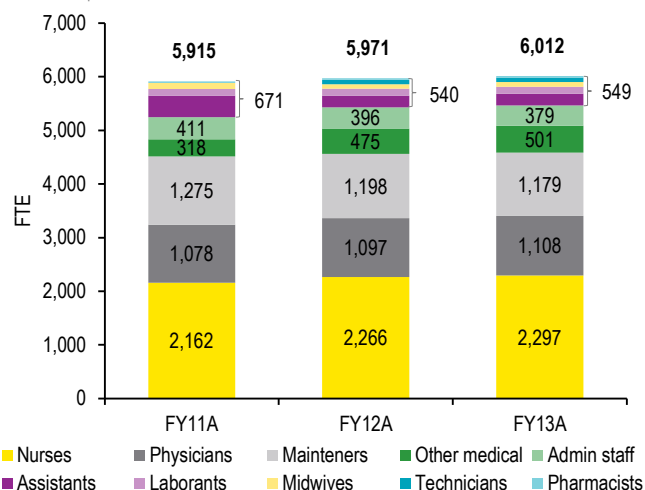
### Development of average salary by employee categories

Source: Client



### Employee structure

Source: NCZI reports



### Personnel costs

Table on the left present the personnel costs divided into 10 employee categories together with the average number of FTEs in each category for the whole UNB in FY11A, FY12A and FY13A.

- ▶ Wages are the most significant part of operating costs and in total accounted for c. 55% of total UNB costs.
- ▶ In recent years UNB is facing issues with increasing personnel costs due to adverse effect of collective agreement and strong position of unions representing mainly the physicians.
- ▶ It is also expected that in 2015 there will be another round of wage increases for physicians and nurses.
- ▶ In FY13A UNB spent 81.3% of its revenue from HICs on personnel costs, which is an improvement due to higher HICs revenue, compared to FY12A when 86.1% of HICs revenue was spent.
- ▶ Based on the price level of revenues in 2011 the productivity of work of physicians and nurses slightly increased as depicted in the chart below.

### Payroll KPIs

| Units: various                                  | FY11A | FY12A | FY13A |
|---|-------|-------|-------|
| HIC revenue (2011 p.l.) per physician (EUR 000) | 110.7 | 110.9 | 117.3 |
| HIC revenue (2011 p.l.) per nurse (EUR 000)     | 55.2  | 53.7  | 56.6  |
| No. of UH per physician                         | 73.1  | 69.3  | 71.5  |
| No. of UH per nurse                             | 36.5  | 33.5  | 34.5  |

Source: Client, EY analysis

### Wages and salaries

- ▶ Total personnel costs increased from EUR 99m in FY11A to EUR 109.4m in FY13A (increase by EUR 10.4m – 10.5%) which was mainly caused by increase of wages of physicians (in average by c. EUR 350 per month – 20.4%) and nurses (in average by c. EUR 140 – 15.3%) as a result of strikes of physicians and nurses and subsequent agreement of MZ SR with unions.
- ▶ In FY13A UNB reported another increase by EUR 7m (6.4%) mainly due to valorisation of wages by 4%.
- ▶ From Jan14 another round of wage increase by 4% occurred in UNB and another university and faculty hospitals in Slovakia as a result of negotiation of unions with MoH.
- ▶ As depicted on the upper chart on the left, the highest average monthly wage is held by physicians followed by RDG technicians and nurses.

### FTEs

- ▶ Total average number of FTEs in FY11A was 5,915 and increased by 56 in FY12A and by another 41 between FY12A and FY13A.



## Adjusted EBITDA

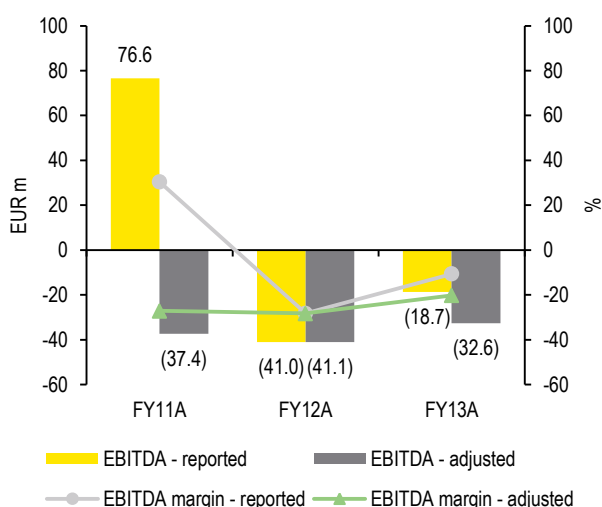
### Adjusted and reported EBITDA

| Currency: EUR 000                  | Note | FY11A            | FY12A           | FY13A           |
|------------------------------------|------|------------------|-----------------|-----------------|
| <b>EBITDA - reported</b>           |      | <b>76,590</b>    | <b>(41,039)</b> | <b>(18,745)</b> |
| <b>Net profit/(loss)</b>           |      | <b>63,624</b>    | <b>(52,341)</b> | <b>(28,942)</b> |
| out of Net profit/(loss):          |      |                  |                 |                 |
| Ružinov                            |      | (7,402)          | (11,182)        | (7,065)         |
| Kramáre                            |      | (11,038)         | (13,061)        | (5,348)         |
| Petržalka                          |      | (13,137)         | (11,199)        | (9,774)         |
| Staré mesto                        |      | (3,288)          | (5,052)         | 4,370           |
| Podunajské Biskupice               |      | (2,020)          | (2,871)         | (2,625)         |
| UNB HQ                             |      | 100,510          | (8,975)         | (8,500)         |
| <b>Adjustments to EBITDA</b>       |      |                  |                 |                 |
| Infusion of state funding          |      | (113,720)        | -               | -               |
| Revaluation of fixed assets        |      | -                | -               | (13,845)        |
| Revenues from sale of fixed assets |      | (10)             | (11)            | (18)            |
| Revenues from sale of material     |      | (13)             | (8)             | (18)            |
| Revenues from credit notes         |      | (217)            | -               | -               |
| <b>Adjustments to EBITDA total</b> |      | <b>(113,961)</b> | <b>(18)</b>     | <b>(13,881)</b> |
| <b>EBITDA - adjusted</b>           |      | <b>(37,371)</b>  | <b>(41,058)</b> | <b>(32,626)</b> |
| <i>EBITDA margin - Reported</i>    |      | <i>30.4</i>      | <i>(28.2)</i>   | <i>(10.7)</i>   |
| <i>EBITDA margin - Adjusted</i>    |      | <i>(27.1)</i>    | <i>(28.3)</i>   | <i>(20.2)</i>   |

Source: Client

### Adjusted and reported EBITDA

Source: Client



### Adjusted EBITDA

The table on the left presents the reported EBITDA adjusted by one-off items that occurred during the FY11A, FY12A and FY13A.

- The highest loss from UNB hospitals in FY13A was generated in Petržalka (EUR 9.8m) followed by Ružinov (EUR 7.1m), Kramáre (EUR 5.3m) and Podunajské Biskupice (EUR 2.6m).
- Staré mesto accounted for a net profit of EUR 4.4m which was mainly caused by one-off effect of revaluation of land of EUR 13.8m. These lands were not on the balance sheet of UNB and were identified and subsequently revalued.
- UNB HQ operated with costs of c. EUR 8.5m.

#### FY11A results

- UNB accounted for positive EBITDA of EUR 76.6m and net profit of EUR 63.6m in FY11A.
- However, these were significantly affected by effect of infusion of state funds of EUR 113.7 to cover the debts of UNB. Other minor one-off items in value of EUR 0.2m mainly related to revenue from credit notes and sale of fixed assets and material.
- Adjusted EBITDA of FY11A is therefore in amount of negative EUR 37.4m and adjusted EBITDA margin of negative 27.1%.

#### FY12A results

- In FY12A UNB resulted in negative EBITDA of EUR 41m and net loss of EUR 52.3m.
- We have identified only minor one-off items as adjustments to EBITDA, therefore the adjusted EBITDA was negative EUR 41.1m and adjusted EBITDA margin negative 28.2%.

#### FY13A results

- During FY13A, UNB revalued some of its owned lands which accounted for one-off revenue of EUR 13.8m. Other minor one-off items identified totalled to less than EUR 0.05m and related to sale of assets and material.
- UNB reported negative EBITDA of EUR 18.7m which after adjustments resulted in negative EBITDA of EUR 32.6m and negative EBITDA margin of 20.2%.

#### EBITDA margin development

- Improvement of adjusted EBITDA margin from negative 27.1% (FY11A) to negative 20.2% (FY13A) was mainly caused by:
  - Increase in revenue mainly due to increase in production (UH, OHV) and higher agreed prices with HICs for UH.
  - Savings on material costs and utilities costs.
  - Offset by higher personnel costs.

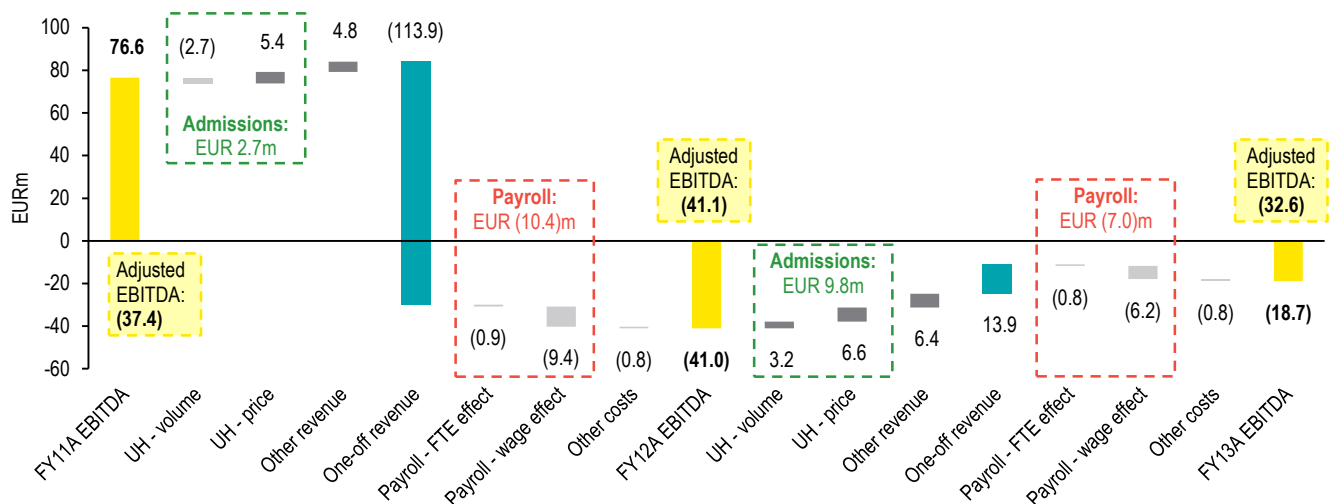
## Adjusted EBITDA

The charts below depict the bridges between:

- Reported EBITDA of FY11A to FY12A and FY13A, and
  - Adjusted EBITDA between FY11A and FY13A.
- As illustrated on the Reported EBITDA bridge below, the main accelerator of the change between FY12A and FY11A was the one-off revenue that mainly related to transfer from state fund of EUR 113.7m that occurred in FY11A. FY13A EBITDA was also affected by EUR 13.9m one-off revenue that mainly related to revaluation of land of UNB.

### Reported EBITDA bridge

Source: Client, EY analysis

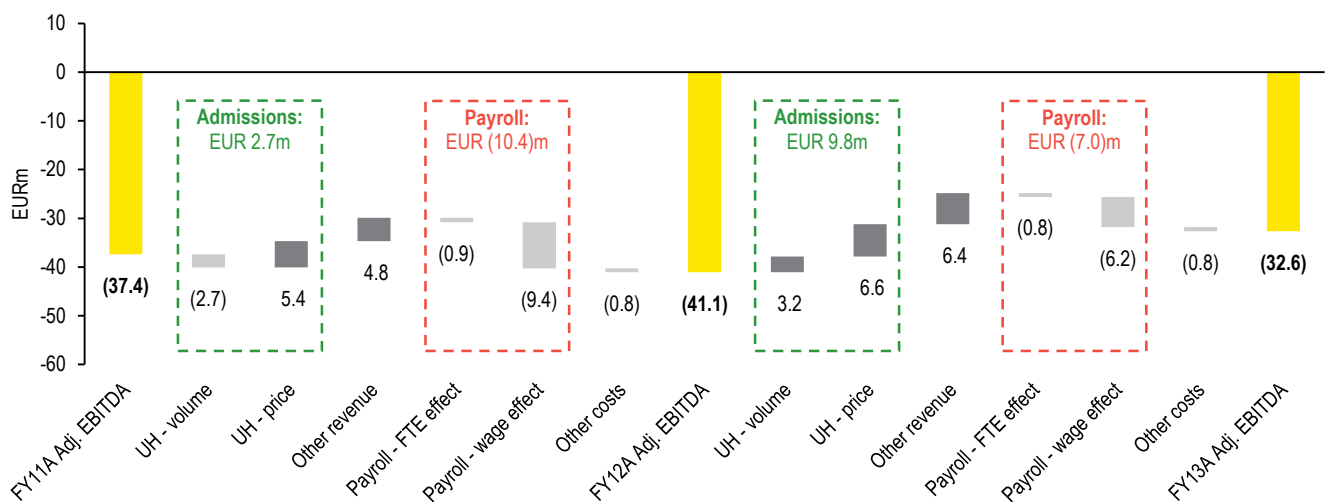


Adjusted EBITDA bridge depicts the development of EBITDA without the effect of one-off revenue.

- Decrease in adjusted EBITDA from negative EUR 37.4m (FY11A) to negative EUR 41.1m (FY12A) was mainly caused by increase in personnel costs by EUR 10.4m (10.5%) to EUR 109.4m which was slightly offset by increase in adjusted revenue by EUR 7.5m (5.4%) mainly as a result of higher prices for production.
- In FY13A the increase in prices of production and volume of production positively affected the adjusted EBITDA, which increased by EUR 8.4m (20.5%). The positive impact of revenue increase by EUR 16.2m (11.2%) was partly offset by increase in personnel costs by EUR 7m (6.4%).

### Adjusted EBITDA bridge

Source: Client, EY analysis



## **Due diligence on the current status of UNB - KPIs analysis**

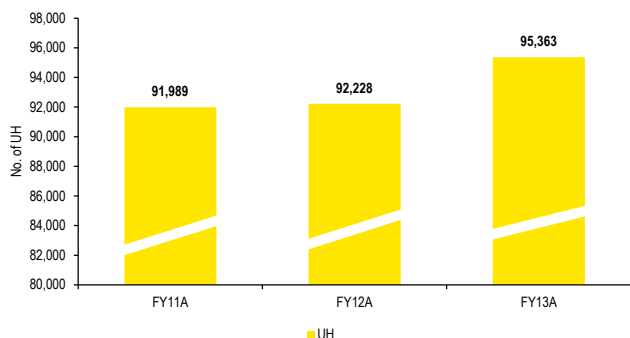
---

1. Completed hospitalizations
2. Outpatient care
3. Diagnostic examinations
4. Other KPIs
5. Key UNB terms with HICs

## Completed hospitalizations UNB

### Overview of number of UH in UNB in FY11A-FY13A

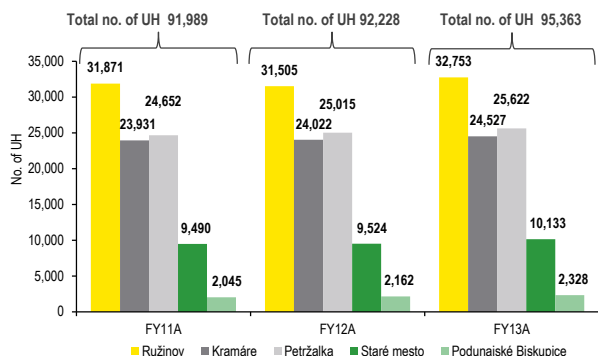
Source: Client



**Note:** Number of UH in the chart above and below is statistical number (includes transfers of patients between departments). Number of reimbursed UHs was as follows: FY11A: 78,863; FY12A: 76,015; FY13A: 79,168

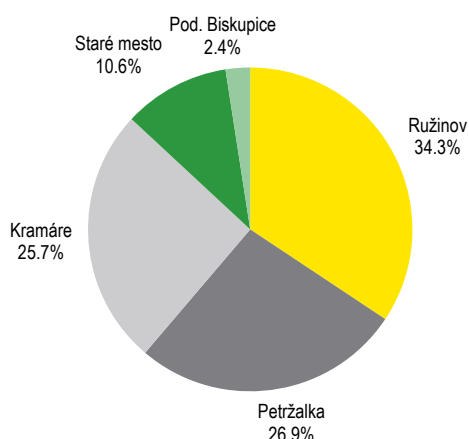
### Overview of number of UHs in UNB in FY11A-FY13A by hospitals

Source: Client



### Share of hospitals on total number of UHs in UNB in FY13A

Source: Client



### Admissions

The two upper charts on the left provide an overview of development in number of admissions ('UH') in UNB in period under review.

- ▶ Total number of UHs in FY11A was 91,989 where the majority of UH was generated by (i) Ružinov (31,871 UH - 34.6%), followed by (ii) Petržalka (24,652 UHs - 26.8%), (iii) Kramáre (23,931 UHs - 26%), Staré mesto and Podunajské Biskupice (11,535 UHs in total - 12.5%).
- ▶ UNB reported a slight increase by 239 UHs (0.3%) in FY12A compared to FY11A which was mainly reflected in (i) Petržalka in which an increase by 363 UHs (1.5%) was noticed, followed by (ii) Kramáre and (iii) Staré Mesto by 91 and 34 UHs respectively (both by 0.4%) and (iv) Podunajské Biskupice by 117 (5.7%). Decrease in number of admissions by 366 (1.1%) was reported in Ružinov.
- ▶ In FY13A the total number of admissions increased by 3,135 (3.4%) compared to FY12A. The main increase was accounted for in (i) Ružinov (increase by 1,248 UHs – 4%), (ii) Staré Mesto by 609 UHs – 6.4% and Petržalka by 607 UHs - 2.4%.
- ▶ The chart on the bottom left depicts the share of individual hospitals on the generated number of admissions in FY13A with leading position of Ružinov with 34.3%.
- ▶ A detailed breakdown of UHs by hospitals and departments in period under review is presented on the chart on the bottom left.

### The key points to note

- Gynecology and obstetrics generates the highest number of UHs in all hospitals except for Staré mesto and Podunajské Biskupice where these departments are not present. In FY12A total number of UHs decreased by 0.5% comparing to FY11A (from 15,507 UHs in FY11A to 15,435 UHs in FY12A). In FY13A total number of UH at gynecology and obstetrics increased by 96 UH (0.6%) to 15,531 UHs.
- Other departments generating the highest number of UHs in all UNB hospitals in FY13A are (i) Internal medicine (11,957 UH – share 12.5%), (ii) Surgery (7,795 UH – share 8.2%), and (iii) Neonatology (7,733 UH – share 8.1%).
- There are specialized departments in each hospital that cannot be found in any other UNB hospital in Bratislava, e.g. (i) Pneumology and Ftizeology in Ružinov (2,407 UHs in FY13A), (ii) Infectology and Occupational medicine and toxicology in Kramáre (3,536 UHs), (iii) Gastroenterology in Petržalka (1,027 UHs) and (iv) Burns in Ružinov (371 UHs) etc.

## Completed hospitalizations UNB

### Overview of UH in UNB in FY11A-FY13A by hospitals and departments

| Units: no. of UH; %          | FY11A         | FY12A         | FY13A         | % of total<br>FY11A | % of total<br>FY12A | % of total<br>FY13A | FY12A vs.<br>FY11A | FY13A vs.<br>FY12A | FY12A vs.<br>FY11A (%) | FY13A vs.<br>FY12A (%) |
|------------------------------|---------------|---------------|---------------|---------------------|---------------------|---------------------|--------------------|--------------------|------------------------|------------------------|
| <b>Ružinov</b>               | <b>31,871</b> | <b>31,505</b> | <b>32,753</b> | <b>34.6</b>         | <b>34.2</b>         | <b>34.3</b>         | <b>(366)</b>       | <b>1,248</b>       | <b>(1.1)</b>           | <b>4.0</b>             |
| Gynecology and obstetrics    | 5,690         | 5,394         | 5,661         | 6.2                 | 5.8                 | 5.9                 | (296)              | 267                | (5.2)                  | 4.9                    |
| Internal medicine            | 3,912         | 4,035         | 4,209         | 4.3                 | 4.4                 | 4.4                 | 123                | 174                | 3.1                    | 4.3                    |
| Orthopedics                  | 2,778         | 2,853         | 2,980         | 3.0                 | 3.1                 | 3.1                 | 75                 | 127                | 2.7                    | 4.5                    |
| Surgery                      | 2,430         | 2,198         | 2,510         | 2.6                 | 2.4                 | 2.6                 | (232)              | 312                | (9.5)                  | 14.2                   |
| Pneumology                   | 2,524         | 2,525         | 2,407         | 2.7                 | 2.7                 | 2.5                 | 1                  | (118)              | 0.0                    | (4.7)                  |
| Neonatology                  | 2,442         | 2,263         | 2,338         | 2.7                 | 2.5                 | 2.5                 | (179)              | 75                 | (7.3)                  | 3.3                    |
| Neurology                    | 1,700         | 1,670         | 1,727         | 1.8                 | 1.8                 | 1.8                 | (30)               | 57                 | (1.8)                  | 3.4                    |
| Plastic surgery              | 1,350         | 1,359         | 1,413         | 1.5                 | 1.5                 | 1.5                 | 9                  | 54                 | 0.7                    | 4.0                    |
| Urology                      | 1,116         | 1,169         | 1,271         | 1.2                 | 1.3                 | 1.3                 | 53                 | 102                | 4.7                    | 8.7                    |
| Hand surgery                 | 1,017         | 1,207         | 1,222         | 1.1                 | 1.3                 | 1.3                 | 190                | 15                 | 18.7                   | 1.2                    |
| Other                        | 6,912         | 6,832         | 7,015         | 7.5                 | 7.4                 | 7.4                 | (80)               | 183                | (1.2)                  | 2.7                    |
| <b>Kramáre</b>               | <b>23,931</b> | <b>24,022</b> | <b>24,527</b> | <b>26.0</b>         | <b>26.0</b>         | <b>25.7</b>         | <b>91</b>          | <b>505</b>         | <b>0.4</b>             | <b>2.1</b>             |
| Gynecology and obstetrics    | 4,981         | 4,940         | 4,750         | 5.4                 | 5.4                 | 5.0                 | (41)               | (190)              | (0.8)                  | (3.8)                  |
| Infectology                  | 3,200         | 2,918         | 2,950         | 3.5                 | 3.2                 | 3.1                 | (282)              | 32                 | (8.8)                  | 1.1                    |
| Internal medicine            | 2,868         | 2,723         | 2,717         | 3.1                 | 3.0                 | 2.8                 | (145)              | (6)                | (5.1)                  | (0.2)                  |
| Traumatology                 | 2,274         | 2,329         | 2,455         | 2.5                 | 2.5                 | 2.6                 | 55                 | 126                | 2.4                    | 5.4                    |
| Neonatology                  | 2,492         | 2,607         | 2,436         | 2.7                 | 2.8                 | 2.6                 | 115                | (171)              | 4.6                    | (6.6)                  |
| Urology                      | 1,442         | 1,579         | 1,867         | 1.6                 | 1.7                 | 2.0                 | 137                | 288                | 9.5                    | 18.2                   |
| Surgery                      | 1,583         | 1,744         | 1,859         | 1.7                 | 1.9                 | 1.9                 | 161                | 115                | 10.2                   | 6.6                    |
| Geriatrics                   | 1,508         | 1,591         | 1,684         | 1.6                 | 1.7                 | 1.8                 | 83                 | 93                 | 5.5                    | 5.8                    |
| Neurosurgery                 | 1,431         | 1,518         | 1,633         | 1.6                 | 1.6                 | 1.7                 | 87                 | 115                | 6.1                    | 7.6                    |
| Neurology                    | 1,163         | 1,120         | 1,175         | 1.3                 | 1.2                 | 1.2                 | (43)               | 55                 | (3.7)                  | 4.9                    |
| Other                        | 989           | 953           | 1,001         | 1.1                 | 1.0                 | 1.0                 | (36)               | 48                 | (3.6)                  | 5.0                    |
| <b>Petržalka</b>             | <b>24,652</b> | <b>25,015</b> | <b>25,622</b> | <b>26.8</b>         | <b>27.1</b>         | <b>26.9</b>         | <b>363</b>         | <b>607</b>         | <b>1.5</b>             | <b>2.4</b>             |
| Gynecology and obstetrics    | 4,836         | 5,101         | 5,120         | 5.3                 | 5.5                 | 5.4                 | 265                | 19                 | 5.5                    | 0.4                    |
| Neonatology                  | 2,630         | 2,824         | 2,959         | 2.9                 | 3.1                 | 3.1                 | 194                | 135                | 7.4                    | 4.8                    |
| Pediatrics                   | 1,880         | 1,724         | 2,016         | 2.0                 | 1.9                 | 2.1                 | (156)              | 292                | (8.3)                  | 16.9                   |
| Traumatology                 | 1,821         | 1,932         | 2,002         | 2.0                 | 2.1                 | 2.1                 | 111                | 70                 | 6.1                    | 3.6                    |
| Surgery                      | 1,640         | 1,827         | 1,810         | 1.8                 | 2.0                 | 1.9                 | 187                | (17)               | 11.4                   | (0.9)                  |
| Internal medicine            | 1,597         | 1,708         | 1,726         | 1.7                 | 1.9                 | 1.8                 | 111                | 18                 | 7.0                    | 1.1                    |
| ORL                          | 1,549         | 1,332         | 1,288         | 1.7                 | 1.4                 | 1.4                 | (217)              | (44)               | (14.0)                 | (3.3)                  |
| Orthopedics                  | 1,072         | 1,177         | 1,247         | 1.2                 | 1.3                 | 1.3                 | 105                | 70                 | 9.8                    | 5.9                    |
| Urology                      | 1,196         | 1,148         | 1,081         | 1.3                 | 1.2                 | 1.1                 | (48)               | (67)               | (4.0)                  | (5.8)                  |
| Gastroenterology clinic      | 909           | 917           | 1,027         | 1.0                 | 1.0                 | 1.1                 | 8                  | 110                | 0.9                    | 12.0                   |
| Other                        | 5,522         | 5,325         | 5,346         | 6.0                 | 5.8                 | 5.6                 | (197)              | 21                 | (3.6)                  | 0.4                    |
| <b>Staré mesto</b>           | <b>9,490</b>  | <b>9,524</b>  | <b>10,133</b> | <b>10.3</b>         | <b>10.3</b>         | <b>10.6</b>         | <b>34</b>          | <b>609</b>         | <b>0.4</b>             | <b>6.4</b>             |
| Internal medicine            | 2,801         | 3,045         | 3,305         | 3.0                 | 3.3                 | 3.5                 | 244                | 260                | 8.7                    | 8.5                    |
| Neurology                    | 2,274         | 2,423         | 2,644         | 2.5                 | 2.6                 | 2.8                 | 149                | 221                | 6.6                    | 9.1                    |
| Surgery                      | 1,777         | 1,524         | 1,616         | 1.9                 | 1.7                 | 1.7                 | (253)              | 92                 | (14.2)                 | 6.0                    |
| Psychiatry                   | 1,009         | 1,078         | 1,149         | 1.1                 | 1.2                 | 1.2                 | 69                 | 71                 | 6.8                    | 6.6                    |
| Dermatovenerology            | 1,095         | 1,009         | 930           | 1.2                 | 1.1                 | 1.0                 | (86)               | (79)               | (7.9)                  | (7.8)                  |
| Coronary unit and arrhythmia | 402           | 388           | 423           | 0.4                 | 0.4                 | 0.4                 | (14)               | 35                 | (3.5)                  | 9.0                    |
| Nuclear medicine             | 64            | 57            | 66            | 0.1                 | 0.1                 | 0.1                 | (7)                | 9                  | (10.9)                 | 15.8                   |
| Diabetology                  | 68            | n/a           | n/a           | 0.1                 | n/a                 | n/a                 | n/a                | n/a                | n/a                    | n/a                    |
| <b>Podunajské Biskupice</b>  | <b>2,045</b>  | <b>2,162</b>  | <b>2,328</b>  | <b>2.2</b>          | <b>2.3</b>          | <b>2.4</b>          | <b>117</b>         | <b>166</b>         | <b>5.7</b>             | <b>7.7</b>             |
| Geriatrics                   | 1,057         | 1,107         | 1,178         | 1.1                 | 1.2                 | 1.2                 | 50                 | 71                 | 4.7                    | 6.4                    |
| Long-term ill                | 583           | 640           | 685           | 0.6                 | 0.7                 | 0.7                 | 57                 | 45                 | 9.8                    | 7.0                    |
| Healing department           | 405           | 415           | 465           | 0.4                 | 0.4                 | 0.5                 | 10                 | 50                 | 2.5                    | 12.0                   |
| <b>Total</b>                 | <b>91,989</b> | <b>92,228</b> | <b>95,363</b> | <b>100.0</b>        | <b>100.0</b>        | <b>100.0</b>        | <b>239</b>         | <b>3,135</b>       | <b>0.3</b>             | <b>3.4</b>             |

Source: Client

**Note:** Number of UH (admissions) represents statistical amount of UHs which also includes transfers of patients between departments (e.g. from surgery to ICU surgery and back). Therefore there is a difference between numbers of UHs reimbursed by HICs as they reimburse transferred patients in most cases as one UH.

## Completed hospitalizations Ružinov and Kramáře

### Overview of number of UH in Ružinov FY11A-FY13A

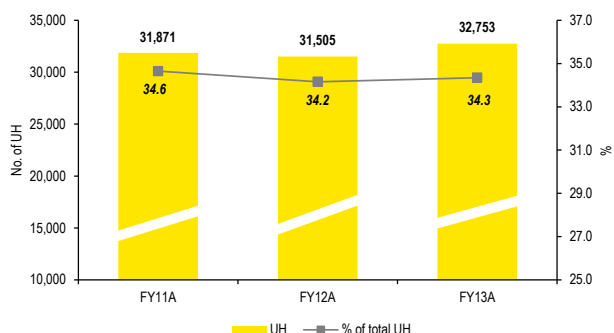
| Units: no. of UH; %   | FY11A         | FY12A         | FY13A         | % of total FY13A | FY13A vs. FY12A (%) |
|-----------------------|---------------|---------------|---------------|------------------|---------------------|
| <b>Ružinov</b>        | <b>31,871</b> | <b>31,505</b> | <b>32,753</b> | <b>34.3</b>      | <b>4.0</b>          |
| Gynecology            | 5,690         | 5,394         | 5,661         | 5.9              | 4.9                 |
| Internal medicine     | 3,912         | 4,035         | 4,209         | 4.4              | 4.3                 |
| Orthopedics           | 2,778         | 2,853         | 2,980         | 3.1              | 4.5                 |
| Surgery               | 2,430         | 2,198         | 2,510         | 2.6              | 14.2                |
| Pneumology            | 2,524         | 2,525         | 2,407         | 2.5              | (4.7)               |
| Neonatology           | 2,442         | 2,263         | 2,338         | 2.5              | 3.3                 |
| Neurology             | 1,700         | 1,670         | 1,727         | 1.8              | 3.4                 |
| Plastic surgery       | 1,350         | 1,359         | 1,413         | 1.5              | 4.0                 |
| Urology               | 1,116         | 1,169         | 1,271         | 1.3              | 8.7                 |
| Hand surgery          | 1,017         | 1,207         | 1,222         | 1.3              | 1.2                 |
| Chest surgery         | 1,084         | 1,097         | 1,156         | 1.2              | 5.4                 |
| Ophthalmology         | 1,143         | 1,100         | 1,098         | 1.2              | (0.2)               |
| FRO                   | 858           | 870           | 967           | 1.0              | 11.1                |
| Maxillofacial surgery | 757           | 709           | 772           | 0.8              | 8.9                 |
| Clinical oncology     | 712           | 696           | 762           | 0.8              | 9.5                 |
| ORL                   | 688           | 607           | 503           | 0.5              | (17.1)              |
| Psychiatry            | 357           | 375           | 415           | 0.4              | 10.7                |
| Long-term ill         | 350           | 359           | 387           | 0.4              | 7.8                 |
| Burns                 | 360           | 458           | 371           | 0.4              | (19.0)              |
| Gerontopsychiatry     | 372           | 345           | 362           | 0.4              | 4.9                 |
| Anesthesiology        | 231           | 216           | 222           | 0.2              | 2.8                 |

Source: Client

**Note:** Number of UH (admissions) represents statistical amount of UHs which also includes transfers of patients between departments (e.g. from surgery to ICU surgery and back). Therefore there is a difference between numbers of UHs reimbursed by HICs as they reimburse transferred patients in most cases as one UH.

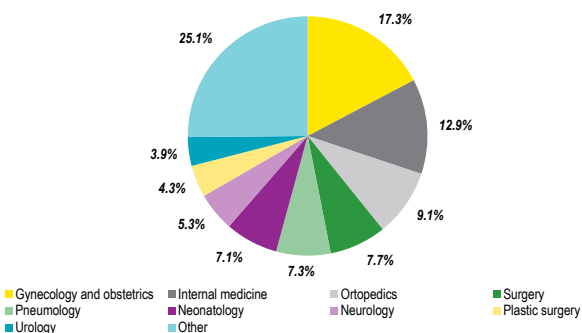
### Overview of number of UH in Ružinov in FY11A-FY13A

Source: Client



### Share of departments on total number of UH in FY13A in Ružinov

Source: Client



### Overview of number of UH in Kramáře FY11A-FY13A

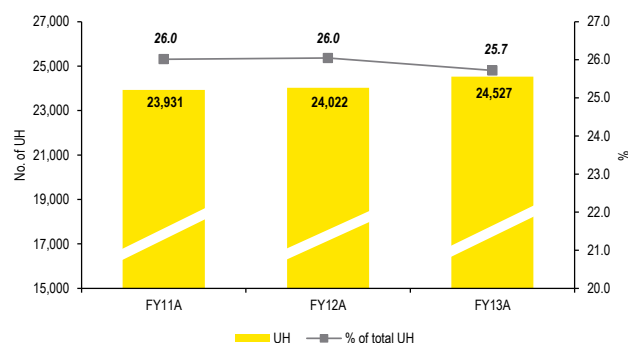
| Units: no. of UH; % | FY11A         | FY12A         | FY13A         | % of total FY13A | FY13A vs. FY12A (%) |
|---------------------|---------------|---------------|---------------|------------------|---------------------|
| <b>Kramáře</b>      | <b>23,931</b> | <b>24,022</b> | <b>24,527</b> | <b>25.7</b>      | <b>2.1</b>          |
| Gynecology          | 4,981         | 4,940         | 4,750         | 5.0              | (3.8)               |
| Infectology         | 3,200         | 2,918         | 2,950         | 3.1              | 1.1                 |
| Internal medicine   | 2,868         | 2,723         | 2,717         | 2.8              | (0.2)               |
| Traumatology        | 2,274         | 2,329         | 2,455         | 2.6              | 5.4                 |
| Neonatology         | 2,492         | 2,607         | 2,436         | 2.6              | (6.6)               |
| Urology             | 1,442         | 1,579         | 1,867         | 2.0              | 18.2                |
| Surgery             | 1,583         | 1,744         | 1,859         | 1.9              | 6.6                 |
| Geriatrics          | 1,508         | 1,591         | 1,684         | 1.8              | 5.8                 |
| Neurosurgery        | 1,431         | 1,518         | 1,633         | 1.7              | 7.6                 |
| Neurology           | 1,163         | 1,120         | 1,175         | 1.2              | 4.9                 |
| Toxicology          | 581           | 557           | 586           | 0.6              | 5.2                 |
| Long-term ill       | 233           | 244           | 255           | 0.3              | 4.5                 |
| Anesthesiology      | 175           | 152           | 160           | 0.2              | 5.3                 |

Source: Client

**Note:** Number of UH (admissions) represents statistical amount of UHs which also includes transfers of patients between departments (e.g. from surgery to ICU surgery and back). Therefore there is a difference between numbers of UHs reimbursed by HICs as they reimburse transferred patients in most cases as one UH.

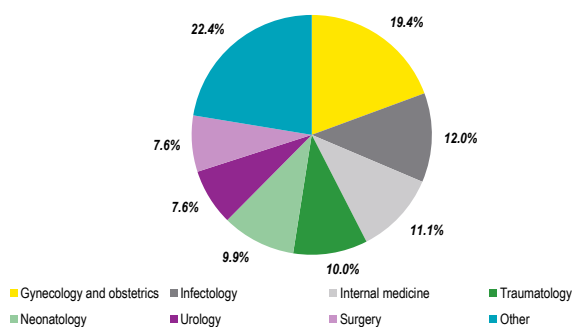
### Overview of number of UH in Kramáře in FY11A-FY13A

Source: Client



### Share of departments on total number of UH in FY13A in Kramáře

Source: Client



## Completed hospitalizations Petržalka, Staré mesto and Podunajské Biskupice

Overview of number of UH in Petržalka in FY11A-FY13A by departments

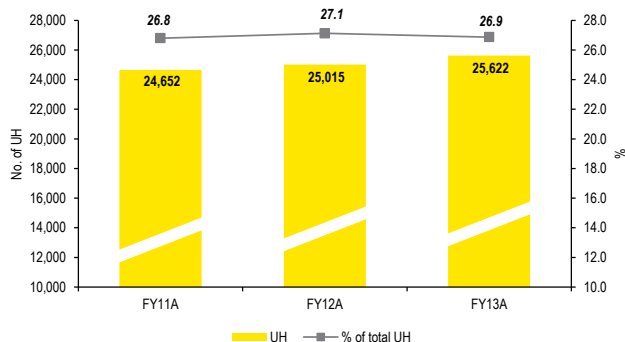
| Units: no. of UH; %       | FY11A         | FY12A         | FY13A         | % of total FY13A | FY13A vs. FY12A (%) |
|---------------------------|---------------|---------------|---------------|------------------|---------------------|
| <b>Petržalka</b>          | <b>24,652</b> | <b>25,015</b> | <b>25,622</b> | <b>26.9</b>      | <b>2.4</b>          |
| Gynecology and obstetrics | 4,836         | 5,101         | 5,120         | 5.4              | 0.4                 |
| Neonatology               | 2,630         | 2,824         | 2,959         | 3.1              | 4.8                 |
| Pediatrics                | 1,880         | 1,724         | 2,016         | 2.1              | 16.9                |
| Traumatology              | 1,821         | 1,932         | 2,002         | 2.1              | 3.6                 |
| Surgery                   | 1,640         | 1,827         | 1,810         | 1.9              | (0.9)               |
| Internal medicine         | 1,597         | 1,708         | 1,726         | 1.8              | 1.1                 |
| ORL                       | 1,549         | 1,332         | 1,288         | 1.4              | (3.3)               |
| Orthopedics               | 1,072         | 1,177         | 1,247         | 1.3              | 5.9                 |
| Urology                   | 1,196         | 1,148         | 1,081         | 1.1              | (5.8)               |
| Gastroenterology clinic   | 909           | 917           | 1,027         | 1.1              | 12.0                |
| Neurology                 | 899           | 865           | 816           | 0.9              | (5.7)               |
| Vascular surgery          | 760           | 698           | 745           | 0.8              | 6.7                 |
| Psychiatry                | 796           | 752           | 733           | 0.8              | (2.5)               |
| FRO                       | 588           | 585           | 648           | 0.7              | 10.8                |
| Pathological newborns     | 416           | 609           | 544           | 0.6              | (10.7)              |
| Ophthalmology             | 836           | 496           | 498           | 0.5              | 0.4                 |
| Phoniatrics               | 488           | 500           | 497           | 0.5              | (0.6)               |
| Hematology                | 337           | 400           | 446           | 0.5              | 11.5                |
| Long-term ill             | 253           | 253           | 244           | 0.3              | (3.6)               |
| Anesthesiology            | 149           | 167           | 175           | 0.2              | 4.8                 |

Source: Client

**Note:** Number of UH (admissions) represents statistical amount of UHs which also includes transfers of patients between departments (e.g. from surgery to ICU surgery and back). Therefore there is a difference between numbers of UHs reimbursed by HICs as they reimburse transferred patients in most cases as one UH.

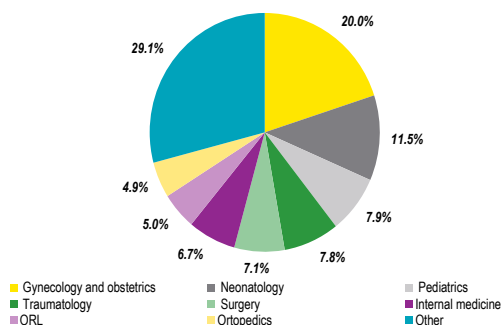
Overview of number of UH in Petržalka in FY11A-FY13A

Source: Client



Share of departments on total number of UH in FY13A in Petržalka

Source: Client



Overview of number of UH in Staré mesto and Podunajské Biskupice in FY11A-FY13A by departments

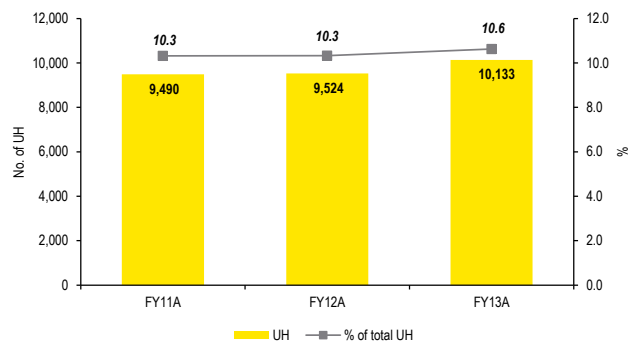
| Units: no. of UH; %         | FY11A        | FY12A        | FY13A         | % of total FY13A | FY13A vs. FY12A (%) |
|-----------------------------|--------------|--------------|---------------|------------------|---------------------|
| <b>Staré mesto</b>          | <b>9,490</b> | <b>9,524</b> | <b>10,133</b> | <b>10.6</b>      | <b>6.4</b>          |
| Internal medicine           | 2,801        | 3,045        | 3,305         | 3.5              | 8.5                 |
| Neurology                   | 2,274        | 2,423        | 2,644         | 2.8              | 9.1                 |
| Surgery                     | 1,777        | 1,524        | 1,616         | 1.7              | 6.0                 |
| Psychiatry                  | 1,009        | 1,078        | 1,149         | 1.2              | 6.6                 |
| Dermatovenereology          | 1,095        | 1,009        | 930           | 1.0              | (7.7)               |
| Coronary unit, arrhythmia   | 402          | 388          | 423           | 0.4              | 9.0                 |
| Nuclear medicine            | 64           | 57           | 66            | 0.1              | 15.8                |
| Diabetology                 | 68           | n/a          | n/a           | n/a              | n/a                 |
| <b>Podunajské Biskupice</b> | <b>2,045</b> | <b>2,162</b> | <b>2,328</b>  | <b>2.2</b>       | <b>2.3</b>          |
| Geriatrics                  | 1,057        | 1,107        | 1,178         | 1.1              | 1.2                 |
| Long-term ill               | 583          | 640          | 685           | 0.6              | 0.7                 |
| Healing department          | 405          | 415          | 465           | 0.4              | 0.4                 |

Source: Client

**Note:** Number of UH (admissions) represents statistical amount of UHs which also includes transfers of patients between departments (e.g. from surgery to ICU surgery and back). Therefore there is a difference between numbers of UHs reimbursed by HICs as they reimburse transferred patients in most cases as one UH.

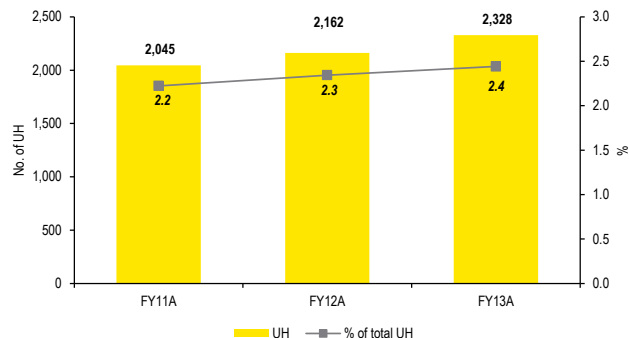
Overview of number of UH in Staré mesto in FY11A-FY13A

Source: Client



Overview of number of UH in Pod. Biskupice in FY11A-FY13A

Source: Client

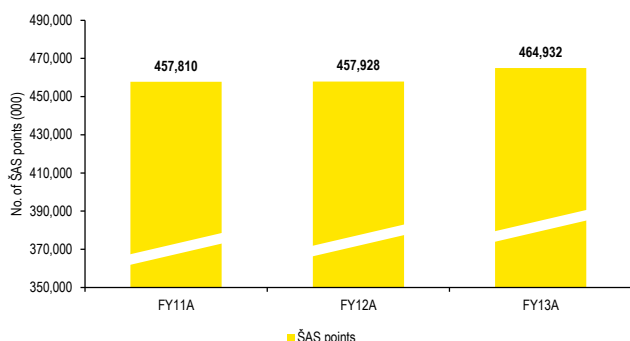




## Outpatient care UNB

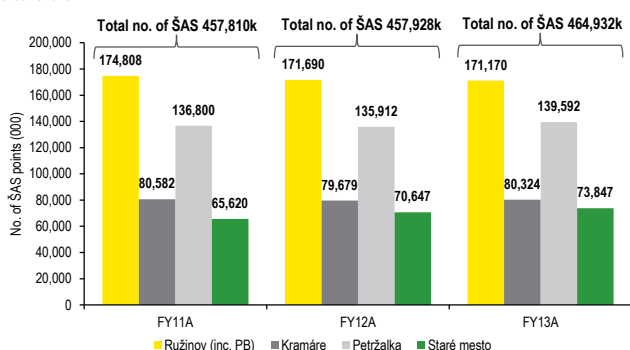
### Overview of no. of approved ŠAS points in UNB

Source: Client



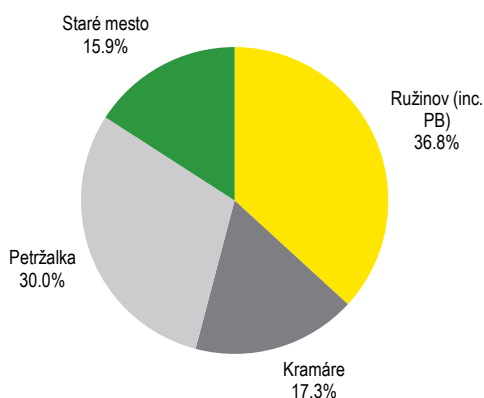
### Overview of no. of approved ŠAS points in UNB by hospitals

Source: Client



### Share of hospitals on total no. of approved ŠAS points in FY13A

Source: Client



### Outpatient ambulatory care

The upper two charts provide an overview of approved outpatient ambulatory care (ŠAS) points' development in UNB in periods FY11A, FY12A and FY13A.

- ▶ Total number of approved ŠAS points in FY11A was 457.8m. The majority of ŠAS points was generated by (i) Ružinov incl. Podunajské Biskupice (174.8m - 38.2%), followed by (ii) Petržalka (136.8m - 29.9%), (iii) Kramáře (80.6m - 17.6%), and (iv) Staré mesto (65.6m - 14.3%).
- ▶ The number of approved ŠAS points was relatively stable in FY12A (457.9m), a slight increase by less than 0.1% comparing to FY11A was reported.
- ▶ In FY13A the total number of approved ŠAS points increased by 7m (1.5%) compared to FY12A. The increase was mainly reported in Petržalka by 3.7m (2.7%) and in Staré Mesto by 3.2m (4.5%) as a result of more effective work organization and better utilization of resources.
- ▶ As depicted in the bottom left chart, the majority of ŠAS points was generated by Ružinov incl. Pod. Biskupice (171.2m ŠAS points, i.e. 36.8%), followed by Petržalka (139.6m ŠAS points, i.e. 30%), Kramáře (80.3m ŠAS points, i.e. 17.3%), Staré mesto (73.9 ŠAS points, i.e. 15.9%).

A detailed breakdown of ŠAS points by hospitals and departments in periods under review is provided in Financial analysis appendices.

### The key points to note

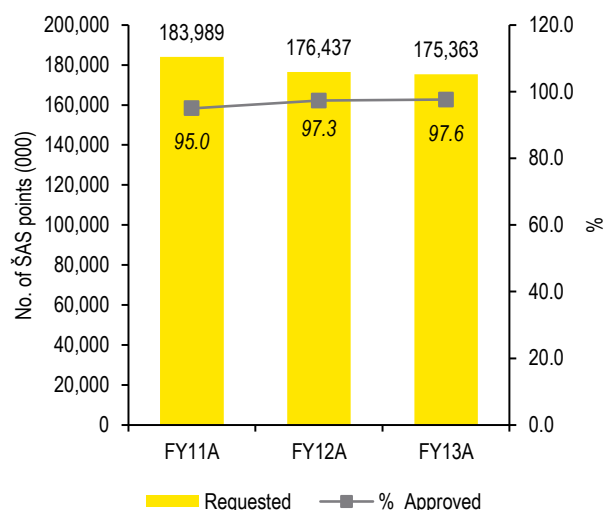
- The number of requested ŠAS points has decreased since FY11A by 1.3% (from 484.2m in FY11A to 477.9m in FY13A).
- The ratio of not approved points from requested ŠAS points has been decreasing since FY11A. While in FY11A there were 5.5% of not approved ŠAS points, in FY12A HICs did not approve only 3.4%. In FY13A the ratio was 2.7%.
- Central admissions generate the highest number of approved ŠAS points in total (15.1% of total ŠAS points in FY13A). In FY12A total number of approved ŠAS points increased by 5.4% comparing to FY11A (from 66.9m in FY11A to 70.5m in FY12A). In FY13A total number of approved ŠAS points at central admissions decreased by 0.5m (0.7%) to 70m.
- The share of other Top 5 departments on generated number of ŠAS points in FY13A was: (i) Gastroenterology 3.8% with 17.7 points, (ii) Cardiology 3.7% with 17.4m points, (iii) Ophthalmology 3.4% and (iv) ORL 3.2% with 14.8m.



## Outpatient care Ružinov (incl. Pod. Biskupice)

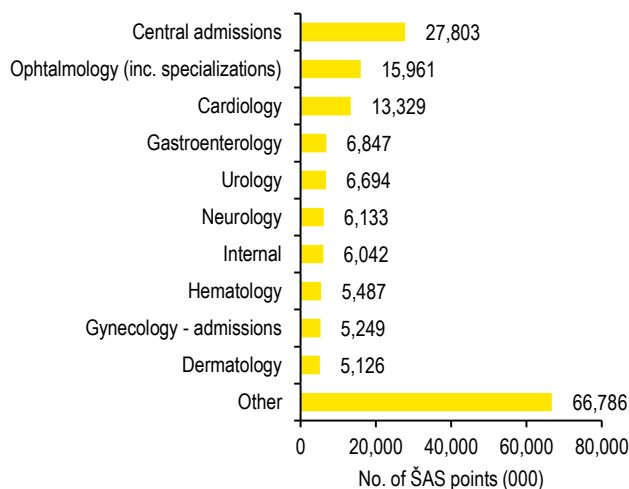
No. of requested ŠAS points in Ružinov (incl. Pod. Biskupice)

Source: Client



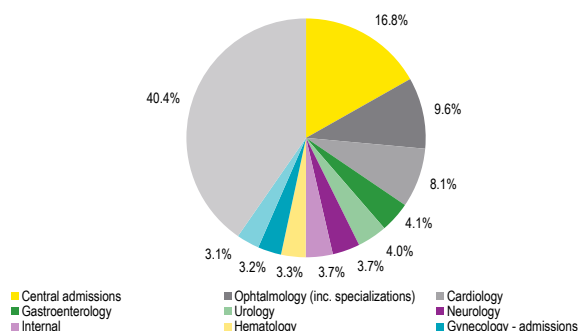
No. of approved ŠAS points in Ružinov (incl. Pod Biskupice) in FY13A by departments (TOP 10)

Source: Client



Share of outpatient care units (TOP 10) on total number of approved ŠAS points in Ružinov (inc. PB) in FY13A

Source: Client



### Outpatient care Ružinov (incl. Pod. Biskupice)

The upper chart on the left provides an overview of the number of requested ŠAS points and percentage of approved ŠAS points out of requested between periods FY11A and FY13A in Ružinov incl. Pod. Biskupice.

- ▶ The largest number of outpatient care ('OC') units is located in Ružinov (incl. Pod. Biskupice).
- ▶ The number of requested ŠAS points has decreased since FY11A. OC units in Ružinov (incl. PB) requested 184m ŠAS points in FY11A, 176.4m in FY12A and 175.4m in FY13A.
- ▶ On the other hand, the ratio of approved ŠAS points out of requested increased in the period under review. HICs approved 95% of requested ŠAS points in FY11A, 97.3% in FY12A and 97.6% in FY13A.

The chart in the middle depicts the number of approved ŠAS points by departments in FY13A.

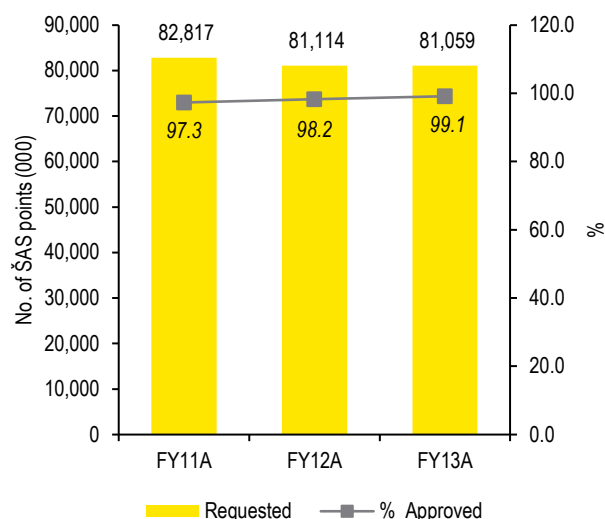
- ▶ TOP 10 departments represented c. 60% of total approved ŠAS points in Ružinov (incl. PB).
- ▶ Central admissions with 27.8m approved points have the largest share on total approved Ružinov's ŠAS points (16.8%) followed by Ophthalmology (incl. specializations) with 16m (9.6%) and Cardiology with 13.3m (7.8%) approved ŠAS points.
- ▶ Following outpatient care units have 3-4% share on total approved ŠAS points in Ružinov (incl. PB):
  - Gastroenterology 6.8m ŠAS points, i.e. 4.1%,
  - Urology 6.7m ŠAS points, i.e. 4.0%,
  - Neurology 6.1m ŠAS points, i.e. 3.7%,
  - Internal medicine 6m ŠAS points, i.e. 3.5%,
  - Gynecology admissions 5.5m ŠAS points, i.e. 3.2%,
  - Dermatology 5.2m ŠAS points, i.e. 3.1%,
  - Clinical oncology 5.1m ŠAS points, i.e. 3.0%
- ▶ There was a significant increase in number of requested and approved ŠAS points between FY11A and FY13A at (i) Endocrinology (68.1%), (ii) Orthodontics (10.6%) and (iii) Rheumatology (8.3%).
- ▶ On the other hand, a large decrease in ŠAS points was reported at (i) Plastic surgery (44.2%), (ii) Clinical psychology (35.1%) and (iii) Orthopedics and ORL (both 18.7%).
- ▶ Almost no unpaid overlimits were reported in the number of the ŠAS points in the period under review.

Detailed breakdown of requested, approved and paid ŠAS points in Ružinov (incl. Pod Biskupice) in periods FY11A, FY12A and FY13A is presented in Financial analysis appendices.

## Outpatient care Kramáre

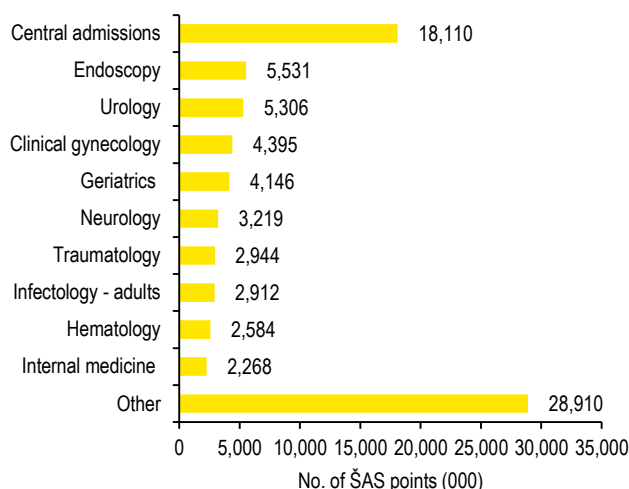
### No. of requested and % of approved ŠAS points in Kramáre

Source: Client



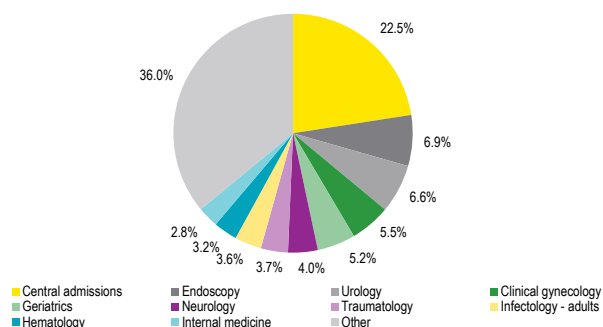
### No. of approved ŠAS points in Kramáre in FY13A by departments (TOP 10)

Source: Client



### Share of outpatient care units (TOP 10) on total number of approved ŠAS points in Kramáre in FY13A

Source: Client



### Outpatient care Kramáre

The upper chart on the left provides an overview of the number of requested ŠAS points and percentage of approved ŠAS points between FY11A and FY13A in Kramáre.

- ▶ The number of requested ŠAS points has decreased since FY11A. OC units in Kramáre requested 82.8m ŠAS points in FY11A, 81.1m in FY12A and 81.1m in FY13A.
- ▶ On the other hand, the ratio of approved ŠAS points out of requested increased in the period under review. HICs approved 97.3% of requested ŠAS points in FY11A, 98.2% in FY12A and 99.1% in FY13A.

The chart in the middle depicts the number of approved ŠAS points by departments in FY13A.

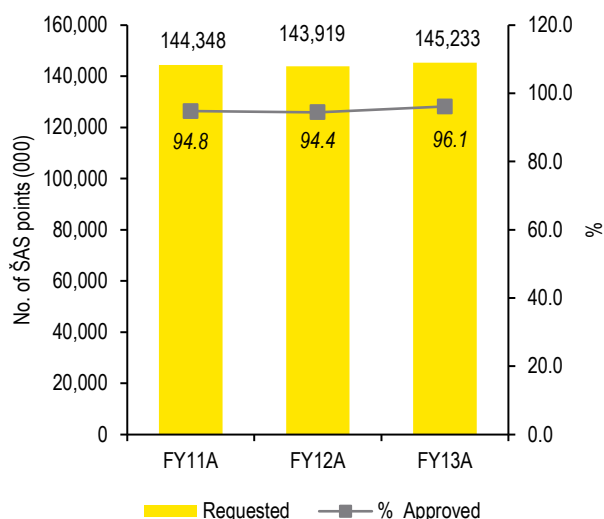
- ▶ TOP 10 outpatient care units represented c. 64% of total approved ŠAS points in Kramáre.
- ▶ (i) Central admissions with 18.1m approved points have the largest share (22.5%) on total approved ŠAS points of Kramáre followed by (ii) Endoscopy with 5.5m (6.9%) and (ii) Urology with 5.3m (6.6%) approved ŠAS points.
- ▶ Other TOP 10 outpatient care units regarding the number of approved ŠAS points in FY13A are:
  - Clinical oncology 4.4m ŠAS, i.e. 5.5%,
  - Geriatrics 4.1m, i.e. 5.2%,
  - Neurology 3.3m, i.e. 4%,
  - Traumatology 2.9m, i.e. 3.7%,
  - Infectology (adults) 2.9m, i.e. 3.6%.
- ▶ There are several outpatient care units with 2-3% share on total approved ŠAS points in FY13A, e.g. Hematology, Internal medicine, Surgery, Alergology, etc.
- ▶ Significant increase was reported in number of requested and approved ŠAS points between FY11A and FY13A in (i) Logopedy (42.3%), (ii) Traumatology - surgery (37%) and (iii) Clinical neurophysiology (33%).
- ▶ On the other hand, a large decrease in ŠAS points was reported at (i) Clinical surgery (12.4%), (ii) Diabetology (11.4%) and (iii) Hematology (9.4%).

Detailed breakdown of requested, approved and paid ŠAS points in Kramáre in periods FY11A, FY12A and FY13A is presented in Financial analysis appendices.

## Outpatient care Petržalka

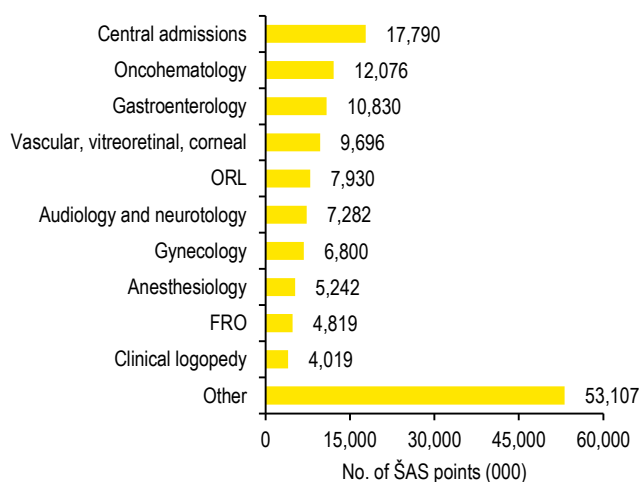
No. of requested and % of approved ŠAS points in Petržalka

Source: Client



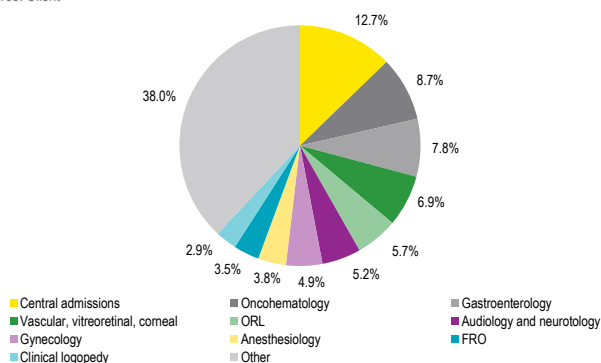
No. of approved ŠAS points in Petržalka in FY13A by departments (TOP 10)

Source: Client



Share of outpatient care units (TOP 10) on total number of approved ŠAS points in Petržalka in FY13A

Source: Client



### Outpatient care Petržalka

The upper chart on the left provides an overview of the number of requested ŠAS points and percentage of approved ŠAS points between FY11A and -FY13A in Petržalka.

- ▶ The number of requested ŠAS points was broadly stable and decreased by only 0.3% in FY12A comparing to FY11A and increased by 0.9% in FY13A comparing to FY12A. OC units in Petržalka requested 144.3m ŠAS points in FY11A, 143.9m in FY12A and 145.2m in FY13A.
- ▶ The ratio of approved points was 94.8% of requested ŠAS points in FY11A, 94.4% in FY12A and 96.1% in FY13A. The absolute number of not approved ŠAS points decreased between in FY11A and FY13A.

The chart in the middle illustrates the number of approved ŠAS points by departments in FY13A.

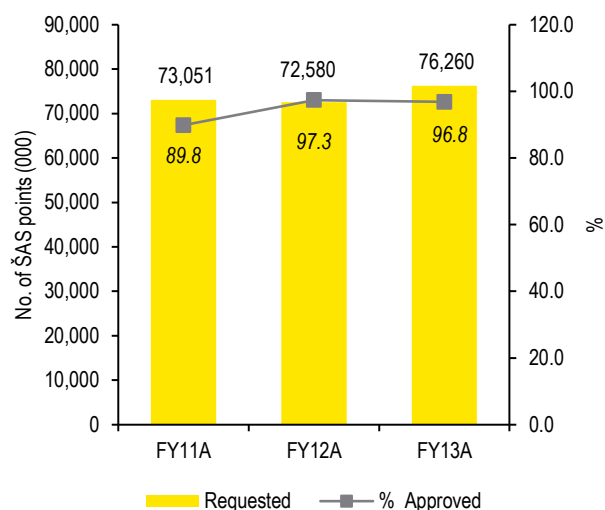
- ▶ TOP 10 outpatient care units represented c. 62% of total approved ŠAS points in Petržalka.
- ▶ Central admissions with 17.8m approved points have the largest share on total approved ŠAS points (12.7%) followed by Oncohematology with 12.1m (8.7%) and Gastroenterology with 10.8m (7.8%) approved ŠAS points.
- ▶ Other TOP 10 outpatient care units regarding the number of approved ŠAS points in FY13A were:
  - Vascular, vitreoretinal, corneal OC 9.7m ŠAS points, i.e. 6.9%,
  - ORL 7.9m, i.e. 5.7%,
  - Audiology and neurotology 7.3m, i.e. 5.2%,
  - Gynecology 6.8m, i.e. 4.9%.
- ▶ There were several outpatient care units with 2-4% share on total approved ŠAS points in FY13A, e.g. Anesthesiology, FRO, Neurology, Clinical logopedy, etc.
- ▶ Significant increase was reported in number of requested and approved ŠAS points between FY11A and FY13A at (i) Reproductive medicine (92.8%), (ii) FRO (41.3%) and (iii) Gynecology (24%). More than 100% increase in points was reported at Angiology (126.3%) and Children's neurology (207.2%).
- ▶ On the other hand, a large decrease in ŠAS points was reported at (i) Hemo-chemotherapy (38.6%), (ii) Hematology (38.1%) and (iii) Otological, rhinological and sleep disorders OC unit (16.3%).

Detailed breakdown of requested, approved and paid ŠAS points in Petržalka in periods FY11A, FY12A and FY13A is presented in Financial analysis appendices.

## Outpatient care Staré Mesto

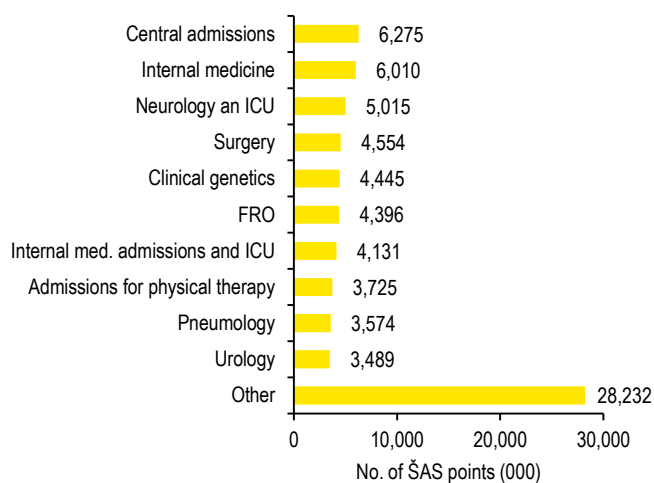
### No. of requested and % of approved ŠAS points in Staré mesto

Source: Client



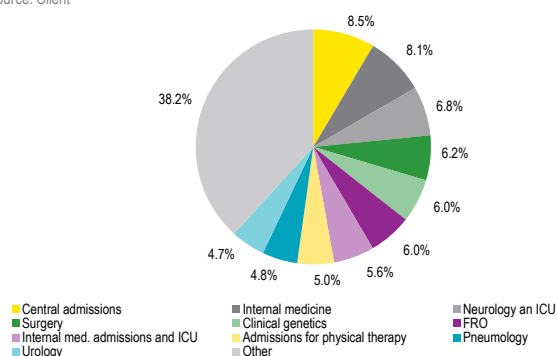
### No. of approved ŠAS points in Staré mesto in FY13A by departments (TOP 10)

Source: Client



### Share of outpatient care units (TOP 10) on total no. of approved ŠAS points in Staré mesto in FY13A

Source: Client



### Outpatient care Staré mesto

The upper chart on the left provides an overview of the number of requested ŠAS points and percentage of approved ŠAS points between FY11A and FY13A in Staré mesto.

- ▶ The number of requested ŠAS points decreased by 0.6% in FY12A comparing to FY11A and increased by 5.1% in FY13A comparing to FY12A. OC units in Staré mesto requested 73.1m ŠAS points in FY11A, 72.6m in FY12A and 76.3m in FY13A.
- ▶ The ratio of approved ŠAS points increased in FY12A comparing to FY11A but decreased again in FY13A. HICs approved 89.8% of requested ŠAS points in FY11A, 97.3% in FY12A and 96.8% in FY13A.

The chart in the middle depicts the number of approved ŠAS points by departments in FY13A.

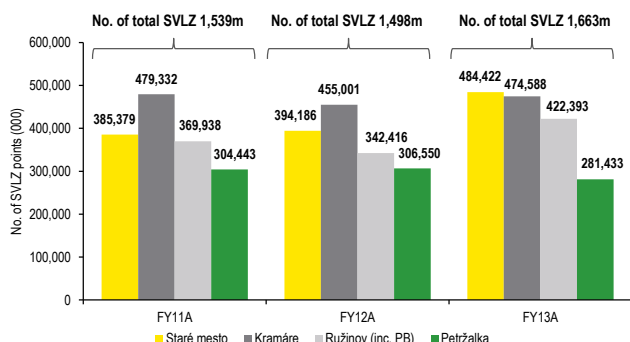
- ▶ TOP 10 outpatient care units represented c. 62% of total approved ŠAS points in Staré mesto.
- ▶ Central admissions with 6.3m approved points have the largest share on total approved ŠAS points (8.5%) followed by Internal medicine with 6m (8.1%) and Neurology with 5m (6.8%) approved ŠAS points.
- ▶ Other TOP 10 outpatient care units regarding the number of approved ŠAS points in FY13A were:
  - Surgery, Clinical genetics and FRO with c. 6% share,
  - Internal medicine admissions and intensive care unit with 5.6% share,
  - Physical therapy admissions, Pneumology and Urology with c. 5% share on total approved ŠAS points in Staré mesto.
- ▶ There are several outpatient care units with 2-3% share on total approved ŠAS points in FY13A, e.g. Cardiology, Angiology, Diabetology, ORL, etc.
- ▶ Significant increase was reported in number of requested and approved ŠAS points between FY11A and FY13A in (i) Internal medicine and intensive care unit (52.1%), (ii) Endocrinology (45.9%) and (iii) Central admissions (44.5%).
- ▶ On the other hand, a decrease in ŠAS points was reported in Angiology (18.6%) and Psychiatry (10%).

Detailed breakdown of requested, approved and paid ŠAS points in Staré Mesto in periods FY11A, FY12A and FY13A is presented in Financial analysis appendices.

## Diagnostic examinations UNB

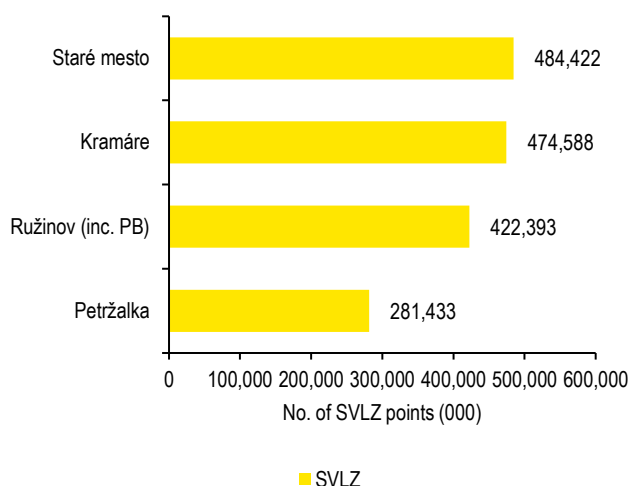
### Overview of approved SVLZ points by hospitals in FY11A-FY13A

Source: Client



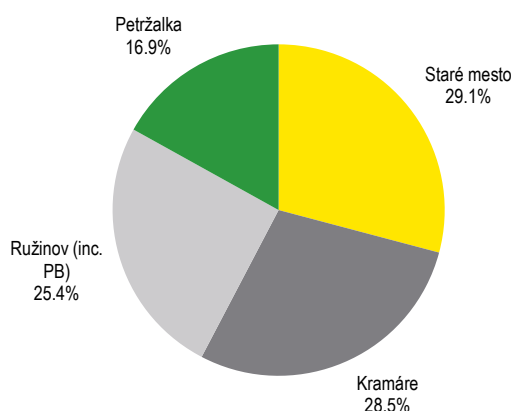
### Number of approved SVLZ points in FY13A by hospitals

Source: Client



### Share of hospitals on total approved SVLZ points in FY13A

Source: Client



### Diagnostic examinations

The upper chart provides an overview of approved diagnostic examinations (SVLZ) points' development in UNB in the reported period FY11A-FY13A.

- ▶ Total number of approved SVLZ points in FY11A was 1 539m. The majority of SVLZ points was generated in Kramáre (479.3m, i.e. 31%), followed by Staré mesto (385.4m, 25%), Ružinov incl. PB (369.9m, 24%), and Petržalka (304.4m, 20%).
- ▶ In FY12A the number of approved SVLZ points decreased by 2.7% (41k SVLZ points) compared to FY11A as a result of less diagnostic examinations provided in Kramáre and Ružinov (incl. PB).
- ▶ In FY13A the total number of approved SVLZ points increased by 11% (164.7k SVLZ points) compared to FY12A. As shown in the bottom left chart, the majority of SVLZ points was generated in Staré mesto (484.4m, i.e. 29.1%), followed by Kramáre (474.6m, 28.5%), Ružinov (incl. PB) (422.4m, 25.4%) and Petržalka (281.4m, 16.9%).

A more detailed breakdown of SVLZ points by hospitals and departments in the reported period is presented on following pages.

### The key points to note

- The total number of requested SVLZ points has increased from 1,623m points in FY11A to 1,729m points in FY13A
- The ratio of not approved out of requested SVLZ points in FY11A was 5.2%. In FY12A 54.7k (3.5%) of SVLZ points were not approved. In FY13A the ratio increased slightly to 3.8%.
- CT section generates the most SVLZ points in all hospitals except Petržalka as it is not located there. In FY11A the total number of approved SVLZ points was 463.9m. In FY12A the number increased by 4.2% and in FY13A by further 32.6%.
- The second most productive diagnostic section is Radiodiagnostics. In FY11A the approved SVLZ points totaled 217.1m. Radiodiagnostics' SVLZ points increased by 6.2% (13.5k) in FY12A. In FY13A only slight increase of 0.2% (0.35k points) was reported.



## Diagnostic examinations UNB

### Overview of SVLZ in UNB in FY11A-FY13A

| Unit: points 000, %                        | FY11A            |                  |                  | FY12A            |                  |                  | FY13A            |                  |                  | % of total<br>FY13A<br>Approved |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------------------|
|  | Requested        | Approved         | Paid             | Requested        | Approved         | Paid             | Requested        | Approved         | Paid             |                                 |
| <b>Ružinov (inc. PB)</b>                   | <b>398,878</b>   | <b>369,938</b>   | <b>369,938</b>   | <b>370,814</b>   | <b>342,416</b>   | <b>342,416</b>   | <b>448,139</b>   | <b>422,393</b>   | <b>422,393</b>   | <b>25.4</b>                     |
| CT section                                 | 155,186          | 152,211          | 152,211          | 151,641          | 149,563          | 149,563          | 234,197          | 229,510          | 229,510          | 13.3                            |
| Radiodiagnostics and USG                   | 66,693           | 56,920           | 56,920           | 66,580           | 63,700           | 63,700           | 71,756           | 62,545           | 62,545           | 3.6                             |
| FRO - rehabilitation halls                 | 25,005           | 16,366           | 16,366           | 25,399           | 14,743           | 14,743           | 27,936           | 21,207           | 21,207           | 1.2                             |
| Blood bank                                 | 16,445           | 15,957           | 15,957           | 13,633           | 13,487           | 13,487           | 15,172           | 15,116           | 15,166           | 0.9                             |
| Functional diagnostics                     | 15,654           | 15,383           | 15,383           | 15,140           | 14,895           | 14,895           | 15,225           | 15,073           | 15,073           | 0.9                             |
| Densitometry                               | 14,633           | 13,542           | 13,542           | 13,383           | 13,023           | 13,023           | 13,567           | 13,296           | 13,296           | 0.8                             |
| RTG  | 11,541           | 11,447           | 11,447           | 12,220           | 11,945           | 11,945           | 12,046           | 11,995           | 11,995           | 0.7                             |
| Ophthalmology                              | 9,388            | 9,318            | 9,318            | 10,826           | 10,818           | 10,818           | 10,540           | 11,204           | 11,204           | 0.6                             |
| FRO - department                           | 12,114           | 11,888           | 11,888           | 13,373           | 7,022            | 7,022            | 13,706           | 9,038            | 9,038            | 0.5                             |
| Non-invasive cardiology                    | 6,663            | 6,552            | 6,552            | 7,027            | 6,414            | 6,414            | 7,484            | 7,277            | 7,277            | 0.4                             |
| Other                                      | 65,556           | 60,354           | 60,354           | 41,592           | 36,806           | 36,806           | 26,510           | 26,130           | 26,130           | 1.5                             |
| <b>Kramáře</b>                             | <b>485,858</b>   | <b>479,332</b>   | <b>479,332</b>   | <b>460,484</b>   | <b>455,001</b>   | <b>455,001</b>   | <b>477,311</b>   | <b>474,588</b>   | <b>474,588</b>   | <b>28.5</b>                     |
| CT   | 199,990          | 197,486          | 197,486          | 203,268          | 201,250          | 201,250          | 219,404          | 217,249          | 217,249          | 12.6                            |
| MRI  | 141,203          | 139,378          | 139,378          | 108,056          | 107,399          | 107,399          | 108,856          | 108,516          | 108,516          | 6.3                             |
| Radiodiagnostics and USG                   | 59,550           | 58,048           | 58,048           | 62,722           | 61,951           | 61,951           | 64,285           | 64,002           | 64,002           | 3.7                             |
| Functional diagnostics                     | 28,746           | 28,446           | 28,446           | 28,781           | 28,668           | 28,668           | 28,350           | 28,804           | 28,804           | 1.7                             |
| FRO - department                           | 19,831           | 19,707           | 19,707           | 22,261           | 20,202           | 20,202           | 23,864           | 23,548           | 23,548           | 1.4                             |
| Blood bank                                 | 14,443           | 14,115           | 14,115           | 14,570           | 14,546           | 14,546           | 14,573           | 14,527           | 14,527           | 0.8                             |
| Clinical genetics                          | 8,931            | 8,910            | 8,910            | 8,204            | 7,685            | 7,685            | 6,550            | 6,498            | 6,498            | 0.4                             |
| Occupational medicine                      | 1,936            | 1,888            | 1,888            | 2,621            | 2,557            | 2,557            | 2,967            | 2,976            | 2,976            | 0.2                             |
| Internal medicine                          | 2,615            | 2,643            | 2,643            | 2,702            | 2,733            | 2,733            | 2,608            | 2,623            | 2,623            | 0.2                             |
| Endoscopy                                  | 517              | 572              | 572              | 1,046            | 1,652            | 1,652            | 1,055            | 1,055            | 1,055            | 0.1                             |
| Other                                      | 8,097            | 8,141            | 8,141            | 6,253            | 6,358            | 6,358            | 4,798            | 4,791            | 4,791            | 0.3                             |
| <b>Petržalka</b>                           | <b>317,464</b>   | <b>304,443</b>   | <b>304,443</b>   | <b>313,891</b>   | <b>306,550</b>   | <b>306,550</b>   | <b>309,599</b>   | <b>281,433</b>   | <b>281,433</b>   | <b>16.9</b>                     |
| Diagnostics and transfusions               | 142,038          | 139,363          | 139,363          | 136,727          | 134,200          | 134,200          | 124,181          | 121,452          | 121,452          | 7.0                             |
| Radiodiagnostics                           | 79,831           | 74,207           | 74,207           | 79,811           | 79,459           | 79,459           | 83,835           | 74,023           | 74,023           | 4.3                             |
| FRO - department                           | 27,920           | 27,624           | 27,624           | 33,493           | 31,200           | 31,200           | 37,706           | 23,339           | 23,339           | 1.3                             |
| Non-invasive cardiology                    | 20,983           | 19,865           | 19,865           | 21,403           | 21,076           | 21,076           | 20,551           | 20,334           | 20,334           | 1.2                             |
| Clinical immunology                        | 19,342           | 16,787           | 16,787           | 14,073           | 12,683           | 12,683           | 14,190           | 13,771           | 13,771           | 0.8                             |
| Densitometry                               | 6,458            | 6,172            | 6,172            | 11,174           | 10,984           | 10,984           | 12,851           | 12,531           | 12,531           | 0.7                             |
| Lithotripsy and ultrasonography            | 13,923           | 13,791           | 13,791           | 12,335           | 12,321           | 12,321           | 10,600           | 10,432           | 10,432           | 0.6                             |
| Gynecological ultrasound                   | 1,707            | 1,652            | 1,652            | 2,167            | 2,123            | 2,123            | 3,107            | 3,013            | 3,013            | 0.2                             |
| Neurophysiology                            | 2,258            | 2,198            | 2,198            | 1,509            | 1,486            | 1,486            | 1,197            | 1,192            | 1,192            | 0.1                             |
| Audiometry                                 | 632              | 573              | 573              | 517              | 413              | 413              | 487              | 473              | 473              | 0.0                             |
| Other                                      | 2,371            | 2,212            | 2,212            | 682              | 606              | 606              | 895              | 873              | 873              | 0.1                             |
| <b>Staré mesto</b>                         | <b>420,783</b>   | <b>385,379</b>   | <b>385,379</b>   | <b>407,633</b>   | <b>394,186</b>   | <b>394,186</b>   | <b>493,949</b>   | <b>484,422</b>   | <b>484,422</b>   | <b>29.1</b>                     |
| CT   | 122,099          | 114,194          | 114,194          | 132,954          | 132,471          | 132,471          | 194,480          | 194,232          | 194,232          | 11.2                            |
| Molecular, biochem. genetics               | 104,117          | 97,300           | 97,300           | 80,703           | 78,869           | 78,869           | 59,979           | 59,164           | 59,164           | 3.4                             |
| Pathological anatomy dpt.                  | 42,643           | 38,033           | 38,033           | 44,143           | 43,334           | 43,334           | 45,968           | 45,246           | 45,246           | 2.6                             |
| Microbiology department                    | 27,430           | 25,254           | 25,254           | 30,878           | 28,860           | 28,860           | 34,696           | 33,754           | 33,754           | 2.0                             |
| Labs of molecular and biochemical genetics | -                | -                | -                | -                | -                | -                | 35,647           | 33,702           | 33,702           | 1.9                             |
| Radiodiagnostics                           | 29,632           | 27,949           | 27,949           | 25,787           | 25,488           | 25,488           | 30,448           | 30,376           | 30,376           | 1.8                             |
| RTG - USG                                  | 14,792           | 13,711           | 13,711           | 15,178           | 15,126           | 15,126           | 16,314           | 16,294           | 16,294           | 0.9                             |
| Spinal fluid examination lab               | 12,760           | 11,919           | 11,919           | 12,955           | 12,929           | 12,929           | 14,483           | 14,387           | 14,387           | 0.8                             |
| Labs of clinical genetics                  | 16,120           | 14,940           | 14,940           | 13,390           | 12,685           | 12,685           | 10,297           | 10,588           | 10,588           | 0.6                             |
| Nuclear medicine                           | 12,458           | 11,644           | 11,644           | 12,271           | 11,215           | 11,215           | 10,368           | 10,353           | 10,353           | 0.6                             |
| Other                                      | 38,734           | 30,435           | 30,435           | 39,373           | 33,210           | 33,210           | 41,269           | 36,326           | 36,326           | 2.2                             |
| <b>Total</b>                               | <b>1,622,984</b> | <b>1,539,091</b> | <b>1,539,091</b> | <b>1,552,821</b> | <b>1,498,153</b> | <b>1,498,153</b> | <b>1,728,998</b> | <b>1,662,836</b> | <b>1,662,836</b> | <b>100.0</b>                    |

Source: Client

## Diagnostic examinations Ružinov (inc. PB)

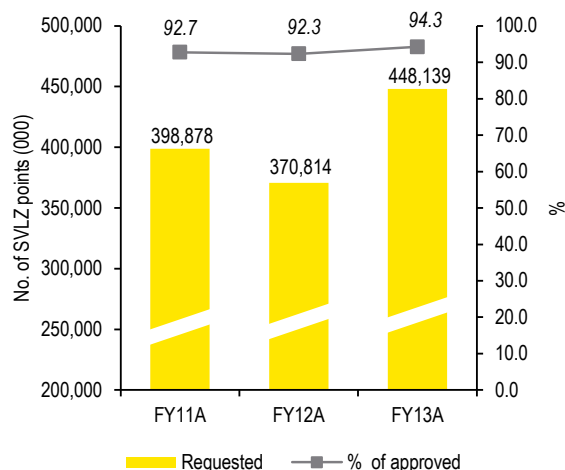
## Overview of number of SVLZ points in Ružinov (including Podunajské Biskupice) in FY11A-FY13A

| Unit: points 000, %                   | FY11A          |                |                | FY12A          |                |                | FY13A          |                |                | % of total<br>FY13A<br>Approved |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------------|
|                                       | Request<br>ed  | Approve<br>d   | Paid           | Request<br>ed  | Approve<br>d   | Paid           | Request<br>ed  | Approve<br>d   | Paid           |                                 |
| <b>Ružinov (inc. PB)</b>              | <b>398,878</b> | <b>369,938</b> | <b>369,938</b> | <b>370,814</b> | <b>342,416</b> | <b>342,416</b> | <b>448,139</b> | <b>422,393</b> | <b>422,393</b> | <b>25.4</b>                     |
| CT section                            | 155,186        | 152,211        | 152,211        | 151,641        | 149,563        | 149,563        | 234,197        | 229,510        | 229,510        | 13.3                            |
| Section of radiodiagnostics and USG   | 66,693         | 56,920         | 56,920         | 66,580         | 63,700         | 63,700         | 71,756         | 62,545         | 62,545         | 3.6                             |
| FRO - rehabilitation halls            | 25,005         | 16,366         | 16,366         | 25,399         | 14,743         | 14,743         | 27,936         | 21,207         | 21,207         | 1.2                             |
| Blood bank                            | 16,445         | 15,957         | 15,957         | 13,633         | 13,487         | 13,487         | 15,172         | 15,116         | 15,116         | 0.9                             |
| Functional diagnostics                | 15,654         | 15,383         | 15,383         | 15,140         | 14,895         | 14,895         | 15,225         | 15,073         | 15,073         | 0.9                             |
| Densitometry                          | 14,633         | 13,542         | 13,542         | 13,383         | 13,023         | 13,023         | 13,567         | 13,296         | 13,296         | 0.8                             |
| RTG                                   | 11,541         | 11,447         | 11,447         | 12,220         | 11,945         | 11,945         | 12,046         | 11,995         | 11,995         | 0.7                             |
| Ophthalmology                         | 9,388          | 9,318          | 9,318          | 10,826         | 10,818         | 10,818         | 10,540         | 11,204         | 11,204         | 0.6                             |
| FRO department                        | 12,114         | 11,888         | 11,888         | 13,373         | 7,022          | 7,022          | 13,706         | 9,038          | 9,038          | 0.5                             |
| Non-invasive cardiology               | 6,663          | 6,552          | 6,552          | 7,027          | 6,414          | 6,414          | 7,484          | 7,277          | 7,277          | 0.4                             |
| Endoscopy - Lithotripsy               | 5,252          | 5,340          | 5,340          | 5,700          | 5,700          | 5,700          | 7,620          | 6,958          | 6,958          | 0.4                             |
| Neurology OC                          | 3,238          | 3,149          | 3,149          | 2,601          | 2,579          | 2,579          | 3,020          | 3,728          | 3,728          | 0.2                             |
| Gastroenterological endoscopy and USG | 5,043          | 3,979          | 3,979          | 5,739          | 5,318          | 5,318          | 3,710          | 3,673          | 3,673          | 0.2                             |
| USG in gynecology and obstetrics      | 4,279          | 3,670          | 3,670          | 3,154          | 2,915          | 2,915          | 3,281          | 3,248          | 3,248          | 0.2                             |
| Urology OC                            | 2,109          | 1,964          | 1,964          | 2,576          | 2,566          | 2,566          | 2,528          | 2,528          | 2,528          | 0.1                             |
| Gastroenterology clinic               | 1,585          | 1,536          | 1,536          | 2,829          | 2,775          | 2,775          | 2,576          | 2,513          | 2,513          | 0.1                             |
| Neonatology                           | 3,367          | 2,991          | 2,991          | 2,160          | 1,906          | 1,906          | 2,146          | 1,994          | 1,994          | 0.1                             |
| Other                                 | 40,683         | 37,724         | 37,724         | 16,833         | 13,046         | 13,046         | 1,630          | 1,489          | 1,489          | 0.1                             |

Source: Client

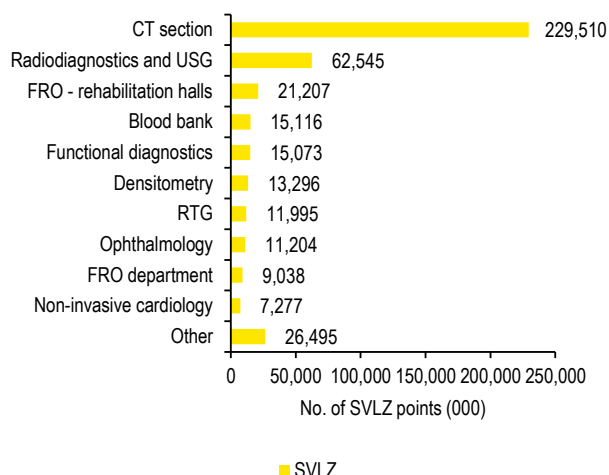
Number of requested and % of approved SVLZ points in  
Ružinov (inc. PB) in FY11A-FY13A

Source: Client



## Approved SVLZ in FY13A in Ružinov (inc. PB)

Source: Client



## Diagnostic examinations in Ružinov (inc. PB)

The table above provides a detailed breakdown of requested, approved and paid SVLZ in Ružinov (inc. PB) in FY11A-FY13A.

The upper chart provides an overview of approved SVLZ points' development in Ružinov (inc. PB) in reported period.

- ▶ The number of requested SVLZ points decreased by 7% in FY12A compared to FY11A and increased by 20.9% in FY13A compared to FY12A. Diagnostic centers in Ružinov (inc. PB) requested 398.9m SVLZ points in FY11A, 370.8m in FY12A and 448.1m in FY13A.
- ▶ HICs did not approve 7.3% of requested SVLZ points in FY11A, 7.7% in FY12A and 5.7% in FY13A.
- ▶ The bottom left chart shows the number of approved SVLZ points in FY13A. TOP 10 diagnostic centers represent c. 94% of total approved SVLZ points in Ružinov (inc. PB).
- ▶ CT section with 229.5m approved points has the largest share on total approved SVLZ points (54.3%) followed by Radiodiagnostics and USG with 62.5m (14.8%) and FRO rehabilitation halls with 21.2m (5%) approved SVLZ points.
- ▶ Other of TOP 10 diagnostic centers with significant share on total approved SVLZ points in FY13A are:
  - Functional diagnostics with 5% share,
  - Blood bank and densitometry with c. 3.6% share,
  - RTG, Ophthalmology with c. 3% share.

## Diagnostic examinations Kramáre

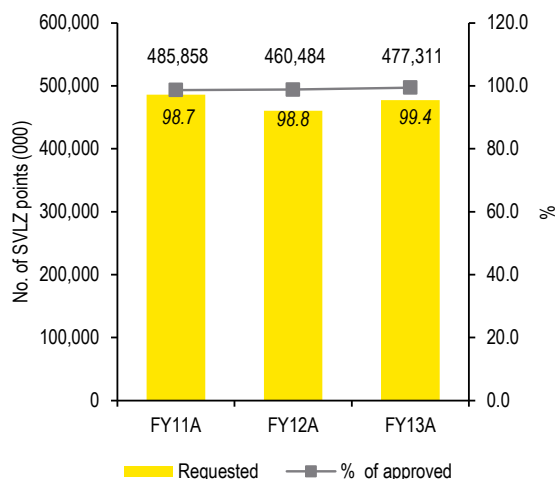
### Overview of SVLZ in Kramáre in FY11A-FY13A

| Unit: points 000, %           | FY11A     |          |         | FY12A     |          |         | FY13A     |          |         | % of total<br>FY13A<br>Approved |
|-------------------------------|-----------|----------|---------|-----------|----------|---------|-----------|----------|---------|---------------------------------|
|                               | Requested | Approved | Paid    | Requested | Approved | Paid    | Requested | Approved | Paid    |                                 |
| Kramáre                       | 485,858   | 479,332  | 479,332 | 460,484   | 455,001  | 455,001 | 477,311   | 474,588  | 474,588 | 28.5                            |
| CT                            | 199,990   | 197,486  | 197,486 | 203,268   | 201,250  | 201,250 | 219,404   | 217,249  | 217,249 | 12.6                            |
| MRI                           | 141,203   | 139,378  | 139,378 | 108,056   | 107,399  | 107,399 | 108,856   | 108,516  | 108,516 | 6.3                             |
| Radiodiagnostics and USG      | 59,550    | 58,048   | 58,048  | 62,722    | 61,951   | 61,951  | 64,285    | 64,002   | 64,002  | 3.7                             |
| Functional diagnostics        | 28,746    | 28,446   | 28,446  | 28,781    | 28,668   | 28,668  | 28,350    | 28,804   | 28,804  | 1.7                             |
| FRO - department              | 19,831    | 19,707   | 19,707  | 22,261    | 20,202   | 20,202  | 23,864    | 23,548   | 23,548  | 1.4                             |
| Blood bank                    | 14,443    | 14,115   | 14,115  | 14,570    | 14,546   | 14,546  | 14,573    | 14,527   | 14,527  | 0.8                             |
| Clinical genetics             | 8,931     | 8,910    | 8,910   | 8,204     | 7,685    | 7,685   | 6,550     | 6,498    | 6,498   | 0.4                             |
| Occupational medicine         | 1,936     | 1,888    | 1,888   | 2,621     | 2,557    | 2,557   | 2,967     | 2,976    | 2,976   | 0.2                             |
| Internal medicine             | 2,615     | 2,643    | 2,643   | 2,702     | 2,733    | 2,733   | 2,608     | 2,623    | 2,623   | 0.2                             |
| Endoscopy                     | 517       | 572      | 572     | 1,046     | 1,652    | 1,652   | 1,055     | 1,055    | 1,055   | 0.1                             |
| Geriatrics                    | 527       | 527      | 527     | 1,515     | 1,543    | 1,543   | 980       | 981      | 981     | 0.1                             |
| Internal medicine             | 1,054     | 1,103    | 1,103   | 1,253     | 1,317    | 1,317   | 953       | 955      | 955     | 0.1                             |
| Ultrasonography workplace     | 960       | 952      | 952     | 892       | 935      | 935     | 885       | 886      | 886     | 0.1                             |
| Biochemical laboratory - KIGM | 973       | 940      | 940     | 868       | 844      | 844     | 958       | 878      | 878     | 0.1                             |
| Urology - lithotripsy and USG | 1,750     | 1,733    | 1,733   | 1,241     | 1,241    | 1,241   | 475       | 525      | 525     | 0.0                             |
| Clinical neurophysiology      | 235       | 253      | 253     | 344       | 330      | 330     | 336       | 336      | 336     | 0.0                             |
| Clinical gynecologic          | 438       | 479      | 479     | 139       | 148      | 148     | 209       | 228      | 228     | 0.0                             |
| Neonatal - Sonography         | 2,161     | 2,153    | 2,153   | -         | -        | -       | 2         | 2        | 2       | 0.0                             |

Source: Client

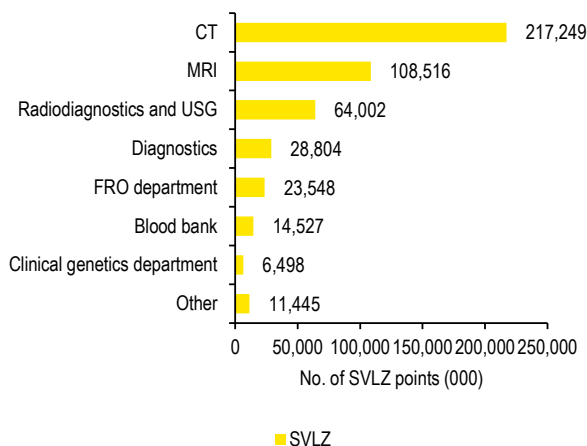
### Number of requested and % of approved SVLZ points in Kramáre in FY11A-FY13A

Source: Client



### Number of approved SVLZ points in FY13A in Kramáre

Source: Client



### Diagnostic examinations Kramáre

The table above provides a detailed breakdown of requested, approved and paid SVLZ in Kramáre in FY11A-FY13A.

The upper left chart provides an overview of approved SVLZ points' development in Kramáre in FY11A-FY13A.

- ▶ The number of requested SVLZ points decreased by 5.2% in FY12A comparing to FY11A and increased by 3.7% in FY13A comparing to FY12A. Diagnostic centers in Kramáre requested 485.9m SVLZ points in FY11A, 460.5m in FY12A and 477.3m in FY13A.
- ▶ HICs did not approve 1.3% of requested SVLZ points in FY11A, 1.2% in FY12A and only 0.6% in FY13A.
- ▶ The bottom left chart shows the number of approved SVLZ points in FY13A. TOP 10 diagnostic centers represent c. 98% of total approved SVLZ points in Kramáre.
- ▶ CT section with 217.2m approved points has the largest share on total approved SVLZ points (45.8%) followed by MRI with 108.5m (22.9%) and Radiodiagnostics and USG with 64.0m (13.5%) approved SVLZ points.
- ▶ Other of TOP 10 diagnostic centers with significant share on total approved SVLZ points in FY13A are:
  - Diagnostics with c. 6% share,
  - FRO department with c. 5% share,
  - Blood bank with c. 3% share.



## Diagnostic examinations Petržalka

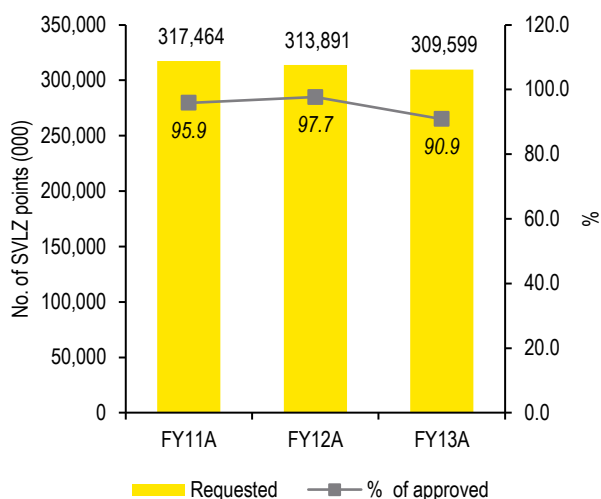
### Overview of SVLZ in Petržalka in FY11A-FY13A

| Unit: points 000, %            | FY11A          |                |                | FY12A          |                |                | FY13A          |                |                | % of total<br>FY13A<br>Approved |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------------|
|                                | Requested      | Approved       | Paid           | Requested      | Approved       | Paid           | Requested      | Approved       | Paid           |                                 |
| <b>Petržalka</b>               | <b>317,464</b> | <b>304,443</b> | <b>304,443</b> | <b>313,891</b> | <b>306,550</b> | <b>306,550</b> | <b>309,599</b> | <b>281,433</b> | <b>281,433</b> | <b>16.9</b>                     |
| Lab diagnost. and transfusions | 142,038        | 139,363        | 139,363        | 136,727        | 134,200        | 134,200        | 124,181        | 121,452        | 121,452        | 7.0                             |
| Radiodiagnostics               | 79,831         | 74,207         | 74,207         | 79,811         | 79,459         | 79,459         | 83,835         | 74,023         | 74,023         | 4.3                             |
| FRO - department               | 27,920         | 27,624         | 27,624         | 33,493         | 31,200         | 31,200         | 37,706         | 23,339         | 23,339         | 1.3                             |
| Non-invasive cardiology        | 20,983         | 19,865         | 19,865         | 21,403         | 21,076         | 21,076         | 20,551         | 20,334         | 20,334         | 1.2                             |
| Clinical immunology            | 19,342         | 16,787         | 16,787         | 14,073         | 12,683         | 12,683         | 14,190         | 13,771         | 13,771         | 0.8                             |
| Densitometry                   | 6,458          | 6,172          | 6,172          | 11,174         | 10,984         | 10,984         | 12,851         | 12,531         | 12,531         | 0.7                             |
| Lithotripsy and USG            | 13,923         | 13,791         | 13,791         | 12,335         | 12,321         | 12,321         | 10,600         | 10,432         | 10,432         | 0.6                             |
| Gynecological ultrasound       | 1,707          | 1,652          | 1,652          | 2,167          | 2,123          | 2,123          | 3,107          | 3,013          | 3,013          | 0.2                             |
| Neurophysiology                | 2,258          | 2,198          | 2,198          | 1,509          | 1,486          | 1,486          | 1,197          | 1,192          | 1,192          | 0.1                             |
| Audiometry                     | 632            | 573            | 573            | 517            | 413            | 413            | 487            | 473            | 473            | 0.0                             |
| USG for newborns               | 2,358          | 2,203          | 2,203          | 241            | 167            | 167            | 456            | 437            | 437            | 0.0                             |
| Blood bank                     | -              | -              | -              | 440            | 438            | 438            | 404            | 402            | 402            | 0.0                             |
| USG surgery                    | 13             | 8              | 8              | -              | -              | -              | 35             | 35             | 35             | 0.0                             |

Source: Client

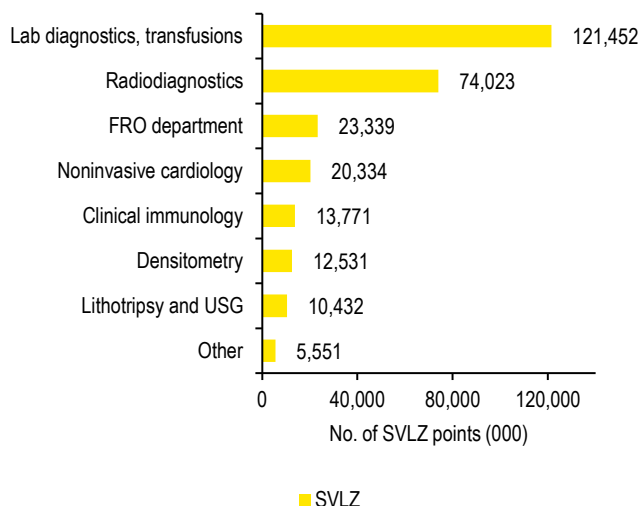
### Number of requested and % of approved SVLZ points in Petržalka in FY11A-FY13A

Source: Client



### Approved SVLZ in Petržalka in FY13A

Source: Client



### Diagnostic examinations Petržalka

The upper left chart provides an overview of approved SVLZ points' development in Petržalka in reported period FY11A-FY13A.

- ▶ The number of requested SVLZ points decreased by 1.1% in FY12A compared to FY11A and decreased further by 1.4% in FY13A compared to FY12A. Diagnostic centers in Petržalka requested 317.5m SVLZ points in FY11A, 313.9m in FY12A and 309.6m in FY13A.
- ▶ HICs did not approve 4.1% of requested SVLZ points in FY11A, 2.3% in FY12A and 9.1% in FY13A.
- ▶ The bottom left chart shows the number of approved SVLZ points in FY13A. TOP 10 diagnostic centers represent c. 98% of total approved SVLZ points in Petržalka.
- ▶ Lab diagnostics, transfusions with 121.5m approved points has the largest share on total approved SVLZ points (43.2%) followed by Radiodiagnostics with 74.0m (26.3%) and FRO department with 23.3m (8.3%) points.
- ▶ Other diagnostic centers with significant share on total approved SVLZ points in FY13A in Petržalka are:
  - Non-invasive with c. 7% share,
  - Clinical immunology c. 5% share,
  - Blood bank with c. 3% share.

## Diagnostic examinations Staré Mesto

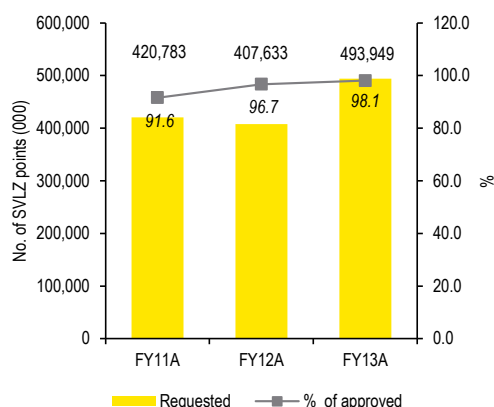
### Overview of SVLZ in Staré mesto in FY11A-FY13A

| Unit: points 000, %                           | FY11A          |                |                | FY12A          |                |                | FY13A          |                |                | % of total<br>FY13A<br>Approved |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------------|
|   | Requested      | Approved       | Paid           | Requested      | Approved       | Paid           | Requested      | Approved       | Paid           |                                 |
| <b>Staré mesto</b>                            | <b>420,783</b> | <b>385,379</b> | <b>385,379</b> | <b>407,633</b> | <b>394,186</b> | <b>394,186</b> | <b>493,949</b> | <b>484,422</b> | <b>484,422</b> | <b>29.1</b>                     |
| CT  | 122,099        | 114,194        | 114,194        | 132,954        | 132,471        | 132,471        | 194,480        | 194,232        | 194,232        | 11.2                            |
| Labs of molecular and<br>biochemical genetics | 104,117        | 97,300         | 97,300         | 80,703         | 78,869         | 78,869         | 59,979         | 59,164         | 59,164         | 3.4                             |
| Pathological anatomy                          | 42,643         | 38,033         | 38,033         | 44,143         | 43,334         | 43,334         | 45,968         | 45,246         | 45,246         | 2.6                             |
| Microbiology                                  | 27,430         | 25,254         | 25,254         | 30,878         | 28,860         | 28,860         | 34,696         | 33,754         | 33,754         | 2.0                             |
| Molecular and biochemical<br>genetics         | -              | -              | -              | -              | -              | -              | 35,647         | 33,702         | 33,702         | 1.9                             |
| Radiodiagnostics                              | 29,632         | 27,949         | 27,949         | 25,787         | 25,488         | 25,488         | 30,448         | 30,376         | 30,376         | 1.8                             |
| RTG - USG                                     | 14,792         | 13,711         | 13,711         | 15,178         | 15,126         | 15,126         | 16,314         | 16,294         | 16,294         | 0.9                             |
| Spinal fluid examination lab                  | 12,760         | 11,919         | 11,919         | 12,955         | 12,929         | 12,929         | 14,483         | 14,387         | 14,387         | 0.8                             |
| Labs of clinical genetics                     | 16,120         | 14,940         | 14,940         | 13,390         | 12,685         | 12,685         | 10,297         | 10,588         | 10,588         | 0.6                             |
| Nuclear medicine                              | 12,458         | 11,644         | 11,644         | 12,271         | 11,215         | 11,215         | 10,368         | 10,353         | 10,353         | 0.6                             |
| FRO - department                              | 9,140          | 4,476          | 4,476          | 11,501         | 5,528          | 5,528          | 13,374         | 8,562          | 8,562          | 0.5                             |
| Densitometry                                  | 7,916          | 5,884          | 5,884          | 6,944          | 6,923          | 6,923          | 6,599          | 6,583          | 6,583          | 0.4                             |
| Functional diagnostics                        | 4,524          | 4,206          | 4,206          | 4,887          | 4,860          | 4,860          | 4,933          | 4,932          | 4,932          | 0.3                             |
| USG   | 3,028          | 2,851          | 2,851          | 3,306          | 3,301          | 3,301          | 3,384          | 3,378          | 3,378          | 0.2                             |
| Clinical immunology - lab                     | 3,507          | 3,554          | 3,554          | 3,192          | 3,182          | 3,182          | 3,285          | 3,266          | 3,266          | 0.2                             |
| Blood bank                                    | 3,044          | 2,872          | 2,872          | 3,053          | 2,989          | 2,989          | 3,217          | 3,213          | 3,213          | 0.2                             |
| Endoscopy                                     | 2,130          | 1,920          | 1,920          | 2,233          | 2,199          | 2,199          | 3,224          | 3,151          | 3,151          | 0.2                             |
| Mycology lab of dermatology                   | 1,844          | 1,717          | 1,717          | 1,494          | 1,481          | 1,481          | 1,388          | 1,380          | 1,380          | 0.1                             |
| Neurology - USG                               | 1,621          | 1,339          | 1,339          | 1,657          | 1,657          | 1,657          | 952            | 952            | 952            | 0.1                             |
| USG - functional examination                  | 1,899          | 1,545          | 1,545          | 1,070          | 1,058          | 1,058          | 914            | 910            | 910            | 0.1                             |
| Psychiatry - diagnostics                      | 77             | 67             | 67             | 33             | 31             | 31             | 0              | -              | -              | -                               |
| Biochemical lab                               | 4              | 4              | 4              | 1              | 1              | 1              | -              | -              | -              | -                               |

Source: Client

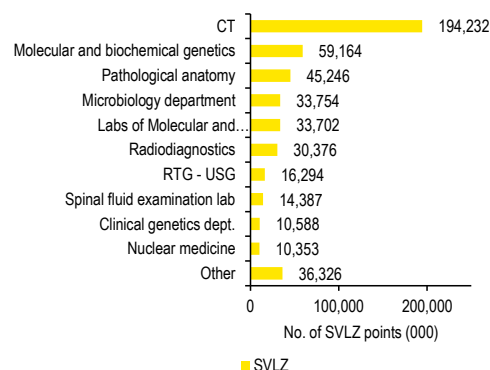
### Requested and approved SVLZ in Staré Mesto in FY11A-FY13A

Source: Client



### Approved SVLZ in Staré Mesto in FY13A

Source: Client



### Diagnostic examinations Staré Mesto

The chart on the left provides an overview of approved SVLZ points' development in Staré mesto in the reported period FY11A-FY13A.

- ▶ The number of requested SVLZ points decreased by 3.1% in FY12A compared to FY11A and increased by 21.2% in FY13A compared to FY12A. Diagnostic centers in Staré mesto requested 420.8m SVLZ points in FY11A, 407.6m in FY12A and 493.9m in FY13A.
- ▶ HICs did not approve 8.4% of requested SVLZ points in FY11A, 3.3% in FY12A and only 1.9% in FY13A.
- ▶ TOP 10 diagnostic centers represent c. 93% of total approved SVLZ points in Staré mesto.
- ▶ CT section with 194.2m approved points has the largest share on total approved SVLZ points (40.1%) followed by Molecular and biochemical genetics with 59.2m (12.2%) and Pathological anatomy with 45.2m (9.3%).

## Surgeries and childbirths

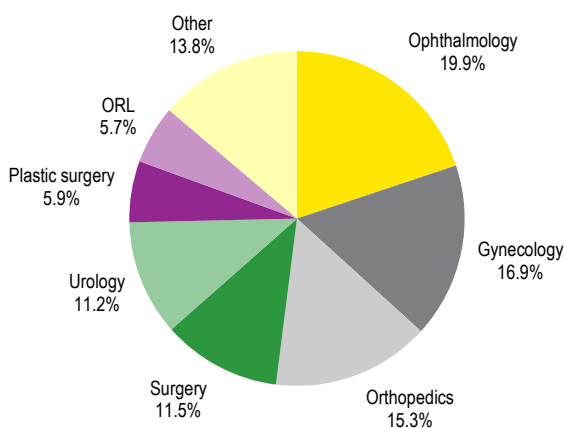
Number of surgeries in UNB in FY11A-FY13A by hospital

| Units                        | FY11A         | FY12A         | FY13A         |
|------------------------------|---------------|---------------|---------------|
| <b>Ružinov</b>               | <b>21,589</b> | <b>22,233</b> | <b>23,427</b> |
| Ophthalmology                | 4,057         | 4,925         | 5,940         |
| Plastic surgery              | 3,378         | 3,301         | 3,166         |
| Gynecology and obstetrics    | 2,952         | 2,882         | 3,001         |
| Orthopedics and traumatology | 2,469         | 2,486         | 2,750         |
| Maxillofacial surgery        | 2,219         | 2,041         | 1,987         |
| Hand surgery                 | 1,510         | 1,723         | 1,679         |
| Surgery                      | 1,539         | 1,545         | 1,577         |
| Urology                      | 1,230         | 1,222         | 1,259         |
| Chest surgery                | 1,102         | 1,047         | 1,135         |
| ORL                          | 771           | 665           | 574           |
| Burns                        | 362           | 396           | 359           |
| <b>Kramáře</b>               | <b>9,624</b>  | <b>9,024</b>  | <b>11,288</b> |
| Urology                      | 2,272         | 1,672         | 3,083         |
| Gynecology and obstetrics    | 1,861         | 2,030         | 2,962         |
| Traumatology                 | 2,722         | 2,068         | 2,097         |
| Surgery                      | 1,367         | 1,894         | 1,705         |
| Neurosurgery                 | 1,402         | 1,360         | 1,441         |
| <b>Petržalka</b>             | <b>15,630</b> | <b>17,637</b> | <b>17,556</b> |
| Ophthalmology                | 3,103         | 4,461         | 4,681         |
| Traumatology                 | 3,349         | 3,032         | 3,307         |
| Gynecology and obstetrics    | 2,844         | 2,974         | 3,065         |
| ORL                          | 2,479         | 2,692         | 2,449         |
| Surgery                      | 1,384         | 1,699         | 1,658         |
| Urology                      | 1,533         | 2,002         | 1,628         |
| Vascular surgery             | 938           | 777           | 768           |
| <b>Staré Mesto</b>           | <b>1,088</b>  | <b>1,077</b>  | <b>1,191</b>  |
| Surgery                      | 1,088         | 1,077         | 1,191         |
| <b>Total UNB</b>             | <b>47,931</b> | <b>49,971</b> | <b>53,462</b> |

Source: Client

Share of departments on total number of surgeries in UNB FY13A

Source: Client



### Surgeries

The table on the left provides an overview of surgeries by hospitals and departments.

- ▶ The number of surgeries has increased by 4.3% in FY11A and by another 7% in FY13A.
- ▶ As depicted in the bottom left chart, the largest share on total surgeries in FY13A in UNB have (i) Ophthalmology with 10,621 operations (19.9%), (ii) Gynecology with 9,028 operations (16.9%), (iii) Orthopedics with 8,154 operations (15.3%), (iv) Surgery with 6,131 operations (11.5%) and (v) Urology with 5,970 operations (11.2%).
- ▶ The most surgeries in FY13A (43.8%) were provided in Ružinov followed by Petržalka (32.8%), Kramáře (21.1%) and Staré Mesto (2.2%).

### Childbirths

The table below provides an overview of childbirths in UNB in FY11A-FY13A.

- ▶ The total number of childbirths was stable between FY11A and FY12A and increased by 2.6% in FY13A.
- ▶ The most childbirths were performed in Petržalka in FY11A-FY13A with an increase of 11.4% during the period. As shown in the chart below, the largest share on childbirths in UNB in FY13A has Petržalka (40.2%) followed by Kramáře (30.4%) and Ružinov (29.4%).

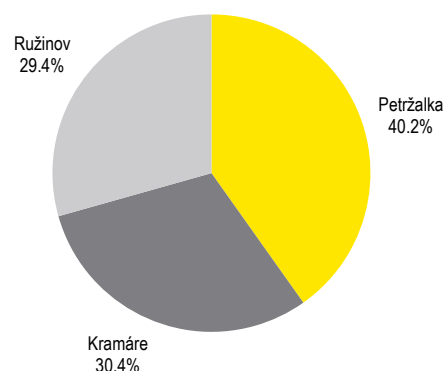
Overview of childbirths in UNB in FY11A-FY13A

| Units            | FY11A        | FY12A        | FY13A        |
|------------------|--------------|--------------|--------------|
| Petržalka        | 2,824        | 3,050        | 3,145        |
| Kramáře          | 2,440        | 2,564        | 2,381        |
| Ružinov          | 2,387        | 2,238        | 2,299        |
| <b>Total UNB</b> | <b>7,651</b> | <b>7,852</b> | <b>7,825</b> |

Source: Client

Share of hospitals on total number of childbirths in UNB FY13A

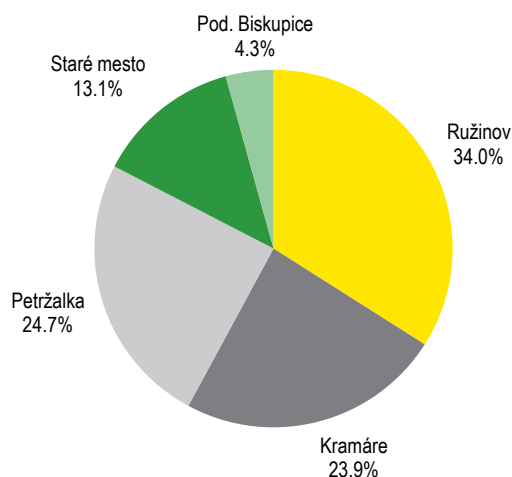
Source: Client



## Number of beds, occupancy rate and ALOS in UNB

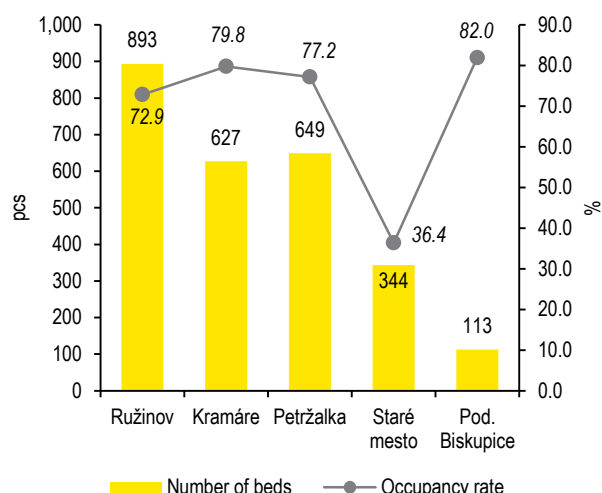
### Share of hospitals on total number of beds in UNB in FY13A

Source: Client



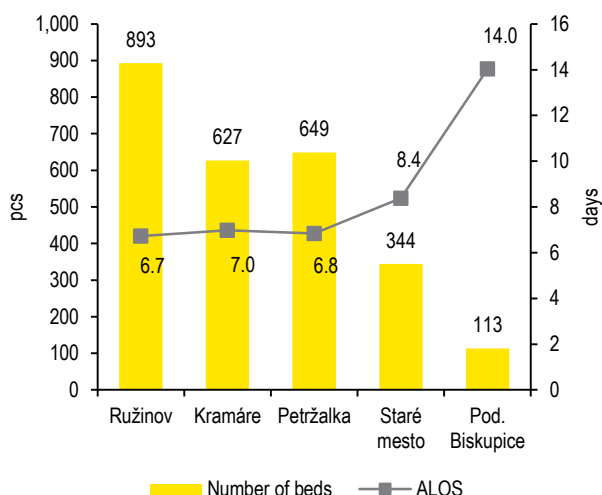
### Occupancy rate in UNB in FY13A by hospitals

Source: Client



### Average length of stay in UNB in FY13A

Source: Client



### Number of beds

Total number of beds in UNB was relatively stable in reported period with only slight decrease in FY13A comparing to FY12A (less than 0.5%).

- ▶ The chart on the left shows the share of hospitals on total number of beds in UNB in FY13A. The largest number of beds in FY13A was in Ružinov (893 beds, i.e. 34%), followed by Petržalka (649 beds, i.e. 24.7%), Kramáre (627 beds, i.e. 23.9%), Staré Mesto (344 beds, i.e. 13.1%) and Podunajské Biskupice (113 beds, i.e. 8.2%).
- ▶ More details regarding number of beds in particular hospitals can be found in Financial analysis appendices.

### Occupancy rate

Occupancy rate in UNB increased by 5.8% in FY12A comparing to FY11A and decreased by 4.9% in FY13A.

- ▶ Kramáre and Podunajské Biskupice report the highest occupancy rate (c. 80%) in UNB in FY13A.
  - In Kramáre, there are 10 departments with over 80% occupancy rate, for example (i) Geriatrics and Neurosurgery (c. 89.7%), (ii) Internal medicine (87.8%) and (iii) Neonatology (86.8%).
  - The highest occupancy rate in Podunajské Biskupice was reported at Long-term ill department (c. 88.5%).
- ▶ The occupancy rate in Petržalka in FY13A was 77.2% where the largest share had Pediatrics with c. 96% followed by Pathological newborns (c.90%) and Neonatology (c. 90%).
- ▶ In Ružinov the largest share on total occupancy rate (72.9%) had FRO department (83.4%) and Orthopedics (81.8%).
- ▶ The lowest rate was reported in Staré Mesto (36.4%), where all departments have less than 45% occupancy.

### Average length of stay (ALOS)

There were only slight changes in ALOS in UNB in FY11A-FY13A. The bottom left chart depicts ALOS by UNB hospitals in FY13A.

- ▶ The highest ALOS was reported in Podunajské Biskupice (14.0) followed by Staré Mesto (8.4), Kramáre (7.0), Petržalka (6.8) and Ružinov (6.7).

The tables in Financial analysis appendices provide a detailed overview of occupancy rate, ALOS and number of beds in UNB in FY11A-FY13A.

Further analysis of abovementioned KPIs is also provided on following pages.

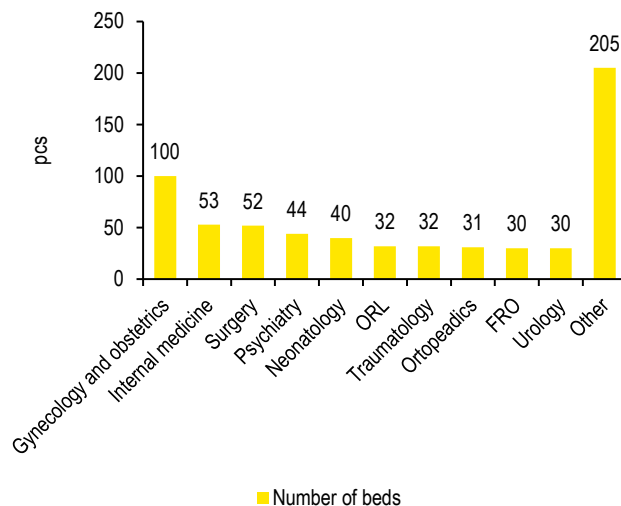
## Number of beds, occupancy rate and ALOS in UNB

The charts on this page provide an overview of number of beds by hospitals and departments in FY13A.

- ▶ The largest number of beds in FY13A was in Ružinov (893 beds, i.e. 34%), followed by Petržalka (649 beds, 24.7%), Kramáre (627 beds, 23.9%), Staré Mesto (344 beds, 13.1%) and Podunajské Biskupice (113 beds, 4.3%).
- ▶ Department with the largest number of beds in FY13A in Ružinov is Orthopedics (101, i.e. 11.3%), Gynecology and obstetrics (100, 15.4%) in Petržalka, Gynecology and obstetrics in Kramáre (99, 15.8%), Psychiatry in Staré Mesto (70, 20.3%) and Geriatrics (46, 40.7%) in Podunajské Biskupice.

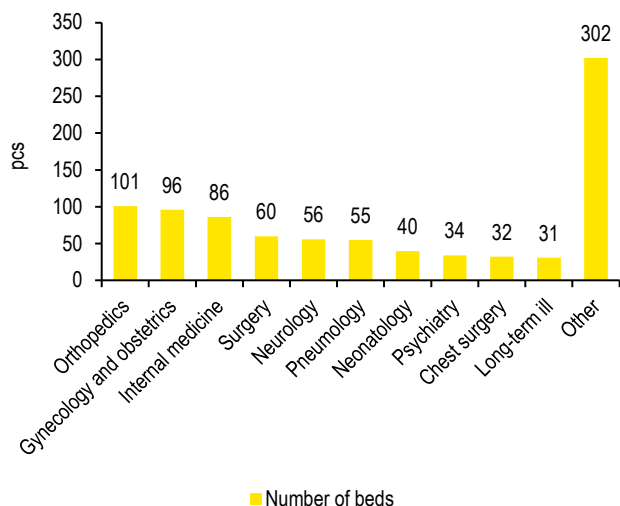
Number of beds by departments in Petržalka in FY13A

Source: Client



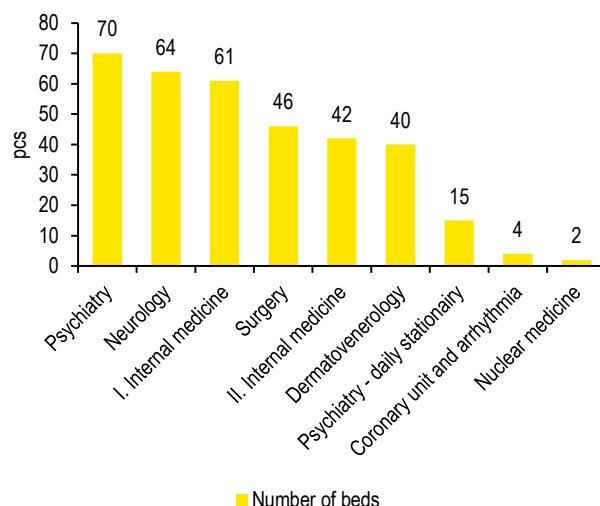
Number of beds by departments in Ružinov in FY13A

Source: Client



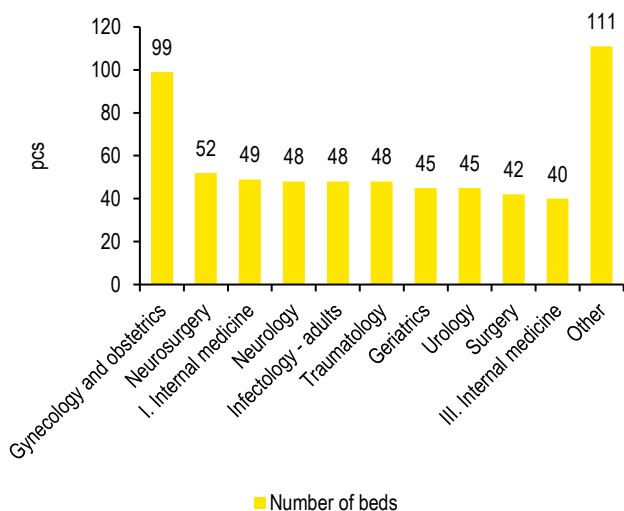
Number of beds by departments in Staré Mesto in FY13A

Source: Client



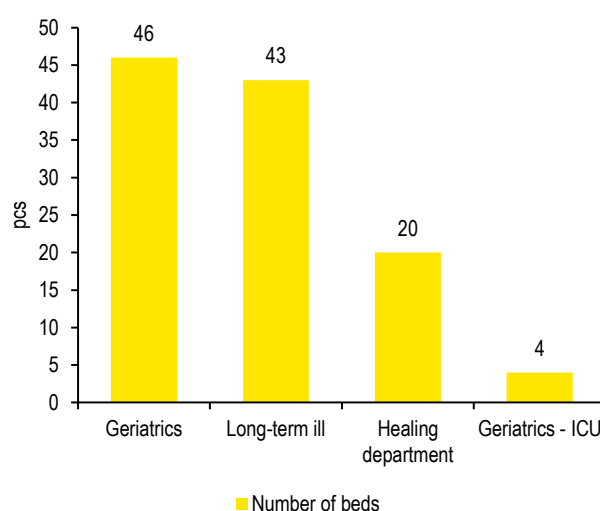
Number of beds by departments in Kramáre in FY13A

Source: Client



Number of beds by departments in Pod. Biskupice in FY13A

Source: Client



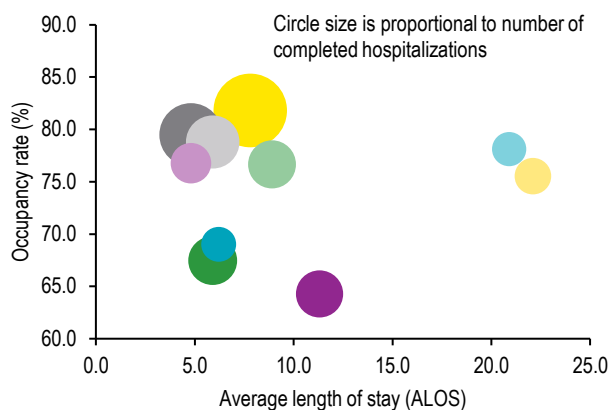
## UH, ALOS and occupancy rate

The charts below provide an overview of occupancy rate and ALOS in FY13A by TOP 10 departments in UNB hospitals. The size of circles is proportional to number of UHs in particular department.

- ▶ The highest occupancy rate in Ružinov was reported by (i) Gynecology and obstetrics (81.8%), (ii) Internal medicine (79.5%) and (iii) Orthopedics (78.8%). The longest stay was observed in (i) Plastic surgery (22.1), Hand surgery (20.9) and Neonatology (11.3).
- ▶ The highest occupancy rate in Kramáre was reported by (i) Geriatrics (89.8%), (ii) Neurosurgery (89.7%), and (iii) Internal medicine (87.8%). The longest stay was observed in Neurology (11.8) and Neurosurgery (10.3).
- ▶ Petržalka reports the highest occupancy rates by departments among UNB hospitals, e.g. (i) Pediatrics (95.9%), (ii) Neonatology (88.5%), and (iii) Internal medicine (80.5%). The longest stay was observed in (i) Internal medicine (8.9), (ii) Gastroenterology (7.3) and (iii) Orthopedics (6.7).
- ▶ The occupancy rate in Staré Mesto is on the other hand the lowest among UNB hospitals where the majority of departments have occupancy rate c. 35-41%. The longest stay was observed in Psychiatry (17.5) and Dermatovenerology (10.1).

Occupancy rate and ALOS in TOP 10 departments in  
Ružinov in FY13A

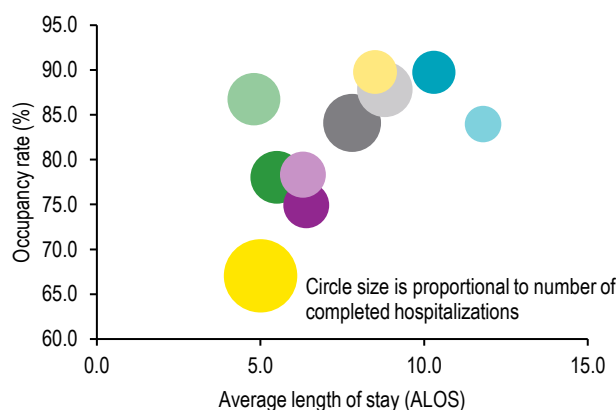
Source: EY analysis



- Gynecology and obstetrics
- Internal medicine
- Orthopedics
- Surgery
- Pneumology
- Neonatology
- Neurology
- Plastic surgery
- Hand surgery
- Urology

Occupancy rate and ALOS in TOP 10 departments in Kramáre  
in FY13A

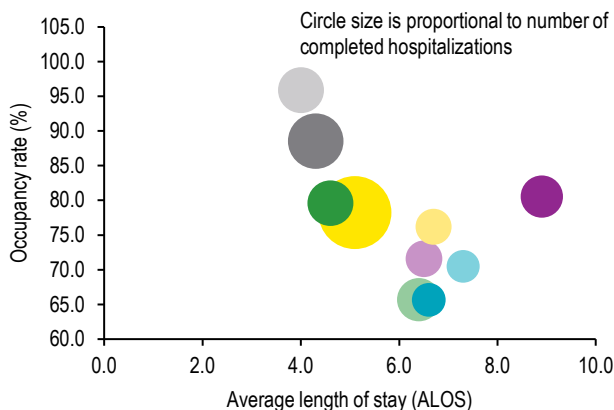
Source: EY analysis



- Gynecology and obstetrics
- Internal medicine
- Neonatology
- Surgery
- Neurosurgery
- Infectology
- Traumatology
- Urology
- Geriatrics
- Neurology

Occupancy rate and ALOS in TOP 10 departments in  
Petržalka in FY13A

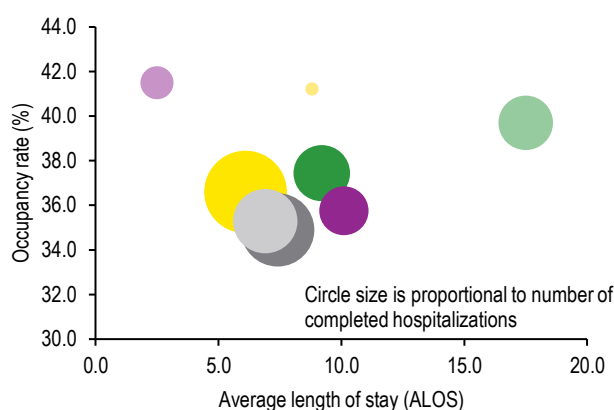
Source: EY analysis



- Gynecology and obstetrics
- Pediatrics
- Surgery
- ORL
- Urology
- Neonatology
- Traumatology
- Internal medicine
- Orthopedics
- Gastroenterology clinic

Occupancy rate and ALOS in TOP 10 departments in Staré Mesto  
in FY13A

Source: EY analysis



- Neurology
- Surgery
- Psychiatry
- Coronary unit and arrhythmia
- I. Internal medicine
- II. Internal medicine
- Dermatovenerology
- Nuclear medicine

## Limits

### Limits VŠZP

| Currency: EUR 000          | FY11A         | FY12A         | FY13A         |
|----------------------------|---------------|---------------|---------------|
| Completed Hospitalizations | 60,751        | 62,140        | 56,973        |
| Outpatient Ambulatory Care | 6,958         | 7,177         | 7,379         |
| Diagnostic Examinations    | 7,435         | 5,618         | 6,384         |
| Special Medical Materials  | 2,774         | 5,548         | 5,548         |
| Computed tomography        | 1,235         | 2,470         | 2,957         |
| Magnetic resonance         | 390           | 780           | 780           |
| One-day admissions         | 631           | 927           | 609           |
| Vacuum assisted closure    | 120           | 208           | 228           |
| Stationar                  | 211           | 211           | 211           |
| Densitometry               | 92            | 185           | 46            |
| Anesthesiology             | in UH         | in UH         | 29            |
| Breast milk                | 4             | 7             | 7             |
| <b>Total</b>               | <b>80,600</b> | <b>85,271</b> | <b>81,152</b> |

Source: Client

### Limits Dôvera

| Currency: EUR 000              | FY11A         | FY12A         | FY13A         |
|--------------------------------|---------------|---------------|---------------|
| Completed Hospitalizations     | 16,443        | 15,900        | 16,956        |
| Diagnostic Examinations        | 2,076         | 2,376         | 2,676         |
| Separately reimbursed perform. | 720           | 1,740         | 1,884         |
| Stomatology                    | 43            | 43            | 43            |
| Stationar                      | 13            | 13            | 13            |
| General outpatient care        | 0             | 0             | 0             |
| Gynecology                     | 0             | 0             | 0             |
| <b>Total</b>                   | <b>19,295</b> | <b>20,072</b> | <b>21,572</b> |

Source: Client

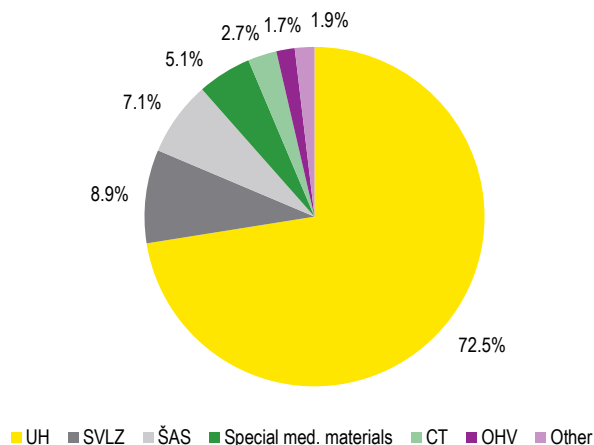
### Limits Union

| Currency: EUR 000               | FY11A        | FY12A        | FY13A        |
|---------------------------------|--------------|--------------|--------------|
| Completed Hospitalizations      | 3,300        | 3,058        | 4,213        |
| Diagnostic Examinations         | 189          | 381          | 536          |
| Outpatient Ambulatory Care      | 182          | 238          | 295          |
| One-day admissions              | -            | 9            | 39           |
| Stationar                       | 2            | 3            | 4            |
| Extra fees for hospitalizations | -            | 132          | -            |
| <b>Total</b>                    | <b>3,673</b> | <b>3,822</b> | <b>5,086</b> |

Source: Client

### Overview of limits by performances in FY13A

Source: Client



### Limits with health insurance companies

The tables on the left present the agreed limits with health insurance companies for the periods under review. The chart depicts the percentage share of each limit for revenue stream on the total agreed limit.



## Prices for completed hospitalizations by HICs

### VšZP

| Currency: EUR                        | Oct13A |
|--------------------------------------|--------|
| Spondylosurgery                      | 10,420 |
| Anesthesiology                       | 6,925  |
| Hematology                           | 5,618  |
| Microsurgery                         | 4,984  |
| Burns                                | 4,918  |
| Nuclear medicine                     | 4,297  |
| Pathological neonatology - ICRU      | 3,985  |
| Pathological newborns                | 2,709  |
| Neurosurgery                         | 2,415  |
| Cystic fibrosis - adults             | 2,228  |
| Pneumooncology                       | 2,116  |
| Arrhythmias and coronary units       | 2,115  |
| Chest surgery                        | 1,889  |
| Cystic fibrosis - children           | 1,824  |
| Long term ill (21+ days)             | 1,744  |
| Orthopedics                          | 1,289  |
| Traumatology                         | 1,267  |
| Vascular surgery A                   | 1,267  |
| Pneumology and phthisiology          | 1,248  |
| Psychiatry                           | 1,231  |
| Gerontopsychiatry                    | 1,231  |
| Pneumology - children                | 1,212  |
| Surgery                              | 1,179  |
| ORL                                  | 1,177  |
| Phoniatics                           | 1,177  |
| Maxillofacial surgery                | 1,119  |
| Gastroenterology                     | 1,114  |
| Neurology                            | 1,100  |
| Infectology - adults                 | 1,075  |
| Plastic surgery                      | 1,072  |
| Hand surgery                         | 1,072  |
| Urology                              | 1,056  |
| Geriatrics                           | 1,056  |
| Infectology - children               | 1,034  |
| Ophthalmology                        | 922    |
| Neonatology - ICU                    | 922    |
| Long term ill (up to 20 days)        | 872    |
| Internal medicine                    | 800    |
| Diabetology                          | 800    |
| Vascular surgery B                   | 800    |
| FRO                                  | 755    |
| Pediatrics                           | 741    |
| Gynecology                           | 738    |
| Healing department                   | 650    |
| Neonatology                          | 642    |
| Dermatovenerology                    | 634    |
| Occupational medicine and toxicology | 624    |

Source: Client

### Dôvera

| Currency: EUR                        | Jan14A |
|--------------------------------------|--------|
| Spondylosurgery                      | 10,419 |
| Anesthesiology                       | 7,890  |
| Hematology                           | 5,600  |
| Microsurgery                         | 4,932  |
| Burns                                | 4,918  |
| Nuclear medicine                     | 4,296  |
| Pathological newborns                | 2,709  |
| Neurosurgery                         | 2,465  |
| Arrhythmias and coronary units       | 2,324  |
| Cystic fibrosis - adults             | 2,227  |
| Pneumooncology                       | 2,116  |
| Cystic fibrosis - children           | 1,824  |
| Chest surgery                        | 1,750  |
| Vascular surgery                     | 1,585  |
| Orthopedics                          | 1,440  |
| Traumatology                         | 1,316  |
| Plastic surgery                      | 1,270  |
| Surgery                              | 1,255  |
| Pneumology and phthisiology          | 1,247  |
| Pneumology - children                | 1,211  |
| Maxillofacial surgery                | 1,204  |
| Psychiatry                           | 1,190  |
| Urology                              | 1,156  |
| ORL                                  | 1,150  |
| Gastroenterology                     | 1,113  |
| Diabetology                          | 1,110  |
| Neurology                            | 1,078  |
| Infectology - children               | 1,076  |
| Hand surgery                         | 1,070  |
| Infectology - adults                 | 1,047  |
| Geriatrics                           | 1,025  |
| Ophthalmology                        | 971    |
| Gerontopsychiatry                    | 889    |
| Gynecology                           | 838    |
| Internal medicine                    | 780    |
| FRO                                  | 755    |
| Pediatrics                           | 750    |
| Phoniatics                           | 739    |
| Neonatology                          | 642    |
| Neonatology - ICU                    | 642    |
| Dermatovenerology                    | 623    |
| Occupational medicine and toxicology | 598    |

Source: Client

#### Notes to table

1. In HIC Dôvera prices for Long-term ill and Healing department vary. The categorization is based on number of treatment days.

### Union

| Currency: EUR                        | Jan14A |
|--------------------------------------|--------|
| Spondylosurgery                      | 10,421 |
| Anesthesiology                       | 6,926  |
| Hematology                           | 5,619  |
| Microsurgery                         | 4,985  |
| Burns                                | 4,919  |
| Nuclear medicine                     | 4,298  |
| Pathological neonatology - ICRU      | 3,986  |
| Pathological newborns                | 2,710  |
| Neurosurgery                         | 2,416  |
| Cystic fibrosis - adults             | 2,229  |
| Pneumooncology                       | 2,117  |
| Arrhythmias and coronary units       | 2,116  |
| Chest surgery                        | 1,890  |
| Cystic fibrosis - children           | 1,825  |
| Long term ill                        | 1,745  |
| Orthopedics                          | 1,290  |
| Hand surgery                         | 1,272  |
| Traumatology                         | 1,268  |
| Vascular surgery A                   | 1,268  |
| Pneumology and phthisiology          | 1,249  |
| Psychiatry                           | 1,232  |
| Gerontopsychiatry                    | 1,232  |
| Lungs transplantations               | 1,220  |
| Liver transplantations               | 1,220  |
| Kidney transplantations              | 1,220  |
| Transplantations - hematology        | 1,220  |
| Pneumology - children                | 1,213  |
| Surgery                              | 1,180  |
| ORL                                  | 1,178  |
| Phoniatics                           | 1,178  |
| Maxillofacial surgery                | 1,120  |
| Gastroenterology                     | 1,115  |
| Neurology                            | 1,101  |
| Infectology - children               | 1,076  |
| Plastic surgery                      | 1,073  |
| Urology                              | 1,057  |
| Geriatrics                           | 1,057  |
| Infectology - adults                 | 1,035  |
| Ophthalmology                        | 923    |
| Internal medicine                    | 801    |
| FRO                                  | 756    |
| Pediatrics                           | 742    |
| Gynecology                           | 739    |
| Healing department                   | 651    |
| Neonatology                          | 643    |
| Dermatovenerology                    | 635    |
| Occupational medicine and toxicology | 625    |

Source: Client



## Technical assessment

---

1. Introduction and methodology
2. Phase 1: Technical assessment of modification options of the current UNB
3. Phase 2: Technical assessment of Options replacing the Existing Hospitals
4. Phase 3: technical assessment of the preserved hospital status
5. Next step: detailed technical analysis of the preferred options

## Introduction

The analysis in this section of the Study was provided in order to select preferred technical option of all modification options of current UNB. The result of this analysis will be the preferred option from the technical point of view that serves as an input in the financial assessment. The analysis, as indicated to the technical advisers, has included the large current UNB sites where acute hospital care is provided: those in the districts of Staré Mesto, Kramáre, Ružinov, and Petržalka.

In carrying out its analysis, the technical assessment has focused on future volumes and typology of healthcare demand. In accordance with the MoH's Output Specifications as listed in the Inception Report:

- Educational services (clinical training) have been calculated on the basis of a linear extrapolation of current numbers;
- R&D services have been considered as entirely optional, and no output calculations have been included for this segment.

The technical analysis has been carried out to a level of detailing consistent with the strategic nature and the objectives of the current study. The assumptions used are listed in Chapter 26 *Key Financial Model Assumptions* and more fully in Chapter 50 *General description of the AFM*.

In the very beginning, a technical assessment (site visits, visual inspection and interviews with site technical services staff) and financial assessment of the current status of UNB (due diligence, carried out by the financial advisers, presented in the previous section) were carried out and the effects of the preservation of the current status were assessed before analysing modification options of UNB.

The outcome of this analysis shows that the current status of the UNB (the "Do nothing" option) poses a great risk from both the technical and the financial viewpoints and was unilaterally discarded from further assessments. Reasons for discarding the Do nothing option from further analysis are:

- ▶ It is the opinion of the technical advisers on the basis of the information provided by the Client and the site visits carried out that doing nothing would expose the UNB and its patients to unacceptable safety and continuity risks. The site visits on April 9<sup>th</sup> and 10<sup>th</sup> 2014 have confirmed that the technical state and functional quality of the current sites in the districts of Kramáre, Ružinov and Staré Mesto are such that investments are urgently needed to safeguard the structural integrity of the buildings and address the worst safety risks.
- ▶ Among problems identified are: (i) façade cladding coming off the buildings at Ružinov and Kramáre, presenting a hazard to passers-by, staff, patients and visitors; (ii) crumbling concrete structures in parts of the buildings at Kramáre and Ružinov; (iii) antiquated electrics and lead plumbing in Staré Mesto; (iv) grossly insufficient elevator capacity at Ružinov site and elevator facilities in contravention of national health & safety standards at Staré Mesto (open cage elevators); (v) antiquated air treatment installations in part of the operating theatres at all sites (thirty years old or more, and in some cases dating back to the 1960's) and (vi) poor air treatment generally, presenting a very substantially increased risk of hospital acquired infections.

Accordingly, the subject of further assessments was restricted to the options of the modification of UNB.

- ▶ The modification options of current UNB were assessed in the following three phases:
  - In phase 1, a strategy for (re)development is determined. We have assessed whether it is preferable (i) to minimize CapEx ("Do minimum"), (ii) to invest substantially in the current hospital sites and refurbish them ("Refurbishment"), or (iii) to replace at least some of the current sites by a new hospital ("New hospital"). The assumptions used for these options are explained in the chapter "Phase 1: Technical assessment of modification options of the current UNB".
  - Once the (re)development strategy has been determined, phase 2 of the analysis determines the preferred number of sites to be replaced. Replacing one to four sites within the scope of the Study (Kramáre, Petržalka, Ružinov, Staré Mesto) is considered.
  - For the site or sites (if any) that are not replaced by a new hospital building, phase 3 carries out a comparative analysis to determine what functional profile for these would yield the best quality results.<sup>3</sup>

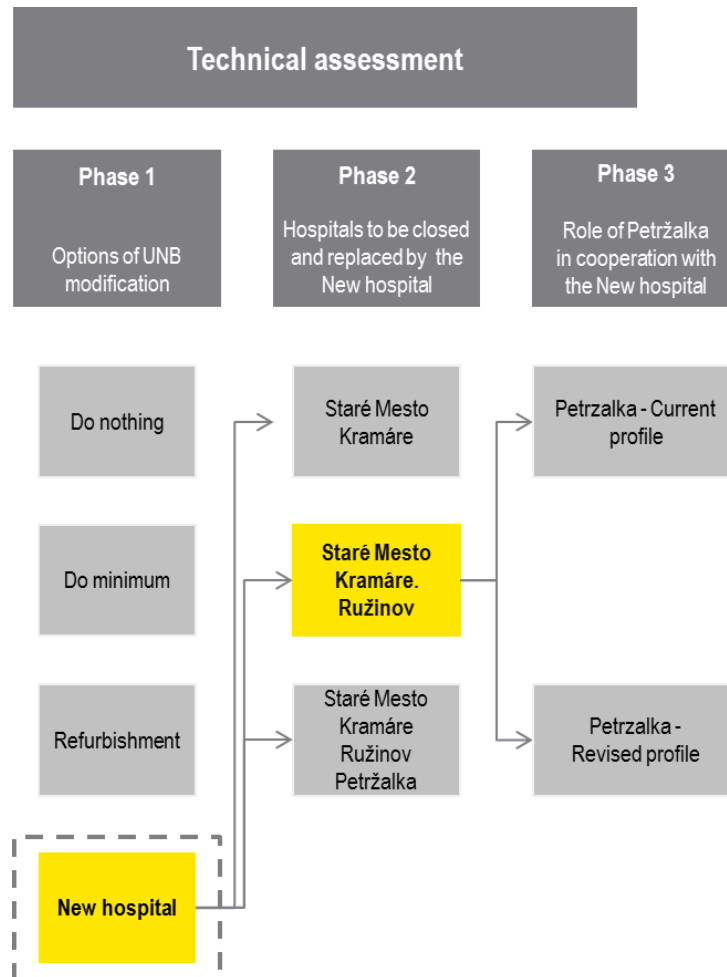
The following diagram depicts the process of the technical assessment and also indicates its results:

<sup>3</sup> For the purpose of the technical assessment of the modification of the existing UNB, the costs connected with the value added tax were not taken into account. This increase does not have any effect on the final choice of the preferred technical option. For the purpose of the financial modelling in the next section, the value added tax of 20% was taken into account.

# Introduction

## Technical assessment methodology

Source: EY, TNO



For the options still deemed acceptable after phase 3, a detailed technical analysis is performed using the AFM, to generate the appropriate input for the financial analysis carried out by the financial advisors.

## Theoretical background

In any complex investment and (re)development process, the number of options and sub-options can be bewildering, and this hampers effective decision making. The high level options analysis aims to provide a balanced high-level qualitative and quantitative analysis of benefits and costs to pinpoint effective and less effective strategies at an early stage of the decision process. The process of setting objectives, generating options, and deciding on the preferred option is commonly described as option appraisal.

Methods commonly used in option appraisal are following:

- ▶ Cost-benefit analysis (“CBA”) quantifies and expresses the costs and benefits of a service or programme in the common metric of today’s money, including items which do not normally have a monetary value. Decisions are based on whether there is a net benefit or cost to the service, i.e. total benefits, less total costs.
- ▶ Social return on investment (“SROI”) is a framework for measuring and accounting for a much broader concept of value than just money. It incorporates social, environmental and economic costs and benefits, and helps organisations better understand the economic value that they create by assigning a monetary value to all these factors. There are two types of SROI:
  - Evaluative SROI: undertaken retrospectively and based on actual outcomes that have taken place over a given period. This approach is best used when a project has been set up and good data on outcomes are available.
  - Forecasted SROI: predicts how much social value will be created if planned activities meet their intended objectives. Forecasted SROIs can be used at the planning stages of a project to assess its likely impact, or for projects where there is a lack of outcomes data.
- ▶ Multi-criteria analysis (“MCA”) provides a framework to enable decision-makers to overcome difficulties in handling large amounts of complex information in a consistent way. It provides a structured process for determining both the criteria by which a range of options will be assessed, and the relative importance of each of the criteria. This enables a single preferred option to be identified. The judgment of the decision-making team in establishing explicit objectives and criteria, scoring, and weighting is a critical feature. MCA provides a way of looking at complex problems that have a mixture of monetary and non-monetary objectives, where defining monetary values for costs and benefits is impractical or not very robust, and where there are non-monetary items that may be of major importance.<sup>4</sup>

The method used in this analysis most closely resembles an MCA, but also has elements of a CBA, in that it attempts to assign a monetary cost to a non-monetary value unit. It is based on the appraisal methods and matrices commonly encountered in early stage decision making in UK private finance initiative (“PFI”)<sup>5</sup> and other public to private sector transfer projects.

The method used in this analysis is a shortened and simplified version of a full options appraisal analysis. Such a full process takes many months and assumes intensive involvement and participation from multiple stakeholders. Within the context and aims of the current feasibility study this is neither feasible nor useful. Part of the problem analysis and scoping of possible solutions has already been done by the MoH prior to deciding on the need for the present feasibility study, while much of the detailed analysis of options can only usefully be done later on in the project, once the main choices have been decided upon. The aim of the method used in this study has been to provide a concise but consistent, logical and balanced approach to select and rank main alternatives. Thus the present analysis provides the framework and bandwidths within more detailed analysis can be performed later on.

<sup>4</sup> The above summary is based on a briefing paper prepared in 2011 by the British Institute of Public Care in 2011.

<sup>55</sup> PPP projects are also known as PFI.

## Methodology

In each of the phases of the high-level analysis carried out as part of the technical assessment a set of relevant categories of criteria and the criteria within each of those categories are defined to reflect a balanced approach to the analysis of the non-monetary value created by different options. The categories and the criteria defined within them vary from analytical step to step to reflect the width and primary focus of that phase. The primary basis for the criteria identified are the Key Principles, with some additional criteria based on further understanding of the project and its framework conditions built up in discussions with the Client during the contract negotiation and project inception phases and the TNO's understanding of the Client's objectives and priorities based on the meetings that have taken place with the Client.

Each criterion is assigned a "weighing factor" to indicate how important it is in determining the success of the Project. Weighing factors chosen by TNO based on their opinion and experience are 1, 2, 4 and 8. These represent a manageable range of weighs to choose from, and the fact that there is an even number of values means that the "safe middle" option is not available. In a full options appraisal process establishing the most useful scaling method would be a matter for working out in a participatory process with the various stakeholders. The current selection of weighing factors has been done by the technical advisers in line with the main objective of the current analysis to provide a concise but consistent methodology. The assignment of scores has likewise been done by the technical advisers on the basis of their understanding of the current situation and the Client's objectives, the data collected, the Inception report<sup>6</sup>, and TNO's previous experience with assessment and development of large-scale hospital investment projects.

Each option (re)development option is scored against each objective, to indicate to what extent the option is likely to achieve the objective in question. Scores are on a scale of 1-5 (discrete integers), with 1 representing "very poor" and 5 representing "excellent". In this setting, the scoring of options is free in terms frequency of usage of each score. The number of time each score 1 – 5 can be assigned is not limited. The tables below give an overview of the categories and criteria used in each phase, together with an explanatory note and argumentation for the weighing factor assigned.

### Categories and criteria used in phase 1

Source: TNO

Source: TNO

| Category and criterion                          |   | Weighing factor and explanation / motivation |   |
|---|---|--|---|
| A. Design and scope                             |   |  |   |
| A.1   | Central coordinating point of a networked regional model of health services delivery                          | 8  | Key objective of strategic MoH policy. Hospital development is seen as a catalyst in this process.  |
| A.2   | Provide range of tertiary services, including some at Slovak national level                                   | 4  | Provision of tertiary services is a core function of a university hospital. But volume of tertiary care is small relative to total care volume.   |
| A.3   | Provide comprehensive range of secondary care, offering inpatient, outpatient and diagnostic medical services | 2  | Options are open to take parts of secondary care provision out of the UNB portfolio, either by devolving them to other secondary hospitals or by devolution of care to other sectors (primary care, long-term care). Note that criterion H.1 (described below) needs to be satisfied. |
| A.4   | Offer a sustainable, fit-for-purpose model for healthcare provision   | 8  | Key objective of the hospital redevelopment.  |
| B. Accountability, governance and participation |   |  |   |
| B.1   | Minimise risk for public sector finances  | 8  | Current operational losses of the UNB and the fragile state of Slovak national budgets make this an absolute necessity.   |
| B.2   | Align strategy and operations of hospital with national health policy objectives                              | 4  | Hospital development is a catalyst for health system reform. But in the longer term, there will be opportunities to pursue policy objectives through interventions in other areas of the health system.   |
| C. Financial assessment                         |   |  |   |

<sup>6</sup> The Inception report is one of the parts of the Feasibility study (the first one).

## Methodology

|   |  |   |   |
|---|--|---|---|
| C.1   | Cover capital and operational costs from the hospital revenue stream, no burden placed on public resources                                 | 8 | Absolute necessity to minimize current burden on public resources caused by operational losses of UNB.  |
| C.2   | Operate at a level of functional and organisational efficiency at least equal to the current average for European University Hospitals     | 2 | Blanket objective. In reality, there will be (and will need to be) considerable flexibility to determine performance standards tailored to regional/national needs and preferences.   |
| <b>D. Quality of services</b>                       |  |   |   |
| D.1   | Provide quality of care meeting European standards and benchmark averages  | 4 | Blanket objective. In reality, there will be (and will need to be) considerable flexibility to determine performance standards tailored to regional/national needs and preferences. Also: current standards and instruments in use in the EU are unsatisfactory in terms of measuring health outcomes. However, from a public interest perspective quality is more important than efficiency. |
| D.2   | Meet European standards and benchmark averages for patient safety and operational safety   | 4 | Blanket objective. In reality, there will be (and will need to be) considerable flexibility to determine performance standards tailored to regional/national needs and preferences. Also: current standards and instruments show considerable divergence, harmonisation process is not very far along. However, from a public interest perspective quality is more important than efficiency. |
| D.3   | Achieve patient satisfaction scores at European average or better  | 2 | Patient satisfaction is a result of a complex of factors, in which "hard" criteria play only a limited role, precedence going to "emotional" and culturally dependent factors.  |
| <b>E. Regional economy and community</b>            |  |   |   |
| E.1   | Provide a basic scale of potential commercial activities   | 2 | Outside the core objectives of the redevelopment. Also, these small-scale activities have very limited impact on overall cash flow for the hospital.  |
| E.2   | Provide employment opportunities for medical staff   | 8 | The UNB is one of the largest employers in the Bratislava region, and probably the major employer in Slovakian health care.   |
| E.3   | Provide employment opportunities for support and services  | 8 | The UNB is one of the largest employers in the Bratislava region. Changes in employment opportunities will significantly affect Bratislava region economy.  |
| <b>F. Quality of employment</b>                     |  |   |   |
| F.1   | Offer premises of sufficient size and quality for clinical teaching of students, postgraduate students and medical students                | 4 | Precondition for keeping up the quality and numbers of Slovak health care professionals. But: also dependent on quality of Medical Faculties (outside scope of study), and not the primary focus of the feasibility study.  |
| F.2   | Offer an attractive working environment to medical specialists, medical staff and support staff  | 4 | Required for proper performance of tertiary functions, and for attracting high-end professionals.   |
| <b>G. Sustainable development</b>                   |  |   |   |
| G.1   | Compliance with the recast (2010) Energy Performance of Buildings Directive ("EPBD")   | 4 | Key concern identified by the Client. However, achieving energy efficiency goals is to a large degree independent of other efficiency and quality objectives.   |
| <b>H. Address inequalities in healthcare access</b> |  |   |   |
| H.1   | Satisfy constraints on proximity, accessibility and affordability of appropriate care equal or superior to those for state-owned hospitals | 8 | Supremely important, to ensure healthcare for all, and prevent "cherry picking" as part of the redevelopment..  |
| <b>I. Adaptability to change</b>                    |  |   |   |

## Methodology

|   |  |   |   |
|---|--|---|---|
| I.1   | Provide sufficient lifetime flexibility to cope with qualitative and quantitative changes in demand and operational principles | 4 | Necessary to provide a fit for purpose solution. However, especially for flexibility issues popping up in the longer term, there will be adjustment possibilities in other areas of the health care system.   |
| <b>J. Added value</b>                       |  |   |   |
| J.1   | Serve as a centre of excellence for the region   | 4 | Important for the position of the hospital as a tertiary hospital and centre of excellence. However, relatively small percentage of total turn-over so more limited effect on financial feasibility.  |
| J.2   | Offer opportunities for public sector and commercial research & development ("R&D")  | 4 | Would provide a boost to Bratislava region and Slovak high-end economic activity. But: R&D component optional element not included in feasibility study.  |
| <b>K. Corporate impact on public sector</b> |  |   |   |
| K.1   | Minimise need for legislative changes  | 2 | Given the poor state of current building stock and considerable yearly losses, there is considerable time-pressure on the hospital redevelopment. Necessary changes in legislation represent potential delays to timing and feasibility that are hard to control. |
| K.2   | Minimise organisational changes required for project realisation   | 4 | The proposed changing role of the hospital in combination with redevelopment constitutes a sizable change management challenge.   |

The criteria for phase 1 reflect the need in this overall strategy step to take on board considerations from a variety of policy fields and domains of public interest to determine the best overall option. Once the decision in phase 1 has been made, the set of categories and criteria in phases 2 and 3 is significantly reduced and much more focused on the operational quality and efficiency of the options and the extent to which they are compatible with health sector reform policy goals, as evidenced by tables *Categories and criteria used in phase 2* and *Categories and criteria used in analytical phase 3* below

### Categories and criteria used in phase 2

Source: TNO

|                                 |  |   |  |
|---------------------------------|--|---|--|
| <b>L. Health Care Provision</b> |  |   |  |
| L.1                             | Consequences for accessibility and availability of acute (emergency) care and chronic care | 8 | Ensuring a timely and adequate response to emergency health care needs is a prime requirement of any acute health care provision model. It is a legitimate concern given the major reconfiguration of services across the greater Bratislava regions involved in most of the options analysed. Chronic care represents an inherent burden on patients, who have to visit hospital at a regular, fairly frequent basis. Chronic care is predominantly provided to vulnerable citizens, who generally have limited means of transport and a limited action radius. |
| L.2                             | Consequences for accessibility and availability of elective care                           | 4 | Research has shown that patients are generally willing to travel further for elective care provision, if there are adequate trade-offs in terms of quality, patient-centredness, waiting times et cetera. Nevertheless, a growing percentage of the patient population for elective care, too, is made up of vulnerable, often elderly patients, for whom travel to service sites farther away is a burden.  |

## Methodology

|   |   |   |  |
|---|---|---|--|
| L.3                                     | Availability of buffer capacity in case of efficiency gain shortfalls | 8 | In dimensioning the New hospital, substantial gains in efficiency of production capacity utilisation and staffing efficiency have been assumed. Various factors outside (or only partially inside) the span of control of the future management of the New hospital constitute risks for the attainment of these efficiency gains within the timeframe available up to the planned opening of the New hospital. Examples are: delays in necessary legislative changes, employment effect concerns, training requirements for physicians and staff. Adequate buffer capacity to deal with these contingencies should they occur is crucial to ensure availability of care in the greater Bratislava region. |
| L.4                                     | Facilitate and support transition to regional model of care           | 8 | The transition towards a more sustainable, integrated regional model of care is the key policy objective informing the redevelopment of the UNB. This process will take longer than the redevelopment of the New hospital itself, so the New hospital configuration will have an important role to play in facilitating the further process of reform. Also: the longer term operation of the New hospital will require flexibility to deal with qualitative and quantitative changes in demand as a result of future reform.  |
| <b>M. Quality, efficiency and risks</b> |   |   |  |
| M.1                                     | Technical and structural quality and risks                            | 4 | Any UNB redevelopment must provide a healthcare environment that offers technically adequate and safe conditions for patients, employees and visitors. For new build there must be a reasonable certainty of safe conditions for 25-50 years, for refurbishment options for 15-20 years.   |
| M.2                                     | Functional quality, efficiency and risks                              | 4 | Any UNB redevelopment must provide a healthcare environment that offers long-term conditions enabling efficient utilisation of production facilities and provision of care according to contemporaneous standards.   |
| M.3                                     | Staffing efficiency: primary processes                                | 4 | A major expected deficit reduction effect from redevelopment of the New hospital is in cutting down on staffing inefficiencies occasioned by the poor quality current healthcare environment and considerable redundancy due to retention of four separate sites with a more or less full acute hospital profile. Staff costs are a major driver in hospital costs. Also, job profiles and task levels fitting competencies and ambitions of health care professionals are important to attract and retain good quality staff. Because primary processes are patient-related, achieving the required staffing efficiency is a direct outcome of the successful redevelopment of the New hospital.          |
| M.4                                     | Staffing efficiency: support and services                             | 2 | Cutting down on redundancy and (in the present circumstances unavoidable) inefficiencies in support and services provision is another major strategy in improving the cost effectiveness of the New hospital. However, as these staff functions are not directly patient-related, there will be alternative options to improve efficiency (e.g. outsourcing of services, camera surveillance instead of security etc.) independent of the main option pursued for the New hospital redevelopment.  |
| <b>N. Financial assessment</b>          |   |   |  |
| N.1                                     | Volume of initial CapEx required                                      | 4 | The current New hospital has very low CapEx, due to the almost total lack of investments in built infrastructure over the past 20+ years. Redevelopment of the New hospital will incur substantial capital expenditures, influencing total operational costs. Logically, the larger the capital investment, the higher CapEx will result. But the level of CapEx is also influenced by the depreciation period for capital investments. While CapEx is a substantial influence, operational costs are THE determining factor over the lifetime of the New hospital determining efficiency and profitability.   |



## Methodology

|     |  |   |  |
|-----|--|---|--|
| N.2 | Required return on investment to avoid drain on primary process funds from CapEx | 2 | In all cases of substantial capital investment, a required return on investment on capital costs must be figured in to cover loans, and perceived risks, as well as an extra margin to build up some financial reserve to deal with unforeseen setbacks, innovation needs during the lifetime of the building et cetera. This is true irrespective of whether the funding for the capital investment comes from public or private sources. The return on investment required will depend both on the total volume of CapEx, and on the perceived risks associated these CapEx. However, for the options analysis, this factor is less relevant, as other strategies to cut down capital costs and reduce risks can be pursued independent of the site replacement option selected. |
| N.3 | Remaining burden on public sector  | 4 | The current UNB incurs very substantial yearly losses without even considering maintenance and capital costs or return on investment. In the event of Petržalka, or Petržalka and Ružinov being kept out of the scope of the New hospital development, these site(s) will have to be run at a lower level of efficiency given their constraints on technical and functional efficiency and adaptability. Extra costs related to this lower level of efficiency will devolve back onto the public sector; either directly, when these sites are run as public hospitals, or indirectly through prices charged by a private contractor.  |

### Categories and criteria used in Phase 3

Source: TNO

| O. Health Care Provision         |  |   |  |
|----------------------------------|--|---|--|
| O.1                              | Contribution to policy objectives: regional cooperation and integration of care    | 8 | The long-term policy objective for the Bratislava region (and Slovakia) is to move towards an integrated, regionally coordinated model of healthcare delivery. The UNB redevelopment is a mid-term flagship initiative highlighting this shift. Its organisational principles and its spatial organisation must be consistent with this shift and must offer encouragement and capacity building for further reform.   |
| O.2                              | Capacity risk management and facilitation of transition model                      | 8 | The main capacity risk facing the New hospital site when it opens is insufficient bed capacity, if measures to increase occupancy rates, reduce average length of stay and shift patients from inpatient to day patient run into delays or difficulties. (Other efficiency objectives may encounter similar problems, but these are much more amenable to simpler contingency measures such as longer opening hours). The preferred option must thus first of all offer spare bed capacity that can be used in emergencies. Furthermore, the preferred option for the Petržalka functional profile should present a functional profile for the Petržalka site that reflects the direction of reform, and that can easily be downsized or partially reallocated when further reforms are implemented. |
| O.3                              | Accessibility, availability and quality of acute (emergency) care and chronic care | 8 | Ensuring a timely and adequate response to emergency health care needs is a prime requirement of any acute health care provision model. Chronic care represents an inherent burden on patients, who have to visit hospital at a regular, fairly frequent basis. Chronic care is predominantly provided to vulnerable citizens, who generally have limited means of transport and a limited action radius. The preferred option for the Petržalka site profile should find the appropriate balance between concentration of high-complexity emergency care, provision of low-complexity emergency care and chronic care close to home.  |
| O.4                              | Accessibility, availability and quality of elective care                           | 4 | In contemporary service delivery models, elective care, too, is increasingly approached from an integrated care pathway perspective, distinguishing between appropriate environments for different steps in the care process. The preferred option for the Petržalka profile must facilitate an integrated care pathway approach. Additionally, for elective care processes as well as for emergency and chronic care, it is preferable that high-frequency hospital procedures are available close to home.   |
| P. Quality, efficiency and risks |  |   |  |

## Methodology

|                         |   |   |  |
|-------------------------|---|---|--|
| P.1                     | Structural and technical quality New hospital site  | 2 | Depending on the profile preferred for Petržalka, the functional capacity to be housed at the New hospital site may vary, creating a better or lesser fit with the site area and characteristics, as well as possibly resulting in a different intrinsic risk profile for the New hospital site. However, it is felt that the total impact of this variance between options considered at this stage of the analysis will be limited.  |
| P.2                     | Structural and technical quality Petržalka site     | 4 | The preferred option should take account of and avoid conflict with known structural and technical limitations at the Petržalka site (e.g. limited ceiling heights, lack of full climate control, restraints from load bearing construction etc.) to avoid risks to safety and continuity of care provision.   |
| P.3                     | Functional quality and efficiency New hospital site | 4 | In selecting the preferred profile for the Petržalka site, an extra efficiency consideration must be introduced in addition to economies of scale: economies of scope. Inefficiencies in organisation and use of production facilities in general and tertiary hospitals accrue in part from the fact that processes with many different typological characteristics need to run together, interfering and placing irreconcilable demands on production capacity. By differentiating profiles between sites (e.g. high-complexity inpatient care versus low-complexity outpatient care) a more uniform typology of processes and demands is introduced reducing the risk of interference and efficiency loss at each site.   |
| P.4                     | Functional quality and efficiency Petržalka site    | 4 |  |
| Q. Financial assessment |   |   |  |
| Q.1                     | CapEx New hospital                                  | 2 | The functional profile and scope (see points P.3 and P.4 hereby) above) determined for the New hospital site have an influence on the total CapEx required for the initial investment to erect the building. Investment levels per sqm vary from functional group to functional group depending on the constructive and technical complexity of the function. A higher percentage of high-complexity functions will result in higher CapEx. This difference would be even more marked when the layers methodology is applied to the design of the New hospital (not addressed in this high-level analysis, but used in the detailed analysis of the preferred option).   |
| Q.2                     | Capital expenditure Petržalka site                  | 2 | The functional profile and scope (see P.3 and P.4 above) determined for the Petržalka site have an influence on the total CapEx required for the initial investment to bring the Petržalka site up to a technical and functional fit-for-purpose state. Investment levels per sqm vary from functional group to functional group depending on the constructive and technical complexity of the function. In addition, continuation of the current production profile for Petržalka, given the limited efficiency gains that can be assumed for a refurbishment scenario, means that approximately 90% of the current site will have to be refurbished. If a different functional scope and profile are selected, there may be substantial effect in the percentage of current floor space needing refurbishment and the investment level per sqm associated with those refurbishments. |
| Q.3                     | Remaining burden on public sector ("VS")            | 4 | To the extent that the capital costs cannot be covered entirely from the revenues generated by the hospital, yearly deficits will occur which, like currently, will present a burden on public funds. However, for the options analysis, this factor is less relevant, as other strategies to cut down capital costs and reduce risks can be pursued independent of the site replacement option selected.  |

## Approach, general assumptions and limitations

### Approach and assumptions

The real long-list of options for the (re)development contains any number of intermediate forms, e.g. partly Do minimum and partly Refurbishment, or partly Refurbishment and partly New hospital, etc. Even an option with elements from all four options would be theoretically conceivable. However, since one of the objectives of this stage of the analysis is to narrow down the options for the (re)development, these intermediate forms are disregarded.

As the technical assessment precedes the more detailed analysis of investment and operational costs and revenues, a single price per sqm will be used for the New hospital option: EUR 1.600/sqm at price level 2013 of the gross floor area. This figure is consistent with the baseline figure for building capital investments used in the AFM that is described in detail in *Technical analysis appendices* in section *General description of the AFM model*. In other words, for the purposes of the technical assessment, all new built (and refurbishment) options are treated as a „monolith“ hospital. (i. e. no differentiation of hospital zones using the layers methodology<sup>7</sup> has been assumed).

Additional assumptions:

- ▶ Comparatively easy-to-implement performance-enhancing measures have been assumed as discussed with the Client.<sup>8</sup>
- ▶ Prices per sqm for Refurbishment and Do minimum options are expressed as percentages of the figure for New hospital.
- ▶ The CapEx considered in this analysis only includes the initial CapEx associated with the building. It does not include e.g.:
  - Capital investments for equipment and information and communication technologies (“ICT”) and CapEx during or after the lifetime of the building stock. The reason is that it is very difficult to outline the CapEx during different stages of the Project’s lifecycle in the preliminary analysis, and the CapEx for equipment and ICT are comparable in all options.<sup>9</sup>
  - Expenditure for the building site procurement and landscaping, including brownfield demolition and site re-cultivation, for the construction of the New hospital,
  - Public sector opportunity costs,
  - Transaction costs of the Public sector related to the realisation of the New hospital,
  - Costs related to (i) a temporary simultaneous operation of the New hospital and the current sites, (ii) transfer of operation from the current sites to the New hospital, and (iii) other costs related to closing of these hospitals,
  - Sales / costs connected with the maintenance of the closed current sites.
- ▶ For the purpose of the technical assessment of the modification of the existing UNB, the costs connected with the value added tax were not taken into account.<sup>10</sup>
- ▶ All CapEx and OpEx are expressed at estimated price levels for 2020. CapEx and OpEx levels per sqm in 2020 are extrapolated from the 2013 baseline figures using a uniform inflation percentage.

### Limitations

- ▶ A full-scale options appraisal process takes many months and includes involvement of and input from various user groups, stakeholders and authorities. In the scope of the present assignment, this is not feasible.
- ▶ CapEx and OpEx used in the technical assessment analysis are indicative and may differ from the figures used in the detailed analysis made in the next phase of the technical assessment (cf. the following sections).

<sup>7</sup> Original publication of model and methodology: Netherlands Board for Healthcare Facilities, 2007

<sup>8</sup> The layers methodology is applied and the efficiency improvement measures are calculated in the detailed analysis of the preferred option presented in the next section regarding the financial assessment (cf. the following sections). However, these simplified measures do not have any effect on the outcome of the high-level analysis.

<sup>9</sup> This assumption slightly favours the more conservative options (Do minimum and Refurbishment) because these would necessitate some additional partial or whole replacement of facilities and equipment at a time when the New built option is still operational.

<sup>10</sup> This assumption does not have any effect on the final choice of the preferred technical option. For the purpose of the financial modelling in the next section, the value added tax of 20% was taken into account.

## Phase 1: Technical assessment of modification options of the current UNB

### Building modification options

There are many options for the realisation of construction, or reconstruction. However, because one of the main goals of this analysis is to narrow the number of options of the construction or reconstruction down, the subject of this analysis is restricted to the main options. Three basic options of the modification of UNB are given below (the Do nothing option is discarded – see the introduction to the technical analysis).

In this phase we analyse modification options of the current UNB listed below based on assumption that they will simultaneously affect the four hospitals considered in this Study (Ružinov, Kramáre, Petržalka, Staré Mesto). Different levels of (re)development of the hospitals are considered in Phase 2 of technical assessment.

#### Do minimum

- ▶ The main idea of this option is to invest as little as possible to eliminate the principal persisting safety risks. Broadly speaking, this option is based on postponing the decision of reconstruction for several years.

The main assumptions are:

- ▶ CapEx EUR 38.4m. This represents an investment of 10% of the expenditures for a sqm of the New hospital with the total area equal to the present gross floor area of the hospitals (c. 240,000 sqm)<sup>11</sup>.
- ▶ Investments from the year 2015.
- ▶ EUL (economic useful life) CapEx: 10 years (corresponds with minimal modifications to eliminate the most acute problems).
- ▶ Zero improvement of operational efficiency.

#### Refurbishment

This option includes a reconstruction of the existing hospitals in the medium-term horizon and an achievement of technical and functional quality that would enable the hospitals to continue their operation in the present configuration for the following 20 years.

The main assumptions are:

- ▶ CapEx EUR 201.6m. This represents an investment of 60% of the expenditures for a sqm of the New hospital applied to the gross floor area of c. 210,000 sqm<sup>12</sup>.
- ▶ Investments from the year 2020.
- ▶ EUL CapEx: 20 years (the standard depreciation period of a reconstruction carried out approximately in the half of the lifespan of a building).
- ▶ Achieved savings in OpEx 10% (based on the expectation that refurbishment will improve the performance of a number of OpEx factors such as energy consumption and cleaning – this assumption is based on a comparison of the current UNB operational cost structure with the cost structure of Dutch and German hospitals from publicly available data sources. However, it is assumed that the three main drivers of current inefficiency will remain in place: (i) distribution of functions over four sites that all originated as full-scale independent hospitals, with very significant redundancy of functions; (ii) poor functional design and technical adaptability; and (iii) current governance of the hospital, with refurbishment of the current configuration not offering a natural handhold to implement change)<sup>13</sup>.

#### New hospital

This option counts with a construction of a New hospital and a replacement of the existing infrastructure.

<sup>11</sup> The CapEx level for Do Minimum is a conservative estimate of what would be needed to tackle the major risks and deficiencies. It does not in real terms represent a small investment in every bit of the current hospitals, but rather a focused high intensity investment in problem areas, with the percentage per sqm total floor area used as a simplifying assumption. Note that a due diligence appraisal to be carried out in a following project phase could substantially affect this estimate.

<sup>12</sup> The CapEx level for Refurbishment (60% of new build costs per sqm) is consistent with standard cost estimation practice for Dutch hospitals for cases where refurbishment of facades is also necessary. It is also assumed that the refurbishment will offer the opportunity to rationalize to some extent the current excess bed capacity, excess outpatient capacity and other unused or underused space (reflected in the assumption that 210,000 sqm of the current 240,000 sqm will be refurbished).

<sup>13</sup> Data on performance 2012 Dutch Hospitals published by Dutch Hospital Data (2013); data on German Hospitals from Grunddaten Krankenhäuser 2010 published by the Statistisches Bundesamt, Wiesbaden (2012).

## Phase 1: Technical assessment of modification options of the current UNB

Based on the information provided by MoH, the area of the site in Cesta na Červený most considered for the construction is 9 hectares. Taking the area into account, the site could be, according to preliminary analyses, sufficient for the realisation of the New hospital. However, it is necessary to make a detailed analysis of the site with regard to the realisation of the New hospital from the viewpoint of flexibility of the hospital building, inevitable logistics needed during the economic lifespan of the New hospital, possibilities of connection to and capacity of the civil engineering infrastructure, and compliance with the local plan.

The expected investment expenditure of EUR 1,600/sqm of gross floor area (it is considered that the new hospital will fulfil the function of a university hospital)<sup>14</sup>.

The main assumptions are:

- ▶ CapEx EUR 259.5m (corresponds with the gross floor area of approximately 162,000 sqm and is calculated using the AFM. For general description regarding AFM, please refer to *Technical analysis appendices - section General description of the AFM model*).
- ▶ EUL CapEx: 40 years (the standard depreciation period of a new hospital).
- ▶ Achieved savings in OpEx 25% (reflects the effects of functional and technical improvements and an elimination of inefficiencies resulting from a simultaneous operation of multiple hospitals). The efficiency increase in terms of OpEx has been estimated by TNO using the AFM.

### Results

Table regarding to Options appraisal in *Technical analysis appendices - Phase 1 options scoring final report* lists the weighted scores for each of the three alternatives together with the motivation for the scoring.

The table *Phase1 appraisal summary* demonstrates the main outcomes of the Phase 1 analysis. The table depicts weighted values of all three options (for more details, please see *Technical analysis appendices - Phase 1 options scoring final report*), estimated CapEx and OpEx in the year 2020 and estimated CapEx and OpEx divided by the number of points. The last line of the table contains the values of expenditures per point.

#### Phase1 appraisal summary

Source: TNO

| Options:                             | Do minimum   | Refurbishment | New hospital |
|--------------------------------------|--------------|---------------|--------------|
| Annualised CapEx 2020 <sup>(a)</sup> | EUR 4,734k   | EUR 14,834k   | EUR 13,113k  |
| OpEx 2020 <sup>(b)</sup>             | EUR 243,681k | EUR 219,313k  | EUR 182,760k |
| Annualised CapEx and OpEx 2020       | EUR 248,415k | EUR 234,147k  | EUR 195,873k |
| Number of weighted points            | 224          | 248           | 384          |
| Expenditures per point               | EUR 1,109k   | EUR 944k      | EUR 510k     |

#### Notes:

(a) Calculated using annuity payment for CapEx at a discount rate of 4% for the period of a corresponding EUL (e.g. for option Do minimum value was calculated by annuity payment for period of 10 years with present value of EUR 38,400k).

(b) The value was calculated from the approximated value of OpEx for UNB in the year 2013 (EUR 205,000k) increased by the estimated annual inflation rate (2.5% yearly) until the year 2020 and decreased by the assumed achieved savings in OpEx specific for each option (0% for Do minimum, 10% for Refurbishment, 25% for New hospital).

<sup>14</sup> Based on a detailed investment expenditure breakdown according to Dutch construction standards reduced to the Slovak price level.

## Phase 1: Technical assessment of modification options of the current UNB

### Conclusion

The table *Phase1 appraisal summary* shows that the option of construction of a New hospital is strongly preferred. This result is valid even despite having accepted simplifying assumptions<sup>15</sup>, which, to some extent, privilege the Do minimum and Refurbishment options.

The table *Phase1 appraisal summary* also reveals that, due to the annualisation, the overall level of CapEx is a minor factor in determining the preferred option. On a yearly basis, the magnitude of OpEx is significantly larger. This is consistent with the received insight in hospital planning and facility management that the initial CapEx for a hospital or other healthcare facility is a minor factor in determining its total costs over the lifetime.

On top of the results presented in table *Phase1 appraisal summary*, the main strengths of the New hospital option over the Do minimum and Refurbishment options are:

- ▶ The opportunity to rationalize and centralize functions and facilities to eliminate redundancies,
- ▶ Functional and technical design according to contemporary insights and standards,
- ▶ A project with iconic value and a strong “signal for change” that can act as a catalyst to encourage and speed up further health system reform and performance improvement,
- ▶ The opportunity to tailor availability and distribution of facilities and services to desired accessibility and availability standards.

---

<sup>15</sup> These simplifying assumptions are described in subsection Approach, General assumptions and limitations).

## Phase 2: Technical assessment of Options replacing the Existing hospitals

In Phase 1 it has been determined that a strategy based on building a New hospital is the preferable approach. However, this does not yet tell us whether it is preferable to replace all four sites within the scope of the Study, or only some of these.

While replacing all sites is more likely to yield a New hospital that conforms to contemporary functional and technical standards, this option might be too expensive in terms of CapEx and may represent too high concentration of hospital care, potentially compromising availability of acute and chronic care.

In this phase, options involving replacing two, three and four current sites are considered. Options involving retaining more than two sites and/or retaining Kramare and/or Staré Mesto have been dismissed. Both sites are at the end of their life cycles, are (on the basis of the site visits and the information collected during those visits) in a very poor functional and technical state, and (Staré Mesto especially) have very poor prospects of improving on functional efficiency given the constraints of the current buildings and sites.

### Site replacement options

#### Replace all four sites

This option is identical to the New hospital option from Phase 1

#### Replace three sites

This option examines the possibility of retaining the current site at Petržalka (while refurbishing it) and replacing the other three.

The technical reasons for keeping Petržalka rather than the other three sites are:

- ▶ The site at Petržalka is comparatively new (built between 1987 and 1997) and has a logistical and functional structure that does not preclude relatively efficient provision of health care.
- ▶ The site is broadly modelled on the “double comb” principle of a central logistical corridor with “teeth” attached to it at various points. This is a design principle that was in common use during the 1980’s and 1990’s in western Europe and still surfaces occasionally.

#### Replace two sites

This option examines the possibility of retaining both the Petržalka and Ruzinov site, as being the two most recent. According to information provided by the UNB the Ruzinov site dates from the early 1980’s.

### Results

The table *Assumptions for site replacement options* below presents replacement option considered and specific assumptions for particular options<sup>16</sup>:

#### Assumptions for site replacement options

Source: TNO

| Hospitals replaced by the New hospital:  | CapEx New hospital          | CapEx Petržalka            | CapEx Ružinov              | EUL CapEx                 | Savings in OpEx     |
|--|-----------------------------|----------------------------|----------------------------|---------------------------|---------------------|
| Staré Mesto Kramáre                      | EUR 104,591k <sup>(a)</sup> | EUR 54,556k <sup>(b)</sup> | EUR 47,040k <sup>(c)</sup> | 30 years <sup>(d)</sup>   | 15 % <sup>(e)</sup> |
| Staré Mesto, Kramáre, Ružinov            | EUR 204,916k <sup>(f)</sup> | EUR 54,556k <sup>(b)</sup> | -                          | 35.7 years <sup>(g)</sup> | 20 % <sup>(h)</sup> |
| Staré Mesto, Kramáre, Ružinov, Petržalka | EUR 259,533k <sup>(i)</sup> | -                          | -                          | 40 years <sup>(i)</sup>   | 25 % <sup>(i)</sup> |

#### Notes:

(a) Corresponds with the area of about 65,000 sqm at a cost of EUR 1,600/sqm (gross floor area). Calculated using the AFM, which is described in details in *Technical analysis appendices* in the section *General description of the AFM model*.

(b) Corresponds with a reconstruction of 90% of the current floor area in Petržalka at a cost equal to 60% of costs per sqm of the New hospital.

(c) Corresponds with a reconstruction of 90% of the current floor area in Ružinov at a cost equal to 60 % of costs per sqm of the New hospital.

<sup>16</sup> Similarly to the assessment of individual options of building modifications, the general assumption in this step is that only the initial capital expenditures related to buildings are taken into account (see subsection Approach, general assumptions and limitations).

## Phase 2: Technical assessment of Options replacing the Existing hospitals

- (d) Corresponds with a weighted arithmetic average of the 40-year lifespan of a new building and the 20-year lifespan of the reconstructed buildings in Petržalka and Ružinov.
- (e) Based on OpEx savings corresponding with the replacement of all four hospitals (25%), multiplied by the coefficient of 50%, (replacement of 2 hospitals out of 4) and increased moderately to reflect an increase in operation efficiency of the remaining two hospitals in connection with their refurbishment.
- (f) Corresponds with the area of about 128,000 sqm at a cost of EUR 1,600/sqm (gross floor area). Calculated using the AFM, which is described in details *Technical analysis appendices* in the section *General description of the AFM model*.
- (g) Corresponds with a weighted arithmetic average of the 40-year lifespan of a new building and the 20-year lifespan of the reconstructed building in Petržalka (weights correspond with CapEx).
- (h) Based on OpEx savings corresponding with the replacement of all four hospitals (25%), multiplied by the coefficient of 75% (replacement of 3 hospitals out of 4) and increased moderately to reflect an increase in operation efficiency of the remaining hospital in connection with its refurbishment.
- (i) Corresponds with the New hospital option in Phase 1.

### Results

The table in *Technical analysis appendices* in the section *Phase 2 options scoring final report* lists the weighted scores for each of the three alternatives considered in Phase 2 together with the motivation for the scoring. The table *Phase 2 appraisal summary* below presents the main results of the analysis performed in Phase 2.

#### Phase 2 appraisal summary

Source: TNO

| Hospitals replaced by<br>New hospital: | Staré Mesto<br>Kramáre | Staré Mesto,<br>Kramáre, Ružinov | Staré Mesto, Kramáre,<br>Ružinov, Petržalka |
|--|------------------------|----------------------------------|---|
| Annualised CapEx 2020 <sup>(a)</sup>   | EUR 11,924k            | EUR 13,775k                      | EUR 13,113k                                 |
| OpEx 2020 <sup>(b)</sup>               | EUR 207,128k           | EUR 194,944k                     | EUR 182,760k                                |
| Annualised CapEx and OpEx 2020         | EUR 219,052k           | EUR 208,720k                     | EUR 195,873k                                |
| Number of weighted points              | 126                    | 208                              | 168   |
| Expenditures per point                 | EUR 1,739k             | EUR 1,003k                       | EUR 1,166k                                  |

#### Notes:

(a) Calculated using annuity payment for CapEx at a discount rate of 4% for the period of a corresponding EUL. For example, for the option of replacement of Stare Mesto and Kramare the annuity payment was calculated for 30 years period from total amount of EUR 104,591k + EUR 54,556k + EUR 47,040k.

(b) The value was calculated from the value of OpEx for UNB in the year 2013 in amount of EUR 205,000k increased by the annual inflation rate until the year 2020 and decreased by the assumed achieved savings in OpEx in each option.

### Conclusion

It is clear that the option to replace only two sites is the least preferable.

- ▶ This option retains the Ružinov site, which the site visits have indicated is in a poor functional and technical state and it keeps in place current functional inefficiencies and technical limitations of about a half of current UNB.
- ▶ Retaining so much of the current structure does not offer a natural transition point to a more regionally organized and coordinated system of health.
- ▶ While the initial CapEx is the lowest for the 2-sites-replacement option, substantial further investments will be required later on in the (assumed) thirty year period to cover the eventual replacement of Ružinov and Petržalka.
- ▶ The part of the New hospital that can be run according to contemporary standards of efficiency and quality is reduced to approximately half of the current UNB, with the added complication that a sizable portion of high-complexity care will be retained at Ružinov.
- ▶ The 4-sites-replacement option scores the best in terms of quality and efficiency of hospital care (70 weighted points for the 4 sites replacement compared to 52 points for the 3 sites replacement), but the 3-site-replacement option is slightly better in terms of financial assessment (36 weighted points for the replacement of 3 sites vs. 30 weighted points for the replacement of 4 sites).
- ▶ However, the most significant difference between the 3-sites- and the 4-sites-replacement options is in terms of the health care provision. In this category, the 3 sites replacement scores 120 weighted points, while the replacement of 4 sites only scores 68 points.



## Phase 2: Technical assessment of Options replacing the Existing hospitals

- ▶ The reason is that the replacement of 3 sites offers a natural transition to a regional model, while also providing adequate buffer capacity in case the efficiency gains are not reached as quickly as expected. Both the 4-sites replacement and 2-sites replacement options effectively lack this capacity.
- ▶ By providing a functional configuration with a main site (New hospital) and a subsidiary site (Petržalka), this option combines the advantages of centralization and rationalization of complex health care with the availability of acute and chronic care in western Bratislava. The option also provides the best risk management in terms of the availability of the buffer capacity.

## Phase 3: Technical assessment of the preserved hospital status

In Phase 2, it has been determined that a new-built-based strategy that keeps the Petržalka site operational offers the best balance between amenability to health policy objectives, quality and efficiency of care provision and financial considerations.

### Petržalka role options

In this phase a comparison is made between keeping Petržalka with its current production profile ("Current profile") and re-scoping the functional programme at Petržalka to one resembling a community hospital ("Revised profile"). Additionally, an analysis is done whether it would be preferable to have the Petržalka site be part of the organisational structure of the New hospital, or as a separate legal entity.

Here, the three options are analysed within the framework of the high-level technical assessment. For a detailed analysis of the three options that is also used for financial modelling, please see the *Technical analysis appendices*, the part *Phase 3 option scoring*.

#### Current profile

For the Current profile option an assumption of 90% of current floor area to be refurbished was used, consistent with the estimate used in phase 2.

The current production stream is taken out of the parameters determining CapEx and OpEx, and so is the revenue stream of the New hospital. The production of Petržalka has been extrapolated separately based on an age-specific regional demographic prognosis.

However, by keeping the Current profile, several limits on efficiency gains arise, reflected into the following technical analysis assumptions:

- ▶ Occupancy rates inpatient wards and special care will not rise above 75%, because current "pavilion type" organisation will be kept in place (no incentive to change).
- ▶ Operating theatre utilization will not reach the efficiency aim assumed for the new hospital (described in *Technical analysis appendices* in the section *General description of the AFM model*, but will stall halfway between current figures and efficiency aim of the New hospital. Reason: technical and functional limitations.
- ▶ No centralization of support staff will result in lower efficiency gains in support staff.
- ▶ Nursing staff will remain higher because of higher number of beds.
- ▶ Number of physicians will remain higher, because of retention of pavilion type structure and inefficiencies in functional building lay-out
- ▶ Efficiency of utilization of outpatient and diagnostics facilities will not progress beyond halfway point between current efficiency and efficiency aim of the New hospital. Reasons: functional and technical limitations; retention of pavilion structure

#### Revised profile

The Revised profile assumes concentrating the complex care at the New hospital site and Petržalka specializing in the low-complexity acute care and the chronic care.

To determine the production profile and capacity at Petržalka in the revised profile option, an analysis was done by TNO on the level of 173 unique combinations of medical specialty with care provision typology using the AFM as described in *Technical analysis appendices* in the section *General description of the AFM model*. For each of 173 lines, an assumption was made as to what percentage of the projected future UNB production would typologically be the best situated at Petržalka. Percentages ranged from 0-100%.

The assumptions were based on the functional profiles of community hospital settings in the Northern Ireland regional model, high-level functional profiles of community hospital type locations in the Israeli system, Australia and Finland (documentation on the Kymenlaakso region reform). A full overview of production distribution assumed by the technical advisers is provided in the *Technical analysis appendices* in the section *Petržalka profile assumption details*.

The resulting functional profile was run through the AFM to generate a reference floor area for New hospital and to arrive at an estimate of the percentage of current floor area of Petržalka to be refurbished to house the revised profile.

## Phase 3: Technical assessment of the preserved hospital status

The table *Assumptions for Petržalka role options* summarizes the options concerning the status of Petržalka and the corresponding assumptions.<sup>17</sup>

### Assumptions for Petržalka role options

Source: TNO

| Options of the status of Petržalka | CapEx New hospital          | CapEx Petržalka            | EUL CapEx                 | OpEx eff. increase |
|------------------------------------|-----------------------------|----------------------------|---------------------------|--------------------|
| Current profile                    | EUR 204,916k <sup>(a)</sup> | EUR 54,556k <sup>(a)</sup> | 35.7 years <sup>(a)</sup> | 20% <sup>(a)</sup> |
| Revised profile                    | EUR 201,950k <sup>(b)</sup> | EUR 30,309k <sup>(c)</sup> | 37.4 years <sup>(d)</sup> | 30% <sup>(e)</sup> |

#### Notes:

(a) Corresponds with the replacement of hospitals Staré Mesto, Kramáre, Ružinov in Phase 2.

(b) Corresponds with the area of about 126,000 sqm at a cost of EUR 1,600/sqm (gross floor area). Calculated using the AFM, which is described in details in *Technical analysis appendices* in the section *General description of the AFM model*.

(c) Corresponds with the reconstruction of 50% of the current floor area in Petržalka at a cost equal to 60% of costs per sqm of the New hospital.

(d) Corresponds with a weighted arithmetic average of the 40-year lifespan of a new building and the 20-year lifespan of the reconstructed building in Petržalka (weights correspond with CapEx).

(e) The increase of savings in OpEx in comparison with the option of replacing all remaining hospitals by a single New hospital (25% savings in OpEx) is based on the assumption that the option of two hospitals with specialised profiles enables certain economies of scale as the logistic processes and the functional capacity utilisation are more efficient than in the case of a single new hospital. This increase is supported by limited research and experience with similar projects, however, and serves as an approximation only (Note: Maintaining the level of the savings at 25% would not affect the relative order of preference of both considered options).

## Results

The table *Technical analysis appendices* in the section *Phase 3 options scoring final report* lists the weighted scores for the alternatives considered in phase 3 together with the motivation for the scoring. Table *Phase 3 appraisal summary* below presents the main results of the analysis performed in phase 3.

### Phase 3 appraisal summary

Source: TNO

| Quantitative comparison of the profile of Petržalka: | Current profile | Revised profile, Petržalka part of New hospital organisation | Revised profile, Petržalka separate legal entity |
|--|-----------------|--|--|
| Annualised CapEx 2020 <sup>(a)</sup>                 | EUR 17,790k     | EUR € 15,712k  | EUR 15,218k                                      |
| OpEx 2020 <sup>(b)</sup>                             | EUR 194,944k    | EUR € 170,576k   | EUR 170,576k                                     |
| Annualised CapEx and OpEx 2020                       | EUR 212,735k    | EUR € 186,289k   | EUR 185,795k                                     |
| Number of weighted points                            | 128             | 194  | 190  |
| Expenditure per point                                | EUR 1,662k      | EUR 960k   | EUR 978k   |

#### Notes:

(a) Calculated using annuity payment for CapEx at a discount rate of 4% for the period of a corresponding EUL. For example, for Current profile option the annuity payment was calculated for period of 35.7 years from total amount EUR 204,916k + EUR 54,556k.

(b) The value was calculated from the value of OpEx for UNB in the year 2013 in amount of EUR 205,000k increased by the annual inflation rate until the year 2020 and decreased by the assumed achieved savings in OpEx in each option.

<sup>17</sup> Similarly to the assessment of individual options of building modifications, the general assumption in this step is that only the initial capital expenditures related to buildings are taken into account (see subsection Approach, general assumptions and limitations).

## Phase 3: Technical assessment of the preserved hospital status

### Conclusion

- ▶ It clearly follows from the technical assessment that the preferred option is to replace three hospitals of the existing UNB (Staré Mesto, Kramáre, Ružinov) by a New hospital while keeping the hospital in Petržalka in operation.
- ▶ Regarding the profile options of Petržalka providing complementary services to the New hospital, the preferred option from the technical assessment point of view is the Revised profile.
- ▶ This Study does not clearly differentiate between the options, whether Petržalka will be a part of the organisational structure of the New hospital, or an independent legal entity. For this reason, the technical and financial analysis is restricted to functions that should be part of the New hospital. A well thought-out decision about the management structure of revised Petržalka must and can be only made in the next phase of the project. The decision will not affect the objectives and outcomes of the present Study.

## Next step: detailed technical analysis of the preferred options

In this sub-section, the options identified in Phase 3 of the high-level analysis are subjected to a more detailed technical analysis. The main objectives of this phase are to build up a more detailed picture of the profile, production capacity and volumes, revenue streams, staffing of the New hospital and to provide the input material for the detailed analysis performed by the financial advisers.

This chapter provides information on the methodologies, assumptions and outcomes of the detailed modelling done by technical advisers TNO on the options selected on the basis of the high-level analysis of options, and describes relevant differences of approach between the high-level and detailed technical analyses.

### Abstract functional model

- ▶ AFM is a simulation model and gives guidance on the potential efficiency, productivity and quality gains from a new model of hospital care, while adhering to the principles of flexibility to adapt to future demands, with constraints on additional public funding and government guarantee or security.
- ▶ The AFM shows the relation between production data from the hospital in its catchment area and a first hospital programme. It gives insight in the sizing of the hospital as well as the future operational and CapEx of the hospital. The model helps during the programming phase to monitor important parameters in terms of gross floor area as a whole or per function group/specialism, differentiated square meter pricing, exploitation costs and production parameters like annual admissions, nursing days, surgeries and, related to this, average lengths of stay, bed occupancy and ratios of clinical and day-clinical capacity in the hospital.
- ▶ The modelling is based on expectations of future demand for healthcare provision, ambitions for the hospital and the model of care as a whole, and a functional (space) and financial (cost) translation of a model of care with several ambition levels fit for the Slovak setting.
- ▶ With the input of demographic trends, the market share of the UNB and a range of organisational, technical and financial parameters, it is possible to generate a systematic translation of assumptions about future health care in the catchment area of the project into a detailed quantitative description of possible infrastructural responses. In other words, the model produces abstract but detailed pictures of what the future facility could look like and how it could function over the coming decades.
- ▶ The AFM provides insight into costs and programming in time and per specialism. With the AFM, the financial consequences of the choices are made visible in both the first year and during the course of the hospital's economic lifespan.
- ▶ Together, the model of care, key production parameters and epidemiological trends and future quantitative and qualitative volumes of health care to be serviced by the UNB represent the "demand" side of the AFM. Thus, the AFM produces input data for the financial analyses by EY on the preferred option. In carrying out the feasibility study, the technical advisers have used the AFM both for the high-level analysis of options, and for the detailed analysis of the New hospital output for the two profiles ("Case A" or "Current profile" and "Case B" or "Revised profile") selected for further analysis on the basis of the high-level analysis of options. Relative to the high-level analysis of options a number of additional and/or adjusted assumptions have been made in the detailed AFM analysis. These are described in *General assumptions used for modelling with the AFM* and *Adjusted and additional assumptions Cases A and B* relative to high-level analysis below.
- ▶ With the AFM several options have been explored to come to a couple of realistic options for the New hospital. In this chapter the outcome of the AFM for two base profiles will be described. Firstly Current profile, the replacement of three current locations of UNB including full capacity diagnostic treatment and the current product mix of the hospitals. Secondly Revised profile, the replacement and of three current locations of UNB including full capacity diagnostic treatment and a revised product mix based on the assumption that the remaining "old" UNB site will be made more efficient. Per case the outcomes will be described and we will elaborate on the description of the AFM in *Technical analysis appendices* in the section *General description of the AFM model* focusing on the key performance indicators for these specific cases.
- ▶ The AFM generates possible infrastructural responses and their effects in terms of expenditure. The objective of the modelling done with the AFM is to provide coherent input for the financial assessment done in the Study and to provide the MoH with an analytical framework to be used in further development of the Project. Its outcomes should not be taken to represent either an actual programme of requirements for the New hospital or a definition of "the only possible solution".

## Next step: detailed technical analysis of the preferred options

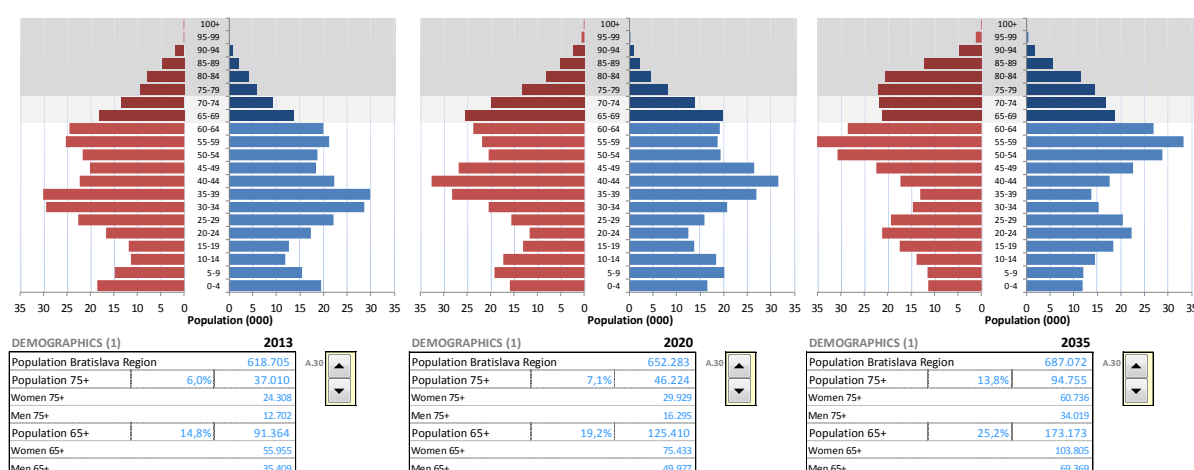
### General assumptions used for modelling with the AFM

A full description of the methodology, logic, assumptions and structure of the AFM is provided in *Technical analysis appendices* in the section *General description of the AFM model*. This paragraph briefly describes the main assumptions held constant for all modelling steps.

- ▶ The calculation year used has been 2020: all outputs of the AFM represent expected values for the year 2020.
- ▶ To extrapolate expected future production data, baseline data (production data) has been used pertaining to the fiscal year 2013 where these were available and to a three year average for the years 2010-2012 where data for 2013 were lacking or of insufficient quality.
- ▶ Furthermore it has been assumed that the New hospital will start operations in the year 2020. This represents the (i) expected remaining time needed to finalize the contractual detailing and the functional and technical design of the New hospital, (ii) 36 months of construction time, and a period of several months for start-up and transfer of services. To generate forecasts of the future volume and composition of the population in the catchment area of the UNB, data provided by the MoH derived from statistical office of Slovakia has been used covering age-specific population data and prognoses for the period 2013-2035.
- ▶ The AFM incorporates a number of assumptions on efficiency measures and performance improvement relative to the current performance figures of the UNB. A summary of these has been included in the financial chapters of this study, a fuller overview of them is provided in *Technical analysis appendices* in the section *General description of the AFM model*. The most important efficiency and performance improvement assumptions relate to occupancy rate of the beds, both clinical and day beds; a general decrease of the average length of stay in the clinical departments of the hospital; shift from clinical capacity to day cases; improved utilization rates of operating theatres, diagnostics suites and outpatient facilities. Some assumptions have been adjusted for the detailed analyses. These will be described in the chapters on Current profile (also referred to as Case A) and Revised profile (also referred to as Case A).
- ▶ Besides the efficiency measures an independent growth of specific specialties is taken into account based on epidemiology and production demand caused by changes in demography. Each age-group and gender represents a specific demand based on overall healthcare utilization rates and dominant age-specific healthcare issues.

### Demographics for the greater Bratislava region

Source: TNO



The calculations are based on these assumptions and further refined for the specific setting of Current profile and Revised profile.

## Next step: detailed technical analysis of the preferred options

### Investment costs, capital expenditure

- ▶ The investments costs are calculated by using price standards for general hospitals in the Netherlands. These price standards are based on benchmark data and can be used for the hospital as a whole (monolith structure). The different functional types and layers use differentiated price levels, expressed as a percentage of the price standard of the monolith structure which is used as a base figure. After all, a hotfloor has a higher price level than an office building.
- ▶ The same applies for the operating theatre in comparison with the outpatient clinic. The price standard is also adjusted to Slovak price level and takes into account a number of assumptions which are fully described in *Technical analysis appendices* in the section *General description of the AFM model*. Relative to the high-level analysis, which used a single price-level of EUR 1.600/m<sup>2</sup>, a slightly higher base rate of EUR 1.655,- has been calculated for deriving the differentiated price-levels per layer, to reflect possible extra costs not relevant for the options selection in the high-level analysis, e.g. extra costs for connecting up building sections housing different layers.

### Description of Current profile and Revised profile

Current profile: Replacing three of the current hospital sites, while retaining the Petržalka site with its current production profile.

- ▶ Current profile simulates a situation in which three of the current UNB hospitals will be fully replaced including all current production capacity of these three sites. This profile assumes that the Petržalka site will be retained with its current production capacity and profile and will be run independently from the New hospital.
- ▶ It is further assumed that, like presently, the considerable volume of diagnostics that is currently realized at the three sites to be replaced by third parties will not be part of the extrapolated future diagnostics production performed by the New hospital in 2013. The graphic below shows the main Interface settings in the AFM for this profile.

### Interface part I, key performance indicators of the abstract functional model Case A

Source: TNO

Abstract Functional Model - 2014

PRODUCTION

Calculation year

Baseyear data

Startyear of operation

2020

2013

2020

Total admissions CL

Total beds Clinic

Total admissions DCL

Total beds DCL

Total admissions CL+DCL Hospital

Total beds CL+DCL Hospital

Ratio DCL:CLB

Production Outpatient visits

Production Diagnostics

Production Surgeries

Production Deliveries

TOTAL weighted average length of stay - ALOS

TOTAL weighted average occupancy rate - OR

OR general to be adjusted to performance standard of

OR special care to be adjusted to performance standard of

General nursing

Healing

Beds/function

ALOS for selected (combined) function(s)

44.170

880

28.232

64

72.402

944

39% | 61%

873.533

644.776

42.020

5.204

6,45

88,7%

90%

85%

CLB

DCL

11,7

0,3

11,1

Include current productionmix of location

Include current productionmix of location

Include current productionmix of location

Include current productionmix of location

Include current productionmix of location

☒

☒

☒

☐

☒

INTERFACE I

A.01

A.02

A.03

2020

2013

2020

A.04

A.05

90%

85%

CLB

DCL

11,7

0,3

11,1

A.99

A.99

A.99

A.99

A.99

A.99

Ružinov

Kramáre

Petržalka

Staré mesto

CASE A

BUILDING & INVESTMENT

☒ Apply layer approach

Construction period in months

☐ Include 20% VAT

☐ Include contingencies (2.0, 6.1, 6.2)

Yes

36

No

No

LIFESPAN

EUL Monolith

EUL Hotfloor

EUL Hotel

EUL Office

EUL Utilities

A.19

A.20

A.21

A.22

A.23

40

25

50

50

25

Building differentiation / Layers (1)

Monolith

Hotfloor

Hotel

Office

Utilities

TOTAL

GFA

GFA

GFA

GFA

GFA

GFA

40.201

30.140

17.563

6.085

93.990

%GFA

%GFA

%GFA

%GFA

%GFA

%GFA

0%

43%

32%

19%

6%

100%

Cost per m² GFA per layer

Hotfloor

Hotel

Office

Utilities

1.745

1.229

1.147

1.639

Base case adjustment scheme

☒ Ambition level building

☒ Ambition level building II

☒ Ambition level equipment

☒ Building & Equipment utilisation

☒ Outsourcing non-essential

☒ Commercial healthcare

1

1

1

1

1

1

EQUIPMENT & ICT

Equipment capex

Equipment lifespan (yr)

ICT capex

ICT lifespan (yr)

€ (000)

€ (000)

36.474

7

17.164

3

MARKET POSITION

CLB increase - % market

DCL increase - % market

outpatient visits increase - % market

Surgeries increase - % market

Deliveries increase - % market

A.14

A.15

A.16

A.17

A.18

0%

0%

0%

0%

0%

EFFICIENCY - performance standards (PS)

Selected OPEX

€ (000)

24.783

Startyear for base PS in OPEX

% (+ or -) change in base PS

Year of reaching ideal PS in OPEX

% change in ideal PS OPEX

A.10

A.11

2020

2023

0%

0%

0%

0%

FTE at start operation

FTE Physicians

FTE Nurses

FTE Other staff

3.380

528

1.059

1.793

Startyear for base PS in FTE

% (+ or -) change in base FTE

Year of reaching ideal PS FTE

% change in ideal PS FTE

A.12

A.13

2020

2023

0%

0%

0%

0%

TOTAL CAPEX

190.951

Pricing compared to Dutch pricing

75%

All diagnostics production to nUNB

1

## Next step: detailed technical analysis of the preferred options

Revised profile: Replacing three sites and retaining the Petržalka site, accompanied by a shift of high-complexity and clinical care to the New hospital and low-complexity care, outpatient care and chronic care to the Petržalka site.

Revised profile simulates a situation in which three of the current UNB hospitals will be fully replaced taking into consideration a reconfigured production capacity for the Petržalka site and for the New hospital site to create economies of scope at both sides and improve future access to hospital care in the Bratislava region. For this option too it is assumed that the extrapolated future diagnostics production will not include the (extrapolated) volume of diagnostics production currently realized in the UNB by third parties. The New hospital will be erected on a new location for this purpose. The graphic below shows the main Interface settings in the AFM for this profile.

### Interface part II, key performance indicators of the abstract functional model Case B

Source: TNO

| Abstract Functional Model - 2014                          |      | INTERFACE I |     | CASE B   |                                    | EQUIPMENT & ICT |  | EFFICIENCY - performance standards (PS) |         |
|---|------|-------------|-----|--|------------------------------------|-----------------|--|---|---------|
| <b>PRODUCTION</b>   |      |             |     | <b>BUILDING &amp; INVESTMENT</b>                               |                                    |                 |  |   |         |
| Calculation year  | A.01 | 2020        |     | <input checked="" type="checkbox"/> Apply layer approach       | A.07                               | Yes             | Equipment capex                              | € (000)                                 | 36.137  |
| Baseyear data   | A.02 | 2013        |     | Construction period in months                                  | A.08                               | 36              | Equipment lifespan (yr)                      |   | 7       |
| Startyear of operation                                    | A.03 | 2020        |     | <input type="checkbox"/> Include 20% VAT                       | A.09                               | No              | ICT capex                                    | € (000)                                 | 17.005  |
|   |      |             |     | <input type="checkbox"/> Include contingencies (2.0, 6.1, 6.2) | A.10                               | No              | ICT lifespan (yr)                            |   | 3       |
| Total admissions CL                                       |      | 52.503      |     | <b>LIFESPAN</b>  |                                    |                 | <b>MARKET POSITION</b>                       |   |         |
| Total beds Clinic   |      | 998         |     | EUL Monolith   | A.11                               | 40              | CLB increase -% market                       | A.16                                    | 0%      |
| Total admissions DCL                                      |      | 29.113      |     | EUL Hotfloor   | A.12                               | 25              | DCL increase -% market                       | A.17                                    | 0%      |
| Total beds DCL  |      | 66          |     | EUL Hotel  | A.13                               | 50              | outpatient visits increase -% market         | A.18                                    | 0%      |
| Total admissions CL+DCL Hospital                          |      | 81.616      |     | EUL Office   | A.14                               | 50              | Surgeries increase -% market                 | A.19                                    | 0%      |
| Total beds CL+DCL Hospital                                |      | 1.064       |     | EUL Utilities  | A.15                               | 25              | Deliveries increase -% market                | A.20                                    | 0%      |
| Ratio DCL:CLB   |      | 36%   64%   |     | <b>Building differentiation / Layers (1)</b>                   |                                    |                 | <b>Building differentiation / Layers (2)</b> |   |         |
| Production Outpatient visits                              |      | 598.616     |     | Monolith   | GFA                                | -               | %GFA   | 0%                                      |         |
| Production Diagnostics                                    |      | 541.204     |     | Hotfloor   | GFA                                | 40.308          | %GFA   | 44%                                     |         |
| Production Surgeries                                      |      | 43.601      |     | Hotel  | GFA                                | 33.317          | %GFA   | 36%                                     |         |
| Production Deliveries                                     |      | 6.360       |     | Office   | GFA                                | 12.978          | %GFA   | 14%                                     |         |
| TOTAL weighted average length of stay - ALOS              |      | 6.17        |     | Utilities  | GFA                                | 6.024           | %GFA   | 7%                                      |         |
| TOTAL weighted average occupancy rate - OR                |      | 88.9%       |     | <b>TOTAL</b>   | GFA                                | 92.627          | %GFA   | 100%                                    |         |
| OR general to be adjusted to performance standard of      | A.04 | 90%         |     | <b>Cost per m² GFA per layer</b>                               |                                    |                 | <b>Pricing compared to Dutch pricing</b>     |   |         |
| OR special care to be adjusted to performance standard of | A.05 | 85%         |     | Hotfloor   | Hotel                              | Office          | Utilities                                    |   |         |
| General nursing   | A.06 | CLB         | DCL |  | 1.745                              | 1.229           | 1.147  | 1.639                                   |         |
| Beds/function   |      | 11,7        | 0,3 | <b>Base case adjustment scheme</b>                             |                                    |                 | <b>TOTAL CAPEX</b>                           |   | 189.185 |
| ALOS for selected (combined) function(s)                  |      | 11,1        |     | B.05   | 1                                  | 1               |  |   |         |
| Include current productionmix of location                 | B.01 | Eulínov     |     | B.06   | 2                                  | 1               |  |   |         |
| Include current productionmix of location                 | B.02 | Kramáre     |     | B.07   | 3                                  | 1               |  |   |         |
| Include NEW productionmix of location                     | B.03 | Petržalka   |     | B.08   | 4                                  | 1               |  |   |         |
| Include current productionmix of location                 | B.04 | Staré mesto |     | B.09   | 5                                  | 1               |  |   |         |
|   |      |             |     | B.10   | 6                                  | 1               |  |   |         |
|   |      |             |     | B.11   | All diagnostics production to nUNB | 1               |  |   |         |
| <b>PART I</b>   |      |             |     |  |                                    |                 |  |   |         |

The initial CapEx related to the Revised profile is EUR 186m. The CapEx is broken down into building CapEx EUR 134m, equipment CapEx EUR 35.5m and ICT CapEx EUR 16.7m. The selected OpEx related to the Revised profile calculated in the AFM is EUR 27.6m. The selected OpEx in the AFM consists of cost for goods and materials (EUR 24.8m), cost for utilities (EUR 0.7m), and cost for services (EUR 2.1m). OpEx for physicians and staff is calculated in the financial modelling done by EY, based on physician and staff numbers generated through the AFM. All OpEx is compared to international benchmarks for these categories and the values in the AFM represent a performance standard set for the ambition levels for the New hospital.

### Adjusted and additional assumptions to Current and Revised profiles relative to high-level analysis

#### ► Layers approach

- Where the high-level analysis assumed a traditional 'monolith' type building solution for the New hospital (appropriate to the strategic comparison of options performed in that step of the feasibility study), in the detailed analysis it is more realistically assumed that any party (public or private) developing the New hospital will want to use some form of the layers approach to hospital design. This approach, more fully described in *Technical analysis appendices* in the section *General description of the AFM model* and first documented in *Building Differentiation of Hospitals - layers approach, report number 611*, Netherlands Board for Healthcare Institutions, Utrecht (2007), allocates components of the hospital programme to four different building typologies, each with their own investment level, EUL and lifecycle investments, and net to gross floor area ratios.
- Besides reducing the complexities of functional and technical design of hospitals, the layers approach allows for cost saving and efficiency enhancing measures that are unavailable when housing all hospital functions in an undifferentiated building mass.

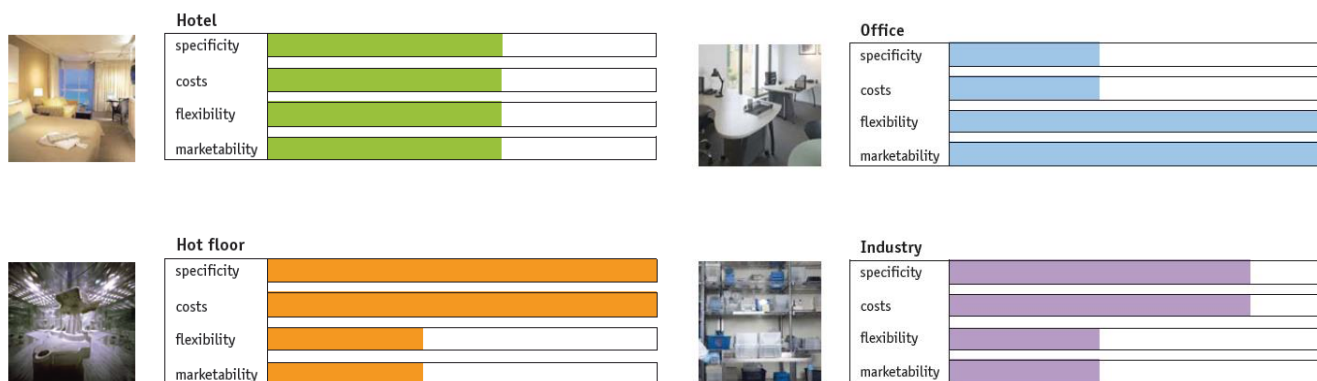


## Next step: detailed technical analysis of the preferred options

- Another important feature of the layers approach is the high degree of flexibility over the lifetimes of the buildings.
- The approach is based on categorization of functions setting similar requirements for the built environment, for the purpose of optimizing the property. The layers are:
  - i) Hotel: hotel-like functions, this layer includes the larger part of the patient accommodations.
  - ii) Hot Floor: the capital intensive high-tech functions that are unique to the hospital.
  - iii) Office: office-like functions, this layer includes outpatient units, accounting, management and training functions.
  - iv) Utilities: this layer accommodates those functions that are capital intensive, such as laboratories and the production unit.
- Each level 2 combination of functional type and department is linked to one of the layer types mentioned above with the exception of four functional types within the support category: community spaces, central Staff accommodation, workrooms medical specialists and staff facilities. Because of their general aspects these functional types are spread over different layers. When not using the layer-approach, all functions are considered to be accommodated in one undifferentiated building complex: the monolith.

### Properties of a hospital's design

Source: Building Differentiation of Hospitals - layers approach, 2007



- Each of these layers has its own properties profile with regards to specificity, investments costs, growth/downsizing requirements, and marketability of the property (see *Technical analysis appendices*, the section *General description of the AFM model*).
- For the different layers the price level is differentiated using the standard as a base ("Base"). The table below shows the price level for the layers relative to the standard price level as mentioned above.

### Price level layers in relation to standard price level

Source: Building Differentiation of Hospitals - layers approach, 2007

| Layer     |       |
|-----------|-------|
| Hot floor | 105 % |
| Office    | 70 %  |
| Hotel     | 75 %  |
| Utilities | 100 % |

- The application of the layers approach results in the following outputs for Current and revised profiles in terms of investment and gross floor area for each layer.

## Next step: detailed technical analysis of the preferred options

### The outputs for Current profile

| Current profile |             |                |             |            |               |             |
|-----------------|-------------|----------------|-------------|------------|---------------|-------------|
| Hot floor       | EURk        | 68,180         | 50%         | GFA        | 39,073        | 42%         |
| Office          | EURk        | 36,926         | 27%         | GFA        | 30,043        | 32%         |
| Hotel           | EURk        | 20,073         | 15%         | GFA        | 17,498        | 19%         |
| Utilities       | EURk        | 9,853          | 7%          | GFA        | 6,012         | 6%          |
| <b>Total</b>    | <b>EURk</b> | <b>135,032</b> | <b>100%</b> | <b>GFA</b> | <b>92,627</b> | <b>100%</b> |

- The outputs for Revised profile are as follows:

### The outputs for Revised profile

| Revised profile |             |                |             |            |               |             |
|-----------------|-------------|----------------|-------------|------------|---------------|-------------|
| Hot floor       | EURk        | 68,367         | 51%         | GFA        | 39,181        | 43%         |
| Office          | EURk        | 40,831         | 31%         | GFA        | 33,220        | 36%         |
| Hotel           | EURk        | 14,812         | 11%         | GFA        | 12,192        | 14%         |
| Utilities       | EURk        | 9,752          | 7%          | GFA        | 5,951         | 7%          |
| <b>Total</b>    | <b>EURk</b> | <b>133,762</b> | <b>100%</b> | <b>GFA</b> | <b>91,264</b> | <b>100%</b> |

### Adjustments to efficiency assumptions and ambition levels

- On the basis of an initial calculation of the financial effects of the base case model used to start the detailed analysis phase, it was concluded that further adjustments to improve the outlook of this base case would be necessary, and that it would be reasonable to assume that any operator, whether public or private, of the future New hospital would want to implement any improvements that represented an acceptable costs-benefits trade-off and that would lie within the competency scope of the future operator<sup>18</sup>.
- An extensive structured list of possible adjustments was drawn up by TNO and discussed with and presented to the MoH in a meeting on the 7<sup>th</sup> of May 2014.
- The possible adjustments were coded according to whether they:
  - Were relatively simple to model and could be calculated into the AFM and financial calculations within the scope of the feasibility study (GREEN).
  - Required more extensive research, modelling and or discussion and could appropriately be analysed in a follow-on phase of the project (ORANGE).
  - Represented a major adjustment to the project concept and/or would represent a major change in the system of healthcare provision in Slovakia and would need strategic discussion with appropriate stakeholders and experts before it could be decided whether they could be pursued (RED).
- The possible adjustment marked as GREEN have been incorporated into the AFM modelling assumptions for Current and Revised profiles. They are briefly described below.

### Adjustment scheme

Source: TNO

| Adjustment   | Explanation  |
|--|--|
| Reduce floor areas per bed general nursing wards to western general (tertiary) hospital standard | To reflect this, the average net square floor area per bed is reduced from 25 m <sup>2</sup> to 21 m <sup>2</sup> . Since the base case figure of 25 m <sup>2</sup> includes clinical training facilities that are necessary for the academic hospital function, this reduction effectively means fewer single rooms and more modest floor plans per room. |

<sup>18</sup> For instance: a private operator would find it outside his competency scope to introduce changes of payment mechanisms, while a public operator would be ill-placed, perhaps even legally unable, to develop for-profit activities.

## Next step: detailed technical analysis of the preferred options

|   |   |
|---|---|
| Reduce floor areas per bed special care to western general (tertiary) hospital standard.      | To reflect this, the average net square floor area per bed is reduced from 45 m <sup>2</sup> to 41.5 m <sup>2</sup> . Since the Base case figure of 45 m <sup>2</sup> includes clinical training facilities that are necessary for the academic hospital function, this reduction effectively means fewer single rooms and more modest floor plans per room.  |
| Reduce ratio of special care to general (inpatient) care beds                                 | To reflect this, the number of special care beds is reduced by approximately 20%. With a substantial general improvement in standards of facilities and equipment in general nursing wards, the number of patients needing to be admitted to special care beds will very likely decrease.   |
| Reduce operating theatres floor areas to general hospital standard                            | To reflect this, the average net square floor area per operating theatres is reduced by 15%, from 175 m <sup>2</sup> to just under 150 m <sup>2</sup> . Relative to university hospitals internationally the New hospital performs a large percentage of general hospital care, so this reduction may be feasible.  |
| Reduce diagnostics suites floor areas to general hospital standards                           | To reflect this, the average net square floor area per diagnostics suite is reduced from 100 m <sup>2</sup> to 80 m <sup>2</sup> . Relative to university hospitals internationally the New hospital performs a large percentage of general hospital care, so this reduction may be feasible.   |
| Reduce outpatient consultation units floor areas to general hospital standards.               | Reflected by a reduction of net square area per unit from 88 m <sup>2</sup> to 77 m <sup>2</sup> . Modern-day set-ups and operational models of outpatient departments are generally more compact than the set-ups the standards used in the base case represent. Reducing floor space per unit should be possible without affecting quality and comfort of care too much.  |
| Reduce laboratory floor areas   | Reflected by a decrease of 15% in the floor areas assumed for the lab functions in the New hospital. These have been dimensioned in the Base case according to full Dutch benchmark university hospital standard. More space-efficient operation should be possible, further aided by the availability of increasingly more compact equipment and remote diagnostics.   |
| Bring down net to gross factor  | By cutting down on circulation space and room for logistics, the gross to net floor area could be reduced, with one of the effects being that a greater proportion of the hospital floor area directly yields revenues. This measure does have potential impact on the quality of logistics in the New hospital, so must be applied with care and with the enlistment of expert advice. To reflect the adjustment, a 5% reduction to the gross-net floor area ratio has been applied to each building layer.  |
| Reduce ceiling heights in non-hotfloor areas  | This affects only a few items in detailed construction cost calculation. A calculation has been done using TNO's Life Cycle Costing model, and the results are simulated by assuming a 1% overall reduction in building costs per m <sup>2</sup> .  |
| Purchase mid-range specs high-end equipment instead of top of the range for tertiary hospital | Purchase and performance specifications of equipment are often not based on rational grounds of what is needed for good quality healthcare, but rather on the wish to purchase the latest and best. For instance, while 256 slice CT equipment is now available on the market, for all but the most complex diagnostics and high-end research, a 64 or even 32 slice CT would do equally well. The effect is modelled through an effective reduction of 15% in initial and derived CapEx for equipment.   |
| Increase occupancy rates general inpatient beds to 90% and of special care beds to 85%        | Several recent hospital redevelopment schemes in the Netherlands have used a 90% occupancy rate for general nursing. Like the occupancy rates used for the current UNB and the baseline calculation, these are "administrative" occupancy rates, that is to say that both the day of admission and the day of release are counted as full bed days. A high occupancy rates means efficient utilization of a cost-intensive means of production. This measure does require that appropriate measures are taken to regulate the flow of clinical patients to "normal" general nursing and special care wards.   |
| Increase occupancy rates day care beds to 200% for 240 days per year                          | In some recent business cases for day wards a figure of 200% has been used, reflecting more intensive use of facilities, dedicated day care surgical planning, partial replacement of beds with rest chairs, and longer operational hours. Both dedicated day surgery planning and new "bed replacing" concepts could be implemented easily given a new build New hospital, and intensive use of facilities makes economic sense. This adjustment does require good back-up facilities in case patients treated later in the day are not in a fit condition to be sent home at close of business at the daycare ward, but this should not provide any problem in a large tertiary hospital. |
| Introduce fully standardized flexible allocation outpatient departments                       | "Generic space" concepts for outpatient departments have shown in recent practice to lead to substantial capacity improvements over more traditional outpatient department concepts such as used in the Base case AFM assumption. Reflected by assuming a 20% improvement of occupancy rates for outpatient department consulting rooms. Does require   |

## Next step: detailed technical analysis of the preferred options

|   |   |
|---|---|
|   | adequate ICT support and an ability and willingness on the part of physicians and other patient-related staff to change the way they work   |
| Outsource catering, laundry services, technical services, central sterilization services and cleaning services. | Reflected by taking these out of the AFM modelling. On the basis of information from facility management sources, decisions to outsource are generally taken not to incur any immediate financial advantage, but to attain higher quality, less "bother" and more direct incentivisation of service- and efficiency-oriented attitudes on the part of providers, while broadly speaking neutral in terms of CapEx and OpEx effects. The effects on the Base case shown here are the result of physically taking out the services from the new build, but there will be compensating OpEx effects. These are figured into the revenue modelling done by EY |
| Operate for profit cosmetic surgery, eye surgery and diagnostics  | Assumed: circa 5000 extra surgical procedures and circa 10% extra I&D production, on a commercial basis. This measure actually increases CapEx and OpEx but there should be more than compensation for this on the revenue side: Financial modelling by EY to reckon with a revenue stream that covers all costs from extra CapEx and Opex (including equity) plus an extra margin of circa 10%   |

- **Important note:** Even these GREEN adjustments are less simple than they appear. All represent trade-offs between quality, efficiency, investment costs, OpEx, patient experience, teaching excellence and so forth. Eventually it will depend on discussion and exploration by the future New hospital operator stakeholders from inside and outside the New hospital, healthcare insurers and government which of these adjustments (plus any ORANGE and RED adjustments) are actually going to be figured in the New hospital business case.

### Other outcomes analysis of Current and Revised profiles

- The KPI's for Current profile generated through the AFM modelling are summed up in the following table.

### KPIs of Current profile (Case A)

Source: TNO

|   |           |
|---|-----------|
| Total admissions CL                                       | 44.170    |
| Total beds Clinic   | 880       |
| Total admissions DCL                                      | 28.232    |
| Total beds DCL  | 64        |
| Total admissions CL+DCL Hospital                          | 72.402    |
| Total beds CL+DCL Hospital                                | 944       |
| Ratio DCL:CLB   | 39%   61% |
| Production Outpatient visits                              | 873.533   |
| Production Diagnostics                                    | 608.761   |
| Production Surgeries                                      | 42.020    |
| Production Deliveries                                     | 5.204     |
| TOTAL weighted average length of stay - ALOS              | 6,45      |
| TOTAL weighted average occupancy rate - OR                | 88,7%     |
| OR general to be adjusted to performance standard of      | A.04 90%  |
| OR special care to be adjusted to performance standard of | 85%       |

- The production volume of the New hospital excluding the Petržalka production volume is represented by 44,170 clinical admissions in year 2020. Resulting in 880 beds based on an average length of stay of 6.45 days, occupancy rates for general nursing beds of 90% and 85% for special care beds.
- The number of admissions for day patients is 28,232 leading to 64 day beds with an occupancy rate of 200% by 250 days of business a year. Calculated into this figures is a shift from short stay and clinical admissions to day admissions to a ratio from around 60/40 (clinical/day admissions).
- The number of outpatient visits taken into consideration are 873,533. In diagnostic treatments the volume is 608,761. The number of surgeries is 42,020. The amount of deliveries taking into account is 5,204 in 2020.
- The spatial programme of Current profile cumulates to 92,627 m<sup>2</sup> gross floor area.

## Next step: detailed technical analysis of the preferred options

### List of functional types and KPI's<sup>19</sup>

Source: TNO

| Patient-related facilities - Nursing (patient present) |          |
|--|----------|
| Clinical beds  | 880 beds |
| Dayclinical beds                                       | 64 beds  |

| Patient-related facilities - Diagnostics & Treatment (patient present) |                   |
|--|-------------------|
| Outpatient clinic  | 81 clinical units |
| General organ function diagnostic                                      | 49 rooms          |
| Imaging and Diagnostics  | 40 rooms          |
| Outpatient treatment   | 49 rooms          |
| Operating theatres   | 22 OR             |
| Delivery ward  | 14 rooms          |

- The KPI's for Revised profile are summed up in the following table.

### KPIs of Revised profile (Case B)

Source: TNO

|   |           |
|---|-----------|
| Total admissions CL                                       | 52.503    |
| Total beds Clinic   | 998       |
| Total admissions DCL                                      | 29.113    |
| Total beds DCL  | 66        |
| Total admissions CL+DCL Hospital                          | 81.616    |
| Total beds CL+DCL Hospital                                | 1.064     |
| Ratio DCL:CLB   | 36%   64% |
| Production Outpatient visits                              | 598.616   |
| Production Diagnostics                                    | 507.735   |
| Production Surgeries                                      | 43.601    |
| Production Deliveries                                     | 6.360     |
| TOTAL weighted average length of stay - ALOS              | 6,17      |
| TOTAL weighted average occupancy rate - OR                | 88,9%     |
| OR general to be adjusted to performance standard of      | A.04 90%  |
| OR special care to be adjusted to performance standard of | A.05 85%  |

- The production volume of the New hospital excluding the Petržalka adjusted production volume is represented by 52,503 clinical admissions in year 2020. Resulting in 998 beds based on an average length of stay of 6.17 days, occupancy rates for general nursing beds of 90% and 85% for special care beds.
- The number of admissions for day patients is 29,113 leading to 66 day beds with an occupancy rate of 200% by 250 days of business a year. Calculated into this figures is a shift from short stay and clinical admissions to day admissions to a ratio from around 64/36 (clinical/day admissions). The number of outpatient visits taken into consideration are 598,616. In diagnostic treatments the volume is 507,735. The number of surgeries is 43,601. The amount of deliveries taking into account is 6,360 in 2020.
- The spatial programme of case B cumulates to 91,264 m<sup>2</sup> gross floor area.

<sup>19</sup> See also in *Technical analysis appendices* in the section *General description of the AFM model*.

## Next step: detailed technical analysis of the preferred options

### List of functional types and KPI's<sup>20</sup>

Source: TNO

| Patient-related facilities - Nursing (patient present) |          |
|--|----------|
| Clinical beds  | 998 beds |
| Dayclinical beds                                       | 66 beds  |

| Patient-related facilities - Diagnostics & Treatment (patient present) |                   |
|--|-------------------|
| Outpatient clinic  | 50 clinical units |
| General organ function diagnostic                                      | 31 rooms          |
| Imaging and Diagnostics  | 39 rooms          |
| Outpatient treatment   | 31 rooms          |
| Operating theatres   | 22 OR             |
| Delivery ward  | 16 rooms          |

<sup>20</sup> See also in *Technical analysis appendices* in the section *General description of the AFM model*.

## Financial Assessment

---

1. Definition of Financial Options and the Method of their Assessment
2. Risk Analysis
3. Modelling Approach
4. Key Financial Model Assumptions
5. Analysis of Financial Affordability
6. Value for Money Analysis
7. Analysis of the Impact on the State's Balance Sheet
8. Summary of Financial Assessment
9. Criteria for the Selection of Candidates for PPP

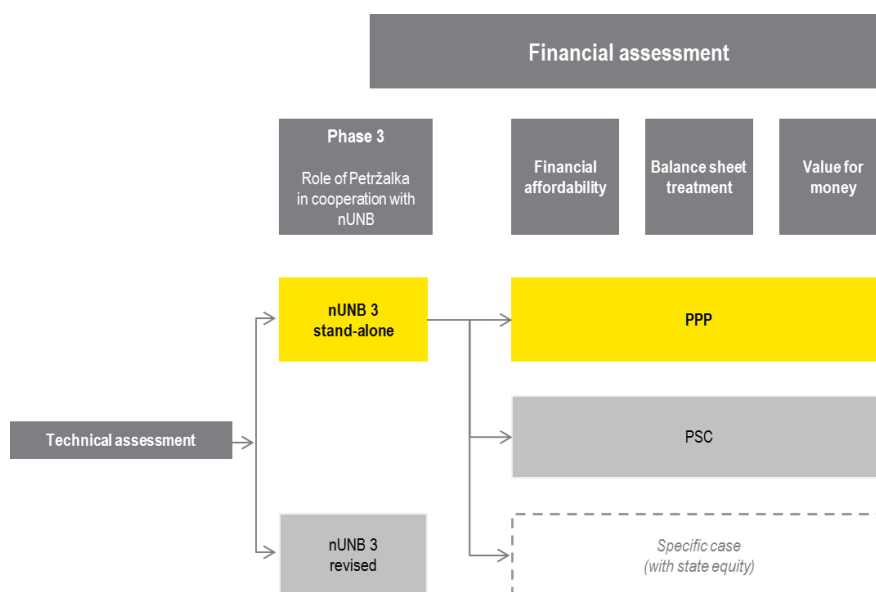
## Definition of Financial Options and the Method of their Assessment

### Methodology

- ▶ The technical analysis discarded all options except for the option of a construction of a New Hospital, which should replace the 3 remaining hospitals (UNB3). This option contains two main sub-options:
  - i) The New Hospital and the Petržalka hospital function as independent and separate hospitals providing health care services.
  - ii) The New Hospital and the Petržalka hospital co-operate in providing these services.
- ▶ From an isolated technical point of view, it seems to be more suitable for the Petržalka hospital to co-operate in the provision of health care services with the New Hospital, i.e. the sub-option (ii). However, there are powerful arguments (discussed with the MoH SR – as well) for the sub-option (i), in which both the hospitals function independently. The arguments are the following:
  - From both the strategic and national security points of view, it would be risky to create a single hospital providing complete services for the whole Bratislava catchment area.
  - A creation of two independent hospitals providing complete services will ensure a more natural competitive environment, which could not be achieved in the case of complementation of the two hospitals.
  - From the strategic point of view, the positions of both hospitals are advantageous (each on a different side of the Danube's riverbank), the main reason being that both the hospitals, operated as hospitals providing complete services, are capable of serving patients from different parts of the catchment area, which creates an added value for the public.
- ▶ Following the aforesaid arguments and after the confirmation with MoH SR, only the sub-option (i) was considered in further analyses. Therefore, only the New Hospital, replacing the 3 remaining hospitals and without the influence of Petržalka (further referred to as "nUNB"), was assessed in the financial analysis. Three forms of the realisation of nUNB were assessed:
  - Traditional form of a series of public procurement contracts PSC,
  - PPP procurement, and
  - Specific variant defined by MoH SR.
- ▶ The method of the financial assessment is outlined in the following diagram:

### Method of the financial assessment of the options

Source: EY





## Definition of Financial Options and the Method of their Assessment

### PSC

- ▶ The traditional form of the realisation of nUNB by a series of public procurement contracts.
- ▶ The design, construction, and operation of nUNB are realised by the Public sector ("PS" or "Public sector").
- ▶ The Public sector is in the position of an investor and the investment expenditures are funded via the national debt (bank loans or bond emission).

### PPP

- ▶ The design, construction, funding and operation of nUNB are arranged by a single Private partner or a consortium of Private partners ("PP" or "Private partner").
- ▶ MoH SR imposed a specific requirement on the assessment of this option that the Private partner arranges the operation, including the operation and provision of health care services.

### Specific variant with an involvement of the state (request of MoH SR)

- ▶ The preparatory phase<sup>21</sup> will be arranged by the Public sector in cooperation with an operations advisor ("Operations Advisor"), who has experience with operating a similar type of hospital abroad and will be procured by standard public procurement.
- ▶ It is assumed that the debt financing will be provided by the European Investment Bank (EIB) or the Council of Europe Development Bank ("CoEB"). The government assumes that they will provide an equity investment of c. EUR 50m without a specific right for a level of the required internal rate of return from the equity (equity IRR). The participation of structures related to the Slovak Investment Holding is considered as well.
- ▶ Similarly to the PSC variant, the construction will be arranged through standard public procurement.
- ▶ The operation of the hospital will be arranged by the Public sector, in co-operation with the Operations Advisor, motivated to help the Public sector with achieving high level of operational efficiency from the beginning of the Project's operation phase. The remuneration of the Operations Advisor will be determined on the basis of a fixed and motivational reward dependent on the achievement of objectives.
- ▶ It is assumed that a contract with the Operations Advisor will be concluded for the period of the first five years of the operation stage of the Project. This is important for the Public sector to learn from the partner how to operate the hospital efficiently.

### Assessment method of the financial options

- ▶ In order to carry out the financial analysis, we created a financial model, whose inputs are based on the following:
  - An independent financial inspection of the current state of UNB based on historical financial information and discussions with the Client,
  - A technical analysis carried out by TNO,
  - A risk analysis carried out by EY in co-operation with bank experts,
  - An analysis of comparable projects from the viewpoint of debt structuring based on benchmarking of debt instruments and discussions with bank experts.
- ▶ The following financial indicators were assessed:
  - Affordability,
  - „Value for Money“, and
  - Financial impact of the Project upon state accounts.

---

<sup>21</sup> Including e.g. preparation of the business and the architectural plans, and other studies.

## Risk Analysis

### Introduction

- ▶ At this stage, we identified and quantified risks connected with the Project.
- ▶ The risk analysis was performed in co-operation with various Project stakeholders, namely the technical (TNO) and legal (RC CMS) advisors, UNB representatives, and MoH SR.
- ▶ The risks were segmented into individual stages of the project and quantified, where such quantification was possible (see below).
- ▶ In addition, this Study suggests risk allocation in such a way that the final risk profile of the Project is acceptable for all participating parties – especially the considered financial institutions.
- ▶ The risk analysis was performed in the following steps:
  - Risk identification irrespective of the selected procurement method.
  - Because the general rule is that the respective risks should be borne by the party that is best able and empowered to control and manage them with minimum costs, the risks were assigned to 3 categories in such a way that the costs of the Public sector are minimal:
    - i) Risks borne by the Public sector (PS)
    - ii) Risks borne by the Private partner (PP)
    - iii) Risks borne by both the Public sector and the Private partner (PP/PS).
- ▶ In the case of the PSC variant, all risks are borne by the Client (PS). In practice, no risk mitigating strategies are adopted for PSC projects. Therefore, we have only assumed protection against standard risks (insurable risks, financial risks) in the PSC variant.
- ▶ In the case of the PPP variant, the allocation of risks is driven by the following logic:
  - The risks that should be retained (further referred to as the “Retained Risks”) by the Public sector are those which:
    - i) Only the Public sector can influence/control (political, regulatory, etc.)
    - ii) In the case of which it is difficult or impossible to quantify, whether their impact is so broad that the transfer of such risks would make the Project unbankable and unacceptably expensive for the Public sector.
  - The risks that should be transferred to the Private partner are referred to as “Transferable Risks”. These risks are quantified based on the obtained expert opinions and external sources about the probability of their occurrence and the likely magnitude.
- ▶ In the case of the Specific variant, the risks are borne by the Client (similarly to PSC). In certain areas, however, the risks may be partially transferred to the Operations Advisor (especially operational risks, cf. table below).
- ▶ Risk conclusions and results serve as inputs into the financial model.

## Risk Analysis

### Overview of the analysed risks

The following table (i) presents a description of the analysed risks, (ii) summarises conclusions of the risk allocation to the Public sector (PS), the Private partner (PP), or both the Public sector and the Private partner (PS/PP) for each of the options (PSC, PPP, the Specific variant), and (iii) it shows whether the risk was quantified in the financial modelling or not.

### Overview of the analysed risks

| Category                          | Brief description  | Detailed description  | PSC      | PPP              | Specific variant | Quantified |
|-----------------------------------|--|---|----------|------------------|------------------|------------|
| Political or regulatory risk      | Project termination or slowdown because of system changes and / or as a result of a political change | Increased costs arisen from changes (or adjustments) that may negatively influence nUNB business arising from political activity, legislation and regulation development.<br><br>E.g. new DRG payment mechanism, EU rules, current formal requirements enabling operational inefficiencies, incl. MTZ, personnel norms, environmental protection, fiscal development reasons. | PS       | PS               | PS               | No         |
| Development and construction risk | CapEx increase and / or delay of construction works (in the construction and operational phases)     | Increased costs arisen from a bad choice and negative development of the partner: (1) unexperienced (incl. non-compliance with the health insurance company), (2) limited financial strengths, (3) no proven business culture, (4) with conflicts of interest.  | PS       | PS               | PS               | Yes        |
|                                   |  | Increased costs arisen from inefficiencies in the process of service provision: (1) unclear design, creating room for additional changes = costs, (2) unclear / predefined procurement construction, (3) unclear control of costs / control of the construction / supply process  | PS       | PP               | PS               |            |
|                                   |  | Increased costs arisen from underdeveloped and unprepared nUNB site:<br><br>1. zoning and infrastructure<br>2. building permit and control and completion of the construction   | PS<br>PS | PS<br>PP         | PS<br>PS         |            |
|                                   |  | Increased costs arisen from non-transparent interests and conflicts of interest of the involved parties during the process of construction and supply.  | PS       | PP               | PS               |            |
| Market risk                       | Loss of revenues (not caused by infrastructure)  | Loss of revenues arisen from insufficient price setting (price risk)  | PS       | PS <sup>2)</sup> | PS               | No         |

## Risk Analysis

|                         |   |   |    |                  |                  |                         |
|-------------------------|---|---|----|------------------|------------------|-------------------------|
|                         | unavailability of the new hospital)   | Loss of revenues arisen from a decrease in the number of clients, a change in the structure of provided services, etc. (quantity risk)  |    |                  |                  |                         |
| Operational risk / OpEx | Flaws in transfer: inefficient management of the transfer of operation from UNB3 to nUNB  | Inefficient management of the business transfer leads to increased costs as a result of underdeveloped design of transition processes, resource mis-calibrations and mis-organisation.<br><br>Increased material/energy costs as a result of negligence, misconduct, operation of the old and the new facility at the same time, and increased personnel costs as a consequence of keeping employees in both facilities during the transition period. | PS | PP               | PS <sup>3)</sup> | No                      |
|                         | Incorrect operation management and non-achievement of the expected operational efficiency | Increased costs as a result of inefficient human resources management (e.g. concerns of the UNB staff about their future employment, required efficiency, compliance with new processes, increased qualification requirements).<br><br>Increased costs as a result of inefficient material / energy & service procurement / management (e.g. management of conflicts of interest, inefficient budgeting & cost control).                              | PS | PP               | PS <sup>3)</sup> | Yes                     |
|                         | Accelerated obsolescence of the infrastructure of the new hospital                        | Increased costs as a result of nUNB infrastructure malfunctioning earlier than anticipated leading to a loss of efficiency, lower capacity, lower ability to satisfy safety and quality standards.  | PS | PP               | PS <sup>3)</sup> | Mitigated <sup>4)</sup> |
| Legal risk              | Invalidity and / or mistakes in the formal process and legal documentation set-up         | Increased costs as a result of improper set-up of processes (incl. insufficient flexibility in management of problem settlement, inefficient change of the demand system), insufficient or illogical competence and responsibility allocation between the private and Public sectors, and its impact on incorrect documentation of the aforesaid processual settings.   | PS | PS <sup>1)</sup> | PS               | No                      |

Notes to the table:

1) Given the complexity and timing of the Project, this risk is the most important in the case of PPP.

2) In the case of PPP, this risk is resolved by an Availability payment (i.e. a payment from the Public sector to the Private partner).

3) In this case, it is possible to consider a partial sharing of the risk with the Operator.

4) The importance of this risk is decreased through relatively high modelled investments in the course of the operational phase (applies to the PPP, PSC and Specific variants).

## Risk Analysis

- In addition to the aforementioned risks, the Project is influenced by other risks, summarised in the following table<sup>22</sup>:

Overview of additional analysed risks

| Category           | Brief description  | Detailed description   | PSC | PPP | Specific variant | Quantified |
|--------------------|--|--|-----|-----|------------------|------------|
| City planning risk | Insufficient connection of the nUNB functionality to the surrounding city-planning and infrastructural solutions | Loss of revenues arisen from the unpreparedness of the infrastructure to handle onslaughts connected with the movement of clients of the nUNB (insufficient communication, insufficient connection by the public transport, insufficiently resolved logistics of services needed for the operation of nUNB). | PS  | PS  | PS               | No         |
| Reputation risk    | Worse acceptance of nUNB   | Loss of revenues arisen from the negative attitude of clients to the use of nUNB services as a result of bad image, transportation distances and costs.  | PS  | PS  | PS               | No         |
| Financial risk     | Negative impact of the development of:<br>- interest rates<br>- currency exchange rates<br>- inflation           | Increased costs arisen from insufficient fluctuation securing.   | PS  | PP  | PS               | Yes        |
| Insurable risks    | - Operation interruption risk<br>- Damage caused by force majeure<br>- Damage to third persons                   | Loss of revenues arisen from the inability to provide services as a result of unforeseeable situations.<br><br>Increased costs connected with repairing the damage caused by unforeseeable situations, or with compensation of damage caused by negligence of the hospital personnel.                        | PS  | PP  | PS               | Yes        |

<sup>22</sup> For the avoidance of any doubt, it is stressed that the risks described in the table above does not constitute complete list of risks related to the Project. The table is focused on main risks which are for a better comprehensibility further divided into prior and other risks.

## Risk Analysis

### Summary

- ▶ In the case of the PSC variant, all the risks are borne by the Public sector.
- ▶ Similarly to PSC, all the risks are borne by the Public sector in the Specific variant. However, certain transition and operational risks (and potentially also to a limited extent) can be transferred to the Operations Advisor (e.g. up to the level of his fees).
- ▶ The most important material risks can be transferred to the Private partner in the **PPP variant**. These risks include especially the development and construction risks and operational risks. The risk of the choice of the partner is retained by the Public sector. This risk is mainly a result of the extent and complexity of the transferred risks (and responsibilities) and the length of the considered co-operation.
- ▶ The suggested risk allocation respects the expected requirements of commercial banks. In addition to standard commercial credit risks, commercial banks may be exposed to a reputation risk in case of a default and subsequent steps in connection with the collection of receivables. Therefore, we assume that potential inefficiencies in transfers of the aforementioned risks may lead commercial banks to require stronger project back-up provided by the Public sector. A non-recourse financing provided by international financial institutions (e.g. EIB, CEB as indicated by MoH SR representatives) should be confirmed in due course.

## Modelling Approach

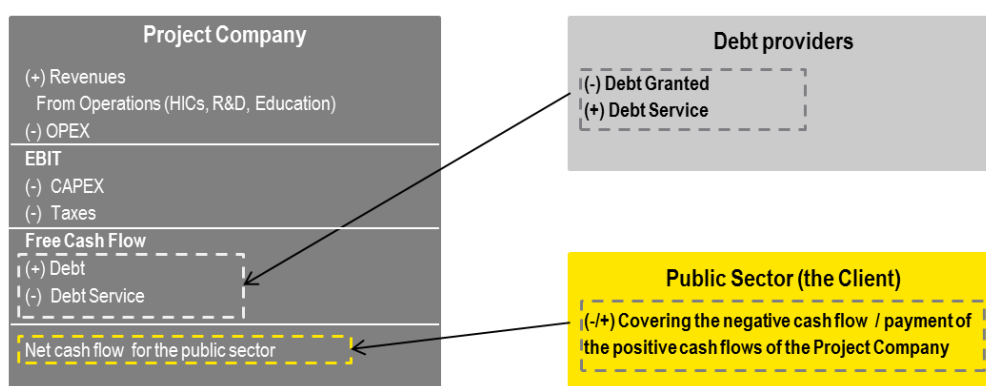
The financial modelling was (i) performed separately for all the three considered alternatives (PPP, PSC, and the Specific variant), and (ii) was based especially on an independent financial inspection of the present state of UNB, risk analysis, technical analysis, and analysis of comparable projects from the viewpoint of debt structuring.

### PSC

- ▶ For the purposes of the financial modelling, the Project is viewed from the side of a Project Company ("Project Company"), within which nUNB is constructed. nUNB is owned and operated by the Public sector.
- ▶ Capital requirements during the construction stage are fully financed by debt.
- ▶ Operational (CFO), investment (CFI), and financial (CFF) cash flows of this Project Company were put together.
- ▶ **Bottom line for the Public sector:** Net cash flows of the Project Company (after having paid all operational, investment, and financial expenditures) represent the total cash flows for the Public sector. Should the net cash flows end negative, the Public sector is assumed to cover the gap. In the case of positive cash flows, the Project Company will be able to pay dividends to the Public sector<sup>23</sup>.
- ▶ The following diagram summarises our approach to modelling of the PSC variant:

#### Approach to the PSC variant modelling

Source: EY



Note: HIC stands for health insurance companies

### PPP

- ▶ It is assumed that in the PPP variant, the Project Company is operated by the Private partner.
- ▶ Capital requirements during the construction stage are funded by a combination of bank debt and equity of the Private partner.
- ▶ Operational (CFO), investment (CFI), and financial (CFF) cash flows of this Project Company were put together.
- ▶ The Project Company repays all operational, investment, and financial expenditures in connection with the debt. All remaining positive funds are used as dividends<sup>24</sup> for the Private partner.
- ▶ In order to attract the Private partner to the project, the dividends paid by the Project Company need to offer sufficient return for the Private partner's equity investment (equity IRR). In addition, in order to attract financing banks, the cash flows need to be strong enough to meet the bank covenants.
- ▶ **Bottom line for the Public sector:** If the Project itself does not produce enough cash flows, in order to secure the aforesaid needs (primarily to meet the covenants), it is necessary to transfer these missing cash flows from the Public sector on a yearly basis in the form of the so called additional payments ("Availability payment").

<sup>23</sup> As a simplification, the dividends are considered to be the only source of income for the Public sector.

<sup>24</sup> As a simplification, the dividends are considered to be the only source of income for the Private partner, i.e. the structure of subordinated debt is not taken into account, etc.

## Modelling Approach

- The amount of this payment by the Public sector is dependent on the assumed amount of cash flows of nUNB. The needed Availability payment would decrease as a result of the following effects:

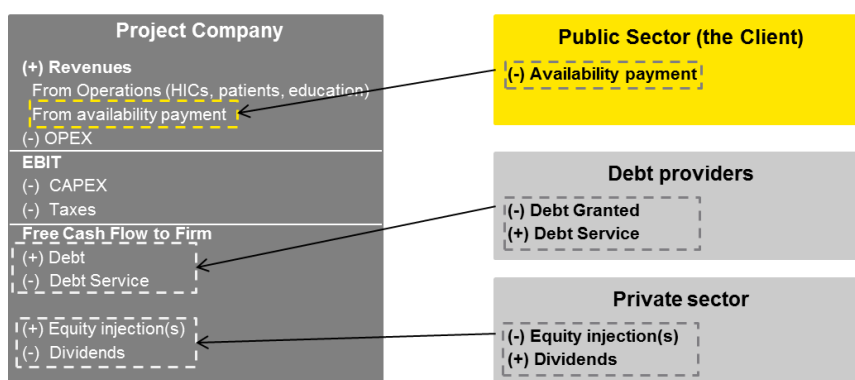
- Increased revenues from the main commercial activities,
- Increased revenues as a result from additional commercial activities (the following analysis assumes commercial activities in the extent of UNB3),
- Lower operational expenditures,
- Lower investment expenditures,
- Less strict bank covenants (lower DSCR) or cheaper financing (lower interest payments)),
- Lower requested return criteria of the invested equity (lower equity IRR).

Note: As a simplification, the Availability payment is considered the only cash flow of the Public sector (i.e. transactional and other costs, for instance, are not taken into account).

- The following scheme summarises our approach to modelling the PPP variant:

### Approach to the PPP variant modelling

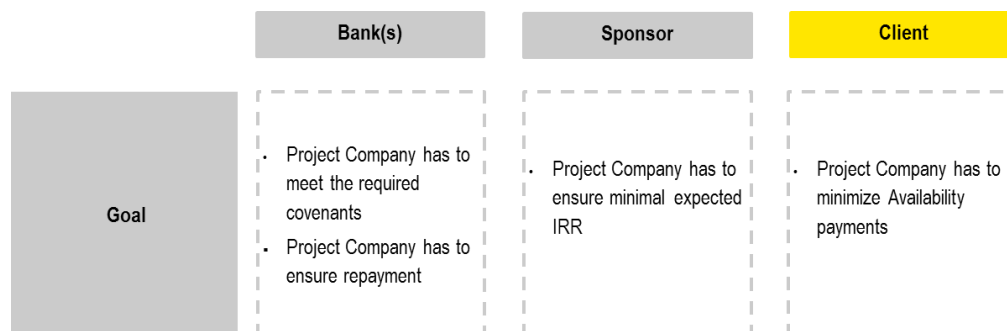
Source: EY analysis



- In the course of the financial modelling, it is needed to detect goals of the three key Project stakeholders: (i) the Client, (ii) bank institutions, and (iii) the Private partner. These goals of theirs are recorded in the form of specific indicators, as demonstrated in the diagram below.

### Diagram

Source: EY



- The objective (and the main output) of the financial modelling in the PPP variant is to minimise the Availability payment required from the Public sector.



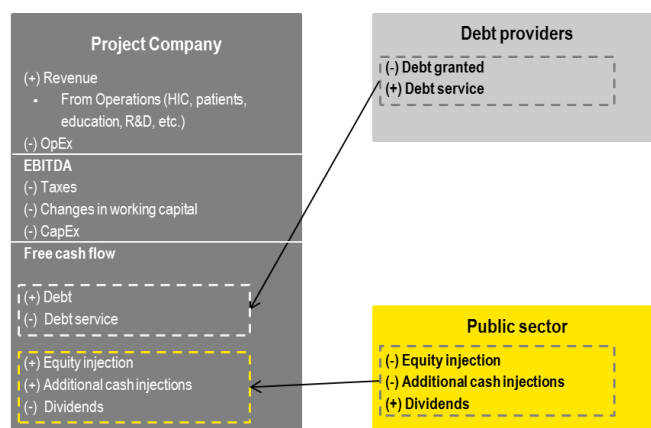
## Modelling Approach

### Specific variant

- ▶ Similar to PSC, there is an assumption that the Project Company is operated by the Public sector. However, in the Specific variant, the operation is realised in co-operation with the Operations Advisor.
- ▶ The capital requirements during the construction phase are financed by a combination of debt and equity. However, in the Specific variant, the equity is provided by the Public sector, while in the PPP variant, the equity is provided by the Private partner.
- ▶ As opposed to PPP, the Public sector does not require any specific return on its equity investment (in the form of equity IRR). However, the Project still needs to remain financially viable for banks; therefore cash flows must be strong enough to meet bank covenants (e.g. DSCR).
- ▶ As a result, we assume potential additional revenue stream for the Project Company (additional money injections – see diagram below), which can be used to support the cash flows of the Project Company, especially in the sense of meeting bank covenants and securing debt repayment. In case the Project generates a sufficient amount of cash flows, these injections are not needed. In this case, the Public sector only collects dividends.
- ▶ **Bottom line for the Public sector:** The Public sector injects equity investment into the Project Company during the construction stage (cash outflow). In the operational stage, the Public sector supports the Project Company cash flows with additional cash flows, so that the Project Company is able to pay debt instalments and meet bank covenants (cash outflow) and collects dividends (reception of funds).
- ▶ The following diagram depicts our approach to financial modelling and indicates cash flows between the involved parties:

### Approach to the Specific variant modelling

Source: EY



## Key Financial Model Assumptions

This part provides an overview of the basic assumptions of the financial model of nUNB for the PSC, PPP, and Specific variants.

### General assumptions

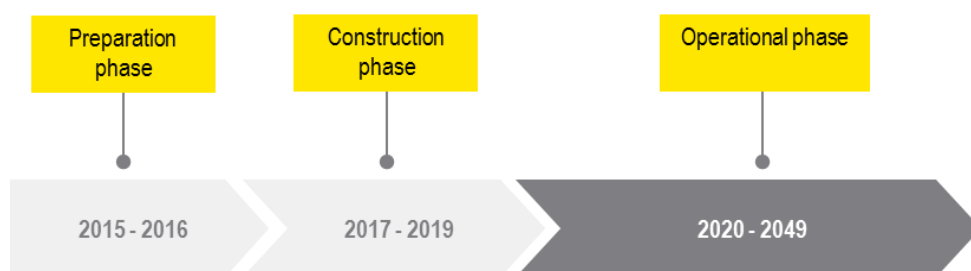
- The scope of the financial model comprises the nUNB exclusively.
- It is considered that nUNB will fully replace the operation of the Kramáre, Staré Mesto and Ružinov hospitals ("UNB3").
- After nUNB has been brought into operation, UNB3 will be closed.
- nUNB will conclude contracts with all health insurance companies.
- Commercial activities (e.g. MR, CT, laboratories, pharmacies), research and development, and educational services were modelled on the level of the present state (status quo of UNB3).

### Timing

From the temporal point of view, the Project is divided into three stages (cf. the following picture):

#### Timing of the Project

Source: EY analysis



### Financial assumptions

- The following table summarizes the key quantitative assumptions considered for the financial analysis. The text on the following page offers a more detailed description and explanation of individual key assumptions.

#### Key financial model assumptions

| Assumption                                  | Note | Unit           | PSC         | PPP         | Specific variant |
|---|------|----------------|-------------|-------------|------------------|
| Revenues 2020                               |      | EUR k          | 132,320     | 132,320     | 132,320          |
| of which: UH/OHV increase in revenues 2020  |      | EUR k          | 12 165      | 12,165      | 12,165           |
| Year-on-year revenue growth                 |      | %              | 3.3 %-1.9 % | 3.3 %-1.9 % | 3.3 %-1.9 %      |
| EBITDA margin                               |      | %              | 10 % - 23 % | 20 % - 28 % | 15 % - 25 %      |
| Investment expenditure                      | 1    | EUR k          | 350,234     | 254,217     | 350,234          |
| Project debt                                | 2    | %              | 100.0       | 60.0        | 85.0             |
| Floor area                                  |      | m <sup>2</sup> | 93,990      | 93,990      | 93,990           |
| Loan maturity                               | 3    | years          | 20          | 20          | 20               |
| Interest rate                               | 3    | %              | 4.6         | 6.5         | 4.0              |
| Required partner profitability (Equity IRR) | 4    | %              | n/a         | 15.6        | 0                |
| Public sector discount rate (PSDR)          |      | %              | 3.1         | 3.1         | 3.1              |

Source: EY analysis

#### Notes:

- Investment expenditures include investments in building, equipment, and ICT, including VAT (in 2020 prices).
- The values in the table represent the ratio of debt and total capital (debt + equity).
- Applies only to the main investment loan for the construction of buildings.
- The required Private partner profitability is considered in the form of equity IRR.

## Key Financial Model Assumptions

### *Revenues:*

- ▶ The key component of revenues are revenues from HIC. The price component of these revenues was modelled according to the current payment mechanism. The quantity component of these revenues was modelled by TNO (a detailed description can be found in the Technical Analysis Appendices). Subsequently, the total revenues were adjusted, so that nUNB is not penalised for a different revenue structure than was the case with UNB3. Specifically, this was an equalisation based on an increase in the volume of OHV against UH in nUNB in comparison with UNB.
- ▶ Other revenues (revenues from private patients, revenues in connection with educational activities, revenues for clinical tests of medicaments, and revenues from renting) were modelled according to UNB3.
- ▶ Revenue growth converging towards 1.9% (inflation rate according to the Global Insight projection).

### *EBITDA margin:*

- ▶ PPP: EBITDA margin (without the influence of the Availability payment) in the year 2020 at the level of 20% increases gradually and converges towards 28% in 2049. These values are based on an analysis where West European hospitals were used as a benchmark. The objective of nUNB is to reach the efficiency of these hospitals.
- ▶ PSC: PPP EBITDA margin is negative 10 percentage points and converges toward PPP EBITDA margin negative 5 percentage points within 20 years. The initial value is based on the operational data of a group of Slovak general faculty hospitals and state university hospitals with high profitability (NCZI data were used for the analysis). This reflects that nUNB operational efficiency will be above average in comparison with the remaining Slovak hospitals even in the PSC variant.
- ▶ Specific variant: Because of the involvement of the Operations Advisor, it was assumed that the operational efficiency would be higher than in the case of the PSC variant. However, in case of (i) an asymmetric remuneration of the Operations Advisor (sharing the “upsides”, not “downsides” connected with the operation of nUNB), and (ii) a limited 5-year period of his activity in the Project, it was assumed that the operational efficiency would not reach the level of PPP (with a symmetric remuneration of the Private partner). Therefore, the option assumes a PPP EBITDA margin of negative 5 percentage points, which converges towards PPP EBITDA margin of negative 2.5 percentage points in 20 years.

### *Working capital:*

- ▶ Key components of the working capital were modelled on the basis of an assumption about turnover periods:
  - inventories 22 days (calculated in relation to material expenditures),
  - trade receivables 65 days (calculated in relation to revenues from health care services),
  - trade payables 204 days (calculated in relation to material, energy, and service costs),
  - social and health insurance 11 days, and
  - obligations to employees 17 days (both indicators are calculated in relation to costs per employee).
- ▶ The values represent a median of comparable hospitals in Slovakia (4 private and 3 public faculty hospitals).
- ▶ Other components of working capital were determined according to the values of UNB3 and were kept on a constant level. Therefore, they do not have any influence upon the year-on-year capital change. For simplification purposes, these assumptions were used for PPP, PSC as well as the Specific variants.

### *Investment expenditures:*

- ▶ In the case of PSC and the Specific variant, it was assumed that the risk of the investment expenditure increase would be on the level of 37.8% in comparison with PPP<sup>25</sup>, based on the Mott Macdonald study (2002). This observation is also indirectly confirmed by a study of the Ministry of Transportation, Construction

<sup>25</sup> “Review of Large Public Procurement in the UK, Mott Macdonald 2002”. The Mott Macdonald company, studying large public procurement projects in the UK in 1982 – 2002, states that in the procurement for standard buildings, the average CapEx were 51% and for non-standard buildings 24%. According to TNO, the nUNB is considered as 51% standard building and 49% non-standard building. Therefore, the expected CapEx overruns are 37.8%.

## Key Financial Model Assumptions

and Regional Development of the Slovak Republic (2009)<sup>26</sup>, which states an average increase in investment expenditures for highway projects on the level of 31.1%. As the construction of a university hospital is a more complex project in comparison with the construction of a highway, the increase in the Mott MacDonald study seems justified.

- ▶ An identical increase (37.8%) was assumed in the case of investment expenditures in the operational phase of the Project.
- ▶ For PPP, the investment expenditure overruns are not calculated, as this risk is transferred from the Public sector to the Private partner completely. This was also confirmed by Mott MacDonald (2002) in his study, claiming that the investment expenditure overruns in the case of PPP are close to zero.

### *Project debt:*

- ▶ PPP: The reason for assuming a debt of 60% is that in most cases of PPP projects realised in the form of PFI (Project finance initiative) in the world, hospital projects normally assume a debt of 80-90%<sup>27</sup>. Even though the risk in the case of the PPP variant is retained by the Public sector (cf. the chapter Risk analysis), the complexity of the project, as for the extent of the transferred risks, in the case of this Project is higher in comparison with standard PFI projects. In the case of standard PFI projects, the Private partner is usually not responsible for the operation of health care services, but only for management and maintenance of infrastructure. From the viewpoint of operational costs, the operation of health care services is less predictable – it is more volatile, and therefore poses a greater risk from the viewpoint of possible impacts on the financial development. Because of the increased Project risk in comparison with standard PPP PFI projects, the assumed financial debt was adjusted in a downward direction. An Availability payment optimisation of 60% is assumed.
- ▶ PSC: The value of 100% is determined according to the discussion with the Client and reflects the nature of the PSC variant. In this option, the assumption does not include funding through equity, but rather a connection to the budget financing of the Public sector.
- ▶ Specific variant: The debt value of 85% is calculated on the basis of the Client's instructions, so that the considered level of the invested equity of the Public sector was equal to EUR 50m.

### *Financing structure:*

- ▶ PPP: External financing structure is based on project financing rules. It means that financing sources are paid by revenues of a given project. Given this assumption, it has been assumed that the financing banks will require establishing a special reserve account, i.e. DSRA (debt service reserve account). This account is filled at the end of the Project's construction phase and, in each period, it is maintained on a level sufficient to cover the debt service of the following period.
- ▶ PSC: This option assumes a public institution financing structure (therefore, the standard structure of project financing is not assumed). As it is connected with budget financing of the Public sector (relatively lower credit risk in comparison with PPP), it was assumed that the establishment of DSRA will not be required by the financing banks. This assumption leads to lower total financing costs.
- ▶ Specific variant: In this option, the Project is viewed as project financing within the financing structure with respect to usual requirements of financial institutions for project transparency. Therefore, DSRA is assumed in this option.

### *Loan maturity and loan interest rates:*

- ▶ Maturities of all loans are based on the assumed lifespan of the individual assets (components), which are funded from these sources. The maturity of the loan for equipment is 7 years and the maturity of the loan for ICT is 3 years. The main loan for the building construction is an exception – although the assumed lifespan of construction components is 35 years, it is not expected that the financing banks will accept such a long duration. Therefore, we assume that the maturity of the loan for the building construction will be identical with the maturity of the Slovak government bond with the longest maturity period, i.e. 20 years.

<sup>26</sup> "Vyhodnotenie výhodnosti ponuky víťazného uchádzača PPP projektu D1 – 1. balík, Apríl 2009". This study lists 21 highway projects procured in the form of PSC and the corresponding CapEx overruns.

<sup>27</sup> Source: Infrastructure Journal, (world hospitals constructed after 2010 were chosen).

## Key Financial Model Assumptions

- ▶ Loan interest rates<sup>28</sup>:
  - i) PPP (6.5 % / 4.6 % / 3.2 %),
  - ii) PSC (4.6 % / 2.8 % / 1.4 %),
  - iii) Specific variant (4.0 % / 2.2 % / 0.8 %).

### *Required Private partner profitability:*

- ▶ PPP: The value mentioned in the table is an average equity IRR reached by the private sector in a sample of 13 comparable PPP PFI projects<sup>29</sup> carried out in the United Kingdom of Great Britain in the years 1997-2014. The original version of the study analyses 77 PPP PFI projects with equity IRR in the range of 12.65 – 23.0%.
- ▶ Specific variant: Following the Client's instructions, it was assumed that the required equity IRR of the Public sector (EUR 50m) is zero.

### *Public sector discount rate:*

- ▶ The base-case assumes the Public sector discount rate ("PSDR") on the level of 3.1% (based on a long-term government bond yield), which represents the theoretical minimal level of PSDR. Based on the fact that there is no clear-cut expert opinion as to the determination of the PSDR value, this value was further adjusted in a sensitivity analysis by plus 2.0 % and plus 4.0 % (cf. the chapter "Value for Money" Analysis), in order to (i) reflect potential additional sector or Project risks, and (ii) in order to be able to assess the impact of this variable on the final result.

### *Tax assumptions:*

- ▶ We have assumed that the Project Company is an income tax payer. According to the Slovak legislation in force, the rate of the income tax is 22%. Tax losses can be used evenly over a period of 4 years following the year when the loss was made.
- ▶ Investment costs were increased by initial VAT of 20 %. Because of the nature of its business, the Project Company should not be eligible for the subtraction of initial VAT. We have therefore made a conservative assumption that (i) the Project Company will pay investment costs including 20% VAT, and (ii) this tax will not be returned by the tax office. The application of a more tax-optimal solution would not have any effects on the results of the assessment of the different options.
- ▶ Initial VAT subtraction in the case of operational costs was modelled according to previous years (i.e. tax paid initially will be returned by the tax office only partially).

### *Other assumptions*

- ▶ We do not consider the introduction of DRG payment mechanism due to unavailability of necessary data and a variety of related unsolved issues.<sup>30</sup>
- ▶ Furthermore, we do not consider changes in application of legal norms related to material, technical and personnel standards. However, these changes have been repeatedly emphasized and recommended.<sup>31</sup>

### *The financial analysis does not include*

- ▶ Expenditure for the building site procurement and landscaping, including brownfield demolition and recultivation of the building site for the construction of nUNB.
- ▶ Public sector opportunity costs.
- ▶ Transaction costs of the Public sector in connection with the realisation of nUNB.

<sup>28</sup> X% / Y% / Z% represent fixed investment rates (on the basis of Interest Rate Swap – IRS) calculated for the 20-year loan for buildings, 7-year loan for equipment, and 3-year loan for ICT. The source of margin of PSC and PPP is an expert estimate of EY and discussion with banks experts. The source of margin was specifically determined based on the requirements of the Client. The source of IRS rates is the Thomson Reuters database.

<sup>29</sup> The following criteria were used to choose comparable projects: (i) the amount of investment expenditures over EUR 150m, and (ii) a classification of the hospital as a university or faculty hospital.

<sup>30</sup> For more information on DRG and its impacts on the Project, please refer to the Healthcare Sector chapter of this Study.

<sup>31</sup> For further information on material and technical and personnel standards and their impact on the Project, please refer to the Healthcare Sector chapter of this Study.

## Key Financial Model Assumptions

- Costs connected with (i) simultaneous operation of nUNB and UNB3, (ii) the transfer of operation from UNB3 to nUNB, and (iii) other costs connected with the closing of these hospitals.
- Income from sales / costs connected with the maintenance of the closed UNB3.

### Technical assumptions

The key technical assumptions are presented in the following table:

| Item  | Modelling assumption  | Notes  |
|---|---|--|
| <b>1. Baseline assumptions</b>                              |   |  |
| Population and catchment area                               | Current age specific (5-year groups) demographic composition greater Bratislava region (Bratislava i-v, Malacky, Pezinok, Senec) and age-specific demographic forecast (both from Statistical Bureau Slovakia)  | For the purpose of this strategic phase, a simplified model of the Bratislava region as a self-contained region without large volumes of transregional care traffic has been assumed   |
| Baseline demand prognosis                                   | Extrapolation of current UNB production (excl. Podunajské Biskupice site) on basis of demographic prognosis using age-specific (5-year groups) data on average length of stay and clinical admissions per 1,000 inhabitants to simulate effect of changing composition of population (Source: Eurostat) | For the baseline demand prognosis, current consumption of health care per age group has been held constant (minor exceptions: see below)   |
| Market share  | Extrapolation of current ratio population to production   | For baseline prognosis, UNB market share has been kept constant  |
| Base case adjustment  | All the "Green" base case adjustments listed in Technical assessment section of the main report have been incorporated into the modelling assumptions   |  |
| <b>2. Efficiency improvements</b>                           |   |  |
| Bed occupancy   | General nursing: 90% (365 day basis)<br>Special care: 85% (365 day basis)<br>Day care: 200% (250 day basis)   | Includes "Green" business case adjustments increasing occupancy rates in bed wards.<br>For the rest figures based on those used for business case calculations in western European new build projects.<br>Lower occupancy rate for special care in tertiary setting because of availability requirements."   |
| Average length of stay                                      | "Blanket" assumption of ALOS of circa 6,5 days.   | "Safe" assumption. Linear continuation of historical Slovakian trend would result in c. 5.5 days and Slovakia would continue to lag slightly behind EU averages. ALOS 5.5 days is consistent with current practice in e.g. Netherlands and Denmark and with acute beds in French university hospitals.<br>However, 6.5 is deemed a safer option to reflect the higher complexity of patients in the UNB and to reflect the shift from inpatient to day care. The shift would increase the average complexity of inpatient cases. |
| Central admissions department (Accident & Emergency) visits | Reduction from circa 110,000 per year to circa 60,000 per year  | Central admissions department is a major congestion point. Information provided by hospital representatives during visits suggests large number of self-referrals that could be handled by primary.  |

## Key Financial Model Assumptions

|   |   |  |
|---|---|--|
| Centralisation of operating theatres, special care and diagnostic imaging | In modelling production capacity it has been assumed that there will be either one central block for these high-tech, high-complexity functions or 2-3 larger "thematic blocks" rather than the current pavilion-type organisation per medical specialty  | Centralisation of these functions is necessary to allow the sort of flexible use and planning that is necessary to fully exploit the production potential.   |
| Flexible use of general nursing and day care beds                         | In modelling production capacity it has been assumed that where possible use and allocation of beds between departments will be flexible, on the basis of peaks and troughs in demand.  | Exceptions for general nursing wards that require very specific qualifications (e.g. paediatrics)  |
| <b>3. Other production capacity indicators</b>                            |   |  |
| Operating theatres ('OT')   | 2,000 surgical procedures per year per theatre, using the surgical procedures registration that has been provided to us.  | Figure is based on assumption (true for several other countries) that the ratio of "surgical procedures" (according to coding systems) that need a full OT context is circa 60%, with the other 40% taking place in an outpatient treatment environment. Note that many of the present OT's of the UNB don't qualify as full OTs (on the basis of site visits: e.g. no plenum, no full pressure hierarchy system, no full air-filtration system or antiquated systems for air treatment) |
| Diagnostic imaging  | Based on benchmark figures (industry (Philips) and Dutch capacity norms) for operational hours and average procedure length per type of equipment, estimating 80% occupancy 250 days/year   | Full figures available on demand   |
| Outpatient clinic   | Using unit system (77 m <sup>2</sup> total net floor area per unit). Number of units established on basis of: average of 3 visits per patient: first consult of 20 minutes, two follow-up consults of 10 minutes each., 9 hours operational per day, 250 days/year with 95% occupancy. For outpatient physiotherapy: 860 m <sup>2</sup> net total floor area for the unit | This is based on the assumption that fully standardized, flexible use outpatient departments will be realised in accordance with the corresponding "Green" base case adjustment specified in the main report   |
| General organ function diagnostic   | 35 m <sup>2</sup> total net floor area per room. Capacity follows development of outpatient visits on a ratio basis of 16,000 outpatient visits equals 1 outpatient treatment room  | Please note this is a derived ratio, no direct link between outpatient visits and general organ function diagnostic rooms  |
| Nuclear medicine  | Inpatient: estimate of 350 m <sup>2</sup> total net floor area for unit (fits typology of department according to current production figures provided)<br>Lab: floor area as add-on to clinical chemistry lab   |  |
| Outpatient treatment  | 55 m <sup>2</sup> total net floor area per room. Capacity follows development of outpatient visits on a ratio basis of 16,000 outpatient visits equals 1 outpatient treatment room  | Please note this is a derived ratio, no direct link between outpatient visits and outpatient treatment rooms   |
| Accident & Emergency ('A&E') department                                   | 1,500 m <sup>2</sup> total net floor area for the department  | Floor area for A&E is not directly dependent on production (availability function, capacity needs to be adjusted to peak demand). Floor area figure reflects typical floor area for a trauma centre type A&E in a tertiary hospital  |
| Delivery  | 85 m <sup>2</sup> total net floor area per unit, with a capacity of 400 deliveries per unit/year  |  |
| Labs, central sterilization department and pharmacy                       | Total floor areas per function have been assumed based on Dutch, French and to some degree German benchmark figures. Full list available on demand  | Floor area for these functions is not directly dependent on production numbers. Floor areas selected represent typical floor areas for large facilities of their type in tertiary hospitals  |
| General and technical support services                                    | These have been expressed as percentages of the total floor area of the hospital. Full list available on demand   |  |

## Key Financial Model Assumptions

Floor areas for beds in different types of wards

General nursing: 21 m<sup>2</sup>  
 Special care: 41m<sup>2</sup>  
 Child care: 23 m<sup>2</sup>  
 Maternity: 27 m<sup>2</sup>  
 Neonatology high care and NICU: see Special care  
 Neonatology healthy infants: 9 m<sup>2</sup> per cot  
 Day care: 23 m<sup>2</sup>  
 Physiotherapy inpatient: 42 m<sup>2</sup>  
 Burns inpatient: 45 m<sup>2</sup>  
 Psychiatry: 52 m<sup>2</sup>

All m<sup>2</sup> represent total net floor areas (department) per bed. Floor areas are the result of applying a "Green" base case adjustment to the standard reference figures

### 4 CapEx and OpEx assumptions

|   |   |  |
|---|---|--|
| Initial building cost   | Based on detailed breakdown of Investment cost according to Dutch building standards reduced to Slovak pricing c. EUR 1,655 /m <sup>2</sup> (excluding VAT) | Note that no detailed pricing data was received for Slovak situation. Rate specified is that for the layers investment costs breakdown in the detailed technical analysis and differs slightly from the rate used in the high-level analysis             |
| LCC Building  | LLC CapEx based on EUL per layer and timing, frequency and length of instalments based on Dutch study building layer differentiation                        |  |
| Initial CapEx for Equipment and ICT   | Based on Dutch, German, English and other western European benchmark figures  | Taking into account that no manufacturer is present on the local market, we assumed pricing of equipment and ICT to be at the same price level as western European hospitals. Lifespan for equipment 7 years and ICT 3 years.                            |
| Differentiation in pricing per layer when taking into account layer approach. | Hotfloor 105%, Hotel 74%, Office 69%, Industry 99%<br>Each layer has its own renovation frequency and lifespan, resulting in different CapEx                | Per Level 2 category we calculated OpEx for layer approach methodology.<br>Each layer has its own distribution of cost according to LCC  |
| Goods & Materials   | Costs have been assumed based on Dutch, and to some degree German and English benchmark figures. Full list available on demand.                             | Cost have been distributed on level2 by nursing days (ALOS x admissions). Assumption that benchmark will be nearly reached by first year of operation and fully reached in first 3 years of operation.   |
| Utilities, Maintenance  | Costs have been assumed based on Dutch, and to some degree German, English benchmark figures. Full list available on demand.                                | Costs have been distributed on level2 by Gross Floor Area ('GFA') in comparison to GFA of 4 current UNB hospital locations. Assumption that benchmark will be nearly reached by first year of operation and fully reached in first 3 years of operation. |
| Personnel FTE   | Staffing has been assumed based on French, and to some degree Dutch, German and English benchmark figures.  | FTE have been distributed on level2 by Benchmark comparison to FTE per bed for clinical beds and day nursing beds. Assumption that benchmark will be nearly reached by first year of operation and fully reached in first 3 years of operation.          |



## Analysis of Financial Affordability

### Introduction

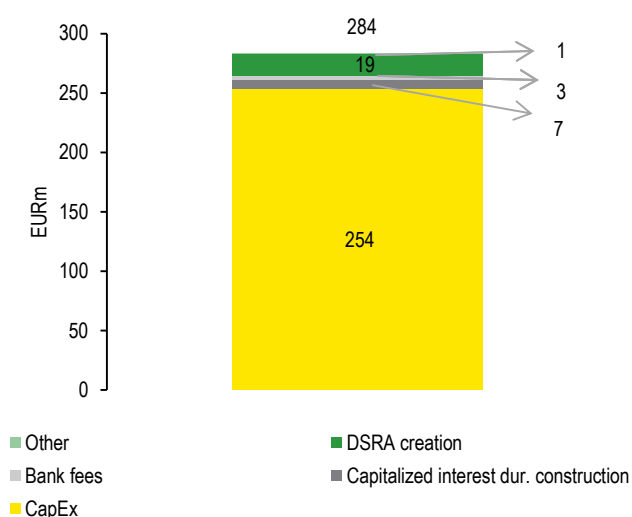
- The focus of the affordability analysis is to answer the main question – whether, and under what circumstances, the Project is affordable for the Client.
- For each of the options (PPP, PSC, and the Specific variant), cash flows (“CF”) of the Public sector are presented below. In the PPP variant, it is the Availability payment, related to all of the considered options.

### PPP

- For the purposes of the financial modelling, the Project is initially viewed from the side of the Project Company.
  - First, operational and investment cash flows of nUNB were calculated (project cash flows).
  - Because the project cash flows were not sufficient to meet the requirements of bank institutions (loan repayment and covenant meeting) and the Private partner (sufficient equity IRR), the cash flows were increased by the Availability payment.
- Then, the Availability payment was gradually increased so that the aforesaid requirements were met. This led to minimal Availability payment. The following two charts depict the expected sources of funds and uses of funds in the construction phase in the years 2017 – 2019.

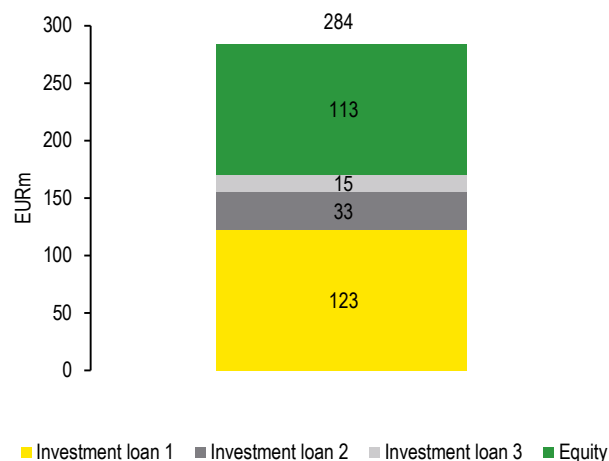
Uses of funds in the construction phase

Source: EY



Sources of funds in the construction phase

Source: EY



### Comments to the charts above:

- Reserve account (DSRA) is filled at the end of the Project’s construction phase and during the Project’s operational phase is kept on such a level so that, in each period, it is sufficient to cover debt service in the following year.
- Investment loan 1 is provided for the construction of buildings and its maturity is 20 years. Instalments of this loan are modelled in such a way that DSCR<sup>32</sup> is maintained on the level of at least 1.5 during the whole loan repayment period.
- Investment loan 2 represents a loan for equipment with a 7-year maturity and constant annuity instalments.
- Investment loan 3 covers expenditures for ICT and has a 3-year maturity with constant annuity instalments.

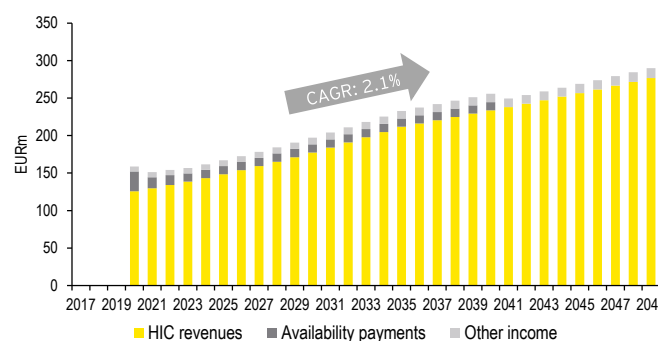
<sup>32</sup> The DSCR calculation was calculated on a consolidated level for all investment loans.

## Analysis of Financial Affordability

- The following two charts depict the modelled revenues and operational costs of the Project.

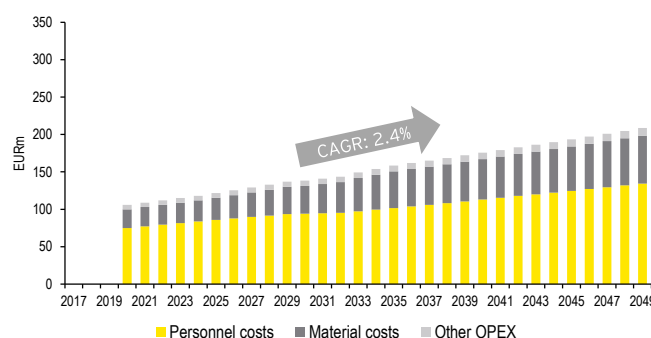
Development of revenues

Source: EY



Development of operational costs

Source: EY



### Notes

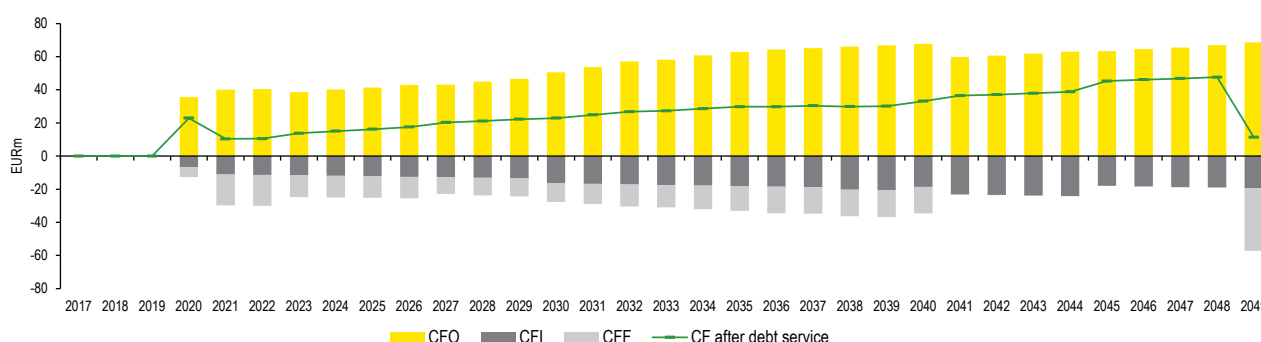
CAGR (Cumulative average growth rate) shows an average yearly growth of total revenues/operational costs in the years 2020 – 2049.

CAGR of revenues (without taking the Availability payments into account) in the years 2020 – 2049 is on the level of 2.7%.

- The growth rate of revenues, without taking the Availability payments into account (CAGR 2.7%) is higher than the growth rate of operational costs (2.4%). This assumption also means that the EBITDA margin (without taking the Availability payment into account) increases with time.
- It is clear from the charts of revenues and costs above that revenues are generated mainly by payments from health insurance companies. Other revenues (particularly generated by revenues from renting, revenues from clinical tests of medicaments, and revenues from private patients) and the Availability payment constitute minor part of revenues. The last year, when this scenario assumes an Availability payment, is the year 2040.
- Operational costs are made up from the greatest part (c. 65% - 70%) by personal costs. Material costs constitute c. 24% - 30% of the operational costs (and their share is increasing). An average growth of revenues in the years 2020 – 2049 is 2.1%.
- The following chart shows the development of the individual constituents.

Development of cash flows of the Project Company

Source: EY, MoH SR



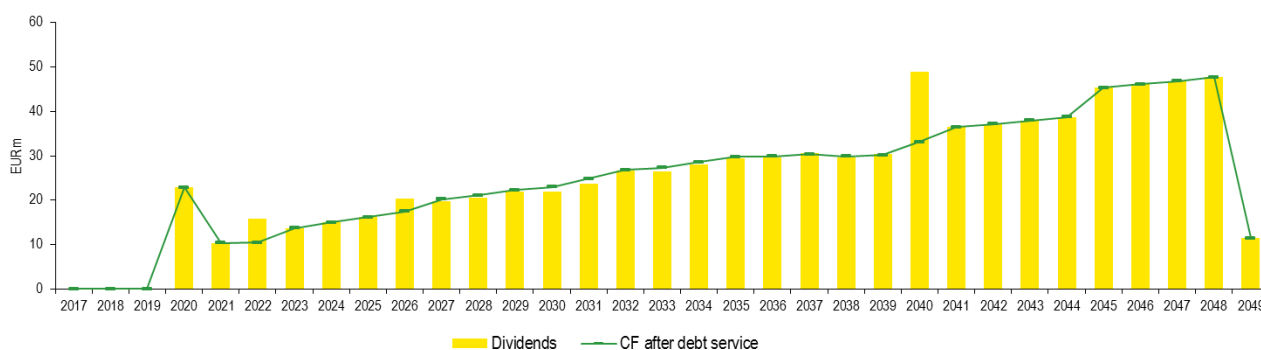
- EBITDA is modelled as the difference of revenues and operational costs. By adjusting the EBITDA indicator for paid taxes and investments in working capital, cash flows from operation (CFO) are determined. CFO has a growing tendency almost during the whole operational phase. A mild decrease of CFO in the year 2040 is caused by the termination of Availability payment provision in this year.
- Cash flows from investment activities (CFI) represent required investments in maintenance, reconstruction, and renovation of buildings, equipment and ICT during the operation of nUNB.

## Analysis of Financial Affordability

- Cash flows from financial activities (CFF) represent the repayment of investment loans taken in the construction phase. In CFF, a further loan to cover the needs of the working capital is assumed. As can be seen from the chart, the repayment of the investment loan 3 is ended in the year 2022, and the repayment of the investment loan 2 in the year 2026. The investment loan 1 is repaid in the year 2040. The repayment of this loan is irregular and based on (i) available cash flows for the repayment of this loan (CFO plus CFI), and (ii) DSCR bank covenant.
- Cash flows after debt service grow during the whole period of the Project, except for the years 2021 and 2049. The decrease of cash flows after debt service is a result of the fact that in 2020, a loan of EUR 13m for working capital financing is taken, which causes a one-time increase of cash flows after debt service. In the year 2049, the loan for financing the working capital is repaid at once, which decreases the cash flows after debt service.
- The following chart depicts the development of dividends paid to the Private Partner in relation to cash flows after debt service.

### Development of dividends and cash flows after debt service of the Project Company

Source: EY

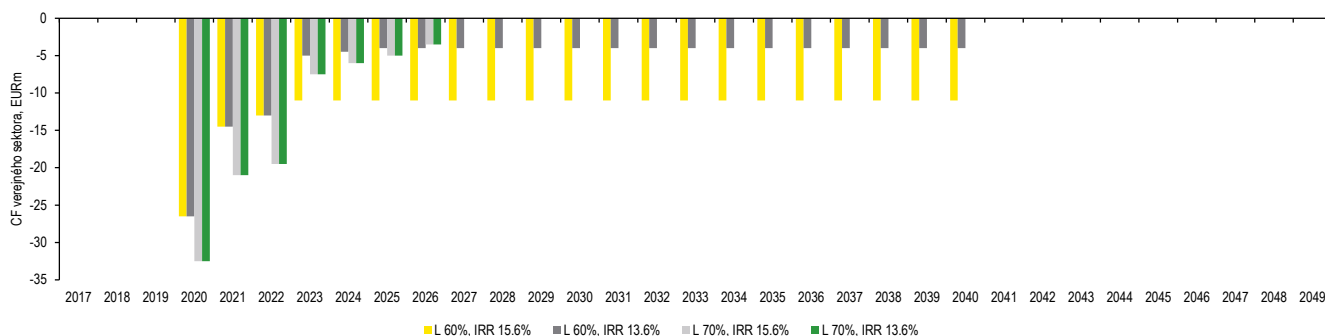


- The chart suggests that the development of the paid dividends approximately copies the development of cash flows after debt service. The years 2022, 2026, and 2040 are exceptions – in comparison with cash flows after debt service, the dividend is increased by the released cash from the reserve account (DSRA) in connection with the repayment of the individual investment loans. In each period, the height of this reserve fund corresponds with the height of instalment of the remaining investment loans in the following period.
- The calculations above assume a required return of the Private partner at the level of 15.6% (equity IRR) and 60% debt (in the sense of the ratio of debt and the sum of debt and invested own funds). However:
  - Equity IRR is a very uncertain assumption, significantly influenced by the transparency of the procurement process, the type of the private investor, and competition between individual competitors in the procurement process. The greater is the transparency, the lower is the equity IRR indicator, which causes a lower Availability payment. Therefore, an alternative assumption of the equity IRR at the level of 13.6% was assumed within the sensitivity analysis.
  - From the available benchmark primarily based on less complex PFI projects of construction of new university hospitals with a lower risk profile, the debt fluctuates in the range of 80 – 90%. Therefore, an alternative debt at the level of 70% was assumed within the sensitivity analysis.
- The chart on the next page depicts Availability payments needed for the Project's realisation in individual years, including the results of sensitivity analysis.

## Analysis of Financial Affordability

### Availability payment – PPP – cash flows of the Public sector

Source: EY



Note:

In the years 2017-2019 the construction phase takes place, when no Availability payment is required.

### Availability payment development

| Currency: mil. EUR                  | 2017-2019 | 2020   | 2021   | 2022   | 2023   | 2024   | 2025   | 2026   | 2027-2040 | 2041-2049 |
|-------------------------------------|-----------|--------|--------|--------|--------|--------|--------|--------|-----------|-----------|
| <b>L 60%, IRR 15.6%</b>             | -         | (26.5) | (14.5) | (13.0) | (11.0) | (11.0) | (11.0) | (11.0) | (11.0)    | -         |
| <b>L 60%, IRR 13.6%</b>             | -         | (26.5) | (14.5) | (13.0) | (5.0)  | (4.5)  | (4.0)  | (4.0)  | (4.0)     | -         |
| <b>L 70%, IRR 15.6%</b>             | -         | (32.5) | (21.0) | (19.5) | (7.5)  | (6.0)  | (5.0)  | (3.5)  | -         | -         |
| <b>L 70%, IRR 13.6%</b>             | -         | (32.5) | (21.0) | (19.5) | (7.5)  | (6.0)  | (5.0)  | (3.5)  | -         | -         |
| <b>L 70%, IRR 13.6%, DSCR 1.20*</b> |           | (24.0) | (12.0) | (10.5) | (7.5)  | (6.0)  | (1.5)  | -      | -         | -         |

Source: EY, MoH SR

Note: In the case of 70% debt, the results are identical, irrespective of the level of the chosen equity IRR (13.6% or 15.6%). This is a result of the fact that already in the case of 15.6% equity IRR, the cash flows are just as high, as to meet the bank covenants (DSCR) exactly. Therefore, no additional decrease of cash flows (and Availability payment and equity IRR either) is possible.

- ▶ In the PPP variant, the Availability payment during the construction phase equals zero. All capital expenditures are covered by equity of the Private partner and the financing banks.
- ▶ The lowest Availability payments at the beginning of the operational phase (undiscounted values) will be achieved when assuming a debt of 60%. The Availability payment starts at the amount of EUR 26.5m in the year 2020 and decreases gradually to EUR 11m (equity IRR 15.6%), or to EUR 4m (equity IRR 13.6%). From the year 2041, no Availability payment is assumed.
- ▶ The highest Availability payments at the beginning of the operational phase (undiscounted values) will be achieved when assuming a debt of 70%, irrespective of the assumed equity IRR (cf. the note under the table). The Availability payment starts at the amount of EUR 32.5m in the year 2020 and decreases gradually to zero in the year 2026. Thus, no Availability payment is assumed since the year 2026.

#### (\*) Note:

- ▶ The Client explicitly requested to determine, what the impact upon Availability payments will be, if (i) equity IRR is 13.6%, (ii) debt 70%, (iii) DSCR 1.20 (as opposed to the assumed 1.5). In this case, the discounted net present cash flow value would amount to c. EUR (48.5)m.
  - However, it is important to emphasise that DSCR at the level of 1.20 can cause that the banks will be unwilling to accept such conditions. This value usually indicates default, or, at least, a risk of default.
  - There are other possibilities of decreasing the Availability payment, which will maintain the DSCR at a level higher than 1.20 (e.g. a change in the DSCR calculation), especially in the first year of operation.

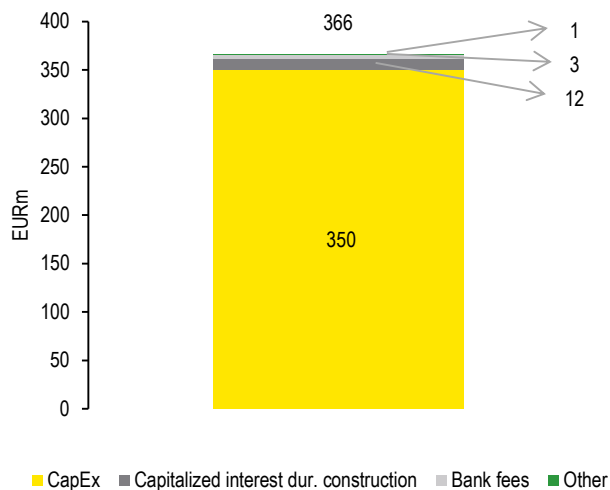
## Analysis of Financial Affordability

### PSC

- ▶ Similar to the PPP variant, for the purposes of the financial modelling, the Project is viewed from the side of the Project Company:
  - Similar to the PPP variant, project cash flows of nUNB were calculated (i.e. operational and investment cash flows).
  - Subsequently, the required debt service was drawn up (financial cash flows).
  - Total cash flows represent the cash flow of the Public sector. If the net cash flows end negative, the Public sector is assumed to cover the gap. In comparison, if the cash flows end positive, the Project Company can pay dividends to the Public sector.
- ▶ The following two charts depict the expected sources of funds and uses of funds in the construction phase in the years 2017 – 2019.

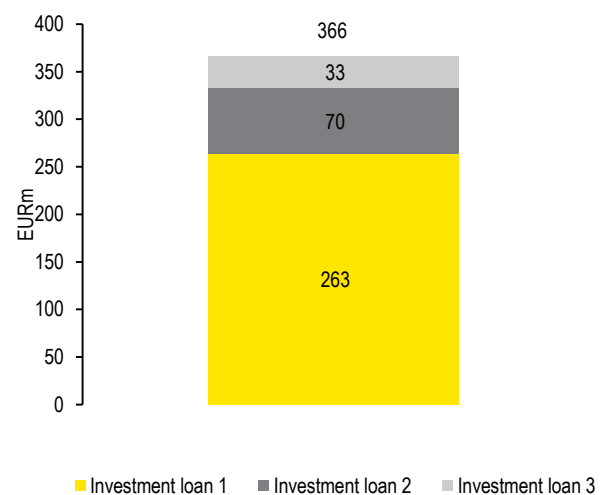
Uses of funds in the construction phase

Source: EY



Sources of funds in the construction phase

Source: EY



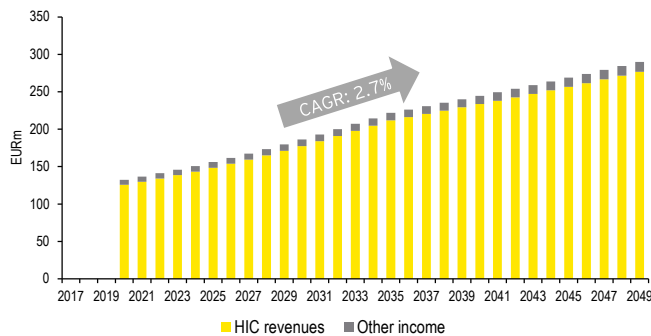
- ▶ As opposed to the PPP variant, in the PSC variant, sources of funds are created by debt exclusively (100% debt). From the viewpoint of uses of funds, higher investment expenditures are expected; as a result of the quantified risk of the expected overruns of investment expenditures (cf. the chapter Key Financial Model Assumptions).
- ▶ At the same time, as described in the Main assumptions about the financial model section, the standard structure of project financing is not assumed in the PSC variant. Therefore, no reserve account (DSRA) is assumed in this option.

## Analysis of Financial Affordability

- The following charts depict the development of revenues and operational costs.

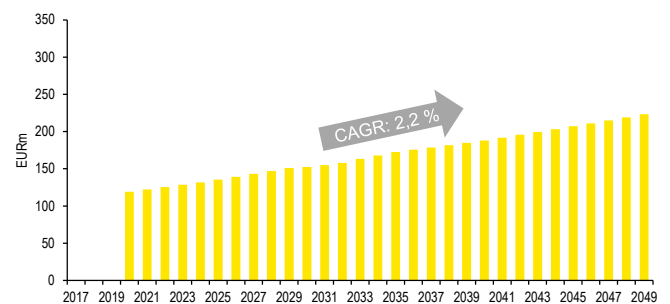
Development of revenues

Source: EY



Development of operational costs

Source: EY

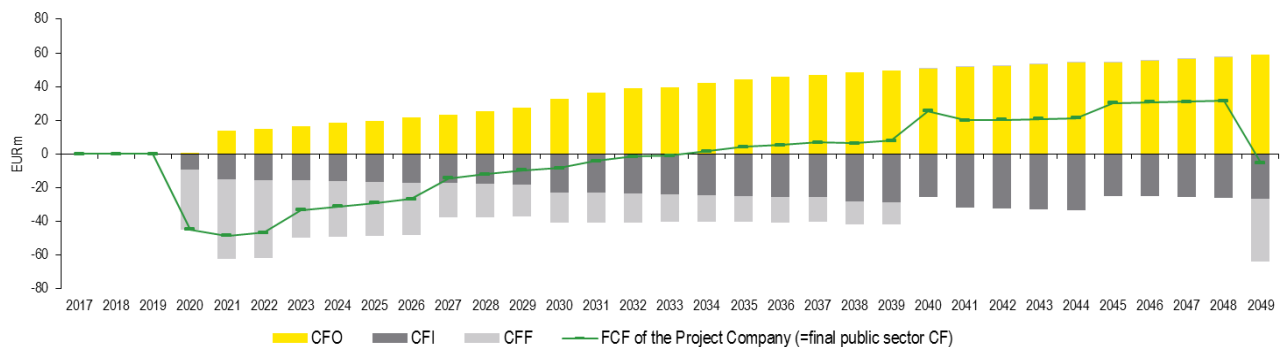


Note: In the PSC variant, the Private partner is not present. Therefore, as opposed to the PPP variant, the revenues do not include any Availability payment.

- Similarly to the PPP variant, the growth rate of revenues (CAGR 2.7%) is higher than the growth rate of operational costs (CAGR 2.2%). This assumption also means that the EBIDTA margin increases with time.
- At the same time, the overall operational efficiency of the PPP variant (given EBIDTA margin) is lower than in the PPP variant, but this difference decreases gradually (cf. the sub-section Main assumptions about the financial model).
- The following chart depicts the development of the individual components of the Project Company's cash flows.

Development of the Project Company's cash flows

Source: EY



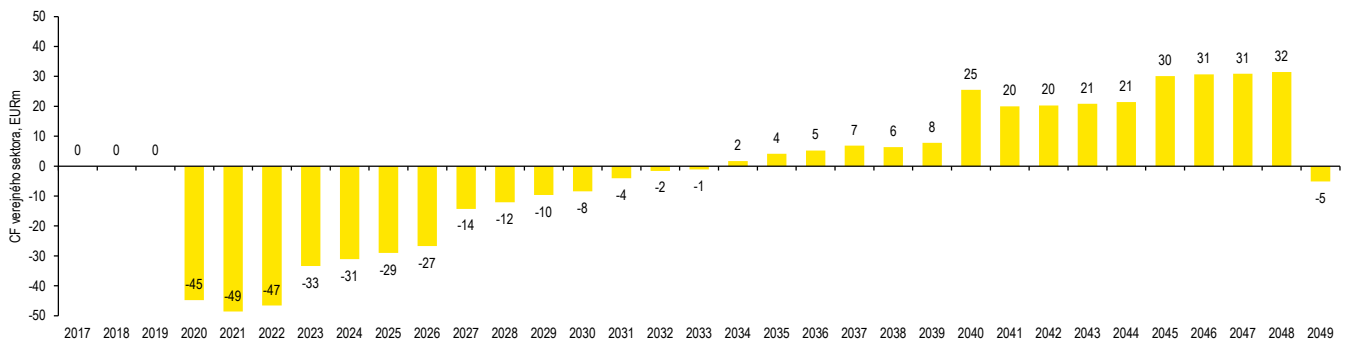
- The CFO development is different from the PPP variant as a result of the missing Availability payment and the expected lower operational efficiency.
- As opposed to the PPP variant, CFI reflects the risk of increased investment expenditures. This assumption applies for both, the construction phase (in the sense of initial investment expenditures) and the operational phase (in the sense of subsequent investment expenditures).
- CFF is different from the PPP variant as a result of different capital structure (100% debt) and lower interest expenditures.
- In the PSC variant, the total cash flows of the Project Company (i.e. the sum of CFO, CFI, and CFF) represent the total cash flows of the Public sector as well.

## Analysis of Financial Affordability

► Total cash flows of the Public sector are separately depicted in the following chart:

### Necessary funds from the Public sector – PSC

Source: EY



- In the PSC variant, the net cash flow of the Public sector during the construction phase equals zero. All capital expenditures are covered by the capital of the financing banks.
- In the operational phase, the necessary cash flow of the Public sector starts at the level of EUR 45m (2020) and remains negative until the year 2033. A high need of additional cash is based especially on the necessity of supporting the cash flows of the project so that it meets the assumed bank covenants.
- From the year 2034, the net cash flow of the Public sector is positive and grows to EUR 32m in 2048.
- In the last year of the operational phase, additional EUR 5m is needed, due to the assumption that the operational capital in the operational phase is financed by a separate bank loan. This liability is repaid at the end of the operational phase (this assumption applies for the PSC, PPP and Specific variants).

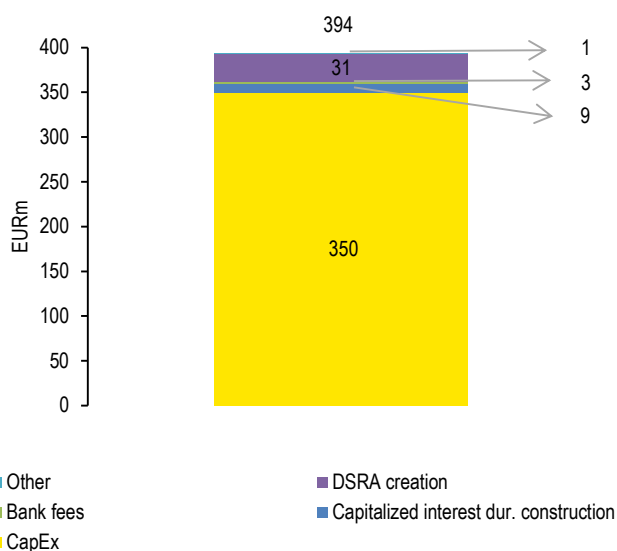
## Analysis of Financial Affordability

### Specific variant

- ▶ Similarly to the preceding options, for the purposes of the financial modelling, the Project is initially viewed from the side of the Project Company.
  - First, the cash flows of nUNB were calculated (FCFF).
  - Because these cash flows were not sufficient to meet the requirements of bank institutions (loan repayment and meeting of covenants), the cash flows were increased by additional financial injections from the Public sector.
- ▶ Subsequently, these additional financial injections were gradually increased, so that the aforesaid requirements of the banks were met. In this way, the minimal level of the necessary additional financial injections was reached.
- ▶ The total cash flow of the Public sector is therefore composed of (i) investment of the Public sector's equity during the construction phase, (ii) minimal necessary additional financial injections during the operational phase, and (iii) dividends paid by the Project Company to the Public sector during the operational phase.
- ▶ The following two charts depict the expected sources and uses of funds in the construction phase in the years 2017 – 2019.

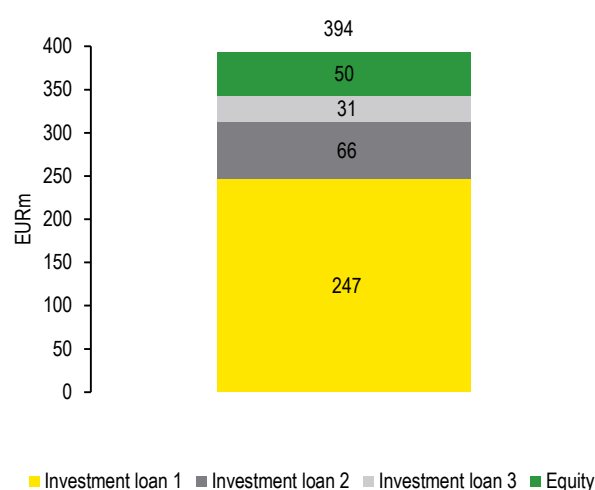
Uses of funds in the construction phase

Source: EY



Sources of funds in the construction phase

Source: EY, MoH SR



- ▶ Similarly to the PSC variant, higher investment expenditures are assumed in this case as a result of the risk of their overrun by the Public sector (cf. the chapter Main Assumptions about the Financial Model).
- ▶ As opposed to the PSC variant (and thus similarly to the PPP variant), this option is viewed as project financing with regard to usual requirements of international financial institutions for project transparency. Therefore, DSRA is assumed in this option.

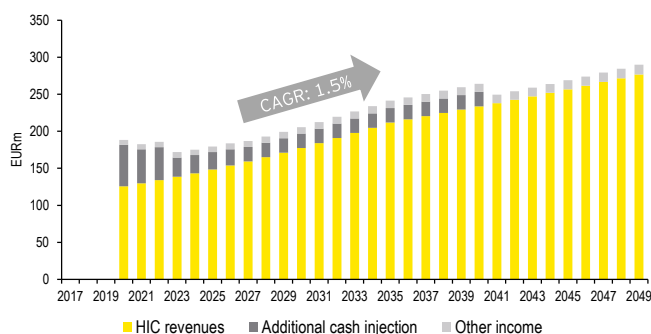


## Analysis of Financial Affordability

- The following charts present the development of revenues and operational costs.

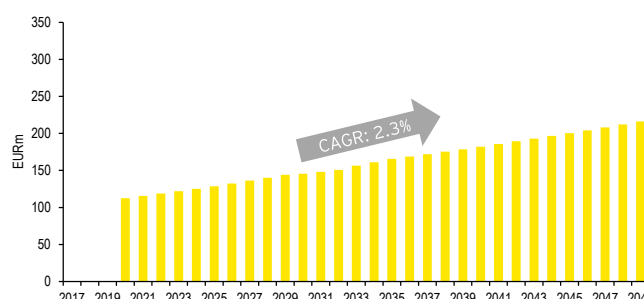
Development of revenues

Source: EY



Development of operational costs

Source: EY

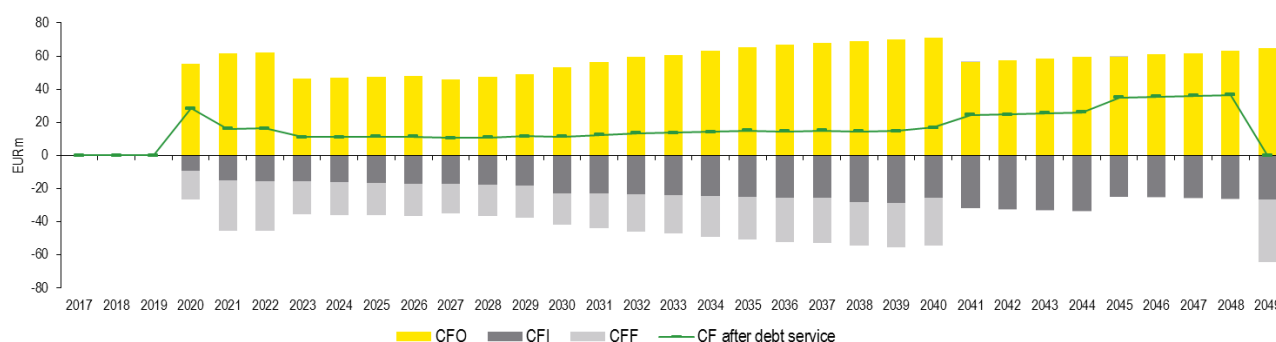


Notes: CAGR without assuming additional financial injections in the years 2020 – 2049 equals 2.7%.

- The chart of the development of revenues shows that their growth (CAGR 1.5%) is relatively lower in comparison with the preceding options, as a result of higher additional financial injections in the years of operation. The last year, when additional financial injection is provided, is the year 2040, just like in the PPP variant.
- Operational costs (CAGR 2.3%) grow more slowly than in the PPP variant (CAGR 2.4%), but faster than in the PSC variant (CAGR 2.2%).
- The difference in the growth rates is particularly a result of different assumptions about the initial level of operational costs (highest in the PSC variant, lower in the Specific variant and lowest in the PPP variant). The Specific variant assumes lower operational efficiency (in the sense of EBITDA margin) than in the PPP variant (albeit higher than in the PSC variant).
- The following chart depicts the development of cash flows:

Development of the Project Company's cash flows by cash flow components

Source: EY



- Compared to previous options, CFO development is influenced by different level of revenues (due to additional financial injections from Public sector) and different operational efficiency (in terms of EBITDA margin – cf. comment above).
- The level of CFI is equal to PSC variant and is thus higher compared to PPP variant (there is a risk of exceeding investment expenditures).
- CFF is different compared to PPP and PSC variants due to different level of indebtedness (higher than PPP variant but lower than PSC variant) and lower interest rates (lower than in the PPP and PSC variants).
- Cash flows after debt service are in the first year of operational phase significantly influenced by drawn down of loan used for working capital financing. The cash flows after debt service are stable until year 2040 and from 2041 they begin to grow as the Investment loan 1 is repaid. In year 2049 cash flows decrease to close to zero

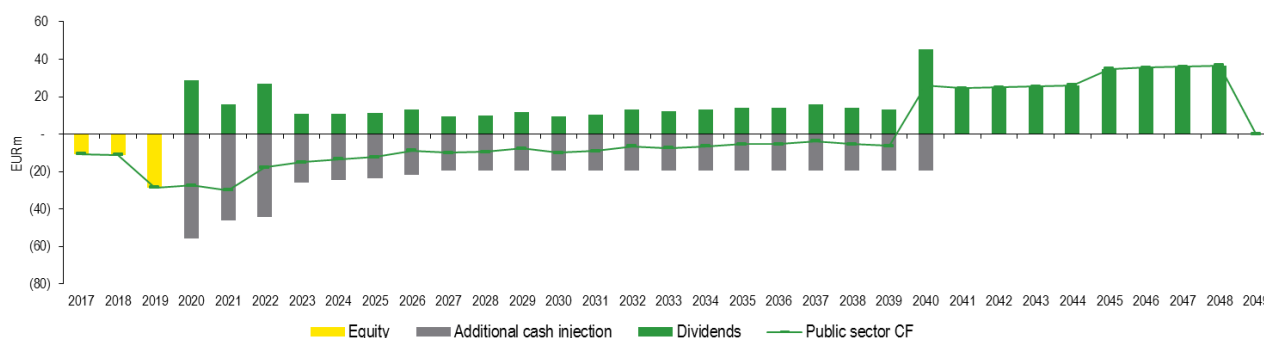
## Analysis of Financial Affordability

value due to bullet repayment of loan used for working capital financing (as is the case in the PSC and PPP variant).

- The following chart depicts the components of cash flows for Public sector.

### Final cash flows of Public sector and their components

Source: EY

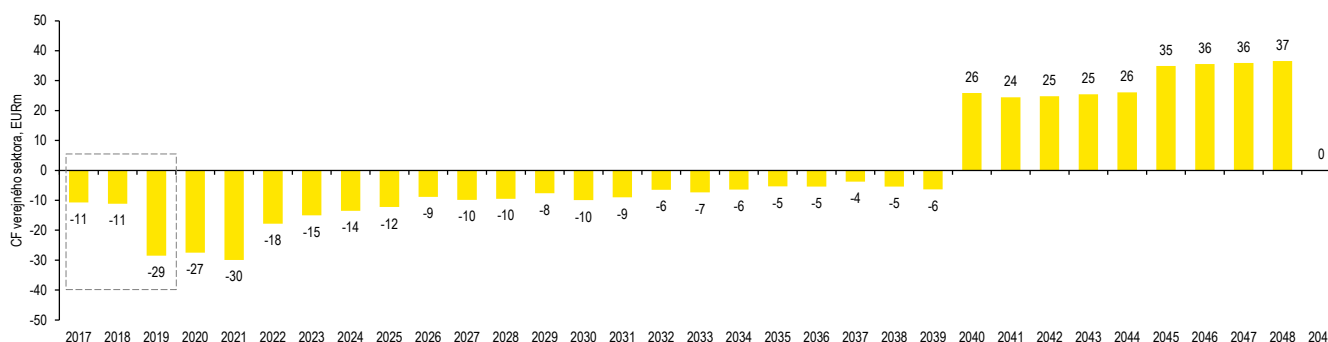


- During the construction phase the Public sector injects equity of EUR 50m into the Project Company.
- Additional financial injections are inserted into the Project Company during the investment loan repayment period, i.e. until 2040
- Paid dividends to Public sector are based on cash flows after debt service (cf. chart above), which are further adjusted for changes in DSRA (works on the same mechanism as in the PPP variant).

- Net cash flows for Public sector are depicted separately in the following chart:

### Cash flows of Public sector in the Specific variant

Source: EY



- In the Specific variant, the net cash flows of Public sector during the construction phase are negative at c. EUR 50m. CapEx in the construction phase are thus covered partially by equity of Public sector. The residual part of required capital is provided by financing banks. This is different from both, the PPP and PSC variants.
- In the operational phase, the required level of cash provided by the Public sector starts at level EUR 27m (2020) and is negative until 2039. High level of required additional cash is caused by the need to support Project's cash flows to meet bank covenants.
- After the repayment of the main investment loan used for the buildings construction, net cash flows of the Public sector are positive and grow up to EUR 37m in year 2048.
- In the last year of the operational phase the net cash flows of Public sector are equal to zero. This is due to assumption that working capital during the operational phase is financed by separate loan. This liability is repaid at the end of the operational phase.

## Analysis of Financial Affordability

### Financial affordability conclusion

- The following chart compares cash flows of Public sector under all considered options (for the better comprehensibility, in the PPP variant only the scenarios with highest and lowest cash flows for Public sector in the first year of the operation are depicted).

### Comparison of Project's cash flows for the Public sector

Source: EY



- **PSC variant** requires the highest net cash flows from the Public sector at the beginning of the operational phase (years 2020 to 2027). At the same time, positive cash flows to the Public sector at the end of the operational phase are comparable to cash flows of the Specific variant. From this point of view, the Specific variant is more convenient compared to the PSC variant.
- **Specific variant**, compared to the PSC variant, offers partial solution to operational inefficiencies by utilising Operations Advisor. However (i) the calculations in this option do not include payments to Operations Advisor as the commercial conditions currently do not exist and (ii) there is an uncertainty about reaching the desired operational efficiency and retaining it at this level when the Operations Advisor exits. Both these factors could potentially lead to deterioration of cash flows of the Public sector.
- **PPP variant** requires relatively lower cash flows provided by the Public sector at the beginning of the Project. Availability payments are however expected throughout the whole investment loan repayment period (i.e. until 2040). Even though the Availability payment is not required after the repayment of the investment loan, the Public sector is not able to collect positive cash flows, compared to the PSC and the Specific variant.

## Value for Money analysis

### Introduction

- ▶ The emphasis is put on the comparison of the PPP, PSC and Specific variant in terms of NPV of the expected cash flows from the Public sector.

### PPP

- ▶ The table below illustrates the NPV of the necessary cash flows of the public sector to the base-case and alternative scenarios in the PPP option.

**NPV in the case of PPP (assuming 3.1% public sector discount rate) in EUR m**

| Debt | IRR                |        |
|------|--------------------|--------|
|      | 13,6 %             | 15,6 % |
| 60 % | - 87               | - 160  |
| 70 % | - 75 <sup>33</sup> | - 75   |

Source: EY, MoH SR

- ▶ The PPP option does not consider commercial activities above those resulting from the UNB3.
- ▶ The following table shows the sensitivity of the base-case of NPV to the public sector discount rate. In the case of the base-case we assume a public sector discount rate of 3.1% (based on the long-term government bond yield), theoretically representing the minimal public sector discount rate. Because of the fact that there is no consensus in the professional community about its "correct level", we have added a premium of 2.0% and 4.0%, which possibly reflect the specific risk of the sector and the Project. Impacts on the NPV are presented in the following table:

**NPV in the case of PPP (assuming 15.6% IRR) in EUR m**

| Debt | Public sector discount rate |       |       |
|------|-----------------------------|-------|-------|
|      | 3,1 %                       | 5,1 % | 7,1 % |
| 60 % | - 160                       | - 122 | - 95  |
| 70 % | - 75                        | - 64  | - 55  |

Source: EY, MoH SR

<sup>33</sup> Client has also explicitly requested what would be the impact on availability payment in the event of (i) Equity IRR is set to 13.6% AND (ii) debt/capital is set to 70% AND (iii) DSCR is set to 1.20. In that case the NPV of availability payments would be around negative EUR48.5m with initial 2020 level of negative EUR24m progressively decreasing to zero in 6 years.

However, it is important to point out that a DSCR level of 1.20 is expected to raise issues with acceptability of such terms on banks side since at senior banks this level usually triggers an event of default or a potential event of default at least.

There may be another debt arrangement that could feasibly result in decrease in availability payments and keeping DSCR at level higher than 1.20 at the same time (change in the DSCR calculation), especially in the first year of operating period year.

### PSC

- ▶ The table below illustrates the NPV of cash flows of the public sector needed in the PSC option. Since the equity IRR and the amount of debt are not variable parameters in this case, the table shows only the sensitivity to the public sector discount rate.

**NPV in the case of PSC in EUR m**

|     | Public sector discount rate |       |       |
|-----|-----------------------------|-------|-------|
|     | 3,1 %                       | 5,1 % | 7,1 % |
| NPV | - 125                       | - 131 | - 125 |

Source: EY, MoH SR

### Conclusion regarding the results of the PSC and the PPP

- ▶ Based on the aforementioned (not taking any other commercial activities in the PPP option into account), in the PSC version in the conservative variant, the result is higher by EUR 35 m than in the PPP option (-EUR 125m versus -EUR 160m).
- ▶ However, based on our analyses, the following applies (each effect is independent from the rest):
  - Assuming additional EBITDA in the amount of c. EUR 3.5m from commercial activities in the PPP option (unlikely in the case of the baseline PPP scenario), the NPV in the PSC option is comparable to the NPV in the PPP option.
  - Assuming 70% debt level compared with the total amount of capital invested in the PPP option, the NPV in the PSC option is worse than the NPV in the PPP option.
  - Assuming 13.6% of the required equity IRR, the NPV in the PSC option is worse than the NPV in the PPP option.
  - Assuming a 5.1% public sector discount rate, the NPV in the PSC option is comparable to the NPV in the PPP option.

The above mentioned effects were analysed separately. In case the above mentioned effects interacted, the outcomes of PPP and PSC would become equal at a much smaller change of the assumed effects.

## Value for Money analysis

### Specific variant

- ▶ The following table demonstrates the sensitivity of the NPV of net cash flows of the public sector for the Specific variant and different levels of the Public sector discount rate.

NPV in the case of the Specific variant in EUR m

|            | Public sector discount rate |       |       |
|------------|-----------------------------|-------|-------|
|            | 3,1 %                       | 5,1 % | 7,1 % |
| <b>NPV</b> | - 86                        | - 99  | - 99  |

Source: EY, MoH SR

- ▶ This option may appear more favourable based on the NPV, however there is number of fundamental risks related to this option led by the risk of non-realisation of the expected operational efficiency.

### Note

- ▶ In some cases of PPP, the state offers zero Availability payment, in the so called project based on demand (e.g. transport infrastructure, etc.).
- ▶ In the case of nUNB the responsibility for health care and provision of clinical services would be fully transferred to the private partner, while the private partner would have to use the revenues from these activities not only for the operation of the hospital, but also for investment expenditures for its construction.
- ▶ In that case, the private partner will be remunerated to a full or major extent, based on the actual use of the hospital by its end-users, i.e. patients. The state would not ensure equalisation of (a potential lack of) cash flows to the level needed for acquiring a debt capital and equity capital.

The Advisers hold the view that such a transfer of risk to the private partner would not be viable for the implementation of the project and no private partner or bank would be willing to enter the Project.

## Analysis of the Impact on the State's Balance Sheet

This section is focused on accounting rules that apply to the individual analysed options and on the quantification of their financial impacts on state accounts.

### PSC

Source: Eurostat statistics, Eurostat: Manual on Government Deficit and Debt 2013, Implementation of ESA 10

| Option | Description   | Impact on state accounts  |
|--------|---|---|
| PSC    | Because in the PSC option the state itself takes loans, the debt needed for the construction of the new hospital is recognised in the balance sheet of the state, and thus is included in the public debt | Debt in the amount of EUR 366m in the balance sheet of the state* |

Note: \* The figure includes the materialised risk of CapEx overruns.

- Based on the macroeconomic statistics of Eurostat for the year 2013, where the public debt of the Slovak Republic reached 55.42% of GDP, and based on fiscal limits, according to which the Slovak debt must not exceed the critical limit of 60%, additional debt increase does not seem to be a preferred option and therefore it is needed to analyse further available options as well.
- In connection with the PPP option, it is difficult to unequivocally assess the accounting impacts of the project. Each PPP project is unique and its entry into accounts will depend on the outcomes of negotiations and the final contractual structure of the transaction. In the case of PPP, the following two basic variants can be considered:

### PPP

Source: Eurostat statistics, Eurostat: Manual on Government Deficit and Debt 2013, Implementation of ESA 10

| Option | Description   | Impact on state accounts   |
|--------|---|--|
| PPP    | Variant A:<br>The construction and availability risks are transferred to the Private partner, while there are no other mechanisms implying the transfer of important risks (e.g. the most of the availability risk) back to the state.  | Accounting similar to "operational leasing"<br><ul style="list-style-type: none"> <li>• No assets / debt in the balance sheet of the state</li> <li>• Availability payment accounted for on a yearly basis as expenditure for purchase of services:<br/>EUR 26.5m (2020)<br/>→ EUR 11m (2023 - 2049)</li> </ul>  |
| PPP    | Variant B:<br>The construction and availability risks are transferred to the Private partner, while there are also other arrangements implying the transfer of important risks back to the state (e.g. various guarantees, regulations about advance repayment, or other regulations concerning financing, etc.). | Accounting similar to "financial leasing"<br><ul style="list-style-type: none"> <li>• Asset / debt accounted for in the balance sheet of the state</li> <li>• Availability payment accounted for on a yearly basis, divided into repayment of principal, interest, or as expenditure for purchase of services:<br/>EUR 26.5m (2020)<br/>→ EUR 11m (2023 - 2049)</li> </ul> |

- In the case of the PPP option, the key issue when choosing the correct accounting method is the classification of the asset in question as state asset (impact on the government deficit / surplus and debt) or as asset of the Private sector (impact on the government deficit / surplus).

## Analysis of the Impact on the State's Balance Sheet

- ▶ “In national accounts the assets involved in a PPP can be considered as non-government assets only if there is strong evidence that the partner is bearing most of the risks attached to the asset of the specific partnership.”<sup>34</sup>
- ▶ A detailed analysis of the risks borne by individual contractual parties is, therefore, a default element of the assessment of the project for the purpose of ensuring a correct accounting of the PPP in national accounts.
- ▶ The risk analysis is, first of all, based on the assessment of the allocation of the following three basic risk categories:
  - **Construction risk:** covers especially cases of delayed delivery, violation of established norms, side costs, claims of third parties, technical shortcomings, etc.
  - **Availability risk:** is related to the arranged qualitative or quantitative parameters of the project and its overall operability and availability.
  - **Demand risk:** covers the demand variation in comparison with the demand expected in the time of the signing of the contract irrespective of the behaviour of the Private partner (e.g. risk of lower occupancy rate).
- ▶ Eurostat recommends that the assets connected with the PPP project are classified as assets of the Private partner, and thus recorded in the national accounts off-balance sheet only, in case the following requirements are met:
  - the Private partner bears the construction risk and at the same time
  - the Private partner bears at least one of the following risks – availability risks (Variant A) or demand risk, as arranged in the contract.
- ▶ In the next step it must be assessed whether different contractual mechanisms were not agreed upon, leading to the transfer of the availability or demand risks back to the state. These elements can include state guarantees, extent of public funding, character of the partner (e.g. the specific case where the partner is a public corporation), and others.
- ▶ According to the Eurostat manual, if the state provides the partner with a guarantee of minimum revenue or profitability (e.g. in the form of availability payment), it can be, if certain requirements are met, considered as “bearing majority of the risk” of availability or demand.
- ▶ In this sense, if the Private partner does not meet the contractually arranged qualitative or quantitative norms of service supply (“apparent lack of the partner’s performance”), and the state keeps making its payments without the possibility of decreasing them significantly, or of its discontinuation, the majority of the availability risk would be considered as transferred back to the state with all of the related negative impacts (Variant B).
- ▶ With regard to state guarantees, the general rule is that one-off explicit state guarantee is considered as an off-balance sheet liability as long as it is not called. In connection with the PPP project, the issue of a guarantee itself can be considered a transfer of a significant portion of the risks back to the state, depending on the specific conditions of a given guarantee.
- ▶ If it is assessed that the majority of risks arising from the project are borne by the state, the assets related to the partnership will be recorded in the balance sheet of the state and their accounting will be similar to the accounting of the financial leasing (Variant B).

<sup>34</sup> Eurostat: Manual on Government Deficit and Debt (Implementation of ESA10)

## Analysis of the Impact on the State's Balance Sheet

### Specific variant

Source: Eurostat statistics, Eurostat: Manual on Government Deficit and Debt 2013, Implementation of ESA 10

| Option           | Description   | Impact on state accounts  |
|------------------|---|---|
| Specific variant | <p>The newly established entitiz as a subsidiary accounting unit of the public administration will be included in the summary financial statement of the Slovak Republic in the form of a full consolidation.</p> <p>For the purposes of reporting to Eurostat and in line with ESA 2010 (in force from September 2014), the debt of the newly established entity will be included in the public debt, if the newly created company meets the following requirements: (i) the company is managed by another institution of the public administration and at the same time (ii) the company is not a regular market participant.</p> | Debt in the amount of EUR 343m in the balance sheet of the state. |

- In the specific option and in terms of the aforementioned, the Eurostat manual does not consider the company as a market participant, if it provides “all or most of their output (goods and services) free of charge or at prices that are not ‘economically significant.’”<sup>35</sup>
- For the purpose of minimising any doubt when choosing the correct accounting methods for the individual options and with regard to the obligation of notifying Eurostat of the government deficit and debt, we advise that any recommendations pulished by Eurostat are strictly adhered to.

<sup>35</sup> Eurostat: Manual on Government Deficit and Debt (Implementation of ESA10)



## Summary of Financial Assessment

The table below summarises all 3 options on the basis of assumptions used in the preceding sections:

| Description  | PSC  | PPP   | Specific variant  |
|--|--|---|---|
| <b>Affordability (cash flows of the Public sector);</b><br>Cf. section: Affordability analysis   | From the initial figure in 2020, the net cash flows in the amount of negative EUR 45m grow gradually, they reach positive values in 2034 and further grow to the value of positive EUR 31m at the end of the operational phase | From the initial amount of EUR 26.5m in 2020, the availability payment converges towards EUR 11m in 2023 and remains at this value until the end of the project   | Investment of EUR 50m of equity in the construction phase; from the initial amount of negative EUR 27m in 2020, the net cash flows grow gradually, they reach positive values in 2040 and further grow to the value of positive EUR 37m at the end of the operational phase |
| <b>NPV of the cash flows of the Public sector („Value for money“ calculated as a difference from PPP)</b><br>Cf. section: "Value for money" analysis | -EUR 125m EUR  | -EUR 160m @ 15,6 %; 60 % <sup>1</sup><br>-EUR 87m @ 13,6 %; 60 %<br>-EUR 75m @ 15,6 %; 70 %<br><br><i>Note: The aforesaid figures do not assume additional commercial activities.</i><br><i>1. Equity IRR ; debt</i>    | -EUR 86m  |
| <b>Impact on the state debt</b><br>Cf. section: Impact on the balance sheet  | Debt: EUR 366m   | Cost: availability payment in the given year (EUR 26.5m / EUR 11m)<br><br>(expected changes of ESA 2010 – NPV of the availability payment EUR 160m @ 15,6 %; 60 % <sup>1</sup><br><br><i>Note: 1. Equity IRR ; debt</i> | Debt: EUR 343m  |
| <b>Key project risks from the viewpoint of the Public sector in all options</b><br>Cf. section: Risk analysis  | <b>Political / regulatory risk:</b><br>Termination of the Project as a result of system changes and/or political change  | <b>Political / regulatory risk:</b><br>Termination of the Project as a result of system changes and/or political change   | <b>Political / regulatory risk:</b><br>Termination of the Project as a result of system changes and/or political change   |
|  | <b>Market risk:</b> Loss of revenues (not caused by the unavailability of the infrastructure of the new hospital)  | <b>Market risk:</b> Loss of revenues (not caused by the unavailability of the infrastructure of the new hospital) covered by Availability payment   | <b>Market risk:</b> Loss of revenues (not caused by the unavailability of the infrastructure of the new hospital)   |
| <b>Key project risks from the viewpoint of the Public sector specific for the individual options</b><br>Cf. section: Risk analysis                   | <b>Development and construction risk:</b> CapEx increase and/or delay of construction works  | <b>Development and construction risk:</b> Especially cost increase as a result of bad choice and negative development of the private partner  | <b>Development and construction risk:</b> CapEx increase and/or delay of construction works   |
|  | <b>Operational risk:</b> Inefficient management of the transfer of operation from UNB3 to nUNB   |   | <b>Operational risk:</b> Inefficient management of the transfer of operation from UNB3 to nUNB<br><br><i>Note: Can be shared with the Operations advisor</i>  |

## Summary of Financial Assessment

|                 |   |   |  |
|-----------------|---|---|--|
|                 | <b>Operational risk:</b> Incorrect operational management risk and non-achievement of expected operational efficiency   |   | <b>Operational risk:</b> Incorrect operational management risk and non-achievement of expected operational efficiency<br><br>Note: Can be shared with the Operations advisor |
|                 | <b>Operational risk:</b> Accelerated outdatedness of the infrastructure of the new hospital                             |   | <b>Operational risk:</b> Accelerated outdatedness of the infrastructure of the new hospital<br><br>Note: Can be shared with the Operations advisor                           |
|                 | <b>Legal risk:</b> Invalidity and / or mistakes in the formal process and legal documentation set-up                    | <b>Legal risk:</b> Invalidity and / or mistakes in the formal process and legal documentation set-up<br><br>Note: <i>This risk is most important in the case of PPP</i> | <b>Legal risk:</b> Invalidity and / or mistakes in the formal process and legal documentation set-up   |
| <b>Benefits</b> | The termination of operation of three hospitals will eliminate the generated normalised yearly loss (2013 - c. EUR 22m) | The termination of operation of three hospitals will eliminate the generated normalised yearly loss (2013 - c. EUR 22m)   | The termination of operation of three hospitals will eliminate the generated normalised yearly loss (2013 - c. EUR 22m)  |
|                 | Full control of the public sector over the project  | Maximum motivation of the private partner to efficient design, construction and operation of the new hospital   | Full control of the public sector over the project   |
|                 | Limited documentation risk  | Direct and long-term transfer of expert know-how  | The public sector buys operational know-how tested in practice for a limited period of time  |
|                 |   | Limitation of investment and operational expenditures for the public sector   | Limited documentation risk   |
|                 |   | Long-term sustainability of the state of assets   |  |

Based on the financial assessment from the viewpoint of (i) affordability, (ii) Value for money and (iii) debt burdens, while taking the risks into account, the PPP option seems to be the most suitable way of the realisation of nUNB, while keeping the following assumptions:

- ▶ Sufficient preparation of the project before launching the procurement process,
- ▶ Appropriate risk allocation between the public and private sectors,
- ▶ Transparency of the procurement,
- ▶ Ensuring sufficient competition in the procurement process,
- ▶ Maximum co-operation of the MoH SR and defining its project management with clear-cut responsibility,
- ▶ Support of a strong advisory team.

## Summary of Financial Assessment

In addition, legislation changes will be required (e.g. payment mechanism changes, changes in the minimal requirements for employment and material-technical equipment of the individual kinds of healthcare facilities, changes in the competence of medical staff).

The condition for accepting any feasible Project option is the preparedness of the Government of the Slovak Republic to accept the need of financial engagement of the state and legislation changes. The only difference is in form (expenditure or balance sheet) and the total estimated volume.

## Criteria for the Selection of Candidates for PPP

In the public procurement process, (i) the conditions on participation are assessed first, followed by (ii) selection criteria.

In line with the law No. 25/2006 Coll. about public procurement, as amended (further referred to as “ZVO”), the public procurement process is divided into two main phases<sup>36</sup>:

- 1 Phase 1 Assessment of conditions on participation
- 2 Phase 2 Assessment of selection criteria

### Phase 1 Assessment of conditions on participation („qualification phase“)

► The conditions on participation and criteria are regulated in ZVO. The conditions on participation:

- (A) personal position,
- (B) financial / economic position,
- (C) technical / expert capacity.

#### (A) Conditions on participation with regard to the personal position

- These are defined in ZVO without a possibility to change.
- They verify whether the candidate for the commission is an entity meeting its obligations and not committing serious infringements. For instance, it is verified whether the entity was not legally sentenced for certain crimes, was not declared bankrupt, does not have any recorded unpaid insurance premium for health insurance, social insurance, any recorded outstanding taxes collected by execution, etc.
- Each member of the consortium (group of suppliers) has to fulfil these conditions on participation themselves.

#### (B) Conditions on participation with regard to the financial and economic position

- We suggest to require the presentation of:
  - bank statement including a declaration of the candidate’s capability to meet his financial obligations, information about the candidate’s not being in an unallowed debit, in case of repaying a loan information about his adhering to the payment schedule and about his account not being subject for execution etc., bank statement about the possibilities of project financing and the bank’s promise to negotiate about providing a loan for the realisation of the contract.
  - the promise of the bank or a subsidiary of a foreign bank to provide a loan.
  - balance sheets or property and liability statements or qualification data from them, e.g.:
    - i. assets: 3 x the volume of nUNB assets,
    - ii. equity: 2 x the volume of nUNB equity or 35 % projected nUNB CapEx (35 % is the expected CapEx overrun of the public sector)
  - an overview of total turnover or overview of achieved turnover in the area to which the subject of the contract relates for the last three marketing years (law restriction: the requirement for the amount of the turnover for the period of one marketing year cannot exceed the expected value of the contract<sup>37</sup> calculated for a period of 12 months, if it is an over-limit contract) and qualification data:
    - i. yearly capital expenditures: planned and real (qualification criterion: real CapEx > 60 % of the planned yearly nUNB CapEx)
    - ii. yearly operational expenditures: planned and real (qualification criterion: real OpEx > 60 % of planned yearly nUNB OpEx)

<sup>36</sup> Uniform for all processes, otherwise the public procurement can be divided into more rounds, such as negotiated procedure with publication of a contract notice or competitive dialogue.

<sup>37</sup> The expected value of the contract is calculated as the price of a comparable subject of contract, while the sum of repeated payments is included, i.e. all payments to the concessionaire during the concession period.

## Criteria for the Selection of Candidates for PPP

iii. volume of yearly turnover > 60 % of the planned nUNB revenues.

- ▶ In the case of consortiums, the meeting of conditions on participation with regard to the financial and economical position or the technical / expert capacity are proved together for the whole consortium, i.e. for instance one member of the consortium proves the meeting of conditions on participation with regard to the financial and economic position and another member the condition on participation with regard to the technical or expert capacity.

### (C) Conditions on participation with regard to the technical or expert capacity

- ▶ We suggest to require the presentation of:
  - lists of relevant provided services in the last three years; in the case of public procurers and procurers in SR, references are assessed, in case of other procurers it is necessary to present a certificate from a relevant customer, or alternatively a declaration of the candidate together with a different evidence of performance; within this condition, it is possible to require e.g. a construction of similar infrastructure / provision of similar services together with the setting of certain parameters such as the investment value of the operated infrastructure, operation period, etc.,
  - lists of construction works realised in the last five years, in the case of public procurers and procurers in SR, references are assessed, in case of other procurers it is necessary to present a certificate from a relevant customer, or alternatively a declaration of the candidate together with a different evidence of performance; within this condition, it is possible to require e.g. an operation of similar infrastructure / real estates as is the subject of the contract together with the setting of certain parameters such as the investment value of the infrastructure / real estates, delivery times, etc.,
  - other conditions on participation according to ZVO, for instance data about the share of subdeliveries, data about education and specialist practice or specialist qualification of the managing staff, especially of those responsible for managing construction works and providing services, etc.
- ▶ In this phase it is not possible to exactly define the conditions on participation, because it is closely connected to the determining of the expected value of the contract and also other parameters of the Project, including for instance the basic definition, whether the subject of the procurement will be a contract for construction works or services and the definition of other bases. For example, in the case of the Specific variant, the subject of the procurement will be the realisation of construction works and the expected value of the contract will be the cost for these works. When procuring the construction and operational services in the CPPP option, the expected value of the contract can be calculated as the value of the repeated payment to the concessionaire.
- ▶ Some of the requirements to verify the private partner can be accounted for in the procurement materials (requirements for the subject of the contract), information document, etc.
- ▶ It is also suitable to move some issues to the negotiation stage with the candidates or to the phase of financial conclusion. The aforementioned applies for example to proving the obligation of taking part in the project from the side of the financing entities, therefore it is more appropriate to require these proofs from these entities as a part of one of the phases of the negotiations or procurement dialogue, or move them entirely to the phase of financial conclusion.

### Phase 2 Assessment of selection criteria

- ▶ The criteria for the selection of the successful candidate are also determined in ZVO. It can either only be:
  - the price or
  - the economically most favourable offer.
- ▶ We suggest assessing the offers according to the price: “minimal Availability payment”.

We assume that within the qualification, the process of procurement dialogue will be applied (or negotiated procedure), during which the future relationship between the client and the provider will be specified. The outcome of this dialogue will be a prepared legal documentation. For the choice of the successful candidate itself it will be sufficient to compare the price of the service. However, the criteria for the economically most favourable offer can be

## Criteria for the Selection of Candidates for PPP

e.g. quality, price, technical design, operational costs, efficiency of the expended costs, post-warranty service and technical support, construction time, etc.

### Key notes

- ▶ Apart from the two above mentioned phases there can still be more phases of public procurement in line with Public Procurement Act. The process of concession award is governed by Public Procurement Act (§ 66). In line with Public Procurement Act, two preferred options can be considered for the selection of the public procurement procedure for granting concession to a private partner:
  - Negotiated procedure with publication (“RKZ”), or
  - Competitive dialogue,

### RKZ

- ▶ The contracting authority may rely on the negotiated procedure with publication pursuant to Section 55(1) of Public Procurement Act if any of the conditions specified in this legal provision is met. The conditions are as follows:
  - § 55 Article 1(3) where the nature of the supplies, public works or services provided or the risks related thereto exceptionally do not allow determine the requirements as regards the pricing method, or
  - § 55 Article 1(4) the requirements for services, in particular financial services, cannot be determined sufficiently precisely to use open procedure or restricted procedure.

### Competitive dialogue

- ▶ Pursuant to Section 60(1) of Public Procurement Act the public partner may resort to the competitive dialogue method in the case of exceptionally complex projects, if neither open nor restricted tender can be used. The aim of the competitive dialogue is to identify and define the most appropriate way of satisfaction of the public authority's needs. Tenders must be evaluated solely according to their economical advantages. Exceptionally complex contract is deemed a contract where the contracting authority is objectively not able (i) to define technical requirements which would meet the contracting authority's needs and objectives, or (ii) specify the legal or financial conditions of the project.

These two procedures are appropriate for complex projects, they reflect best the conditions prevailing on the relevant market, requirements of the public partner, feedback from tenderers and demand for potential private partners. However, traditional process of concessions procurement which has been used in the Slovak Republic is the competitive dialogue. It is important to note that the above mentioned process takes place irrespective of the arrangement of relations between the public partner and the private partner.

## Legal assessment

---

1. Structure of the Final report
2. Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal
3. Assessment of the current legal framework and the need/options of amending it
4. Analysis of legal consequences of the Project in terms of (i) Slovakia's international commitments, (ii) Slovak Constitution, and (iii) Slovakia's generally binding legal regulations
5. Assessment of legal consequences of termination of the operations of the existing health care providers
6. Assessment of potential consequences for legal relations to existing assets
7. Assessment of legal consequences of Project implementation in terms of building regulations
8. Assessment of the risk associated with potential bankruptcy of the private partner
9. Assessment of legal aspects of the proposed payment mechanism between partners
10. Assessment of exit strategies and options of modifying the project by the private and the public partner
11. Analysis of state aid in relation to the preferred Project model
12. Analysis of the applicable methods of public procurement of a hospital PPP project
13. Proposals of realistic legal structures and tools enabling implementation of the preferred model

## Structure of the Final report

The assessment of the Project feasibility in terms of law derives from the following key areas :

- 1 Assessment of legal feasibility of the PPP models and the level of private sector participation, with focus on which model is ideal:
  - - institutional or contractual PPP project,
  - - availability-based, demand-based or combined PPP project,
  - - concession or other contract.
- 2 Assessment of the current legal framework and the need/options of amending it in the wake of the implementation of the preferred model with special focus on the existence of sweeping sector regulation
- 3 Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model with special focus on the impact on the existing network of relations within the region including the new health care provider, existing health care providers, staff, patients, HICs, education institutions, research institutions, debtors, creditors and other interested parties
- 4 Analysis of legal consequences of the Project in terms of (i) Slovakia's international commitments, (ii) Slovak Constitution, and (iii) Slovakia's generally binding legal regulations
- 5 Assessment of legal consequences of termination of the operations of the existing health care providers and identification of legal tools/structures supporting a fluent transfer/transition and settlement of the existing legal relations, especially with respect to staff, patients, HICs, debtors, creditors and other
- 6 Assessment of potential consequences to legal relations to existing assets (i.e. assets ownership, administration of state property and restrictions for disposal of such property) with respect of Project implementation
- 7 Assessment of legal consequences of Project implementation in terms of building regulations (in particular planning, permits and approvals of competent authorities, EIA, and conservation of historical buildings)
- 8 Assessment of the risk associated with potential bankruptcy of the private partner and potential loss of control by both the private and the public partner of the Project over the Project assets
- 9 Assessment of legal aspects of the proposed payment mechanism between partners
- 10 Assessment of exit strategies and options of modifying the project by the private and the public partner
- 11 Analysis of state aid in relation to the preferred Project model
- 12 Analysis of public procurement methods applicable to the Project
- 13 Proposals of realistic legal structures and tools enabling implementation of the preferred model including justification, considering the analysed legal issues

The individual key areas have been evaluated with respect to other project alternatives, which are feasible technically and financially – as these aspects followed from the conclusions arrived at in the technical and financial analysis of the Report of basic alternatives of Project implementation.

For sake of convenience, the introduction of the legal analysis of the Final Report we present considerations as regards legal feasibility of the PPP forms, followed by 4 variants of Project alternatives. The paper concludes with proposals of feasible legal structures and tools enabling the implementation of the preferred model including justifications thereof.



# Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal

Assessment of legal feasibility of the PPP models and the level of private sector participation, with focus on which model is ideal (i) institutional or contractual PPP project, (ii) availability-based, demand-based or combined PPP project, (iii) concession or other contract.

## 1. Contractual PPP vs. Institutionalised PPP

- ▶ **Contractual PPP** (hereinafter as “CPPP”) is established by a contract between the private partner (SPV) and the public partner and may be designed in several different forms following the distribution of the risks between the private partner and the public partner. The contract usually covers different aspects of the project, e.g. design, financing, construction, reconstruction, operation, specific services and/or maintenance. With respect to CPPP, the SPV acts as the private partner.
- ▶ CPPP is normally based on the Works Concession Contract or Service Concession Contract (or other contract) depending on specific aspects, nature and/or goals of a particular project.
- ▶ **Institutionalised PPP** (hereinafter as “IPPP”) is based on
  - foundation of a new legal entity (SPV) jointly controlled by both the private partner and the public partner, or
  - acquiring partial control by private partner over an existing public sector entity (SPV) (whereas the existing publicly owned company shall have obtained the public contracts or concessions “in-house”<sup>38</sup> already in the past).

The final outcome of both options is a joint public-private ownership. According to Commission’s IPPP Interpretative Communication, IPPP is understood by the Commission as a co-operation between public and private parties involving the establishment of a mixed capital entity which performs public contracts or concessions. The private input to the IPPP consists — apart from the contribution of capital or other assets — in the active participation in the operation of the contracts awarded to the public-private entity and/or the management of the public-private entity. Conversely, simple capital injections made by private investors into publicly owned companies do not constitute IPPP according to IPPP Interpretative Communication.

There are no specific legal rules governing the founding of IPPP at Community level. Within the Slovak legal system only Act on Managing State Property addresses IPPP to the extent further described below. At the same time, the essential principles of Community law shall be applied in the field of public procurement and concessions, namely equal treatment, non-discrimination, transparency, mutual recognition and proportionality. According to the IPPP Interpretative Communication, the fact that a private party and a public party co-operate within a public-private entity cannot serve as justification for the public party not having to comply with the legal provisions on public contracts and concessions when assigning public contracts or concessions to this private party or to the respective public-private entity.

In accordance with the ECJ case-law, it cannot be excluded that there may be other circumstances under which a call for tenders is not mandatory, even though the other contracting party is an entity legally distinct from the contracting authority. This is a case where the contracting authority exercises control over the separate entity concerned, which is similar to that which it exercises over its own departments and at the same time that entity carries out the essential part of its activities for the controlling public authority<sup>39</sup>. By contrast, the participation, even as a minority, of a private undertaking in the capital of a company in which the contracting authority in question is also a participant excludes in any event the possibility of that contracting authority exercising over that company a control similar to that which it exercises over its own departments. This approach has been endorsed on legislation level by the new public procurement directives adopted on 26 January 2014 published in the Official Journal of the EU on 28 March 2014, namely Directive 2014/23/EU and Directive 2014/23/EU. For more details on “in-house” contracts see section “In-house contracts”.

The Commission puts emphasis on fair and transparent procedure, irrespective of the IPPP model as specified above, either when selecting the private partner which shall participate in the IPPP (either through establishing a new legal entity (SPV) jointly controlled by the private and the public partner, or by acquiring partial control over the existing public sector entity (SPV), or when granting the particular public contract or a concession to the public-private entity. It is worth saying that according to the IPPP Interpretative Communication, a double tendering

<sup>38</sup> For more details on “in-house” contracts see section “In-house contracts”

<sup>39</sup> Section 50 case C-107/98 Teckal. In this case the entity was wholly-owned by the contracting entity.

## Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal

procedure – one for selecting the private partner to the IPPP and another for awarding public contracts or concessions to the public-private entity, is not considered practical. Nevertheless, the Commission does not exclude such a possibility.

According to the Commission's view the optimal model of an IPPP shall be as follows:

- ▶ the private partner of the IPPP is selected by means of a procedure, the subject of which is both
  - the public contract or the concession which is to be awarded to the future public-private entity; and
  - the private partner's operational contribution to perform the contract or concession and/or his contribution to the management of the public-private entity; and
- ▶ the selection of the private partner is accompanied by the founding of the IPPP and the award of the contract or concession to the public-private entity.

Procedurally, this procurement procedure is dealt with in more detail in section "Analysis of the applicable methods of public procurement of a hospital PPP project in the case of (i) institutional or (ii) contractual scenario with the objective to achieve the best possible value to price ratio".

### 2. Availability payment vs. demand payment vs. combined payment

In theory, there are three basic types of PPP projects concerning division of risks between the public and the private partner, i.e. a project based on availability payment, a project based on demand payment and a project based on combined payment as specified below:

- ▶ The project is based on availability payment if the availability risk is borne by a private partner. Availability risk means that the infrastructure or the service provided by the private partner meets the parameters and is available to public. Evidence that the public partner does not bear availability risk is when payments to the private partner are significantly reduced if the infrastructure or service is not available to public as agreed, if the infrastructure or service does not work or does not meet the agreed specifications or standards. On the contrary if the infrastructure or service fulfils required parameters, payments to the private partner are provided in full or together with rewards if the infrastructure or service is supplied in higher quality.
- ▶ The project is based on demand payment when the demand risk is borne by a private partner. It means that the private partner bears the risk whether there is interest in infrastructure or service for example because of market situation, competition or technical obsolescence. Increase or decrease of payments depends on the actual exploitation of the infrastructure or service supplied by the private partner by public / end users.
- ▶ In case of combined payments (a part of the payments is made by the public partner and a part by end-users) the decisive criterion is whether or not the demand risk is mainly borne by the private partner. If the demand risk is mainly borne by the private partner, the project is based on demand payments. In this context it is also essential whether the private partner bears a real demand risk. If the public partner guarantees revenue of the private partner in a situation where the infrastructure or service is not used, the project is not based on demand payment, but on availability payment.

### 3. Concessions

According to general understanding, concessions are PPP projects where the income of the private partner mainly consists of infrastructure revenues, i.e. payments paid by end-users of the infrastructure. A significant feature of concessions is that the concessionaire is not only responsible for the construction of infrastructure, but also for its use. The risk of demand, i.e. the risk that the infrastructure will not be used to the extent anticipated and the possibility that revenues will not cover the costs of the project is borne by the concessionaire, not the public partner. The concessionaire bears the risk of construction together with the risk of demand. A typical example of concession is the toll collection from road infrastructure built by the private partner under concession.

## Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal

The directives currently effective<sup>40</sup> define public works/service concession as a contract of the same type as a public works/service contract except the fact that the consideration for the works/services to be carried out consists either exclusively in the right to exploit the work or in this right together with payment. There were long discussions at the EU level with respect to the definition of concessions and similar projects, especially those which are financed not only by end-users, but also by the private partner. The discussions yielded three new directives governing public procurement at the EU level, of which one is Directive 2014/23/EU.

In accordance with Directive 2014/23 EU, works concession means *“a contract for pecuniary interest concluded in writing by means of which one or more contracting authorities or contracting entities entrust the execution of works to one or more economic operators the consideration for which consists either solely in the right to exploit the works that are the subject of the contract or in that right together with payment”*.

Compared to the directives currently effective, public procurement process of public works concessions and service concessions was unified, while service concession was defined similarly as the works concession in Directive 2014/23 EU.

In Section 15 (1) of Public Procurement Act, Slovak legislation defines the public works concession as follows:

*“Public works concession is a contract of the same type as a public works contract, except for the fact that the consideration for the public works to be carried out consists either solely of the right to exploit the work for an agreed time or of that right together with payment; In a concession contract, the contracting authority and the concessionaire agree on the scope of the right to exploit the work which may include the receiving of its benefits as well as the amount and terms of payment, if any.”*

Contrary to theoretical distinction between concessions and quasi-concessions as defined further in this paper, the Slovak definition of concessions covers both of them. According to Public Procurement Act, the definition of concession covers practically all types of contractual PPP projects, including those based on demand payment, availability payment and combined payment.

Definition of concession according to Public Procurement Act includes these essential features:

- ▶ Construction of infrastructure: all PPP projects – public works concessions and also public works quasi-concessions include construction or reconstruction of infrastructure. Ownership of infrastructure can be transferred to the public partner or remains with the private partner or may be owned by the public partner from the very start, depending on the public partner's requirements or specific legislation.
- ▶ Exploitation of infrastructure by the private partner: typical feature of all PPP projects - concession and also quasi-concession, exploitation of infrastructure is also necessary for operation and maintenance especially in case that the public partner owns the infrastructure. Without exploitation of infrastructure the concessionaire cannot receive benefits from the end-users.
- ▶ Receiving benefits from the supplied infrastructure: typical for concessions, benefits are paid by end-users and mostly represent the sole income of the private partner.
- ▶ Payments from the public partner: can be part of the revenues of the private partner in combined projects and can represent the sole income source of the private partner in quasi-concessions.

Definition of the service concession according to Section 15 (2) of Public Procurement Act is similar to the definition of the public works concession and the same characteristics of this definition can be identified:

*“Service concession is a contract of the same type as a service contract, except for the fact that the consideration for the services to be provided consists either solely of the right to exploit the services provided for an agreed time or of that right together with payment. In a concession contract, the contracting authority and the concessionaire agree the scope of exploitation of the service provided, which may include the receiving of its benefits as well as the amount and terms of payment, if any.”*

In reality, the distinction between works concessions and services concessions may become blurred. From practical point of view, regulation of the public procurement process according to Public Procurement Act does not distinguish between procurement of public works concessions and service concessions.

<sup>40</sup> Directive 2004/18/EC and Directive 2004/17/EC

## Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal

### 4. Quasi-concessions

In theory, quasi-concessions are PPP projects other than concessions the main distinction being that the private partner is compensated by availability payments paid by the public partner. The private partner does not take the risk of demand of the utilization of infrastructure; it only takes the risk of infrastructure being available to public. A typical example is the use of a courthouse or prison where demand payments are naturally inappropriate. Quasi-concessions can also concern PPP projects where payment maybe theoretically collected by end-users but the public partner decides to pay availability payments instead. This is the case if, for example, the public authority wants to control the fees for utilization of infrastructure (such as highways or hospitals). Quasi-concessions may entitle to collect certain fees on the building/infrastructure from the end-users meaning that the private partner carries the demand risk to a certain extent.

Contrary to concessions where the payment for the utilisation of road infrastructure may be in the form of toll, quasi-concessions may be PPP projects using “shadow toll”, which represents the public partner’s payments paid according to extent of utilization of infrastructure, for example based on precisely defined traffic volumes but generally following another agreed scheme. In order to distinguish concessions and quasi-concessions, one has to assess the risk allocation between the private and the public sector. The demand risk may be borne by the public partner, while the concessionaire receives its payments regardless of whether the public partner collects the toll, taxes or fees. The demand risk may also be shared by both parties (for example if the public partner pays the loss in revenues of the private partner if the infrastructure is not used to the extent expected). The assessment of risk sharing is always specific and requires considering the risk distribution for each project individually with respect to the funds flow.

A rather theoretical distinction between concessions and quasi-concessions has been rendered even less important by the new Directive 2014/23 EU, which does not contain different definitions or public procurement rules for concessions and quasi-concessions. Still, what is decisive in this respect is that the concessionaire bears the operating risk, this being the definitive criterion for concessions. In the absence of this operating risk, the project is not considered a concession. This distinguishing is critical due to creating a more flexible framework of awarding concessions as opposed to traditional public contracts.

### 5. Concessions vs. public works contracts and service contracts

Because of numerous types of possible structures of PPP deals, it may be difficult to differentiate between concessions and quasi-concessions (PPP projects) and regular public works/services contracts.

In principle, each project needs to be considered as a whole, with the main characteristics of the PPP being:

- ▶ Partnership of the private and public sector
- ▶ Length of the contract (mostly 5-30 years)
- ▶ Formation of the special purpose vehicle (“SPV”)/concessionaire
- ▶ Distribution of risks between the public and the private, with the private partner’s risk being larger than the usual risk with public contracts
- ▶ Scope of the contract: fulfilment of public needs, providing services to public or construction of infrastructure and its operation and maintenance
- ▶ Exploitation of infrastructure with receiving benefits and/or the public partner’s payments

In addition to Directive 2014/23/EU, ECJ case law gives guidance helping to distinguish whether a project is a “classic” contract or a concession.

In case C-300/07 Hans & Christophorus Oymanns GbR, Orthopädie Schuhtechnik v. AOK Rheinland/Hamburg the ECJ judged whether the procured health care contract was a ‘service concession’ within Directive 2004/18/EC or a ‘framework agreement’ within the meaning of that directive. The ECJ found that from the definition of the service concession indicates that such concession is distinguished by a situation in which a right to operate a particular service is transferred by the contracting authority to the concessionaire and that the latter enjoys, in the framework of the contract which has been concluded, a certain economic freedom to determine the conditions under which that right is exercised since, in parallel, the concessionaire is, to a large extent, exposed to the risks involved in the operation of the service. On the other hand, the distinguishing characteristic of a framework agreement (classic

## Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal

contract) is that the activity of the trader who has concluded the agreement is restricted in the sense that all contracts concluded by that trader during a given period must comply with the conditions laid down in the agreement.

Especially, the transfer of the risks and the exploitation of the infrastructure together with the receiving of benefits is the main feature of the concession. It is clear from the case law that, when the agreed method of remuneration consists in the right for the provider to exploit the service it is providing, that method of remuneration means that the provider takes the risk of operating the services in question (Case C-458/03 Parking Brixen, paragraph 40; Case C-382/05 Commission v Italy, paragraph 34; Case C-437/07 Commission v Italy, paragraph 29 and Case C 206/08, paragraph 59). In the complete absence of a transfer to the service provider of the risk connected with operating the infrastructure, the transaction concerned is a service/public works contract.

Therefore, in relation to a contract for the supply of services, the fact that the trader does not receive consideration directly from the contracting authority, but is entitled to collect payment under private law from third parties, is sufficient for that contract to be categorised as a 'concession', where the trader assumes all, or at least a significant share, of the operating risk faced by the contracting authority, even if that risk is, from the outset, very limited on account of the detailed rules of public law governing that service.

As mention before, Directive 2014/23 EU reflects this case law and stipulates that award of a works or services concession shall involve the transfer to the concessionaire of an operating risk in exploiting those works or services encompassing demand or supply risk or both. The concessionaire shall be deemed to assume operating risk where, under normal operating conditions, it is not guaranteed to recoup the investments made or the costs incurred in operating the works or the services which are the subject-matter of the concession. The part of the risk transferred to the concessionaire shall involve real exposure to the vagaries of the market, such that any potential estimated loss incurred by the concessionaire shall not be merely nominal or negligible. Still, as such this does not exclude that both basic types of PPP projects, i.e. demand- and availability-based projects, be considered concessions.

### 6. "In house" contracts

The term "in-house" contracts refers to the execution of contracts between contracting authorities. It is based on ECJ case law, but Public Procurement Act does not provide this method of contract award. Except as provided in Section 1 (2) (q) Public Procurement Act, the application of this act is not excluded from award of contracts between contracting authorities, as the definition of candidates and tenderers does not rule out that other contracting authorities supplying goods, carrying out public works or services participate in the procurement. The newly adopted Directive 2014/24/EU governing public procurement sets forth the rules of such "in house" contracts in Article 12. Although Public Procurement Act does not provide the award of "in house" contracts, OPP acknowledges their existence. It should be note in this respect that as per the decision of Slovak National Council No. 5SŽf/39/2009 of 17.03.2010, the methodological guidance of OPP does not in fact constitute a "hard law" interpretation of Public Procurement Act and even an incorrect methodological guidance cannot safeguard a public procurement party a more favourable decision on the case. Deriving from the ECJ case law and the OPP methodology, "in house" contracts may be awarded subject to the following criteria:

- ▶ It involves the award of contract (contract for pecuniary interest) or concession. Other forms of cooperation, which are not contracts are not governed by Public Procurement Act.
- ▶ The activities are mainly carried out for the contracting authority. Yet, the available case law does not indicate that third parties cannot receive the benefits. It means that the activities should be carried out for the contracting authority, i.e. for it to perform its tasks, such as public lighting, provision of health services, etc. According to OPP's methodological guidance No. 261-5000/2011, this requirement is met once the company's activities are mainly for the contracting authority (in the case at stake the municipality) which owns it and any further activities will be merely peripheral. To this end, it is necessary to consider all activities carried out by the company.
- ▶ Control exercised by the contracting authority is akin to the control over its own departments (decision C-107/98 Teckal). Control exercised by the control body over the concessionaire is akin to the control the body exercises over its own departments, and at the same time if the entity carries out most of its activities jointly with the contracting authority which owns it. The consideration of control by the contracting authority must involve all the applicable legislation and relevant facts. The review must indicate that the concessionaire has been subjected to

## Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal

control, which enables the contracting authority to influence the entity's decisions. The influence must be decisive both in terms of strategic goals and significant decisions.<sup>4142</sup>

- ▶ The person, to whom the contract is to be awarded, must be free of any private sector involvement (judgements C-573/07 Sea, C-196/08 Acoset). Although the public procurement rules need not necessarily apply to the mere establishment of a joint-venture between a public and a private partner, it must not serve to circumvent the rules of contract award to the entity (judgements C-215/09). The ECJ held in case C-26/03 (Halle) that where the contracting authority intends to enter into a service contract, which falls under the public procurement directives, with a company with a different legal status and in which it is a shareholder jointly with one or several private companies, public procurement rules must always be applied (see also OPP's guidance No. 513-2000/2008). According to OPP's methodological guidance No. 1204-5000/2011, it is also precluded to award a contract to a company that is not wholly controlled by the municipality, but the company may participate in a proper announced call for tenders.

Similar conclusions have been drawn in the Commission's staff working paper regarding the application of EU law and the application of public procurement between contracting authorities ("cooperation between contracting authorities"). According to the paper, although application of public procurement directives does not preclude the award of contracts between contracting authorities, ECJ formulated certain rules of cooperation between contracting authorities when it comes to awarding contracts. As per the working document, the rules under the procurement directives do not apply if *"a contracting authority concludes a contract with a third party that is only formally, but not substantially independent from it. This case law covers situations in which there is no private capital involved in the third party and it depends both in organisational and economic terms on the contracting party"*. The contracting authority cannot exercise internal control over the entity if the entity is owned by one or several private undertakings. This also applies in case the contracting authority may adopt independently all decisions regarding the entity notwithstanding the private capital involvement.

It is also worth mentioning that if the contract is executed "in house" without a call for tenders and subsequently a private investor would acquire an interest in the company, it could be seen as a change in the underlying conditions of the contract, which would involve all the applicable statutory sanctions including a potential nullity of the contracts and administrative fines.

### 7. Basic characteristics of the individual models considered

Of the original list of identified options, the options "Not doing anything", "Doing the minimum" and "Reconstruction" were taken down as unfeasible on technical grounds. The PSC model was evaluated as unfeasible on the grounds of being financially inaccessible. In light of that, this part of the report focuses first and foremost on the PPP model, but for the sake of completeness it provides a description of a model consisting in a series of public contracts executed by a corporation wholly owned by the state with partial utilisation of state assets, as requested by MOH, and this model is referred to herein as "Specific Model".

#### PPP models

Having regard to previous experience with the implementation of PPP projects, we have assessed the impact of Project implementation against the following basic starting points of Project feasibility using the PPP model:

- ▶ Bankability
- ▶ Financial accessibility
- ▶ Market attractiveness
- ▶ Predictability of cash-flow and revenues of the private partner
- ▶ Supervision of entities with MOH's authority to control Project implementation
- ▶ Private partner not liable for existing UNB obligations
- ▶ Private partner not liable for consequences of termination of the operation of UNB hospitals

<sup>41</sup> In the case at hand the conditions was not fulfilled, as the undertaking was formed by transformation of a public authority undertaking, its scope of activities was extended, the capital was open for further contributions, its operations were extended to the entire country and it had managing powers in the company, which it was authorised to exercise autonomously (C-458/03 Parking Brixen).

<sup>42</sup> Similarly as per methodological guidance No. 261-5000/2011, 1204-5000/2011

## Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal

### ► Creating a favourable legislative environment.

In light of the MOH requirements, we deem the preferred PPP model to be the demand-based model, with the liability for health care and provision of clinical services fully borne by the private partner<sup>43</sup>. In such case, the private partner would be remunerated fully or mostly based on the actual utilisation of the hospital by the end users, i.e. patients. Although this model has not seen a lot of practical testing, in legal terms it generally appears feasible. Still, the risks and complexity of implementation are significantly higher than with other solutions, including other PPP models (availability-based or mixed).

For the purpose of a more thorough analysis we structurally subdivided the PPP model to three models:

- A. Contractual PPP (hereinafter as “CPPP”)
- B. Institutionalised PPP (hereinafter as “IPPP”)
- C. Commercial Joint Venture co-owner by the state (hereinafter as “JV”)

At the same time, true to the specification of MOH, we also considered the Specific Model.

The above division derives from an academic discussion dealing with different forms of PPP models and practical experience with PPP projects. We did not consider all theoretical models, but rather focused on 3 practical solutions, which can be implemented against the background of Slovak legislation. In light of that the final feasibility study contains considerations about theoretical models and practical structures that come into question. It also contains a description of their legal consequences and basic proposals to mitigate relating risks.

As mentioned above, CPPP, IPPP and JV represent some of the PPP structures, which we consider feasible in theory to implement the Project<sup>44</sup>. It has to be noted that these structures differ in terms of their risk profiles and complexity.

- For the purpose hereof, CPPP is a traditional contractual PPP established by a concession contract between the state (or a legal entity controlled by the state) and a group of private sector entities establishing a special purpose vehicle (“SPV”), which will then be liable for the implementation of the Project throughout the entire Project life cycle. This is the easiest structure where practically the entire liability for Project implementation is transferred to one legal entity (SPV) controlled by private sector entities. The private partner(s) is selected based on a transparent tender (as required by Public Procurement Act) and the concession is awarded to the successful tenderer.
- On the other hand, IPPP is institutionalised PPP where the state (or a legal entity controlled by the state) establishes a SPV jointly with a group of private partners. The SPV obtains the concession awarded by the state, but the state can exercise a higher degree of Project implementation supervision, with the state retaining a certain degree of SPV supervision on corporate level. The private partner(s) are also selected by way of a transparent tender (in compliance with Public Procurement Act). The concession is granted to the SPV founded jointly by the state and the successful tenderer. Although this model is somewhat more complex in terms of structure and procurement demands, it mitigates the risks attached to participation of the private sector in the provision of health care and may contribute to securing Project support from key interested parties.
- JV is a model already tested in Slovakia in the past; it involves the foundation of a commercial joint-venture in order to implement a certain project. Here, no concession is awarded and it is left fully to the JV how the Project is implemented subject to its corporate restrictions. Apart from the many drawbacks of this model defined separately next to each of the impact areas of the legal analysis in terms of Project goals, the key advantage of this model is that it allows structuring it so as to apply more flexible and less time-consuming methods of selecting the private partner<sup>45</sup>.

<sup>43</sup> We did not analyse the PPP model based on availability (or the combined model for that matter). However, as this the model that is preferred and one that has been tested many times in PPP health care projects in the EU, we recommend to MOH extending the scope of the feasibility study so as to cover the considerations about this particular model.

<sup>44</sup> Of course, we understand that there are many more academic models (and combinations thereof), but for sake of convenience and efficiency of this report we propose working with three clearly distinguishable basic models, which appear to be feasible in practical life, with regard to previous experience and the applicable theory.

<sup>45</sup> Detailed legal considerations are contained in section “Analysis of applicable public procurement methods”.

# Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal

## A. CPPP

In theory, CPPP is founded by means of a contract between the private and the public partner and may have different structures depending on the distribution of risks between the private and the public partner. As a rule, the contract lays down miscellaneous project aspects such design, financing, construction, reconstruction, operation, specific services and/or maintenance. In Slovakia this structure was used for the electronic toll collection projects and for PPP highway projects. In this area it is widely used for smaller projects (such as public lighting and parking).

We considered the practical aspects of the model established by a concession contract between the state represented by MOH (or by a state-controlled legal entity) and a group of persons from the private sector who will establish a SPV, who will then be responsible for the Project implementation throughout the entire Project life cycle. The private partners usually mean a strategic/financial investor, a building company and an operator.

This is the simplest structure shifting the entire liability to one legal entity controlled by private-sector partners. The private partner(s) are selected in a transparent tender (in compliance with Public Procurement Act) and the concession is obtained by the successful tenderer.

The following table provides an outline of the main risks and advantages of this model.

| Description                             | CPPP   |
|---|--|
| Key project risks for the public sector | Complicated tendering process  |
|   | Financial affordability  |
|   | State's loss of control  |
| Benefits                                | Model already tested (including in Slovakia)   |
|   | Project outside of public debt subject to appropriate structuring (save for a potential availability payment)                    |
|   | Full use of synergies between the proposal and hospital construction and service provisions (subject to appropriate structuring) |

In light of the above, we consider CPPP feasible, yet in terms of the structures safeguarding Project attractiveness and bankability, this appears to be a very ambitious model<sup>46</sup>. Last but not least, this model will significantly impact the existing relations within the health care sector<sup>47</sup>. Considering the fact that the SPV will be fully private, it is very likely the Project will be very sensitive in terms of public opinion. Getting the support from professionals (especially when it comes to the need of making staff redundant, HR changes and transfer of staff) will be key to an uninterrupted and smooth health care provision.

## B. IPPP

Institutionalised IPPP are traditionally based on

- ▶ foundation of a new legal entity (SPV) jointly controlled by both, private partner and public partner, or in other words the capital of which is held jointly by the private partner and public partner; or
- ▶ acquiring partial control by private partner over existing entity of the public sector (whereas the existing publicly owned company shall have obtained the public contracts or concessions "in-house" already in the past).

The final outcome of both options is a joint public-private ownership. According to Commission interpretative communication, IPPP is understood by the Commission as a co-operation between public and private parties involving the establishment of a mixed capital entity which performs public contracts or concessions. The private

<sup>46</sup> See Assessment of legal aspects of the proposed payment mechanism between partners.

<sup>47</sup> See Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model with special focus on the impact on the existing network of relations within the region including the new health care provider, existing health care providers, staff, patients, HICs, education institutions, research institutions, debtors, creditors and other interested parties



## Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal

input to the IPPP consists — apart from the contribution of capital or other assets — in the active participation in the operation of the contracts awarded to the public-private entity and/or the management of the public-private entity.

The structure we have considered in our report operates on the assumption that the SPV will obtain a concession from the state, but the Project implementation will be largely supervised by the state, with the state retaining a certain degree of corporate-level control in the SPV. The private partner(s) will be selected in transparent tender (organised in compliance with Public Procurement Act) and the concession will be awarded to the successful tenderer or SPV (respectively) of which the successful tenderer will become part. In this case, too, it is likely that a group of contractors consisting of a strategic/financial investor, a construction company and an operator will participate.

The following table provides an outline of the main risks and advantages of this model.

| Description                             | IPPP   |
|---|--|
| Key project risks for the public sector | Complicated tendering process  |
|   | Financial affordability  |
| Benefits                                | Model already tested (including in Slovakia)   |
|   | Project outside of public debt subject to appropriate structuring (save for availability payment)  |
|   | Full use of synergies between the proposal and hospital construction and service provisions (subject to appropriate structuring)                   |
|   | Increased control by private partner by way of corporate law institutes  |
|   | Public sector participation directly in SPV's operations mitigating potential tensions triggered by the presence of private element in the sector. |

Although this model is more ambitious with respect to its structural component and the tendering process, it manages to significantly mitigate the risks stemming from objections to the private sector participating in the provision of health care and may increase the odds of gaining support for the Project from the key interested persons. State's participation also contributes to the mitigation of risks of poor Project performance and motivates the state to exercise efficient supervision of the Project and the SPV. In light of that we consider the IPPP model feasible although still very ambitious in terms of structures, which safeguard attractiveness and bankability of the Project. Similarly as with the CPPP model, IPPP will significantly influence the existing legal relations within the sector. Considering the partial participation of the public sector in the SPV, it may be expected that the Project will be less sensitive in terms of public opinion. Yet, getting the support from professionals (especially when it comes to the need of making staff redundant, HR changes and transfer of staff) will remain key to an uninterrupted and smooth health care provision.

### C. JV

The JV model, which we have considered in our report, is basically a variation on the IPPP model. It is a commercial joint venture founded by the state (or a state-controlled legal entity) and a legal entity from the private sector entrusted with the task of implementing a certain project. No concession is granted and it left is fully to the discretion of the JV how the Project is implemented subject to its corporate restrictions. Considering the Project goals, this model has many drawbacks, but the key benefit being that it theoretically allows structuring it so as to apply more flexible and less time-consuming methods of selecting the private partner.<sup>48</sup>

The following table provides an outline of the main risks and advantages of this model.

<sup>48</sup> Detailed legal considerations are contained in section "Analysis of applicable public procurement methods".

## Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal

| Description                             | JV  |
|---|---|
| Key project risks for the public sector | Transparency  |
|   | Commercially driven, neglecting the public interest   |
|   | Absence of certain efficient state control and sanction mechanisms <sup>49</sup>  |
| Benefits                                | Model already tested (including in Slovakia)  |
|   | Potential for using more flexible and less time-consuming methods of transparently selecting the private partner of the Project |

We consider the JV model feasible in theory; yet, it would most likely stir controversy for not being transparent enough and for being too commercially driven. The key benefit appears to be the possibility to bypass the lengthy selection procedure under Public Procurement Act.

### D. Specific Model

The specific model we considered in our report following the request of MOH is basically a variation on the PSC model, operating on:

- ▶ Foundation of a new special purpose legal entity (SPV) wholly controlled by the state. In other words, the capital of such company is controlled exclusively by the state,
- ▶ SPV's obtaining public contracts or concessions as "in-house" contracts,
- ▶ a series of tenders for the operation, design, build and maintenance of the new hospital,
- ▶ provision of health care through SPV as the employer and licence holder,
- ▶ selection of the advisor (know-how provider) from the public sector in a tender.

In practical terms, we considered the model involving the concession contract entered into between the state represented by MOH and SPV, which will be liable for the Project implementation throughout the entire Project life cycle. We consider the concession contract a suitable tool for safeguarding the performance of Project goals and parameters by SPV subject to state's (MOH) requirements. Private sector partners (construction company, facility manager and operation know-how provider) will participate in Project implementation through performing their obligations owed to SPV, without any financial participation. In terms of Project financing SPV will bear the three main Project risks – risk of building, availability and demand.

The implementation of the specific model necessarily works on the assumption of state financing through capital injections, and to maintain bankability, it will require state guarantees for the banking sector to cover the external financing resources of SPV. The method of SPV financing is key in terms of assessing financial affordability, especially in terms of observing the rules of budgetary responsibility and public debt increase.

<sup>49</sup> For a more detailed legal analysis see Analysis of public procurement methods applicable to the Project for (i) institutionalised, or (ii) contractual models in order to achieve the best value for money performance

## Assessment of legal feasibility of the PPP models and the level of private sector participation with focus on which model is ideal

The following table provides an outline of the main risks and advantages of this model.

| Description                                    | Specific Model   |
|--|--|
| <b>Key project risks for the public sector</b> | Lengthy and inconsistent tendering process   |
|  | Financial affordability  |
|  | Lack of market feedback  |
|  | Lack of synergies between the proposal and building of the hospital and service provision  |
| <b>Benefits</b>                                | Provision of health care left within public control  |
|  | Larger degree of state control (corporate, contractual, regulatory);<br>Direct influence of the sole shareholder of SPV on the largest health care insurer |
|  | Risk of industrial action mitigated by the element of exclusive state ownership  |

We consider the Specific Model feasible in theory, yet it raises some concerns about the synergies between the individual stages of public procurement and the achievement of the required degree of nUNB efficiency. Also, exclusive state control over the Project will increase the dependency on political developments.

The key benefit seems to be the elimination of risks attached to the participation of the private partner and the control of the SPV founder over Všeobecná zdravotná poisťovňa, a.s. On the other hand, the drawback of the Specific Model is the poor motivation of SPV (whether positive or negative) to maximise the nUNB efficiency and achieve the highest standard of health care, and the dependency on the human resources level on political developments.

### Comparison of individual models

In light of the above we consider the CPPP and IPPP models suitable and feasible; however, in terms of the structures safeguarding attractiveness and bankability of the Project, these two models seem to be very ambitious<sup>50</sup>. Both will significantly affect the existing legal relations within the health care sector. Also considering the fact that with the CPPP model, SPV will be fully private the Project will most likely be highly sensitive with respect of the public opinion. Gaining support of professionals (especially when it comes to the need of making staff redundant, HR changes and transfer of staff) will remain key to an uninterrupted and smooth health care provision. In this respect it seems appropriate considering the IPPP model, which, though being more demanding in terms of its structural component and the tendering process, significantly mitigates the risks of objections to the participation of the private sector in the provision of health care and may increase the changes of gaining Project support from key interested parties. State participation also mitigates the risks of poor Project performance and motivates the state to exercise responsible control of the Project and SPV. The JV appears to be the most risky, mainly in terms of transparent selection of the private partner and the risk attached to a too commercially driven approach, which may not be in line with the strategic goals of MOH. The Specific Model, being a variation on the PSC model, appears to be feasible and beneficial mainly in terms of continuity of health care provision by the public sector. Similarly as the traditional PSC model, this may carry risks in particular in terms of financial affordability.

<sup>50</sup> See Assessment of legal aspects of the proposed payment mechanism between partners

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model with special focus on the existing network of relations within the region including the new health care provider, existing health care providers, staff, patients, HICs, education institutions, debtors, creditors and other interested parties.

### 1. Basic description of the affected area

In this section of the report we deal with the network of relations between the individual entities participating in the exercise of right to protection of health. The implementation of the Project will significantly intervene into the existing relations system, which will lead to either a change in or termination of the existing relations to UBN and the creation of new relations to nUNB.

For sake of successful implementation of the Project, it is necessary to consider the options and permissions of the anticipated interventions into the current relations system, identify the feasibility risks and options of mitigating such risks.

With regard to the underlying function of the state to ensure that its citizens can exercise their right to protection of health, the changes to the existing system need to be planned and coordinated, as the Project implementation anticipates interventions with irreversible consequences. The Project implementation must not prejudice the citizens' right to protection of health.

Minimising the costs and time needed to realise the contemplated changes is yet another major factor of Project feasibility.

In the event any of the entities participating in the provision of health care or in the operation of a health care facility has but the slightest potential change of jeopardising or frustrating the implementation of the Project, this risk needs to be identified, weighed and mitigation options must be considered.

Regarding Project feasibility, we further deal with the position of the new health care provider and the existing health care providers, the staff, the patients, the health insurance companies, education institutions, research institutions, debtors, creditors, and other entities involved, and their cooperation.

### 2. Legal framework of the health care sector

To identify the risks of Project feasibility, weigh the same and propose efficient mitigation measures, in this section we analyse the legal position of the individual entities affecting the provision of health care or the operation of the health care facility and their interaction with nUNB.

Right to protection of health is being delivered through the interaction of three main groups of entities:

- ▶ **Patients**
- ▶ **Health care providers**
- ▶ **Health insurance companies**

Mutual rights, obligations and responsibilities between the three main groups are regulated by the state in order to achieve a functioning and sustainable health care system. The health care sector presents a network of mutual relations between participants with the state being the largest regulator and owner of the health care infrastructure.

Regulatory and surveillance functions of the state in the health care sector are secured through:

- ▶ **National Council of Slovak Republic**
- ▶ **Slovak Government**
- ▶ **State agencies:**
  - MOH
  - HCSA
  - PHA

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

- SIDC
- National Emergency Centre (NEC) of the Slovak Republic
- NCHI
- NBTS

Outside the state sector specified above, we have considered the following entities:

► **Higher territorial units**

- BSK (in case of nUNB)

► **HIC**

- Všeobecná zdravotná poisťovňa, a.s.
- Dôvera, a.s.
- Union, a.s.

► **Employers' associations**

- Association of state hospitals of the Slovak Republic (in case of UNB)

► **Professional chambers**

- Slovak medical chamber
- Slovak dentist chamber
- Slovak pharmaceutical chamber
- Slovak chamber of nurses and midwives
- Slovak chamber of medicine-technical staff
- Slovak chamber of physiotherapists
- Slovak chamber of dental technicians
- Slovak chamber of orthopaedic technicians
- Slovak chamber of psychologists

► **Trade unions (national)**

- Slovak trade union of health and social services (STUHSS)
- Medical trade union (MTU)
- Trade union of nurses and midwives

► **Trade unions within UNB**

- Basic trade union organisation of STUHSS and UNB Ružinov
- Slovak medical unions at UNB Ružinov
- Basic trade union organisation at UNB akad. L. Déřera
- Medical trade union at UNB akad. L. Déřera
- Basic trade union organisation of STUHSS at UNB sv. Cyrila a Metoda
- Slovak medical unions at UNB sv. Cyrila a Metoda
- Basic trade union organisation at UNB Staré Mesto
- Slovak medical unions at UNB Staré Mesto
- Basic trade union organisation at UNB Podunajské Biskupice

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

- Basic trade union organisation of Slovak union syndicate of anaesthetics and intensive care staff at UNB
- ▶ **Education institutions**
  - Comenius university in Bratislava (“CU”)
  - Slovak Medical University in Bratislava (“SMU”)
- ▶ **Research institutions**
  - Slovak Academy of Science (“SAS”)
  - Slovak Technical University (“STU”)
- ▶ **Patients**
  - Slovak citizens
  - Public servants with limited freedom of choice
  - EU citizens
  - Third country citizens
- ▶ **Health care staff**
  - doctors
  - dentists
  - pharmacists
  - nurses
  - midwives
  - physiotherapists
  - public health care staff
  - medical laboratory technicians
  - dieticians
  - dental hygienists
  - radiology staff
  - rescuers
  - dental technicians
  - technicians for medical equipment
  - optometrists
  - pharmaceutical laboratory technicians
  - masseurs
  - opticians
  - orthopaedic technicians
  - medical assistants
  - dental assistants
  - orderlies.
- ▶ **Existing health care providers**
  - Cooperating with UNB
  - Lessees of UNB

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

- Without any relations to UNB.
- ▶ **UNB as health care provider, employer and administrator of state property, contractual partner**
- ▶ **nUNB as health care provider, employer and contractual partner**

In order to better understand the tasks of the individual health care sector entities and their interactions with nUNB and the impact of the preferred model on the relations, we further specify the basic competences of the entities and their interactions with nUNB.

### NC

NC is the sole constitutional and legislative body of the Slovak Republic. Regarding the implementation of the nUNB Project, NC is authorized to enact the Slovak Constitution, constitutional and other laws and supervise compliance with the laws.

NC has the power to pass legislative changes at the level of laws. Implementation of the nUNB Project may be limited, among other, by the provisions of the following laws<sup>51</sup>:

- ▶ Act on Health Care
- ▶ Act on Health Care Providers
- ▶ Act on Health Insurance
- ▶ Act on Health Insurance Companies
- ▶ Act on Provision of Subsidies in the Competence of MOH
- ▶ Labour Code.

Current legislation allows private entities to provide health care services under the same conditions as public providers. Therefore, it seems that in principle there is no need to adjust the current legislation with respect that the health care originally provided by an organisation subsidised by the state will be provided by the nUNB operator as a corporation with state participation varying by the individual models considered. Specific changes appearing suitable with respect of hospital concessions are detailed in the closing part of the Final Report of the Feasibility Study under “Assessment of the current legal framework and the need/options of amending it in the wake of the implementation of the preferred model with special focus on the existence of sweeping sector regulation”.

### Slovak Government

The Government of the Slovak Republic is the head of the executive power. It adopts major measures to implement the economic and social policy of the Slovak Republic. As part of its powers, it is entitled to adopt secondary legislation which might also concern the health care sector.

Among the most significant regulations (falling within the competence of the Slovak Government) affected by the Project implementation, we consider Government regulation on minimal network of public health care providers. This regulation provides the minimum public network of health care providers offering outpatient care, providers offering institutional health care and within the public minimal network of health care providers the fixed network of providers and the end network of providers.

By way of Regulation No. 752/2004 Coll. on indicators of quality for evaluation of health care provision, the Slovak Government has also the capacity to decide on quality indicators of health care providers. When concluding

---

<sup>51</sup> The list of the acts affected by the Project implementation is provided for convenience only. A summary of legislative changes is provided in a separate section of the Final Report titled “

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

contracts with health care providers, Health Insurance Companies are obliged to consider the performance of the quality indicators.<sup>52</sup>

The need for legislative changes, which fall within the competence of the Slovak Government, are detailed in a separate part of the Final Report of the Feasibility Study under “Assessment of the current legal framework and the need/options of amending it in the wake of the implementation of the preferred model with special focus on the existence of sweeping sector regulation”.

### MOH

- ▶ MOH is the central administrative body of the state for the area of health care and its competencies are specified in Act on Health Care as follows:
  - execution of proposals of strategic aims and priorities of development of health care policy of the state,
  - professional guidance on provision of health care,
  - issuing of standard diagnostic processes and standard therapeutic processes,
  - directing of national programs oriented on protection, maintenance and recovery of health,
  - coordination of research activities in health care and application of the outcomes in praxis,
  - management, administration and control of the health education network of medical high schools,
  - management and control of training and teaching in health education and determination and management the network of medical high schools and study programs of medical high schools in cooperation with MOH,
  - supervision, control and management of the network of study programs, network of study programs and medical colleges and universities training medical staff,
  - management of further education of medical staff,
  - issuing certificates of accreditation of specialised study programs and accreditation of certification study programs,
  - issuing permits and other decisions as provided by a special regulation,
  - carrying up supervision over health care provision pursuant to a special regulation.
- ▶ MOH is the price-maker in the area of products, services and performances in health care and in the area of rent for non-residential premises located in health care facilities<sup>53</sup> in the following scope:
  - it sets forth the conditions for negotiation and regulation of prices under this act,
  - it decides on matters related to price regulation,
  - sets forth the scope of documentation on pricing,
  - it sets forth the principles of price control,
  - it performs pricing related inspections and acts in cases of breach of price discipline,
  - it provides for the information system for the purposes of evaluation of price development, price regulation, price control and actions regarding breach of price discipline,
  - it informs the public on the outcomes of actions relating to breach of price regulation.
- ▶ The need of legislative changes within the competence of MOH is dealt with in a separate part of the Final Report of the Feasibility Study under “Assessment of the current legal framework and the need/options of amending it in the wake of the implementation of the preferred model, with special focus on the existence of sweeping sectoral regulation”.

<sup>52</sup> Section 7 (7) of Act on Providers of Health Care

<sup>53</sup> Section 20 (3) of Act No. 18/1996 Coll. on prices



## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

### HCSA

- ▶ HCSA was established by Act on health care insurance companies. In the area of public administration HCSA is responsible for:
  - supervision over public health insurance,
  - supervision over provision of health care.
- ▶ HCSA is also authorised to implement the new DRG (“diagnoses related groups”) payment system, which will significantly influence the running of and the revenues from nUNB operations.

### PHA

- ▶ PHA is a public organization with nation-wide jurisdiction and with headquarters in Bratislava, and linked to the budget of MOH. PHA performs professional and methodological management, guidance and control over the exercise of state administration in the field of public health care through regional PHA agencies in the Slovak Republic.
- ▶ In terms of implementation of the nUNB project, PHA will issue decision through its regional agency on the commissioning of the nUNB premises<sup>54</sup>.
- ▶ Through its regional agency, PHA will also oversee the performance of workplace protection of health at nUNB.

### SIDC

- ▶ SIDC a state agency in the field of medicinal products for human use and drug precursors. SIDC it is an agency controlled and funded by MOH.
- ▶ SIDC:
  - carries out state supervision in the field of medicinal products for human use and drug precursors,
  - carries out laboratory tests of medicinal products, excipients and medicinal products for human use; it may commission other laboratories to test medicinal products, excipients and medicinal products for human use,
  - approves laboratories testing medicinal products, excipients and medicinal products for human use,
  - tries torts and other minor offences and imposes fines,
  - issues
    - i) reports regarding material equipment and premises,
    - ii) marketing authorisations for medicinal products for human use,
    - iii) licences for clinical trials of medicinal products for human use and medical equipment and supervises such trials,
    - iv) certificate of good manufacturing practice, certificates of good wholesaling practice and certificate of performance of the European Pharmacopoeia,
    - v) opinions on applications for vaccination campaign approval,
  - supervision of medicinal products for human use (pharmacovigilance), records and evaluation of notices of side effects of medicinal products for human use, including blood, blood components, transfusion medicine, tested products and tested medicinal products for human use,
  - exercises state supervision of the medicinal equipment market.

With respect of nUNB, SIDC will exercise its powers particularly in the domain of medicinal products for human use, and material equipment and facilities. SIDC will issue its approval of the material equipment and facilities of nUNB as an applicant for the permit to handle medicinal products for human use and medical equipment.

---

<sup>54</sup> Section 13 (4) (a) of Act No. 355/2007 Coll. on the protection, support and development of public health and on amending other acts

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

SIDC will approve nUNB applications for clinical trials of medicinal products for human use and will exercise supervision of the satisfaction of statutory requirements, clinical trial protocols and good clinical practice.

### National Emergency Centre (NEC)

NEC is responsible for management, coordination and evaluation of the operation of emergency services in order to secure its permanency and continuousness, and provide for technical conditions enabling the telecommunications connection between and transfer of data including satellite monitoring of ambulance vehicles and the emergency service providers with the applicable inpatient health care facilities and other components of the integrated emergency system.<sup>55</sup>

NEC is obliged to ensure the satisfaction of technical requirements regarding telecommunications connection and transfer of data including satellite monitoring of ambulance vehicles of the emergency service with the health service provider, nUNB and other elements of the integrated emergency system.

The emergency service provider is obliged to professionally transport without undue delay any person whose conditions so requires into the next closest health care inpatient facility or into a health care inpatient facility determined by NEC or by the coordination centre, which is capable to offer diagnostics and treatment follow-up to the provided emergency care.

The emergency service provider is also obliged to professionally transport upon instruction of NEC any person whose condition so requires into one of the health care inpatient facilities or into another health care inpatient facility.

NEC may designate nUNB as the health care inpatient facility to which persons are to be transported.

### NCHI

- ▶ NCHI is a state-funded organization founded by MOH. The status and the role of NCHI is governed by Act No. 153/2013 Coll. on the national health information system and on amending and supplementing other acts. The tasks of NCHI include:
  - informatisation of the health sector, administration of the National Health Information System,
  - standardisation of health informatics,
  - health statistics,
  - administration of national health administrative registries and national health registries,
  - provision of library and information services in the field of medical sciences and health service.
- ▶ As part of its operations, NCHI collaborates with institutions such as the Statistical Office of the Slovak Republic, HCSA, PHA, SIDC, institutes of the SAS, health care providers, chambers and health professional organisations, HICs and medical faculties. The nUNB will be obliged to comply with the health informatics standards. NCHI will have access nUNB's patient data.

### NBTS

NBTS was established for the main purpose of performing the tasks related to the complete production of blood products with maximum efficiency, to ensure the highest possible quality and safety of hemotherapy in the volumes necessary for the country to become self-sufficient in this area. Another purpose of NBTS is the achievement and resolution of recommendations that blood and its components, regardless of their planned use, have comparable quality and safety throughout the entire Slovak network, while in taking, processing, distribution and use of blood and blood components priority is given to the protection of public health and effective prevention of the transmission of infectious diseases. Health care providers, including UNB and later nUNB, enter into contracts with NTS for the supply of blood preparations necessary for the provision of health care.

---

<sup>55</sup> Section 3 (3) of Act No. 579/2004 Coll. on medical emergency service and on amending and supplementing other acts

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

### BSK

According to Act No. 302/2001 Coll. on self-governance of higher regional units (Self-Governing Region Act) BSK is responsible for the creation and pursuit of social, economic and cultural development of the territory of the self-governing region.

As part of the transferred competences of state administration, BSK issues permits for operating general hospitals.<sup>56</sup>

The competent body shall issue permits to nUNB provided

- ▶ it has appointed an expert representative holding the expert representative licence,
- ▶ it owns or leases the premises where health care services will be provided,
- ▶ the premises where the health care services

in the application nUNB shall state:

- ▶ the name, seat, legal form, identification number (if any), name, surname and place of residence of the person or persons who are its statutory representatives,
- ▶ name, surname, date of birth and citizenship of the expert representative,
- ▶ place of residence of the expert representative: if the place of residence is outside Slovakia, it is necessary to state also his/her place of temporary residence in Slovakia,
- ▶ type of health care facility and its specialisation,
- ▶ place of operation of the health care facility.

Jointly with the application nUNB shall submit:

- ▶ a certificate of incorporation of the legal person and extract from the commercial register,
- ▶ valid decision on granting the expert representative licence,
- ▶ certificate of ownership or lease agreement for the premises where the health care services will be provided,
- ▶ decision of the competent public health care authority regarding the application to commission the premises,

affidavit that during the two years before filing application, its permit was not revoked on the grounds provided in Section 19 (1) (c), (d) or (e) of Act on Health Care Providers, and that the data contained in the application and the attached deed are true.

### HICs

HICs are joint stock companies established in the Slovak Republic for the purpose of providing public health care insurance under licence to provide public health care insurance. HICs receive and further distribute public health insurance premiums. They enter into contracts on the provision of health care services with health care providers.

In terms of nUNB revenues from the provision of medical services, HICs will be key partners of nUNB. To maintain viability and bankability of the nUNB Project, contracts concluded with HICs will have to secure sustainable and predictable cash-flow of nUNB, sufficient amount of revenues and as such ensure bankability of the project. Jointly with contracts between the operator (and/or developer) of nUNB and the state, contracts with HICs will have to determine bankability and thus Project feasibility.

Considering the above, the terms and conditions of the contracts with HICs must reflect this fact and at the same time comply with the regulations governing competition and state aid. Všeobecná zdravotná poisťovňa, a.s. is under direct control of MOH. Dôvera, a.s. and Union, a.s. are privately owned. As the owner, MOH has the option (subject to complying with the competition regulations) to regulate the contractual freedom of Všeobecná zdravotná poisťovňa, a.s., but it has no leverage to influence the contractual autonomy of the other HICs. Considering the

<sup>56</sup> Section 11 (2) (g) of Act No. 578/2004 Coll. on the providers of health care, medical staff, professional organisations in the health sector and on amending and supplementing other acts

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

technical parameters of the project it may be reasonably assumed that Dôvera, a.s. and Union, a.s. will be interested in entering into contracts with nUNB and secure access for their clients to European-standard health care.

### Professional chambers

Professional chambers do not enter into direct relationships with health care facility operators. Chambers are in charge of licenses of medical staff and may oblige their members to comply with the applicable standards of their professions.

With respect to nUNB, professional chambers may exercise their competences vested under Act No. 184/2009 Coll. on professional education and training and on amending other acts.

Professional chambers participate in the creation of norms in the field of material equipment, technology and premises of health care facilities, where students of medical programs are trained.

nUNB may operate as a centre for professional education and training if, subject to nUNB's consent, the competent professional organisation or chamber decides and if it cooperates with the relevant professional organisation or chamber and offers professional education and training required to carry out the relevant vocation and the professional activities and if it has the staff and meets the material and technical requirements provided in a special regulation.<sup>57</sup>

### National-level trade unions

According to Act No. 2/1991 Coll. on collective bargaining, national-level trade unions and employer or employers' organisations may negotiate higher-level collective agreements.

Higher-level collective agreements are made for the entire industry<sup>58</sup>. MOH has the power to decide that a higher-level collective agreement applies to nUNB, it being the operator of a health care facility and the employer of medical staff despite the fact that the operator or its trade unions are not signatories of such higher-level collective agreement.

### Trade unions at UNB level

Trade unions currently active at UNB will no doubt play a significant role with regards to the process of transfer of staff from UNB to nUNB or with respect of the closing-down of the hospitals Kramáre, Staré Mesto and Ružinov. The list of affected trade union organisations and the manner of interaction with UNB and nUNB are detailed in section "Assessment of legal consequences of termination of the operations of the existing health care providers".

### Universities

Universities are contractual parties of UNB and if nUNB is to become a university hospital, at least one university must become contractual partner of nUNB for sake of practical training. The universities will have a vested interest in enabling their students to be trained. On the other hand, nUNB needs the cooperation with Universities, or at least one of them, to fulfil the conditions in Section 16 MOH Regulation No. 770/2004 Coll. providing for the specific elements of particular health care facilities.

Interactions with nUNB will be further analyzed in "Assessment of legal consequences of termination of the operations of the existing health care providers".

### Research institutions

SAS cooperates with clinics and UNB institutes on "ad hoc" basis through its institutions (SAS Institute of Endocrinology, Institute of Virology). An example of such cooperation is the joint work of SAS's Institute of Experimental Endocrinology with the V. Internal Clinic of LFUK on the scientific research grant project of the

<sup>57</sup> MOH Decree No. 770/2004 Coll. on specific elements of particular healthcare facilities as amended. MOH Decree No. 09812/2008-OL of 10 September 2008 on minimum personnel requirements and material and technical requirements of individual types of health care facilities.

<sup>58</sup> Section 4 (3) of Act No. 2/1991 Coll. on collective bargaining

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

European Lipidomics Initiative - Seventh Framework Program – Lipid droplets as dynamic organelles of fat deposition and release: translational towards human disease, Contract N° HEALTH 2007-2.1.1-6; SYNOPSA).<sup>59</sup>

The terms and duration of the individual research projects are not addressed in the Feasibility Study. Nevertheless, facilitating the conditions for continuing and developing further research will be in joint interest of the Universities and the research institutions.

When planning the process of transferring the UNB capacities to nUNB, it will be necessary to have in mind the satisfaction of needs of research and development and MOH will have to decide based on feedback which part of the research capacities will remain within UNB and which will be handled by nUNB, considering the planned development of the BioMedPark.

### Patients

The Slovak health care system is based on the freedom of patients to choose between providers of health care. When choosing their health care providers patients are individual entities limited only by the existence of contract between a specific provider and the patient's health insurance company. To secure demand for nUNB services, patients will have to be provided incentives to sign health care contracts with nUNB - positively by offering top notch health care and negatively by reducing the offer of available health care capacities in the nUNB catchment area. Our understanding is that negative incentives will be partly accounted for by closing down the hospitals in Kramáre, Ružinov and Staré Mesto.

Maintaining patients' rights to protection of health and accessible health care is an essential prerequisite of any Project scenario.

Interactions with nUNB will be further analyzed in "Assessment of legal consequences of termination of the operations of the existing health care providers and identification of legal tools/structures supporting a fluent transfer/transition and settlement of the existing legal relations, especially with respect to staff, patients, HICs, debtors, creditors and other".

### Medical staff

- ▶ The licensed health care provider offers health care services through individuals – medical staff. The medical profession is carried out.<sup>60</sup>
  - under employment or a similar labour relation
  - based on licence to operate a health care facility
  - based on licence to operate a separate medical practice
  - based on licence to carry out medical opinions, or
  - based on a trade licence as per special regulations.
- ▶ Pursuant to Section 68 (1) Act on Health Care Providers, licences may be obtained:
  - by medical staff to operate a separate medical practice in the profession of doctor, dentist, nurse, midwife, physiotherapist, masseur, speech therapist, therapeutic pedagogue and psychologist,
  - by medical staff to work in the medical profession of doctor, dentist, pharmacist, nurse, midwife, physiotherapist, public health care staff, medical laboratory technician, dietician, dental hygienist, radiology technician, medical rescuer, technician for medical equipment, pharmaceutical laboratory technician, orthopaedic technician, speech therapist, psychologist, therapeutic pedagogue, physicist, and laboratory diagnostician,
  - by medical staff to work as professional representative in the profession of doctor, dentist, pharmacist, nurse, midwife, physiotherapist, public health care staff, medical laboratory technician, dietician, dental hygienist, radiology technician, medical rescuer, technician for medical equipment, pharmaceutical laboratory

<sup>59</sup> Source: <http://www.fmed.uniba.sk/?id=4463>

<sup>60</sup> Section 3 (4) of Act on Health Care Providers

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

technician, orthopaedic technician, speech therapist, psychologist, therapeutic pedagogue, physicist, and laboratory diagnostician,

- to issue medical opinions in the profession of doctor.
- ▶ Licences to operate a separate medical practice are issued to medical staff by the competent professional chamber provided the applicant does not operate and has no plans to operate his/her own private health care facility, but will provide his/her health care services in the premises of other providers who have already obtained the licence to operate a health care facility. In this case the medical staff are not employed by the provider operating the facility.
- ▶ Licences to carry out a medical profession are issued by the competent professional chamber to medical staff or employees, who are required to do so by the employer, or to employers who wish to offer health care services as individuals. This applies to doctors who will operate their own health care facility and will later apply for the licence to provide health care.
- ▶ Within UNB, medical staff carry out their medical professions under labour relations.
- ▶ The relation between the medical staff and nUNB may be established as a relation under labour law or as a relation between landlord and tenant.

### Existing health care providers

#### UNB

- ▶ UNB is an organisation founded by MOH and funded by the state. The position of organisations funded by the state is provided in the Act on Budgetary Rules of Public Administration. UNB is a legal entity with its own legal personality. It acts in its own name and is liable for any obligations resulting from such actions. UNB is a single unit in terms of function, organisation and economy. The following hospitals are part of UNB:
  - Hospital Ružinov, Ružinovská 6, Bratislava,
  - Hospital akad. L. Déreša, Limbová 5, Bratislava,
  - Hospital sv. Cyrila a Metoda, Antolská 11, Bratislava,
  - Hospital Staré Mesto, Mickiewiczova 13, Bratislava,
  - Detached plant of Hospital Ružinov, Krajinská 91, Bratislava,
  - Specialised geriatric hospital in Podunajské Biskupice ("ŠGN"), Krajinská 91, Bratislava,
- ▶ The primary mission of UNB is the performance of the task relating to the protection, maintenance and restoration of human health by way of provision of health care services. The objects of UNB are the comprehensive provision of inpatient and outpatient care in compliance with the articles of association and the valid health care provision licence. Health care encompasses prevention, dispensarisation, diagnostics, treatment, biomedical research, and outpatient nursing care and birth assistance.
- ▶ To perform its tasks, UNB manages movable and immovable assets owned by the state including funds, receivables and other property rights of the Slovak Republic.
- ▶ In managing state property, UNB is entitled and obliged in particular to:
  - use the property to fulfil the tasks following from its objects and relating thereto,
  - dispose of the property in compliance with Act on State Property Administration and relating legal regulations,
  - maintain the property in reasonable condition and use any legal avenues to protect the same,
  - ensure that the property is not damaged, lost, abused or reduced,
  - maintain records of the managed state-owned property as per the applicable legal regulations,
  - maintain bookkeeping of the state-owned property in the scope and in the manner provided by a special regulation,
  - observe the legal procedure applicable to disposal of any redundant, temporarily redundant and useless state-owned property.

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

### *Providers cooperating with UNB*

- ▶ Health care providers other than UNB cooperate with UNB based on contracts. UNB enters into contracts with other providers mainly because of own capacities – either because it lacks the necessary capacities or has an abundance thereof. For some providers UNB offers services of transport and disposal of hazardous waste or X-ray imaging.
- ▶ UNB cooperates with specialised institutions such as the National Institute of Heart and Vascular Diseases or the National Oncological Institute<sup>61</sup>.
- ▶ As the administrator of state property, as laid down in Act on State Property Administration, UNB rents premises to other health care providers, usually of outpatient care.

### *nUNB*

- ▶ In light of the regulations governing health care, we see nUNB as the operator of a health care outpatient facility and an inpatient facility.<sup>62</sup>
- ▶ With regard to the current state of legislation, nUNB may operate a health care facility based on a licence issued by BSK to operate a general hospital.<sup>63</sup>
- ▶ nUNB is slated to be a university hospital. To meet this condition, it must enter with a university, which is seated or the medical faculty of which is seated in the same municipality as the general hospital with such general hospital being referred to as university hospital into contract on practical training as provided in a special regulation<sup>64</sup>. General hospital is referred to as university hospital. Other persons are not allowed to use the phrase “university hospital” (Slovak: *univerzitná nemocnica*) in their names or trade names.
- ▶ University hospital offers practical training in the field of general medicine and dentistry and practical training in several specialised fields of the profession of doctor and certified work fields in the profession of doctor, practical training in college programs, specialised programs and certified work fields in other medical professions.

### 3. Specifics, risks, benefits and recommendations regarding the affected area

The models considered differ in many aspects. In terms of Project implementation consequences for the relations within the field of health care provision and the health care sector, the most prominent is the extent of influence and control of the public sector or MOH over the operation of nUNB and the resulting impact on:

- ▶ maintaining the right to protection of health in the overall catchment area of the Bratislava region,
- ▶ entities competent in the area of regulation and supervision,
- ▶ entities interacting with UNB and nUNB
- ▶ UNB.

Another critical factor of the Project feasibility is the extent to which the private element is accepted in the health care sector, which depends on the different priorities of the public and the private sector and the anticipation of changes to achieve improved efficiency of health care provision and to minimise costs.

The lowest degree of control by MOH is afforded by the JV model, as to fully capitalise on the key benefit consisting in the application of more flexible procurement methods, JV will have to have the structure of a commercial entity without a concession contract with the state. It is followed by CPPP and IPPP, and last but not least the wholly state-controlled Specific Model. We further analyse the individual models in terms of risks and benefits for the affected area. The conclusion of each section offers separate tables identifying the risks to Project feasibility and mitigation recommendations.

<sup>61</sup> Cooperation agreement – processing of autologous grafts of haemopoietic stem cells by way of cryopreservation in liquid nitrogen vapours for NOU

<sup>62</sup> Section 7 (2) Act on Health Care Providers.

<sup>63</sup> Section 11 (2) (g) Act on Health Care Providers

<sup>64</sup> Section 35 (1) (c) Act on Colleges

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

### A. CPPP

A specific feature of the CPPP model with respect to the affected area is that the SPV implementing the Project is that the SPV is wholly owned by a private partner and the state exercises its control by way of a concession contract. Responsibility for Project implementation is fully shifted to the private partner and MOH is in the position of contractual party to the concession.

The following risks have resulted from the assessment of the legal framework governing the system of relations and the consequences the implementation will have for the system if the CPPP model is used:

- ▶ Risk of failure to provide for continuous protection of the right to health on the following grounds:
  - failure to create new and suitable contractual relations by nUNB, in particular with HICs,
  - failure of medical staff to accept the private partner (SPV),
  - failure of patients to accept the private partner (SPV),
  - failure of Universities to accept the private partner (SPV),
  - failure to obtain licence from BSK.

Depending on the extent of materialisation of the above risks, the Project costs may increase and the Project implementation may lag behind schedule.

As opposed to the other models, the benefit of CPPP is a higher degree of resistance to political pressure exercised on the decision-making of SPV and greater freedom SPV enjoys in adopting unpopular measures to boost efficiency.

The risks of SPV's failure to make contracts with HICs or any one of them may be mitigated by way of suitable provisions contained in the concession contract. To mitigate the risk of failure of HICs to execute contracts, we recommend including nUNB into the end network of hospitals, which is feasible by way of an amendment to Government Regulation on Minimal Network. As per Section 7 of Act on Health Insurance Companies, HICs are obliged to enter into contracts on health care provision with health care providers at least in the extent of the minimal network of providers. The end network of providers represents the providers of inpatient care within the minimal network, which offer inpatient health care in the relevant area.<sup>65</sup>

A drawback of this mitigation measure is that it is impossible to include a hospital, which has yet to start its operations, into the end network. MOH has no capacity to oblige the Slovak Government to pass a change to the end networks of hospitals. Notwithstanding that, it is probable and legitimate to assume that the future private partner will require the undertaking of such commitment including the legal consequences of the failure to perform it.

An alternative mitigation measure could be the amendment of Section 7 (1) of Act on Health Insurance Company consisting in the addition of an obligation of the HIC to sign a contract with a concession hospital and maintain it throughout the entire life of the concession contract. In this respect, it would be necessary to add a definition of "concession hospital" to Act on Health Care Providers, specifically in Section 4 (a) (3), thus introducing a new type of health care provider with reference to the relevant provisions of Public Procurement Act.

We have paired the risk of failure of medical staff to accept the private partner to two main types of consequences – consequences for UNB operations and consequences for nUNB operations. With respect of UNB this entails the risk of employees going on strike, which would result in the suspension of health care provision. With respect of nUNB the risk could manifest as the failure to execute the contract with nUNB, which may prevent or delay the commissioning of nUNB.<sup>66</sup>

The risk of failure to establish a relation with patients derives from the principle of freedom to choose one's health care provider. This principle is a fundamental component of the right to protection of health. That said, patients exercise their right to choose against the backdrop of the existing offer of providers. It is legally inadmissible to force patients to sign contracts with a specific health care provider. This risk may be mitigated solely by reducing the existing offer of health care providers, in particular by closing down some of the UNB facilities - hospitals.

The risk of failure to establish a relation between SPV and Universities may be mitigated by way of suitable regulation contained in the concession contract.

<sup>65</sup> Section 5a of Act on Health Care Providers

<sup>66</sup> For further considerations regarding the feasibility risks with respect to medical staff, see section "Assessment of legal consequences of termination of the operations of the existing health care providers and identification of legal tools/structures supporting a fluent transfer/transition and settlement of the existing legal relations, especially with respect to staff, patients, HICs, debtors, creditors and other."



## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

MOH exercises no direct influence on the education institutions. Universities are public and self-governing institutions governed by law, and the only way to impose an obligation upon them is by way of law. Organisation and operations of colleges are decided by the bodies of academic self-government within the scope provided by Act on Colleges.<sup>67</sup> We believe the weight of the risk that Universities will not sign the contract is insignificant, as it is essential for Universities to have enough capacities for hands-on training, otherwise they run the risk of losing accreditation for their study programs.<sup>68</sup>

To mitigate the risks of failure to obtain licence from BSK, we recommend considering changes to the powers of MOH contained in Section 11 (1) (c) of Act on Health Care Providers to the effect that if the nUNB project is implemented as a PPP, MOH would be the one to issue the licence to operate a concession hospital. Although the licence applicant is legally entitled to the issuance of the licence once the criteria contained in Act on Health Care Providers are performed and the risk that BSK will not issue the licence is limited by BSK's statutory powers to dismiss a licence application<sup>69</sup>, with such complex Project, the development of which will be costly and time-consuming, considering such key aspects, it is advisable to safeguard the least possible interference of third parties independent of the Project buyer. There is no doubt that the issuance of the licence to operate nUNB is one such aspect.

| Model | RISK   | MITIGATION   |
|-------|--|--|
| CPPP  | Failure to enter into contracts with HICs                    | Change of legislation – mandatory execution of (suitable) contract, definition of “concession hospital”  |
|       | Failure of medical staff to accept the private partner (SPV) | Detailed plan of staff transfer<br>Appropriate Project communication and marketing<br>Intensive communication between MOH and professionals and laymen<br>Cooperation between UNB and nUNB in the area of transfer planning<br>Market feedback regarding the plan, mechanisms and forms of transfer in the process of public procurement |
|       | Failure of Universities to accept the private partner (SPV)  | Suitable regulation of the concession contract<br>Tripartite negotiations between UNB, nUNB and Universities<br>Market feedback regarding the terms of practical training at nUNB  |
|       | Failure of patients to accept the private partner (SPV)      | Reducing the existing offer of health care by way of closing down selected UNB hospitals<br>Suitable regulation of concession contract in terms of performance quality requirements  |
|       | Failure to obtain licence from BSK                           | Change of legislation – MOH competent to issue licences  |
|       |  |  |

### B. IPPP

The specific feature of the IPPP model with respect of the analysed affected area is the joint ownership of SPV by the public and the private partner and partial control by state exercised by way of the concession contract and the

<sup>67</sup> Section 5 (2) of Act on Colleges

<sup>68</sup> For further considerations regarding the feasibility risks with respect to the relation between UNB, nUNB and Universities, see section “Assessment of legal consequences of termination of the operations of the existing health care providers and identification of legal tools/structures supporting a fluent transfer/transition and settlement of the existing legal relations, especially with respect to staff, patients, HICs, debtors, creditors and other”.

<sup>69</sup> Section 15 (1) of Act on Health Care Providers

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

corporate documents of SPV<sup>70</sup>. Liability for implementation of the Project is partially retained by the public partner – MOH, having the position of concession contract party and the position of owner of a minority share in SPV<sup>71</sup>.

The following risks have resulted from the assessment of the legal framework governing the system of relations and the consequences the implementation will have for the system if the IPPP model is used:

- Risk of failure to provide for continuous protection of the right to health on the following grounds:
  - failure to create new contractual relations by nUNB, in particular with HICs,
  - failure of medical staff to accept the private partner (SPV) as their employer,
  - failure of Universities to accept the private partner (SPV),
  - failure to obtain licence from BSK.

Depending on the extent of materialisation of the above risks, the Project costs may increase and the Project implementation may lag behind schedule.

As opposed to CPPP, the benefit of IPPP is a different perception of SPV by both professionals and laymen by reasons of state's stake in it. On the other hand, compared to CPPP, IPPP is more sensitive to political pressures with respect to adopting unpopular measures to increase efficiency.

The risks of SPV's failure to enter into contracts with HICs or any one of them may be mitigated by way of suitable provisions contained in the concession contract. State's participation in SPV reduces this risk. To mitigate the risk of failure of HICs to execute contracts, we recommend including nUNB into the end network of hospitals, which is feasible by way of an amendment to Government Regulation on Minimal Network. As per Section 7 of Act on Health Insurance Companies, HICs are obliged to enter into contracts on health care provision with health care providers at least in the extent of the minimal network of providers. The end network of providers represents the providers of inpatient care within the minimal network, which offer inpatient health care in the relevant area.<sup>72</sup>

A drawback of this mitigation measure is that it is impossible to include a hospital, which has yet to start its operations, into the end network. MOH has no capacity to oblige the Slovak Government to pass a change to the end networks of hospitals. Notwithstanding that, it is probable and legitimate to assume that the future private partner will require the undertaking of such commitment including the legal consequences of the failure to perform it. An alternative mitigation measure is offered in form of amending Section 7 (1) of Act on Health Insurance Companies consisting in the addition of an obligation of the HIC to sign a contract with a concession hospital and maintain it throughout the entire life of the concession contract. In this respect, it would be necessary to add a definition of "concession hospital" to Act on Health Care Providers, specifically in Section 4 (a) (3), thus introducing a new type of health care provider with reference to the relevant provisions of Public Procurement Act.

We have paired the risk of failure of medical staff to accept the private partner to two main types of consequences – consequences for UNB operations and consequences for nUNB operations. With respect of UNB this entails the risk of employees going on strike, which would result in the suspension of health care provision. With respect of nUNB the risk could manifest as the failure to execute the contract with nUNB, which may prevent or delay the commissioning of nUNB.<sup>73</sup> State's participation in SPV would help mitigate the risk.

The risk of failure to establish a relation with patients derives from the principle of freedom to choose one's health care provider. This principle is a fundamental component of the right to protection of health. That said, patients exercise their right to choose against the backdrop of the existing offer of providers. It is legally inadmissible to force patients to sign contracts with a specific health care provider. This risk may be mitigated solely by reducing the existing offer of health care providers, in particular by closing down some of the UNB facilities – hospitals.

The risk of failure to establish a relation between SPV and Universities may be mitigated by way of suitable regulation contained in the concession contract. MOH exercises no direct influence on the education institutions. Universities are public and self-governing institutions governed by law, and the only way to impose an obligation upon them is by way of law. Organisation and operations of colleges are decided by the bodies of academic self-

<sup>70</sup> For details see section "Proposals of realistic legal structures and tools enabling implementation of the preferred model including justification, considering the analysed legal issues" considering the analysed legal aspects

<sup>71</sup> In order to prevent the viewing of SPV as contracting authority

<sup>72</sup> Section 5a of Act on Health Care Providers

<sup>73</sup> For a detailed analysis of the feasibility risks with respect to medical staff see section "Assessment of legal consequences of termination of the operations of the existing health care providers and identification of legal tools/structures supporting a fluent transfer/transition and settlement of the existing legal relations, especially with respect to staff, patients, HICs, debtors, creditors and other".

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

government within the scope provided by law.<sup>74</sup> We believe the weight of the risk that Universities will not sign the contract is insignificant, as it is essential for Universities to have enough capacities for hands-on training, otherwise they run the risk of losing accreditation for their study programs.<sup>75</sup>

To mitigate the risks of failure to obtain licence from BSK, we recommend considering changes to the powers of MOH contained in Section 11 (3) (c) of Act on Health Care Providers to the effect that if the nUNB project is implemented as a PPP, MOH would be the one to issue the licence to operate a concession hospital. Although the licence applicant is legally entitled to the issuance of the licence once the criteria contained in Act on Health Care Providers are performed and the risk that BSK will not issue the licence is limited by BSK's statutory powers to dismiss a licence application<sup>76</sup>, with such complex Project, the development of which will be costly and time-consuming, considering such key aspects, it is advisable to safeguard the least possible interference of third parties independent of the Project buyer. There is no doubt that the issuance of the licence to operate nUNB is one such aspect.

| Model | RISK   | MITIGATION   |
|-------|--|--|
| IPPP  | Failure to enter into contracts with HICs                    | Change of legislation – mandatory execution of (suitable) contract, definition of “concession hospital”<br>Risk mitigated by state's involvement in SPV  |
|       | Failure of medical staff to accept the private partner (SPV) | Detailed plan of staff transfer<br>Appropriate Project communication and marketing<br>Intensive communication between MOH and professionals and laymen<br>Cooperation between UNB and nUNB in the area of transfer planning<br>Market feedback regarding the plan, mechanisms and forms of transfer in the process of public procurement<br>Risk mitigated by state's involvement in SPV |
|       | Failure of Universities to accept the private partner (SPV)  | Suitable regulation of the concession contract<br>Tripartite negotiations between UNB, nUNB and Universities<br>Market feedback regarding the terms of practical training at nUNB<br>Risk mitigated by state's involvement in SPV  |
|       | Failure of patients to accept the private partner (SPV)      | Reducing the existing offer of health care by way of closing down selected UNB hospitals<br>Risk mitigated by the state's involvement in SPV<br>Suitable regulation of concession contract in terms of performance quality requirements  |
|       | Failure to obtain licence from BSK                           | Change of legislation – MOH competent to issue licences  |

### C. JV

One of the specific features of the JV model with respect of the analysed affected area is the joint participation of the public and the private sector in SPV and the low degree of state's control attributable to the absence of a concession

<sup>74</sup> Section 5 (2) of College Act

<sup>75</sup> For further considerations regarding the feasibility risks with respect to the relation between UNB, nUNB and Universities, see section “Assessment of legal consequences of termination of the operations of the existing health care providers and identification of legal tools/structures supporting a fluent transfer/transition and settlement of the existing legal relations, especially with respect to staff, patients, HICs, debtors, creditors and other”.

<sup>76</sup> Section 15 (1) of Act on Health Care Providers

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

contract. JV's corporate documentation<sup>77</sup> does not enable the state to exercise control over JV as it is drafted so as to apply less demanding, both in terms of time and administration, processes of transparently picking a private partner. The liability for Project implementation is fully borne by JV and puts the state into a position of total dependency on the consensus with the private partner. Execution of a concession contract, or a similar contract, between the state and JV would constitute circumvention of Public Procurement Act.

The following risks have resulted from the assessment of the legal framework governing the system of relations and the consequences the implementation will have for the system if the JV model is used:

- ▶ Risk of failure to provide for continuous protection of the right to health on the following grounds:
  - failure to create new contractual relations by nUNB, in particular with HICs
  - failure of medical staff to accept the private partner (JV) as their employer
  - failure of Universities to accept the private partner (JV)
  - failure to obtain licence from BSK.

Depending on the extent of materialisation of the above risks, the Project costs may increase and the Project implementation may lag behind schedule.

With respect to the affected area, this model shows no significant benefits. On the contrary, as opposed to CPPP and IPPP, JV may be viewed less favourably on account of the absence of any sufficient state control mechanism. The benefit of decreased susceptibility to political influences appears to be rather marginal compared to the state's loss of power to oversee the Project.

The risks of JV's failure to enter into contracts with HICs or any one of them cannot be mitigated by way of suitable provisions contained in the concession contract. In the absence of state's control mechanisms, state's participation in JV does not significantly reduce this risk. As with previous alternatives, to mitigate the risk of failure of HICs to execute contracts, we recommend including nUNB into the end network of hospitals, which is feasible by way of an amendment to Government Regulation on Minimal Network. As per Section 7 of Act on Health Insurance Companies, HICs are obliged to enter into contracts on health care provision with health care providers at least in the extent of the minimal network of providers. The end network of providers represents the providers of inpatient care within the minimal network, which offer inpatient health care in the relevant area.<sup>78</sup>

A drawback of this mitigation measure is that it is impossible to include a hospital, which has yet to start its operations, into the end network. MOH has no capacity to oblige the Slovak Government to pass a change to the end networks of hospitals. Notwithstanding that, it is probable and legitimate to assume that the future private partner will require the undertaking of such commitment including the legal consequences of the failure to perform it. Considering the fact that the hospital will not operate under a concession, a legislation change would be rather complicated compared to the previous models. Section 7 of Act on Health Insurance Companies could be amended by adding the obligation of HICs to enter into contracts with the provider determined by MOH. Such amendment would be unmethodical and would mean an intervention into Government's powers, as it is the Government which determines the end network of hospitals.

We have paired the risk of failure of medical staff to accept the private partner to two main types of consequences – consequences for UNB operations and consequences for nUNB operations. With respect of UNB this entails the risk of employees going on strike, which would result in the suspension of health care provision. With respect of nUNB the risk could manifest as the failure to execute the contract with nUNB, which may prevent or delay the commissioning of nUNB.<sup>79</sup> State's participation in SPV would help mitigate the risk.

The risk of failure to establish a relation with patients derives from the principle of freedom to choose one's health care provider. This principle is a fundamental component of the right to protection of health. That said, patients exercise their right to choose against the backdrop of the existing offer of providers. It is legally inadmissible to force

<sup>77</sup> For details see section "Proposals of realistic legal structures and tools enabling implementation of the preferred model including justification, considering the analysed legal issues".

<sup>78</sup> Section 5a of Act on Health Care Providers

<sup>79</sup> For a detailed analysis of the feasibility risks with respect to medical staff see section "Assessment of legal consequences of termination of the operations of the existing health care providers and identification of legal tools/structures supporting a fluent transfer/transition and settlement of the existing legal relations, especially with respect to staff, patients, HICs, debtors, creditors and other".

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

patients to sign contracts with a specific health care provider. This risk may be mitigated solely by reducing the existing offer of health care providers, in particular by closing down some of the UNB facilities – hospitals.

The risk of failure to establish a relation between JV and Universities cannot be mitigated by way of suitable regulation in the concession contract. MOH exercises no direct influence on the education institutions. Universities are public and self-governing institutions governed by law, and the only way to impose an obligation upon them is by way of law. Organisation and operations of colleges are decided by the bodies of academic self-government within the scope provided by law.<sup>80</sup> We believe the weight of the risk that Universities will not sign the contract is insignificant, as it is essential for Universities to have enough capacities for hands-on training, otherwise they run the risk of losing accreditation for their study programs.<sup>81</sup>

Considering the fact that this model will not involve a concession hospital, the risk of not obtaining licence from BSK cannot most likely be mitigated by a change of legislation, as is the case with CPPP and IPPP. The shift of the power to grant licence to a general hospital to MOH would be feasible by defining qualitative indicators, such as number of beds in a hospital in Section 11 (1) (c) of Act on Health Care Providers.

Yet, the risk that BSK will not issue the licence is limited by BSK's statutory powers to dismiss a licence application. BSK will issue the licence if the applicant documented the performance of the statutory requirements; failing to document that BSK will dismiss the application.<sup>82</sup>

| Model | RISK   | MITIGATION  |
|-------|--|---|
| JV    | Failure to enter into contracts with HICs                    | Very complicated with the JV model  |
|       | Failure of medical staff to accept the private partner (SPV) | Detailed plan of staff transfer<br>Appropriate Project communication and marketing<br>Intensive communication between MOH and professionals and laymen<br>Cooperation between UNB and nUNB in the area of transfer planning |
|       | Failure of Universities to accept the private partner (SPV)  | Tripartite negotiations between UNB, nUNB and Universities  |
|       | Failure of patients to accept the private partner (SPV)      | Reducing the existing offer of health care providers by way of closing down selected UNB hospitals  |
|       | Failure to obtain licence from BSK                           | Change of legislation   |

### D. Specific Model

With respect of the analysed affected area, the main feature of the Specific Model is the state's absolute control over SPV; in practical terms it means that in some cases, the state will act on both sides of the barricades – as the owner of SPV and at the same time as the industry regulator or the person determining the terms and conditions of Project performance. The duality of the state's position appears to constitute an advantage in terms of enforcing the changes triggered by the Project implementation, i.e. termination or change of the existing relations and creation of new ones.

The following risks have resulted from the assessment of the legal framework governing the system of relations and the consequences the implementation will have for the system if the Specific Model is used:

<sup>80</sup> Section 5 (2) of Act on Colleges

<sup>81</sup> For further considerations regarding the feasibility risks with respect to the relation between UNB, nUNB and Universities, see section "Assessment of legal consequences of termination of the operations of the existing health care providers and identification of legal tools/structures supporting a fluent transfer/transition and settlement of the existing legal relations, especially with respect to staff, patients, HICs, debtors, creditors and other".

<sup>82</sup> Section 15 (1) of Act on Health Care Providers

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

- Risk of failure to provide for continuous protection of the right to health on the following grounds:
  - failure to create new contractual relations by nUNB, in particular with HICs
  - failure of medical staff to accept the private partner (SPV) as their employer
  - failure of Universities to accept the private partner (SPV)
  - failure to obtain licence from BSK.

Depending on the extent of materialisation of the above risks, the Project costs may increase and the Project implementation may lag behind schedule.

Compared to CPPP, a special benefit of the Specific Model is the distinctive perception of SPV by both professionals and laymen on account of state's (exclusive) participation in SPV. On the other hand, against CPPP and IPPP the Specific Model is more susceptible to political pressures with respect of the adoption of unpopular measures to boost efficiency.

Contrary to CPPP and IPPP, a significant drawback is the absence of competition between the concession applicants, the relating opportunity to optimise the Project and the resulting risk of failure to achieve the necessary degree of optimisation of the capacities transfer from UNB to nUNB.

The risks of SPV's failure to enter into contracts with HICs or any one of them cannot be mitigated by way of suitable provisions contained in the concession contract. Moreover, the state's control in SPV and in at least one HIC is secured by way of being the sole shareholder.<sup>83</sup> To mitigate the risk of non-execution of contracts by HICs, we recommend including nUNB into the end network of hospitals, which is feasible by way of an amendment to Government Regulation on Minimal Network. As per Section 7 of Act on Health Insurance Companies, HICs are obliged to enter into contracts on health care provision with health care providers at least in the extent of the minimal network of providers. The end network of providers represents the providers of inpatient care within the minimal network, which offer inpatient health care in the relevant area.<sup>84</sup>

A drawback of this mitigation measure is that it is impossible to include a hospital, which has yet to start its operations, into the end network. MOH has no capacity to oblige the Slovak Government to pass a change to the end networks of hospitals. Notwithstanding that, it is probable and legitimate to assume that the future private partner will require the undertaking of such commitment including the legal consequences of the failure to perform it. An alternative mitigation measure would be the amendment of the provision of Section 7 (1) of Act on Health Insurance Companies consisting in the addition of an obligation of the HIC to sign a contract with a concession hospital and maintain it throughout the entire life of the concession contract. In this respect, it would be necessary to add a definition of "concession hospital" to Act on Health Care Providers, specifically in Section 4 (a) (3), thus introducing a new type of health care provider with reference to the relevant provisions of Public Procurement Act.

We have paired the risk of failure of medical staff to accept the private partner to two main types of consequences – consequences for UNB operations and consequences for nUNB operations. With respect of UNB this entails the risk of employees going on strike, which would result in the suspension of health care provision. With respect of nUNB the risk could manifest as the failure to execute the contract with nUNB, which may prevent or delay the commissioning of nUNB.<sup>85</sup> The absence of a private party in SPV significantly mitigates this risk.

The risk of failure to establish a relation with patients derives from the principle of freedom to choose one's health care provider. This principle is a fundamental component of the right to protection of health. That said, patients exercise their right to choose against the backdrop of the existing offer of providers. It is legally inadmissible to force patients to sign contracts with a specific health care provider. Therefore, this risk may be mitigated solely by reducing the existing offer of health care providers, in particular by closing down some facilities – UNB hospitals. The reduction of the existing offer is fully within the powers of the state, which adds yet another benefit to the Specific Model.

The risk of failure to establish a relation between JV and Universities may be mitigated by way of suitable regulation in the concession contract.

<sup>83</sup> On condition SPV will be joint-stock company

<sup>84</sup> Section 5a of Act on Health Care Providers

<sup>85</sup> For assessment of feasibility risks regarding medical staff, see "Assessment of legal consequences of termination of the operations of the existing health care providers and identification of legal tools/structures supporting a fluent transfer/transition and settlement of the existing legal relations, especially with respect to staff, patients, HICs, debtors, creditors and other".

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

MOH exercises no direct influence on the education institutions. Universities are public and self-governing institutions governed by law, and the only way to impose an obligation upon them is by way of law. Organisation and operations of colleges are decided by the bodies of academic self-government within the scope provided by law.<sup>86</sup> We believe the weight of the risk that Universities will not sign the contract is insignificant, as it is essential for Universities to have enough capacities for hands-on training, otherwise they run the risk of losing accreditation for their study programs.<sup>87</sup>

To mitigate the risks of failure to obtain licence from BSK, we recommend considering changes to the powers of MOH contained in Section 11 (1) (c) of Act on Health Care Providers to the effect that if the nUNB project is implemented as a PPP, MOH would be the one to issue the licence to operate a concession hospital. Although the licence applicant is legally entitled to the issuance of the licence once the criteria contained in Act on Health Care Providers are performed and the risk that BSK will not issue the licence is limited by BSK's statutory powers to dismiss a licence application,<sup>88</sup> with such complex Project, the development of which will be costly and time-consuming, considering such key aspects, it is advisable to safeguard the least possible interference of third parties independent of the Project buyer. There is no doubt that the issuance of the licence to operate nUNB is one such aspect.

| Model          | RISK   | MITIGATION   |
|----------------|--|--|
| Specific Model | Failure to enter into contracts with HICs                    | Change of legislation – mandatory execution of (suitable) contract, definition of “concession hospital”  |
|                | Failure of medical staff to accept the private partner (SPV) | Detailed plan of staff transfer<br>Appropriate Project communication and marketing<br>Intensive communication between MOH and professionals and laymen<br>Cooperation between UNB and nUNB in the area of transfer planning  |
|                | Failure of Universities to accept the private partner (SPV)  | Suitable regulation of the concession contract<br>Tripartite negotiations between UNB, nUNB and Universities   |
|                | Failure of patients to accept the private partner (SPV)      | Reducing the existing offer of health care providers by way of closing down selected UNB hospitals<br>Risk significantly mitigated by the state's sole control over SPV<br>Suitable regulation of concession contract in terms of performance quality requirements |
|                | Failure to obtain licence from BSK                           | Change of legislation – MOH competent to issue licences  |

### Comparison of individual models

With respect to the affected area and its consequences for the existing network of relations existing within the region including the new health care provider, the existing health care providers, staff, patients, health insurance companies, education institutions, research institutions, debtors and creditors and other interested entities, all of the models are feasible. In terms of the feasibility risks and the manner of mitigating the same, the most beneficial

<sup>86</sup> Section 5 (2) of Act on Colleges

<sup>87</sup> For assessment of feasibility risks with respect to UNB, nUNB and Universities, see “Assessment of legal consequences of termination of the operations of the existing health care providers and identification of legal tools/structures supporting a fluent transfer/transition and settlement of the existing legal relations, especially with respect to staff, patients, HICs, debtors, creditors and other”

<sup>88</sup> Section 15 (1) of Act on Health Care Providers



## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

seems to the Specific Model, thanks to its low weight of risks and the high degree of viability of the mitigation measures. It is followed by IPPP, with a medium weight of risks and medium viability of mitigation measures on account of the concession contract and the participation of the public partner in SPV, which may improve the negative perception of the private sector's involvement in the position as the largest health care provider in the region. The weight of risks offered by CPPP appears to be high, paired with a medium viability of the mitigation risks. And last but not least, in absence of any control mechanisms of the state and the relating little avenues of applying mitigation measures, the JV model seems to be the riskiest.

Summary table

| Risk   | CPPP   | IPPP   | JV  | Specific Model  |
|--|--|--|---|---|
| Failure to execute contracts with HICs                       | Change of legislation – mandatory execution of (suitable) contract, definition of “concession hospital”  | Change of legislation – mandatory execution of (suitable) contract, definition of “concession hospital”<br>Risk mitigated by state's involvement in SPV  | Very complicated with the JV model  | Change of legislation – mandatory execution of (suitable) contract, definition of “concession hospital”   |
| Failure of medical staff to accept the private partner (SPV) | Detailed plan of staff transfer<br>Appropriate Project communication and marketing<br>Intensive communication between MOH and professionals and laymen<br>Cooperation between UNB and nUNB in the area of transfer planning<br>Market feedback regarding the plan, mechanisms and forms of transfer in the process of public procurement | Detailed plan of staff transfer<br>Appropriate Project communication and marketing<br>Intensive communication between MOH and professionals and laymen<br>Cooperation between UNB and nUNB in the area of transfer planning<br>Market feedback regarding the plan, mechanisms and forms of transfer in the process of public procurement<br>Risk mitigated by state's involvement in SPV | Detailed plan of staff transfer<br>Appropriate Project communication and marketing<br>Intensive communication between MOH and professionals and laymen<br>Cooperation between UNB and nUNB in the area of transfer planning | Detailed plan of staff transfer<br>Appropriate Project communication and marketing<br>Intensive communication between MOH and professionals and laymen<br>Cooperation between UNB and nUNB in the area of transfer planning |
| Failure of Universities to accept the private partner (SPV)  | Suitable regulation of the concession contract<br>Tripartite negotiations between UNB, nUNB and Universities<br>Market feedback regarding the terms of practical training at nUNB  | Suitable regulation of the concession contract<br>Tripartite negotiations between UNB, nUNB and Universities<br>Market feedback regarding the terms of practical training at nUNB<br>Risk mitigated by state's involvement in SPV  | Tripartite negotiations between UNB, nUNB and Universities  | Suitable regulation of the concession contract<br>Tripartite negotiations between UNB, nUNB and Universities  |
| Failure of patients to accept the private partner (SPV)      | Reducing the existing offer of health care by way of closing down selected UNB hospitals<br>Suitable regulation of concession contract in terms of performance quality requirements  | Reducing the existing offer of health care by way of closing down selected UNB hospitals<br>Risk mitigated by the state's involvement in SPV<br>Suitable regulation of concession contract in  | Reducing the existing offer of health care providers by way of closing down selected UNB hospitals  | Reducing the existing offer of health care providers by way of closing down selected UNB hospitals<br>Risk significantly mitigated by the state's sole control over SPV<br>Suitable regulation of                           |



## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

|                                       |   | terms of performance<br>quality requirements                  |   | concession contract in<br>terms of performance<br>quality requirements |
|---------------------------------------|---|---|---|--|
| Failure to obtain<br>licence from BSK | Change of legislation –<br>MOH competent to issue<br>licences | Change of legislation –<br>MOH competent to issue<br>licences | Change of legislation –<br>MOH competent to issue<br>licences | Change of legislation –<br>MOH competent to issue<br>licences          |

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

### Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model with special focus on sweeping sectoral regulation

#### Basic description of the affected area

In this part of the report we elaborate on the health sector regulation in order to identify the Project feasibility risks consisting in the current legislation. Regulation of this sector represents a peculiarity of the hospital PPP project, which is slated to be realised in an environment with not only limited price-making options, but with an assumption of direct state interventions into the prices relevant to profitability and bankability of the Project as such. To secure successful Project implementation, it is therefore critical to identify those areas of regulation in the sector, which may be perceived as risky or even unacceptable in terms of market feedback and to propose efficient measures to mitigate such risks.

The regulation in the sector affects a whole array of health care providers and it should be therefore borne in mind that the consequences of any intervention into the regulation will be sweeping and will differ in character by individual providers. Changes in the health care trends, changes in the composition of the services offered and a shift towards one-day inpatient stays must be reflected in changes to the payment system. To limit the influence on the existing providers, the adoption of special legal regulation governing concession hospitals, which would facilitate conditions suitable for a new type of hospitals without jeopardising the functioning and the economic stability of the existing facilities, would appear advisable, of course on condition of observing the state aid rules.

Bankability of the Project is the basic prerequisite for successful implementation thereof, with bankability conditional on a stable and foreseeable cash-flow. The main risk to Project feasibility in terms of the affected area of sector regulation is the decline in revenues and/or increase of costs of operating nUNB attributable to the state's regulatory interventions.

A fundamental risk attached to the Project is the implementation of a payment mechanism based on categorisation of diagnoses and the allocation of specific weighs (coefficient) to the diagnose categories referred to as "Diagnoses related groups" (or "DRG"). The amount of the basic DRG rate and the relative weight allocated to the individual categories will substantially affect the amount of revenues made by nUNB and thus the feasibility of the Project proper.

#### *Legal framework of the affected area*

As laid down in Slovak Constitution, the state is responsible for securing its citizens the right to health. This right materialises in the safeguarding to each inhabitant the access to health care. For sake of fluent and uninterrupted provision of health care services, the state retains the control over revenues and expenses of individual health care providers and that within the broadest extent possible, and over the technical, staff and material aspects of the operations of health care facilities including the categorisation of such facilities. In order to identify the risks of Project feasibility, assess the weight of the risks and propose efficient mitigations measures, we have analysed the following areas of regulation in the health care sector:

1. Price regulation
2. Distribution regulation
3. Technical and staff regulation
4. Organisation regulation
5. Payroll regulation
6. Regulation of medicinal products
7. Market access regulation.

#### ► **Price regulation**

In terms of price regulation, as at this date, the Project regulation is limited in particular by the following regulations as amended:

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

- MOH Regulation No. 07045/2003 – OAP of 30 December 2003, providing for the scope of price regulation in the health care sector
- Government Regulation No. 722/2004 Coll. providing for the amount of payments of insured persons for services relating to health care provision
- Government Regulation No. 752/2004 Coll. providing for the award of quality indicators for the assessment of health care provision
- Government Regulation No. 776/2004 Coll. providing for the issuance of Directory of medical performances
- Government Regulation No. 777/2004 Coll. providing for the issuance of Directory of illnesses partially covered or not covered by the public health care insurance
- Government Regulation No. 226/2005 Coll. on the amount of payments made to first aid providers for health care covered by health insurance.

As a rule, when purchasing specialised health care, HICs operating in the Slovak Republic employ 3 basic payment mechanisms:

- performance-based payment,
- bed-day-based payment,
- payment based on completed hospitalisation.

In light of the composition of the medical services to be provided by nUNB, for sake of Project implementation it will be necessary to change the payment mechanism used for on-day inpatient care. As is, UNB receives payments for completed hospitalisation depending on the duration of the inpatient stay. This mechanism setup does not motivate the health care providers to strive towards efficiency and has an adverse economic impact on those providers, which are able to provide the treatment in the same quality and require that the patient stay only one day. There is no legal regulation that would set the price of completed hospitalisation.

Changing the payments for one-day inpatient care would require an amendment to Regulation No. 07045/2003 – OAP - (Annex 4), which provides for price regulation and conditions for regulating prices of health care treatments.

### ► DRG

This mechanism operates on the principle that for each hospital stay a lump-sum payment is made (payment for treatment in the relevant diagnostic group) and that subject to specific criteria (attributes) such as the main diagnosis, secondary diagnoses, procedures/treatments carried out, age, gender, manner of hospital release, gravity of the conditions, birth weight of newborns and other criteria. Allocating a hospitalisation case to a specific diagnosis group is made subject to strictly prescribed rules by way of grouping software. The amount of the base rate for a diagnose group is calculated based on the means of real costs incurred by the hospital.

MOH Regulation No. 337/2013 Coll. providing for the list of health care treatments for the purpose of establishing the classification system of diagnostic and therapeutic groups served as the basis for categorisation of health care treatments. Implementation of the DRG system works on the assumption that sweeping legislative changes will be made to price regulation.

The DRG system implementation should result in a shift from agreeing the amount of payments for a hospitalisation case between the provider and HIC towards the DRG model based on transparently calculated relative weights multiplied by the base rate, which will be rarely marked up by further payments.

### ► Distribution regulation

Distribution of proceeds from public health insurance among HICs is limited mainly by the following regulations:

- Act on Health Insurance,
- MOH Regulation No. 263/2012 Coll. providing for the details of criteria for listing and delisting a pharmaceutical cost group in the list of pharmaceutical cost groups,
- MOH Regulation No. 264/2012 Coll. providing for categorising insurance beneficiaries into pharmaceutical cost groups,

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

- MOH Regulation No. 266/2012 Coll. providing for details of calculation of the costs risk index,
- MOH Regulation No. 447/2013 Coll. providing for the list of pharmaceutical cost groups for the year 2014,
- MOH Regulation No. 448/2013 Coll. providing for the health care cost risk index for the year 2014.

Regulation of the distribution of insurance premiums among HICs follows the principle of compensation of those HICs, whose clients are exposed to a higher risk of producing health care costs. Distribution regulation does not directly influence the revenues and expenses of nUNB. It may however be considered by HICs when negotiating the amount of payments for hospitalisations. With the current legislation, regulation of distribution does not pose a risk to the Project implementation.

At this moment, it is unclear to what extent the system of distribution of proceeds from public health insurance among HICs will be affected by the DRG introduction. Instability of the proceeds distribution among HICs may have an adverse impact on the arrangements between HICs and nUNB.

### ► Technical and staff regulation

In terms of technical and staff regulation, the nUNB Project implementation Distribution is limited mainly by the following regulations:

- MOH Regulation No. 553/2007 Coll. providing for details of requirements for the operation of health care facilities in terms of health protection
- MOH Decree No. 09812/2008-OL providing for minimum requirements for staff and material and technical facilities of individual health care facility types (Communication No. 410/2008 Coll.)

It is likely that when it comes to efficiency of the nUNB operation, it will require a change to the parameters laid down by the above regulations. It is expected that concrete proposals to change the regulations will be drafted in the tender for the private partner.

### ► Payroll regulation

Act on Health Care Providers<sup>89</sup> contains special provisions governing the minimum base component of salaries of specific medical staff working in inpatient facilities – doctors and dentists (Section 80a and 80b of the act), regardless of whether the facility is public or private.

Salaries of nurses are regulated by Act No. 553/2003 Coll. providing for the remuneration of certain employees for working in the public interest and on amending and supplementing other acts, which sets forth the payroll categories and groups of employees working in the public interest.

With respect to other than state-owned facilities, currently there is no special regulation of salaries of nurses and other health care staff, save for doctors and dentists working in inpatient health care facilities.

Slovak Constitutional Court found in its award No. PL. ÚS 13/2012 that Act No. 62/2012 Coll. providing for minimum salary entitlements of nurses and midwives amending Act No. 553/2003 Coll. providing for the remuneration of certain employees for working in the public interest and on amending and supplementing other acts, is contrary to Article 20 (1) in conjunction with Art. 1 (1) of Constitution.

According to Art. 125 (3) of the Constitution, as of the publication date of the award in the Collection of Laws of the Slovak Republic, Act No. 62/2012 Coll. providing for minimum salary entitlements of nurses and midwives amending Act No. 553/2003 Coll. providing for the remuneration of certain employees for working in the public interest and on amending and supplementing other acts shall no longer be effective. Slovak National Council failed to harmonise the statute with Slovak Constitution, as a result of which it lost validity as of 23.03.2014.<sup>90</sup>

In terms of Project feasibility, payroll regulation does not pose a significant risk, although it needs to be reflected in the Project costs. That said, it is necessary to consider the restriction of contractual freedom in the negotiations of work contracts with doctors and dentists and also the fact that the base component of salaries of doctors and dentists are linked to the average monthly pay of Slovak employees as established by the Slovak Statistical Office for the calendar year two years before the calendar year for which the base component of the salary is awarded.

<sup>89</sup> Section 80a and 80b of Act on Health Care Providers

<sup>90</sup> After six months of publication of this award in the Collection of Laws of the Slovak Republic, on 23.09.2013

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

### ► Organisation regulation

In terms of organisation regulation, the nUNB Project implementation Distribution is limited mainly by the following regulations:

- Government Regulation on Minimal Network

To ensure nUNB Project bankability and demand for nUNB services we recommend including nUNB on the list of end network of hospitals, and that by way of amending Government Regulation on Minimal Network. The end network of providers represents the providers of inpatient care within the minimal network, which offer inpatient health care in the relevant area.<sup>91</sup>

As per Section 7 of Act on Health Insurance Companies, HICs are obliged to enter into contracts on health care provision with health care providers at least in the extent of the minimal network of providers; where the public network of providers in the area is smaller than the public minimal network of providers, HICs are obliged to enter into contracts on health care provision with providers within the public network of health care providers. Including nUNB on the list of end network providers mitigates the risk of not being able to execute a contract between UNB and HIC.

A drawback of this mitigation measure is that it is impossible to include a hospital, which has yet to start its operations, into the end network. MOH has no capacity to oblige the Slovak Government to pass a change to the end networks of hospitals. Notwithstanding that, it is probable and legitimate to assume that the future private partner will require the undertaking of such commitment including the legal consequences of the failure to perform it.

An alternative mitigation measure would be the amendment of the provision of Section 7 (1) of Act on Health Insurance Companies consisting in the addition of an obligation of the HIC to sign a contract with a concession hospital.

### ► Regulation of medicinal products

In terms of regulation of medicinal products, the nUNB Project implementation Distribution is limited mainly by the following regulations:

- Act No. 362/2011 Coll. on medicinal products and medical equipment and on amending and supplementing other acts, as amended
- MOH Decree of 15 December 2010 No. OPL0410-S21802-OL-2010 providing for the List of Medicinal products and drugs fully or partially covered under public health insurance (Communication No. 539/2010 Coll.) as amended.

In terms of Project feasibility, regulation of medicinal products does not pose a significant risk, although the restrictions to contractual freedom in negotiating contracts with suppliers of medicinal products must be considered.

Regulation of medicinal products may pose a risk to Project implementation in terms of the DRG system implementation. Setting fixed prices of medicinal products will prevent nUNB from responding to changes in payments for health care provision, which will happen once the DRG system is implemented.

### ► Regulation of market access

Health care facilities including nUNB may be operated solely based on a licence<sup>92</sup>. Pursuant to Section 12 (3) of Act on Health Care Providers, the body competent to issue licences to legal entities – the relevant self-governing region will issued the licence if

- the entity designated a professional agent holding a licence to act as one in the field where the provider is slated to provide the health care<sup>93</sup>; if the applicant applied for operating an inpatient health care facility, the licence will be issued if it designated a professional agent holding a licence to act as one,
- the entity owns or rents premises where the health care services are to be provided,

<sup>91</sup> Section 5 (5) of Act on Health Care Providers

<sup>92</sup> Section 11 of Act on Health Care Providers

<sup>93</sup> Section 68 (1) (c) of Act on Health Care Providers

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

- the premises owned or rented comply with health protection requirements.

With reference to setting up the PPP models, it will be necessary to add to Section 12 (3) of Act on Health Care Providers the option of using the relation state – concessionaire with respect of the premises where the medical care is to be provided. Pursuant to Section 13 (5) (c) of Act on Health Care Providers an operator applying for licence is obliged to submit a certificate of ownership or a lease agreement for the premises where the health care services are to be provided. The option of submitting a concession contract will have to be added to the provision if the nUNB project is effect as a PPP.

To reduce the influence of third parties on the implementation and success of the nUNB Project, we recommend considering a change to the powers of MOH vested under Section 11 (1) (c) of Act on Health Care Providers to the effect that if the nUNB Project is realised, MOH will be the one to issue the licence for operating a concession hospital. In this respect, it would be necessary to add a definition of “concession hospital” to Act on Health Care Providers, specifically in Section 4 (a) (3), thus introducing a new type of health care provider with reference to the relevant provisions of Public Procurement Act.

Regardless of the type of nUNB operator (public or private), the operator must run nUNB in compliance with the statutory operation requirements.<sup>94</sup> Failure to comply with the requirements set forth in generally binding legal regulations may result in temporary suspension of the licence to operate a health care facility until such time when the deficiencies are redressed.<sup>95</sup>

MOH has the capacity to change the requirements applicable to the operation of health care facilities, in particular the requirements for staff and material and technical equipment of the individual types of such facilities.

### Specifics, risks, benefits and recommendations for the affected area

What is important with respect of impact of sector regulation on the Project implementation is the position of MOH towards nUNB and the relating degree of interest in:

- Revenues and expenses of nUNB
- Technical parameters of nUNB
- Operation licence of nUNB.

MOH is the crucial body of price regulation for the areas of goods, services and treatments in the health sector and cost of renting non-residential premises in health care facilities.<sup>96</sup> MOH has power to change the system of payments for health care provision and it may therefore influence the revenues of nUNB. HCSA is responsible for introducing the RDG system. Considering the influence MOH has over health sector regulation, we consider the participation of MOH in SPV would be an efficient tool of risk mitigation. Another mitigation tool would be the arrangement of a payment mechanism in the concession contract which would provide for fair and motivating compensation for the concessionaire and make room for flexible regulation in case of changes in price regulation.

Subject to the Specific Model, the largest interest in the functioning of nUNB is reserved for MOH, followed by IPPP and JV with state's minority interest and last but not least, CPPP without state's interest.

The individual models are further assessed separately in terms of their specifics, risks and benefits for the affected area. In conclusion of each section we provide a table summarising the identified Project feasibility risks, jointly with mitigation recommendations.

### A. CPPP

A specific feature of CPPP in terms of the analysed affected area of the 100% private ownership of the SPV realising the Project.

<sup>94</sup> E.g. MOH Regulation No. 553/2007 Coll. providing for details of the requirements for operation of health care facilities in terms of health protection, Government Regulation No. 752/2004 Coll. providing for issuance of quality indicators to assess the quality of health care provision, Decree of MOH of 10.9.2008 No. 09812/2008-OL on minimal requirements for staff, material and technical equipment of individual types of health care facilities

<sup>95</sup> Section 18 (2) of Act on Health Care Providers

<sup>96</sup> Section 20 (3) of Act No. 18/1996 Coll. on prices as amended

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

The following risks have resulted from the assessment of the legal framework governing the system of relations and the consequences the implementation will have for the system if the CPPP model is used:

- ▶ Risk of non-bankability and financial unaffordability on account of:
  - Changes in the method and amount of health care payments (DRG system introduction)
  - Changes in the prices of health care treatments
  - Changes in personnel costs
  - Impairment of nUNB efficiency by reason of prescribed technical and staff regulation

Depending on the extent of materialisation of the above risks, the Project may be viewed as non-bankable by the financial sector or costs of the initial investment and the overall Project costs may increase.

In terms of sector regulation, a benefit of CPPP, as compared to JV and Specific Model, is the market feedback regarding the individual areas of sector regulation in the public procurement process, including specific proposals for amending any provisions impairing efficiency and profitability. In the public procurement process, it is also possible to mitigate the risk attached to technical and staff regulation.

Adverse effects of the DRG system implementation may be mitigated by way of suitable regulation of the payment mechanism contained in the concession contract, in particular by agreeing conditions for calculating adverse effects of the DRG system implementation and arranging a method for compensating any such shortages, or by distributing the risks so that the concessionaire does not bear the risk of such future changes it cannot reasonably manage.

The risk attached to price regulation should be viewed from two angles – in terms of the consequences of the current legal regulation and in terms of effects of the future changes to the sector regulation. It may be said that generally, the effects of the current legal regulation may be mitigated, if need be, by way of legislative changes, and the effects of future changes to sector regulation may be mitigated by providing the payment mechanism in the concession contract or by distributing the risks so that the concessionaire does not bear the risk of such future changes it cannot reasonably manage. On the other hand, it is advisable that the regulation allow for potential benefits connected to price regulation in favour of the concessionaire and commensurate share of state in such benefits.

The risk of changes in the prices for health care treatments and the risk of changes to personnel costs triggered by regulatory interventions can also be mitigated by way of a suitable setup of the payment mechanism in the concession contract, which would provide for fair and motivating compensation for the concessionaire and make room for flexible regulation in case of changes in price regulation, or of the risk distribution (respectively).

| Model | RISK  | MITIGATION   |
|-------|---|--|
| CPPP  | DRG system introduction   | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Market feedback regarding DRG setup in the process of public procurement<br>Legislative changes                  |
|       | Changes in prices for health care treatments                              | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Market feedback regarding pricing of health care treatments within the public procurement<br>Legislative changes |
|       | Changes in personnel costs  | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Legislative changes  |
|       | Impairment to nUNB efficiency by reason of technical and staff regulation | Market feedback regarding technical and staff regulation in the process of public procurement<br>Legislative changes   |

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

### B. IPPP

The feature of IPPP in terms of sector regulation is the state's position as minority owner of SPV<sup>97</sup>.

The following risks have resulted from the assessment of the legal framework governing the system of relations and the consequences the implementation will have for the system if the IPPP model is used:

- ▶ Risk of non-bankability and financial unavailability on account of:
  - Changes in the method and amount of health care payments (DRG system introduction)
  - Changes in the prices of health care treatments
  - Changes in personnel costs
  - Impairment of nUNB efficiency by reason of prescribed technical and staff regulation.

Depending on the extent of materialisation of the above risks, the Project may be viewed as non-bankable by the financial sector or costs of the initial investment and the overall Project costs may increase.

In terms of sector regulation, a benefit of IPPP, as compared to JV and Specific Model, is the market feedback regarding the individual areas of sector regulation in the public procurement process, including specific proposals for amending any provisions impairing efficiency and profitability. In the public procurement process, it is also possible to mitigate the risk attached to technical and staff regulation.

Adverse effects of the DRG system implementation may be mitigated by way of suitable regulation of the payment mechanism contained in the concession contract, in particular by agreeing conditions for calculating adverse effects of the DRG system implementation and arranging a method for compensating any such shortages, or by distributing the risks so that the concessionaire does not bear the risk of such future changes it cannot reasonably manage.

The risk attached to price regulation should be viewed from two angles – in terms of the consequences of the current legal regulation and in terms of effects of the future changes to the sector regulation. It may be said that generally, the effects of the current legal regulation may be mitigated, if need be, by way of legislative changes, and the effects of future changes to sector regulation may be mitigated by providing the payment mechanism in the concession contract or by distributing the risks so that the concessionaire does not bear the risk of such future changes it cannot reasonably manage. On the other hand, it is advisable that the regulation allow for potential benefits connected to price regulation in favour of the concessionaire and commensurate share of state in such benefits.

The risk of changes in the prices for health care treatments and the risk of changes to personnel costs triggered by regulatory interventions can also be mitigated by way of a suitable setup of the payment mechanism in the concession contract or of the risk distribution.

| Model | RISK   | MITIGATION   |
|-------|--|--|
| IPPP  | DRG system introduction                      | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Market feedback regarding DRG setup in the process of public procurement<br>Legislative changes                  |
|       | Changes in prices for health care treatments | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Market feedback regarding pricing of health care treatments within the public procurement<br>Legislative changes |
|       | Changes in personnel costs                   | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Legislative changes  |

<sup>97</sup> To prevent that SPV is in the position of contracting authority.



## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

Impairment to nUNB efficiency by reason of technical and staff regulation

Market feedback regarding technical and staff regulation in the process of public procurement  
Legislative changes

### C. JV

One of the specific features of the JV model with respect of the analysed affected area is the joint participation of the public and the private sector in SPV. The liability for Project implementation is fully borne by JV and puts the state into a position of total dependency on the consensus with the private partner. Execution of a concession contract or a similar contract, between the state and JV would constitute circumvention of Public Procurement Act.

The following risks have resulted from the assessment of the legal framework governing the system of relations and the consequences the implementation will have for the system if the JV model is used:

- Risk of non-bankability and financial unaffordability on account of:
  - Changes in the method and amount of health care payments (DRG system introduction)
  - Changes in the prices of health care treatments
  - Changes in personnel costs
  - Impairment of nUNB efficiency by reason of prescribed technical and staff regulation.

In terms of sector regulation, a drawback of JV, as compared to CPPP and IPPP, is the absence of market feedback regarding the individual areas of sector regulation in the public procurement process. In the public procurement process, it is therefore impossible to mitigate the risk attached to technical and staff regulation. Although we understand that in this case, too, the private partner would be selected in a transparent tender, the absence of mechanisms of public procurement and of the concession contract would be a disadvantage in this respect.

The only mitigation measure feasible with JV and the affected area of sector regulation would be legislative changes to the regulations governing pricing, technical and staff regulation, which would impair profitability and efficient provision of health care.

The adverse consequences of DRG implementation cannot be mitigated by way of a suitable setup of the payment mechanism in the concession contract, as the JV model reckons with a market-driven JV, without any avenues of mitigating the negative influence of sector regulation on the revenues and expenses of JV in the concession contract.

| Model | RISK  | MITIGATION          |
|-------|---|---------------------|
| JV    | DRG system introduction   | Legislative changes |
|       | Changes in prices for health care treatments                              | Legislative changes |
|       | Changes in personnel costs  | Legislative changes |
|       | Impairment to nUNB efficiency by reason of technical and staff regulation | Legislative changes |

### D. Specific Model

With respect of the analysed affected area, the main feature of the Specific Model is the state's absolute control over SPV; in practical terms this means that in some cases, the state will act on both sides of the barricades – as the owner of SPV and at the same time as the industry regulator or the person determining the terms and conditions of

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

Project performance. The duality of the state's position appears to constitute an advantage in terms of enforcing the changes in sector regulation (if needed), but on the other hand promoting the mitigation of adverse effects triggered by changes in sector regulation.

The following risks have resulted from the assessment of the legal framework governing the system of relations and the consequences the implementation will have for the system if the Specific Model is used:

- Risk of non-bankability and financial unaffordability on account of:
  - Changes in the method and amount of health care payments (DRG system introduction)
  - Changes in the prices of health care treatments
  - Changes in personnel costs
  - Impairment of nUNB efficiency by reason of prescribed technical and staff regulation.

Depending on the extent of materialisation of the above risks, the Project may be viewed as non-bankable by the financial sector or costs of the initial investment and the overall Project costs may increase.

In terms of sector regulation, a drawback of Specific Model, as compared to CPPP and IPPP, is the absence of market feedback regarding the individual areas of sector regulation in the public procurement process and concrete proposals of changes to the provisions impairing efficiency and profitability. In the public procurement process, it is impossible to mitigate the risk attached to technical and staff regulation as SPV wholly owned by MOH will be the health care provider and not the entity chosen in the tender.

Adverse effects of the DRG system implementation may be mitigated by way of suitable regulation of the payment mechanism contained in the concession contract, in particular by agreeing conditions for calculating adverse effects of the DRG system implementation and arranging a method for compensating any such shortages, or by distributing the risks so that the concessionaire does not bear the risk of such future changes it cannot reasonably manage. In addition, state's 100% ownership of SPV will most likely be a huge driver for the state to introduce the DRG system so as not to endanger nUNB and the Project as such.

The risk attached to price regulation should be viewed from two angles – in terms of the consequences of the current legal regulation and in terms of effects of the future changes to the sector regulation. It may be said that generally, the effects of the current legal regulation may be mitigated, if need be, by way of legislative changes within the competence of MOH, and the effects of future changes to sector regulation may be mitigated by providing the payment mechanism in the concession contract or by distributing the risks so that the concessionaire does not bear the risk of such future changes it cannot reasonably manage. On the other hand, it is advisable that the regulation allow for potential benefits connected to price regulation in favour of the concessionaire and commensurate share of state in such benefits.

The risk attached to the changing of prices of health care treatments and the risk of changes to personnel costs triggered by regulation interventions may also be mitigated by way of a suitable setup of the payment mechanism in the concession contract or of the risk distribution.

Moreover, compared to the other models, MOH's 100% ownership in SPV will be one more reason for the state to opt for a method of realising pricing regulation changes, which will not jeopardise nUNB and the Project as such.

| Model          | RISK   | MITIGATION  |
|----------------|--|---|
| Specific Model | DRG system introduction                      | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Legislative changes |
|                | Changes in prices for health care treatments | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Legislative changes |
|                | Changes in personnel costs                   | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Legislative changes |

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

|  |   |                     |
|--|---|---------------------|
|  | Impairment to nUNB efficiency by reason of technical and staff regulation | Legislative changes |
|--|---|---------------------|

### Consideration of individual models

With reference to the affected area of sector regulation, all the models compared are feasible. In terms of feasibility risks and mitigation methods, the most beneficial seems to be the Specific Model, thanks to its low weight of risks and high viability of mitigation measures. The model is considered beneficial on account of MOH's ability to influence sector regulation and the setup and introduction of the DRG system. As opposed to that, CPPP and IPPP both have the advantage of yielding market feedback regarding the questions of sector regulation configuration. Of those two, the IPPP model appears to be better compared to CPPP on account of MOH's participation in IPPP and the increased motivation to enforce measures leading towards optimising sector regulation. CPPP model follows with its medium weight of risks and medium viability of mitigation measures, as it enables to combine mitigation measures relating to the concession contract and the public partner's participation in SPV, which may improve the negative perception of the private partner being the largest health care provider in the region. The CPPP model could motivate MOH through the setting up of the payment mechanism in the concession contract to optimise the sector regulation and abstain from any intervention, which would adversely impact the nUNB operation. The weight of CPPP risks appears to be high, with medium effect of the mitigation measures. The JV model appears to be feasible with respect of MOH's participation in JV and the resulting interest of MOH in the running of the Project, yet it is risky because of the absence of the market feedback and the options of negotiating a suitable distribution of risks and the payment mechanism in the concession contract.

### Summary table

| Risk  | CPPP   | IPPP   | JV                  | Specific Model  |
|---|--|--|---------------------|---|
| Introduction of the DRG system              | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Market feedback regarding DRG setup in the process of public procurement<br>Legislative changes                  | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Market feedback regarding DRG setup in the process of public procurement<br>Legislative changes                  | Legislative changes | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Legislative changes |
| Changes in prices of health care treatments | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Market feedback regarding pricing of health care treatments within the public procurement<br>Legislative changes | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Market feedback regarding pricing of health care treatments within the public procurement<br>Legislative changes | Legislative changes | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Legislative changes |
| Changes in personnel costs                  | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Legislative changes  | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Legislative changes  | Legislative changes | Suitable setup of risk distribution and payment mechanism in the concession contract<br>Legislative changes |

## Assessment of the current legal framework and the need/options of amending it in the wake of implementation of the preferred model

|   |   |   |                     |                     |
|---|---|---|---------------------|---------------------|
| Restrictions of<br>nUNB efficiency by<br>way of technical<br>and staff<br>regulations | Market feedback regarding<br>technical and staff<br>regulation in the process of<br>public procurement<br><br>Legislative changes | Market feedback regarding<br>technical and staff<br>regulation in the process of<br>public procurement<br><br>Legislative changes | Legislative changes | Legislative changes |
|---|---|---|---------------------|---------------------|

## **Analysis of legal consequences of the Project in terms of (i) Slovakia's international commitments, (ii) Slovak Constitution, and (iii) Slovakia's generally binding legal regulations**

### Basic description of the affected area

In this part of the report, we focus on the consequences of Project implementation with respect of:

- ▶ International commitments of Slovakia,
- ▶ Slovak Constitution,
- ▶ Generally binding regulations applicable in Slovakia.

As opposed to the section "Assessment of legal framework and the need/options of amending it" we have analysed the individual layers of the hospital PPP through the prism of state and its commitments following from the state's membership in various international organisations, treaties, primary and secondary regulations of Community law, Slovak Constitution, constitutional acts and last but not least the Slovak generally binding legal regulations implementing the provisions of Slovak Constitution.

The analysis in this section provides answers to whether with respect of the Project implementation, there is a risk of Slovakia defaulting on its commitments or conversely, whether the Project implementation can help the performance of these commitments or is essential for the performance.

As part of the analysis of consequences for the generally binding legal regulations, we included a summary of the proposed or recommended changes to the generally binding legal regulations applicable in Slovakia.

The impact of Project implementation on Slovakia's obligations are analysed individually in the following areas:

- ▶ Protection of health
- ▶ Science and development
- ▶ Public procurement
- ▶ Budgetary responsibilities.

Proposals of the changes to be made to Slovakia's generally binding legal regulations with respect of the Project implementation are summarised in section Legal framework of the affected area.

### Legal framework of the affected area

#### *Health protection*

##### **(i) International commitments**

The aim of the existing legal framework of the health care sector is to fulfil one of the main tasks of the state, and that is to secure the right to health care. The right to health care is an economic, social and cultural right to have access to standard health care and it is vested with everyone.

The concept of the right to protection of health is anchored in two acts of the international public law, including Universal Declaration of Human Rights, International Covenant on Economic, Social and Cultural Rights and UN Convention on the Rights of Persons with Disabilities. National legislation may set forth the right to protection of health differently and have its own definition of the term 'health' and define the group of institutions responsible for securing the right to health.

According to Article 25 of the Universal Declaration of Human Rights, Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.

International Covenant on Economic, Social and Cultural Rights provides in Article 12:

*“The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for:*

- (a) The provision for the reduction of the stillbirth-rate and of infant mortality and for the healthy development of the child;*
- (b) The improvement of all aspects of environmental and industrial hygiene;*
- (c) The prevention, treatment and control of epidemic, endemic, occupational and other diseases;*
- (d) The creation of conditions which would assure to all medical service and medical attention in the event of sickness.”*

According to Article 7 (5) of Slovak Constitution, international treaties on human rights and fundamental freedoms, international treaties whose executions does not require a law and international treaties which directly establish rights or obligations of natural persons or legal persons and which were ratified and promulgated in a manner laid down by law shall have primacy over the laws. Having regard to Slovakia's membership in the EU, Slovakia is also bound by the provisions of TFEU. Good health of the state's inhabitants is one of the main objectives pursued by the EU, with the EU making efforts to achieve the highest standard of health protection by way of pan-European initiatives and activities as per Article 168 TFEU.

Notwithstanding that, the designing the national policies in the area of health protection and health care provision is left to the discretion of individual member states. EU policies and initiatives are therefore not intended to interfere with the organisation of health care provision in the member states.

Despite the strategy of not interfering with the national health care regulations, to secure access to health care to inhabitants of the member states in any other EU member state, the EU adopted Directive 2011/24/EU of the European Parliament and of the Council of 9 March 2011 on the application of patients' rights in cross-border health care, which lays down the legal framework for:

- ▶ Definition of patient's rights with respect to cross-border health care
- ▶ Providing for security, quality and efficiency of health care to be provided to citizens of other member states
- ▶ Supporting cooperation between the member states in the area of health care provision.

## **(ii) Slovak Constitution**

Pursuant to Article 40 of Slovak Constitution, everyone has a right to the protection of health. Based on public insurance, citizens have the right to free health care and to medical supplies under conditions which shall be laid down by law. Article 40 of Slovak Constitution must be interpreted with reference to Article 51 (1) of Slovak Constitution and the right to free health care may be exercised only within the bounds of the laws implementing these provisions. This, however, shall be without prejudice to Article 7 (2) of Slovak Constitution, under which legally binding acts of the European Communities and of the European Union shall have preference over the laws of the Slovak Republic.

## **(iii) Generally binding legal regulations**

At the level of generally binding legal regulations, the right to access to health care is set forth in Act on Health Care, under which everyone enjoys the right to the provision of health care. The right to the provision of health care and health care related services, including cross-border health care, is guaranteed to everyone considering the principle of equal treatment within health care.<sup>98</sup>

<sup>98</sup> Section 11 (1) and (2) of Act on Health Care

#### **(iv) Impact of Project implementation on Slovakia's commitments**

Overall, successful Project implementation will positively affect Slovakia's commitments in the area of health care. On condition of reasonably setting up and implementing the Project, nUNB will provide health care in line with Act on Health Care and will secure access to health care for the entire catchment area of Bratislava region.

Slovakia's commitment to ensure the right to protection of health could be violated in the event nUNB does not meet capacity or quality requirements applicable to health care provision and negotiated with MOH.

### *Science and research*

#### **(i) International commitments**

Pursuant to Article 179 of TFEU, the EU shall have the objective of strengthening its scientific and technological bases by achieving a European research area in which researchers, scientific knowledge and technology circulate freely, and encouraging it to become more competitive, including in its industry, while promoting all the research activities deemed necessary by virtue of other Chapters of the Treaties.

Pursuant to Article 182 of TFEU, a multiannual framework programme, setting out all the activities of the Union, shall be adopted by the European Parliament and the Council, acting in accordance with the ordinary legislative procedure after consulting the Economic and Social Committee. The framework programme shall establish the scientific and technological objectives to be achieved by the activities provided for in Article 180 and fix the relevant priorities, indicate the broad lines of such activities, fix the maximum overall amount and the detailed rules for Union financial participation in the framework programme and the respective shares in each of the activities provided for.

The new EU framework programme for financing research and innovation is styled Horizon 2020. It is the main tool for realising the main initiative called Innovation Union and the performance of the commitments following from it<sup>99</sup> and the execution of the conclusions made at the meeting of the European Council of 4 February 2011 and resolution of the European Parliament of 12 May 2011 on Innovation Union.

#### **(ii) Slovak Constitution**

Slovak Constitution does not directly lay down Slovakia's commitments in the field of science and research. That said, provision of Article 7 (2) of Slovak Constitution states that legally binding acts of the European Communities and European Union shall have primacy over the laws of the Slovak Republic. According to Article 1 (2) of Slovak Constitution, the Slovak Republic recognizes and honours general rules of international law, international treaties by which it is bound and its other international obligations.

#### **(iii) Generally binding legal regulations**

The conditions for providing state aid in support of research and development, the position and tasks of agencies operating in the field of science and technologies, including Slovak Research and Development Agency, long-term plan of the state's research and technology policy, national program for the development of science and technology and information technologies are provided in Act No. 172/2005 Coll. on the organisation of state support of research and development amending Act No. 575/2001 Coll. on the organisation of government's activities and the organisation of central state administration, as amended.

#### **(iv) Impact of Project implementation on Slovakia's commitments**

Overall, successful Project implementation will positively affect Slovakia's commitments in the area of science and research. nUNB will be a university hospital, and by way of the contracts on practical training to be executed with Universities and research institutions, it will provide space for development of science and research and the performance of the tasks following from Innovation Union.

---

<sup>99</sup> E.g. the obligation to create knowledge-based alliances between undertakings and academic institutions

Slovakia's commitments in the field of science and research, including the commitment to create knowledge alliances between businesses and academic institutions could be violated in the event nUNB does enter into contracts on practical training and will not cooperate with research institutions.

### *Public procurement*

#### **(i) International commitments**

On 06.04.2014 came into effect the revised WTO Agreement on Government Procurement ("GPA"), international treaty of the World Trade Organisation ("WTO"). GPA jointly binds 15 parties of the agreement, namely Armenia, Canada, EU and its 28 member states, The Netherlands with respect to its overseas territory Aruba, Hong Kong, Island, Israel, Japan, Korea, Lichtenstein, Norway, Singapore, USA, Switzerland and Taipei to comply with the international standards, principles and tools of procurement.

GPA is to date the only legally binding agreement in the WTO focusing on the subject of government procurement. The agreement binds the parties to jointly make accessible their markets to each other and enable entities of all GPA parties to participate in procurement procedures subject to previously agreed and transparent rules.

One of the fundamental goals of GPA is the adoption of an efficient multilateral framework for public procurement, higher degree of liberalisation, expansion and improvement of international trade. The application of GPA is intended to facilitate free movement of goods, work and services and prevent any favouritism or preferential treatment to local tenderers as opposed to other GPA parties. If a contract is awarded by MOH, it exceeds the threshold of SDR 5,000,000<sup>100</sup> and involves public works; it is subject to GPA provisions, which have preference over the law as per Article 7 (2) of Slovak Constitution.

The award of public contracts by bodies of member states or on their behalf must comply with TFEU principles, in particular with the principle of free movement of goods, freedom of establishment and freedom to provide services, as well as the principles following therefrom, such as the principle of equal treatment and non-discrimination, mutual recognition, proportionality and transparency. Public procurement plays a prominent role in the Europe 2020 growth strategy formulated in Commission Communication of 3 March 2010 styled Europe 2020 – a growth strategy to promote smart, sustainable and inclusive growth as one of the market-oriented tools to be used to achieve smart, sustainable and inclusive growth and advance efficient use of public funds.

Directive 2014/23/EU<sup>101</sup> sets forth the rules of procurement procedures applied by contracting authorities and contracting entities through concession contracts with estimated value no less than the threshold provided in Article 8 of this Directive.

Directive 2014/24/EU sets forth the rules of public procurement procedures used by contracting authorities to award public contracts, design contests with estimated value no less than the threshold provided in Article 4 of this Directive.<sup>102</sup>

#### **(ii) Slovak Constitution**

Slovak Constitution does not directly provide Slovakia's commitments in the field of public procurement. That said, provision of Article 7 (2) of Slovak Constitution lays down that the legally binding acts of the European Communities and of the European Union have preference over the laws of the Slovak Republic. Pursuant to Article 1 (2) of its Constitution, Slovakia acknowledges and observes the general rules of international law and international treaties binding upon it and its other international commitments.

#### **(iii) Generally binding legal regulations**

Public Procurement Act governs the award of public supply contracts, public works contracts, public service contracts, design contents and public procurement administration. The award of contracts must comply with the principle of equal treatment, non-discrimination of candidates or tenderers, principle of transparency and principle of

<sup>100</sup> Special drawing rights are a single currency and accounting unit used by the International Monetary Fund

<sup>101</sup> The directive comes into effect on the 20<sup>th</sup> day after its publication in the OJ of the EU and does not apply to concessions offered or granted before 17 April 2014

<sup>102</sup> Member states are obliged to give effect to statutes, other legal regulations and administrative regulations necessary to obtain harmonisation with this directive before 18 April 2016



efficiency economy and effectiveness. Public Procurement Act also provides that candidates and tenderers established in member states enjoy the same favourable conditions of contract award as those applied to candidates and tenderers from third countries subject to GPA application.

#### **(iv) Impact of Project implementation on Slovakia's commitments**

Breach of Slovakia's obligations in the field of public procurement could trigger revision actions.

Each member state is responsible for the application of EU law within its own national legal framework. Under TFEU, the Commission is responsible for correct application of EU law. Accordingly, where a member state fails to fulfil an obligation following from EU law, Commission proper is authorised to make efforts to stop such non-performance (action initiated for failure to fulfil obligations) and if need be, the case is referred to ECJ. In response to a complaint or indication of violation established by the Commission proper, it will adopt a measure which it considers most appropriate.

Everyone may submit a complaint to the Commission against any measure (act, other legal regulation or administrative measure) or procedure of a member state, if the complaint believes that it is contrary to a provision of principle of Community law.

Everyone who is of the opinion that a certain measure (act, other legal regulation or administrative measure) or procedure is contrary to Community law may seek remedy at national administrative or judicial bodies (including national or regional ombudsman and/or by way of arbitration or mediation, if available), either before filing complaint to the Commission or concurrently with such filing. Before filing his complaint, the Commission recommends first exhausting all remedial actions, administrative, judicial or other, which are available nationally on account of the benefits that follow for the complainant.

On national level, these revision procedures are set forth in Public Procurement Act.

#### *Budgetary responsibility*

Slovakia's commitments in terms of budgetary responsibility are defined in the national or EU legislation. Despite different approaches to the definition of rules, their joint aim is to prevent governments from generating high deficits leading to unsustainable levels of public debt, to improve credibility of the budgetary process and reduce the information disproportion by way of publishing relevant indicators.

#### **(i) International commitments**

The Stability and Growth Pact is an agreement under which member states (mostly Eurozone countries) are obliged to comply with budgetary discipline. The Stability and Growth Pact consists of the Resolution of the European Council on the Stability and Growth Pact of 17 June 1997 and the following two :

- ▶ Council Regulation (EC) 1466/97 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies (this being the preventive arm);
- ▶ Council Regulation (EC) 1467/97 on speeding up and clarifying the implementation of the Excessive Deficit Procedure, where the budget deficit of a member state exceeds the 3% ceiling of GDP (this being the corrective arm).

The Pact has two mainstays, which are formulated by the two regulations: the preventive arm and the corrective arm. The preventive arm involves multilateral control of budgetary policies in the member states. The corrective arm is in place to govern excess deficits triggered by either the deficit or the debt threshold:

- ▶ Deficit threshold: government budget deficit is considered excessive if it exceeds the 3 % of GDP threshold at market prices, or
- ▶ Debt threshold: a government debt level above 60% of GDP, which has not been reduced by 1/20th of the debt annually over the last three years.

The excessive debt procedure also lays down sanctions imposed for breaches (Article 126 (11) TFEU). As a rule, the sanctions for Eurozone states involves a fine having two components – a fixed component (0.2 % GDP) and a variable component (max. 0.5 % GDP for both components). Further sanctions for Eurozone states are defined in

Regulation (EU) No 1173/2011 of the European Parliament and of the Council of 16 November 2011 on the effective enforcement of budgetary surveillance in the euro area. Sanctions are imposed at various stages of the excessive debt procedure and entail interest-free deposits of 0.2% and a fine of 0.2% of GDP for previous years. Under the same regulation fines for manipulating statistics are calculated and imposed.

The method of calculating government debt is provided in ESA 10.

## **(ii) Slovak Constitution**

Slovakia's obligations with respect of budgetary responsibility are further formulated in Constitutional Act on Budgetary Responsibilities.

Constitutional Act on Budgetary Responsibilities defines the rules of budgetary responsibility. Rules of budgetary responsibility are intended to facilitate such public administration, which in both short and long term maintain sustainable level of government debt.

The primary rule of budgetary responsibility is the public administration debt ceiling of 50% relative to GDP. The debt definition mirrors the definition of Eurostat (Maastricht debt level). The failure to comply with the limit comes with sanction bands starting at 10% of GDP under the limit, i.e. 40% of GDP. Sanctions begin with a symbolic written notice of the Finance Ministry including a proposal of the measures to cut the debt and end with a request for balanced and in extreme cases with a vote of government confidence. The 'debt brake' is a resort of last instance, aimed at reversing a full disintegration of public finance and prevent the country from becoming insolvent with respect to financial markets. This should not be seen as a tool of operative management of public finance.

By reason of interim provisions of the act, the above debt thresholds will be place come 2027. In the transition period until 2017, the debt ceiling is 60% relative to GDP. Starting in 2018 the thresholds triggering sanction mechanisms equally as the government debt ceiling will gradually decrease each year by 1 percentage point until the ceiling reaches 50 % of GDP.

The effects of the budgetary responsibility policy of the gross debt of public administration on GDP subject to the sanction mechanisms applicable in 2012 -2017 are as follows:

- ▶ With debt level of 50 – 53 % of GDP – Slovak Finance Ministry sends to Slovak National Council a written notice containing explanation of the debt level including proposals for cutting the debt.
- ▶ With debt level of 53 – 55 % HDP – Slovak Government submits for negotiation to Slovak National Council the proposals of measures it intends to use to cut debt and the salaries of members of Slovak Government are reduced to the level of their salaries in the previous fiscal year.
- ▶ With debt level of 55 – 57 % HDP – Slovak Finance Ministry blocks state budget expenses at 3% of overall state budget expenses (except for state debt service costs, EU funds, contributions to the EU, Social Insurance Agency transfers), and at the same time the government must not present to the National Council a state budget proposal, which has a year-to-year nominal growth of total public expenses (except for state debt service costs, EU funds, contributions to the EU, financing contributions to EU funds, costs of liquidation of natural catastrophes) and the self-governments are obliged to pass budget expenses of no more than the level of budgeted expenses for the previous year.
- ▶ With debt level of 57 – 60 % HDP – Slovak Government must not submit to Slovak National Council a public administration budget proposal with a budget deficit and self-governments can only pass a balanced budget or budget surplus.<sup>103</sup>

## **(iii) Generally binding legal regulation**

Budgetary responsibility rules are also defined at the level of generally binding legal regulations, which govern budgetary rules of public administration and budgetary rules for territorial self-government. These include Act on Budgetary Rules of Territorial Self-Government and Act on Budgetary Rules of Public Government.

Special regulation deficit-wise is embodied in State Budget Act adopted yearly. Pursuant to Section 2 (1) Act No. 473/2013 Coll. on state budget for the year 2014, in the course of the current year, Slovak Government, or Finance

<sup>103</sup> Constitutional Act No. 493/2011 Coll. on budgetary responsibility provides opt out clauses from the application of the measures provided in Art. 5 (10), (11) and (12)

Minister if designated by Slovak Government, may adjust the binding state budget indicators for 2014 stated in Annex 2 to Annex 6. However, such adjustments must not hike the 2014 state budget deficit.

Pursuant to provision of Section 19 (5) of Act on Budgetary Rules of Public Administration, MOH is authorised to enter into a concession contract for public works, if the value of the concession as proposed in the concession contract is equal or higher than EUR 5,000,000, only subject to prior consent of Slovak Government. A prerequisite of the document submitted for reading by Slovak Government is the position of MOF to the draft of such concession contract in terms of the impact of its implementation on the public debt reporting within the single methodology valid in the EU.

#### **(iv) Impact of Project implementation on Slovakia's commitments**

Implementation of the Project will affect Slovakia's capacity to meet its obligations in the area of budgetary responsibility. The degree of Project implementation impact will depend on the Project structuring or the choice of the specific Project implementation model and the classification of Project costs as per ESA 10.

The amount of 2013 gross public debt was published by Eurostat on 23 April 2013<sup>104</sup>. The debt expressed as a percentage of the gross domestic product amounted to 55.4%. This figure exceeds the second 55% relative to GDP threshold defined by the Constitutional Act and at the same time lower than the third threshold of 57% of GDP. This triggered the procedure, which should result in debt reduction below 55% GDP.

Because the figure exceeded the 55% limit, Slovak Finance Ministry is lock state budget expenses at 3 % of the overall state budget expenses (except for state debt service costs, EU funds, contributions to the EU, Social Insurance Agency transfers) and at the same time the government must not present to the National Council a state budget proposal, which has a year-to-year nominal growth of total public expenses (except for state debt service costs, EU funds, contributions to the EU, financing contributions to EU funds, costs of liquidation of natural catastrophes) and the self-governments are obliged to pass budget expenses of no more than the level of budgeted expenses for the previous year.

Regarding the public debt indicators, the Project cannot be realised at the expense of a public debt increase.

#### **Proposals for making amendments to the generally binding legal regulations applicable in Slovakia**

The Project implementation comes with risks, which may be and should be mitigated by way of amendments to the Slovak generally binding legal regulations. A detailed description of the reasons and conditions for making such amendments to the generally binding legal regulations is contained in the individual sections of the legal analysis, but for sake of convenience, we provide a summary of the affected legal regulations in this section. Please note that with a venture as comprehensive as the nUNB Project, it is impossible to anticipate all the legislative changes, which will be required for implementing the Project successfully. In this respect, it will be essential to consider thoroughly the feedback received from the Project implementation tenderers so that the Project be bankable, financially accessible and attractive for the investor and it efficiently pursue the strategic objectives of the state in the area of health care.

With respect to the assessment of the current legal framework and the needs/options of amending it by reason of implementing the preferred choice, especially with focus on the consequences for the existing network of relations within the region, we propose considering the following legislative changes:

- ▶ amending Government Regulation on Minimal Network, in particular with respect to the end network of providers so as to include nUNB into the network,
- ▶ amending Section 7 (1) of Act on Health Insurance Companies, by way of adding the obligation of HICs to enter into a contract with the concession hospital and maintain it throughout the entire concession term,
- ▶ amending Act on Health Care by way of adding definition of 'concession hospital', in particular in Section 4 (a) (3) as a new type of health care provider with reference to the relevant provisions of Public Procurement Act,
- ▶ amending Section 11 (1) (c) of Act on Health Care Providers by way of extending MOH's powers to issue licence to operate a concession hospital.

<sup>104</sup> Eurostat Provision of deficit and debt data for 2013 - first notification

In connection to evaluating the current legal framework and the needs/options of amending it by reason of implementing the preferred choice, especially with focus on the sweeping sector regulation, we propose considering the following legislative changes:

- ▶ amending Regulation No. 07045/2003 – OAP - (Annex 4) providing for price regulation and conditions for regulating prices of health care treatments, to introduce special consideration for one-day inpatient stays,
- ▶ amending MOH Regulation No. 553/2007 Coll. providing for specifics of the operation of health care facilities in terms of health protection<sup>105</sup>,
- ▶ amending MOH Decree No. 09812/2008-OL on minimum requirements for staff and material and technical equipment of individual types of health care facilities (Communication No. 410/2008 Coll.)<sup>106</sup>
- ▶ amending Section 12 (3) of Act on Health Care Providers consisting in the adding of using the relation state – concessionaire with respect to premises where health care services are to be provided,
- ▶ amending Section 13 (5) (c) of Act on Health Care Providers to the effect that the operator applying for licence is obliged to submit a certificate proving ownership of the premises or a lease contract for the premises where the health care services are to be provided. In the event nUNB will be realised as a PPP project, the option of submitting a concession contract will have to be added to the provision,
- ▶ amending MOH Regulation No. 07045/2003 – OAP of 30 December 2003 providing the scope of price regulation in health care.<sup>107</sup>

With respect to the consideration of legal consequences of closing down the existing health care providers, identification of legal tools/structures supporting fluent transfer/transition and settlement of existing legal relations, we did not identify any need to amending legal regulations. As regards the Specific Model, it would be possible to consider the adoption of a special act on nUNB, which would provide the establishment of nUNB by operation of law and outline the legal position of nUNB with respect to UNB, including provisions governing the transfer/transition of legal relations from UNB to nUNB.

With respect to the evaluation of potential consequences for the legal relations to the existing assets intended for the Project realisation, we did not identify any need of legislative changes or the adoption of special regulation. In terms of the Specific Model, it would be advisable to consider the adoption of a special act on nUNB, which would cover a mechanism enabling the transfer/transition of assets from UNB to nUNB.

In connection with the consideration of legal consequences of the Project implementation in terms of building regulations, we did not identify any need to change the regulations.

In connection with the consideration of risks attached to potential bankruptcy of the private partner, we recommend considering the following legislative changes:

- ▶ adopting special regulation, under which JV assets or SPV assets would be excluded from Enforcement Code,
- ▶ amending Bankruptcy Act; alternatively the adoption of special legal regulation for the JV and Specific Model to exclude JV or SPV assets from Bankruptcy Act,
- ▶ adopting special regulation with respect of JV and Specific Model, the subject of which would be the establishment of statutory pre-emptive right to the ownership interest in JV or SPV, as the case may be.

In connection with the consideration of legal aspects of the proposed payment mechanisms in place between the partners, we recommend considering the following legislative changes:

- ▶ amending Section 7 (2) of Act on Health Insurance<sup>108</sup>. This amendment would be intended to exercise competitive pressure on HICs and at the same time enable their clients to exercise their right to select their HIC

<sup>105</sup> It is probable that in terms of efficiency of nUNB operation, it will be necessary to change the parameters of the above regulations. Concrete proposals for changing the regulations will most likely be shaped during the selection of the private partner in the procurement procedure.

<sup>106</sup> It is probable that in terms of efficiency of nUNB operation, it will be necessary to change the parameters of the above regulations. Concrete proposals for changing the regulations will most likely be shaped during the selection of the private partner in the procurement procedure.

<sup>107</sup> It is probable that in terms of efficiency of nUNB operation, it will be necessary to change the parameters of the above regulations. Concrete proposals for changing the regulations will most likely be shaped during the selection of the private partner in the procurement procedure.

more flexibly, while HICs would be motivated to sign such contracts with nUNB, which would afford their clients the largest freedom to choose their services with nUNB.

With respect to the consideration of exit strategies and options to change the Project by the public and the private partner, analysis of the aspects of state aid linked to the preferred Project model and analysis of the applicable methods of public procurement for the Project, we have not identified any need to adopt legislative changes.

### Specifics, risks, benefits and recommendations for the affected area

In terms of complying with Slovakia's commitments following from international treaties, Slovak Constitution and the generally binding regulations, each of the Project model appears to be feasible. Analysis of the individual affected area did not yield any obligations or regulations, which would by their very nature, preclude Project feasibility.

With respect to performance of Slovakia's commitments connected to Project implementation, the individual models differ when it comes to risk degree attached to the individual affected areas and the options of using mitigation measures.

In the following section we describe the individual models with special focus on the affected area under evaluation.

#### A. CPPP

A principle risk attached to the CPPP model in terms of Slovakia's commitments and obligations following from international treaties and Slovak Constitution is insufficient emphasis on those areas, which are financially demanding but less attractive in commercial terms.

For the analysed affected area the following risks have been identified with respect to the implementation of the CPPP model:

- ▶ Breach of commitments in the area of the right to protection of health
- ▶ Breach of commitments in the area of science & research
- ▶ Breach of commitments in the area of public procurement law
- ▶ Breach of commitments in the area of budgetary responsibility

If the CPPP model is used, the private partner must be obliged to perform obligations in the field of health protection as well as science and research, considering that by becoming the entity operating nUNB, it will assume state's obligations in these areas.

The concession contract must contain mechanisms motivating the private partner to ensure that the maximum potential of nUNB in the area of science and research is realised.

In terms of Slovakia's commitments in the area of public procurement, CPPP's benefit is that has been tried and tested, also in Slovakia. Application of procurement procedures pursuant to Public Procurement Act constitutes the basis for meeting the TFEU principles, in particular the principle of free movement of goods, freedom of establishment and freedom of provision of services and the rules following from these principles, such as equal treatment, non-discrimination, mutual recognition, proportionality and transparency. We recommend mitigating the risk of breaching of public procurement obligations with help of outside counsel hired for the process of selecting the private partner.

In terms of Slovakia's commitments in the area of budgetary responsibility, the CPPP model carries a low risk, as subject to suitable structuring, the Project debt will not be booked in the state's balance sheet.

<sup>108</sup> The current provision reads as follows: "The client may change his health insurance provider always as of the 1<sup>st</sup> January of the following calendar year. The application may be filed no later than the 30<sup>th</sup> September of the calendar year. The first and the second sentence does not apply if the client changed his health insurance company by reason of becoming a dependant family member as per special regulations. 3a) In the event of expiration and initiation of public health insurance under Section (4) and (5) during the same calendar year, the client must file his application with the health insurance company which insured him last."

| Model | RISK   | MITIGATION   |
|-------|--|--|
| CPPP  | Breach of commitments in the area of the right to protection of health | Suitable regulation of control and sanction mechanisms in the concession contract                                |
|       | Breach of commitments in the area of science & research                | Suitable regulation of control and sanction mechanisms in the concession contract                                |
|       | Breach of commitments in the area of public procurement                | Suitable setup and management of the procurement procedure with support of outside counsel                       |
|       | Breach of commitments in the area of budgetary responsibility          | Suitable structuring of the Project with respect of risk distribution between the public and the private partner |

### B. IPPP

For the analysed affected area the following risks have been identified with respect to the implementation of the IPPP model:

- ▶ Breach of commitments in the area of the right to protection of health
- ▶ Breach of commitments in the area of science & research
- ▶ Breach of commitments in the area of public procurement law
- ▶ Breach of commitments in the area of budgetary responsibility

In terms of Slovakia's commitments following from international treaties and Slovak Constitution, the main risks attached to the IPPP model include insufficient emphasis on those areas, which are financially demanding but less attractive in commercial terms.

If the IPPP model is used, the private partner must be obliged to perform obligations in the field of health protection as well as science & research, considering that by becoming the entity operating nUNB, it will assume state's obligations in these areas.

The concession contract must contain mechanisms motivating the private partner to ensure that the maximum potential of nUNB in the area of science & research is realised. In excess of the arrangements in the concession contract, with the IPPP model the private partner is also bound by SPV's corporate documentation.

In terms of Slovakia's commitments in the area of public procurement, IPPP's benefit is that has been tried and tested in the EU environment. Application of procurement procedures pursuant to Public Procurement Act constitutes the basis for meeting the TFEU principles, in particular the principle of free movement of goods, freedom of establishment and freedom of provision of services and the rules following from these principles, such as equal treatment, non-discrimination, mutual recognition, proportionality and transparency. We recommend mitigating the risk of breaching of public procurement obligations with help of outside counsel hired for the process of selecting the private partner.

In terms of Slovakia's commitments in the area of budgetary responsibility, the IPPP model carries a low risk, as subject to suitable structuring, the Project debt will not be booked in the state's balance sheet.

| Model | RISK   | MITIGATION   |
|-------|--|--|
| IPPP  | Breach of commitments in the area of the right to protection of health | Suitable regulation of control and sanction mechanisms in the concession contract<br>Suitable setup of the corporate documentation |
|       | Breach of commitments in the area of science & research                | Suitable regulation of control and sanction mechanisms in the concession contract  |

|  |   |  |
|--|---|--|
|  |   | Suitable setup of the corporate documentation  |
|  | Breach of commitments in the area of public procurement       | Suitable setup and management of the procurement procedure with support of outside counsel                       |
|  | Breach of commitments in the area of budgetary responsibility | Suitable structuring of the Project with respect of risk distribution between the public and the private partner |

### C. JV

For the analysed affected area the following risks have been identified with respect to the implementation of the JV model:

- ▶ Breach of commitments in the area of the right to protection of health
- ▶ Breach of commitments in the area of science & research
- ▶ Breach of commitments in the area of public procurement law
- ▶ Breach of commitments in the area of budgetary responsibility

In terms of Slovakia's commitments following from international treaties and Slovak Constitution, the main risks attached to the JV model include insufficient state control over JV by reason of state's minority interest and absence of a concession contract. The commercial nature of JV carries with it the need to pay special attention to those areas, which are financially demanding but commercially less attractive.

If the JV model is used, the private partner may be obliged to perform obligations in the field of health protection as well as science & research but only at the level of corporate documentation.

The JV model concession contract does not enable the use of concession contract tools motivating the private partner to ensure that the maximum potential of nUNB in the area of science & research is realised.

Although in terms of commitments in the area of public procurement, JV's benefit is that has been tried and tested in Slovakia (but in a totally different industry), awarding contracts outside Public Procurement Act as such triggers the risk of breaching TFEU provisions, in particular the principle of free movement of goods, freedom of establishment and freedom of provision of services and the rules following from these principles, such as equal treatment, non-discrimination, mutual recognition, proportionality and transparency. We recommend mitigating the risk of breaching of public procurement obligations with help of such tool of selecting the private partner or contract award, which will reflect the equal treatment, non-discrimination, mutual recognition, proportionality and transparency principles<sup>109</sup>.

In terms of Slovakia's commitments in the area of budgetary responsibility, the JV model carries a low risk, as subject to suitable structuring, the Project debt will not be booked in the state's balance sheet.

| Model | RISK   | MITIGATION   |
|-------|--|--|
| JV    | Breach of commitments in the area of the right to protection of health | Suitable setup of the corporate documentation  |
|       | Breach of commitments in the area of science & research                | Suitable setup of the corporate documentation  |
|       | Breach of commitments in the area of public procurement                | Suitable setup and management of the procedure of selecting the JV partner with support of outside counsel |

<sup>109</sup> See Analysis of public procurement methods applicable to the hospital PPP Project with (i) institutional or (ii) contractual scenario in order to achieve the best value for money ratio

Breach of commitments in the area of budgetary responsibility

Suitable choice of state's guarantees for JV's obligations

#### D. Specific Model

From state's point of view, the Specific Model has the highest potential of securing and controlling Slovakia's performance of commitments and obligations in the area of protection of health and science & research. Absence of private element in SPV will enable MOH to fully meet the state's obligations in this area.

For the analysed affected area the following risks have been identified with respect to the implementation of the Specific Model:

- ▶ Breach of commitments in the area of the right to protection of health
- ▶ Breach of commitments in the area of science & research
- ▶ Breach of commitments in the area of public procurement law
- ▶ Breach of commitments in the area of budgetary responsibility

Public procurement-wise awarding an in-house contract to SPV by MOH is feasible subject to observing the ECJ case law and the assumptions formulated by OPP methodology<sup>110</sup>.

The Specific Model carries a risk of non-performance of Slovakia's obligations with respect of budgetary responsibility. If SPV is considered a government entity under ESA 10, the entire Project debt will be booked in the state's balance sheet. Materialisation of this risk could trigger automatic statutory sanction mechanisms or Project cancellation.

| Model          | RISK   | MITIGATION  |
|----------------|--|---|
| Specific Model | Breach of commitments in the area of the right to protection of health | Suitable setup of SPV's corporate documentation and the concession contract |
|                | Breach of commitments in the area of science & research                | Suitable setup of SPV's corporate documentation and the concession contract |
|                | Breach of commitments in the area of public procurement                | Suitable setup of SPV's corporate documentation and the concession contract |
|                | Breach of commitments in the area of budgetary responsibility          | No mitigation possible  |

#### Comparison of individual models

With respect to Slovakia's performance of its obligations following from Project implementation, the individual models differ by the degree of risk they carry for the individual areas of consideration and the avenues of using mitigation measures. To comply with the obligations in protection of health, science & research and education, the participation of the private partner is a risk, as these areas are not usually connected with commercially driven behaviour and generation of profit. The same risk is contained in JV, where the state will only have limited control over the nUNB operation. With CPPP and IPPP, the risk follows from the majority interest of the private partner, mitigated by the concession contract and in case of IPPP also in the corporate documentation.

<sup>110</sup> See section "Assessment of legal feasibility of the PPP models and the level of private sector participation, with focus on which model is ideal (i) institutional or contractual PPP project, (ii) availability-based, demand-based or combined PPP project, (iii) concession or other contract"



The Specific Model has the largest potential when it comes to securing and controlling the performance of obligations in these areas. Yet, this carries the most significant risk with respect of performing budgetary responsibility. The impact of breach of budgetary responsibility rules would be so severe that it could result in Project cancellation.

Reduced transparency of the JV model constitutes the risk of Slovakia's breach of the obligations in public procurement. The absence of state control mechanisms available with the JV model means that there is a risk that Slovakia could breach its obligations in the area of protection of health and science & research.

### Summary table

| Risk  | CPPP   | IPPP   | JV   | Specific Model  |
|---|--|--|--|---|
| Breach of commitments in the area of right to health protection | Suitable regulation of control and sanction mechanisms in the concession contract                                | Suitable regulation of control and sanction mechanisms in the concession contract<br>Suitable setup of the corporate documentation | Suitable setup of the corporate documentation  | Suitable setup of SPV's corporate documentation and the concession contract |
| Breach of commitments in the area of science & research         | Suitable regulation of control and sanction mechanisms in the concession contract                                | Suitable regulation of control and sanction mechanisms in the concession contract<br>Suitable setup of the corporate documentation | Suitable setup of the corporate documentation  | Suitable setup of SPV's corporate documentation and the concession contract |
| Breach of commitments in the area of public procurement         | Suitable setup and management of the procurement procedure with support of outside counsel                       | Suitable setup and management of the procurement procedure with support of outside counsel   | Suitable setup and management of the procedure of selecting the JV partner with support of outside counsel | Suitable setup of SPV's corporate documentation and the concession contract |
| Breach of commitments in the area of budgetary responsibility   | Suitable structuring of the Project with respect of risk distribution between the public and the private partner | Suitable structuring of the Project with respect of risk distribution between the public and the private partner                   | Suitable choice of state's guarantees for JV's obligations   | No mitigation possible  |

## Assessment of legal consequences of termination of the operations of the existing health care providers

**Assessment of legal consequences of termination of the operations of the existing health care providers and identification of legal tools/structures supporting a fluent transfer/transition and settlement of the existing legal relations, especially with respect to staff, patients, HICs, debtors, creditors and other**

### Basic description of the affected area

The project of building a new hospital in Bratislava is not feasible without shutting down the operations of the existing health care providers. In light of the conclusions of the iterations with MOH and in line with the outcome of the technical and financial analysis, we work on the assumption that the operations of three UNB hospitals will be shut down – Kramáre, Staré Mesto and Ružinov. The shutting down of these facilities will disrupt an aggregate of relations existing between the entities involved in health care provision and in the exercise of the right to health protection.

In terms of Project feasibility, the closing down of the existing health care providers is critical on account of:

- ▶ Predictability of health care demand
- ▶ Contracts with HICs
- ▶ UNB staff going on strike
- ▶ Layoff costs
- ▶ Interruption of health care provision
- ▶ Establishing contractual relations with patients
- ▶ Operation of the buildings of the affected UNB hospitals after they are shut down
- ▶ Costs of terminating contracts
- ▶ Existing and new debts

Resuming relations cut short by reason of shutting down the hospitals in Kramáre, Staré Mesto and Ružinov and mitigating the consequences of terminating their operations will be among the critical tasks of nUNB with respect of the selection of the private partner by way of public procurement and it is in particular an optimum solution proposal by the tenderer for this area, which may give competitive edge to the tenderer over other tenderers.

Fluent transfer/transition and settlement of existing legal relations with the staff, HICs, debtors, creditors and other entities is a basic prerequisite for Project feasibility, as most likely nUNB will not be able to fulfil the Project parameters without participation of those entities, which currently play a role in health care provision in UNB.

Currently, with its capacities, UNB satisfies the demand for health care. Termination of the hospitals in Kramáre, Staré Mesto and Ružinov will necessarily create the need for securing the right to protection of health through a new medical facility.

The tools for safeguarding fluent transfer/transition of patients and medical staff from UNB to nUNB will be agreed with the private partner as part of the procurement procedure.

### Legal framework of the affected area

The assumption is that the Project implementation will most affect UNB by reason of significant cuts to its capacities. The preferred Project model works on the assumption of terminating health care provision at the hospitals of Kramáre, Staré Mesto and Ružinov. The legal framework of the affected area is therefore largely determined by the legal regulation governing UNB.

UNB is a legal entity having legal personality. Legally, it acts on its own behalf and is liable for all obligations and liabilities following from such acts. UNB is one functional, organisational and economic unit.

To perform its tasks, UNB manages movable and immovable assets owned by the state including funds, receivables and other property rights of the Slovak Republic.

In managing state property, UNB is entitled and obliged in particular to:

## Assessment of legal consequences of termination of the operations of the existing health care providers

- ▶ use the property to fulfil the tasks following from its objects and relating thereto,
- ▶ dispose of the property in compliance with Act on State Property Administration and relating legal regulations,
- ▶ maintain the property in reasonable condition and use any legal avenues to protect the same,
- ▶ ensure that the property is not damaged, lost, abused or reduced,
- ▶ maintain records of the managed state-owned property as per the applicable legal regulations,
- ▶ maintain bookkeeping of the state-owned property in the scope and in the manner provided by a special regulation,
- ▶ observe the legal procedure applicable to disposal of any redundant, temporarily redundant and useless state-owned property,

Any transfers of administration and ownership of state property managed by UNB are made by UNB under special provision of Act on State Property Administration and the instructions of the facility founder. MOH is the founder and superior body of UNB as per valid legal regulations. Acts issued by MOH are binding upon UNB.

Activities of subsidised organisations are governed mainly by Act on Budgetary Rules of Public Government. Pursuant to Section 1 (d) of Act on Budgetary Rules, this statute governs the establishment and operation of subsidised organisations and organisations funded from state budget.

Pursuant to Section 21 (11) of Act on Budgetary Rules, organisations funded from state budget or subsidised organisations founded under decision of their founder may be shut down, their subordination may be changed or the manner of financing may be changed from state-budget funded to a subsidised organisation or vice versa by way of a decision of their founder starting from the first day of the following budget year subject to prior written consent of MOF. In reasonable cases the Finance Ministry may allow another time period. The legal successor of a subsidised organisation may only be a subsidised organisation or an organisation founded from the state budget.

MOH, being the founder of UNB, has the power to decide on the termination of health care provision in affected facilities. In terms of UNB being a legal entity, as a result of the health care provision termination in hospitals of Kramáre, Staré Mesto and Ružinov, the change of health care provision will change. The legal entity is not wound up and the rights of third parties do not expire and are not transferred to UNB's legal successor. By reason of trimming down the volume of the health care provided, the technical and staff capacities of UNB will become redundant<sup>111</sup>.

Generally speaking, the change of health care provision location is a change, which by law requires a new health care provision licence. However, with UNB the health care will not be provided in a new location or new premises which are not subject to the existing UNB licence. In light of that, the Project implementation will not result in the need to apply for a new licence for UNB.

The relations between UNB and its individual contractual partners will need to be adjusted to the reduction of the health care provision volumes, which in some cases might mean that the contracts will be terminated or that the cooperation volumes will need to be adjusted. The schedule of the Project implementation<sup>112</sup>, and in particular the estimated deadline for nUNB commissioning, which follows from the conclusions of the technical and financial analysis of this report most likely provide ample space for adjusting or terminating the existing relations.

### *UNB as the subject of economic mobilisation*

Following MOH Decision No. 22110-1/2009-OKM of 20 October 2009, effective as of 1 January 2010, UNB is the subject of economic mobilisation and in this respect UNB must carry out without interruption the measures of economic mobilisation determined in the decision at specified establishments.

Pursuant to Section 4 of Act on Economic Mobilisation, the subject of economic mobilisation may be an undertaking, organisation funded from state budget, subsidised organisation, public college or a not-for-profit organisation offering services of general interest designated as the subject of economic mobilisation.

<sup>111</sup> The legal regime of disposing of state property is detailed in Assessment of potential consequences to legal relations to existing assets (i.e. assets ownership, administration of state property and restrictions for disposal of such property) with respect of Project implementation

<sup>112</sup> Approximate schedule of PPP project implementation is provided in section "Analysis of public procurement methods applicable to the Project".

## Assessment of legal consequences of termination of the operations of the existing health care providers

By way of Resolution No. 474/2012 Slovak Government approved the proposal of providing for the number of beds to perform the tasks of economic mobilisation; the proposal provides the number of beds required in case of emergency. In case of emergency, UNB is obliged to increase the number of beds to 2950.

By reason of terminating the operations of the hospitals in Kramáre, Staré Mesto and Ružinov, the number of UNB beds will decrease. This will require the adoption of a new binding resolution governing the distribution of number of hospital beds as part of the extended hospital bed fund. The overall number of UNB beds in 2013 was 2626. The extended UNB hospital bed fund was determined at 2950 beds. As a result of terminating the operations of the hospitals in Kramáre, Staré Mesto and Ružinov, the number of UNB hospital beds will be reduced to 762, which, subject to maintaining the coefficient between the actual and the extended hospital bed fund, represents 856 beds of the extended hospital beds fund. The proposed capacity of nUNB of 880 beds of the extended hospital beds fund or 998 (respectively), would mean 988 beds or 1121 beds (respectively) subject to maintaining the coefficient of the extended hospital beds fund, which accounts for a combined number of UNB and nUNB beds of 1844 or 1977.

The drop in number of hospital beds of the extended fund of UNB will need to be compensated as follows:

- ▶ by increasing the number of the extended hospital beds fund in the existing entities of economic mobilisation,
- ▶ by way of a decision appointing new facilities liable in case of economic mobilisation.

The change in number of UNB hospital beds will require the drafting and passing of a new proposal of providing for the number of beds to perform the tasks of economic mobilisation, and the issuance of new Decisions appointing new entities liable in case of economic mobilisation from among the providers of health care, including nUNB.

MOH enters with economic mobilisation entities into agreements on financing economic mobilisation. The agreement on financing of economic mobilisation sets forth the conditions and rules of paying costs incurred by the entities liable in case of economic mobilisation for the performance of measures and tasks of economic mobilisation provided in Section 5 of Act on Economic Mobilisation and in the decision of MOH on appointing the provider of health care as an entity liable in times of economic mobilisation.

### *Impact on the other health care providers*

The Project implementation will affect the functioning and organisation of UNB and accordingly the functioning of other health care providers within the affected UNB hospitals. Based on the list of contracts submitted to UNB, private health care providers offer their services, usually stomatology and gynaecology outpatient care, in the premises of UNB.

Termination of UNB establishments will affect each health care provider, which uses UNB premises to render its services. The licence for the provision of health care is issued for specific premises, which the provider must either own or lease. Terminating the contract to the premises means a change in the location of health care provision and requires a new licence<sup>113</sup>.

UNB as the administrator of state property, as set forth in Act on State Property Administration, leases premises to other health care providers, which usually offer outpatient care. Lease contracts with the health care providers are entered into pursuant to Section 588 and foll. Of Civil Code and the provisions of Act No. 118/1990 Coll. on lease and sublease of non-residential premises.

The lease contracts existing between UNB and the health care providers were executed for premises located in the hospitals in Kramáre, Staré Mesto and Ružinov are usually for a definite term, with the latest lease expiring in the end of 2016. With respect to termination or potential extension of the leases, it will be necessary to negotiate the lease terms with a view to the scheduled date of terminating the hospitals' operations or negotiate indefinite lease terms which may be terminated without the need to give a reason. In any event, considering the planned schedule of the Project, in terms of duration, these contracts do not represent a significant risk to the feasibility of the Project or its costs. A list of the lease contracts including their terms and termination conditions are contained in the Annex to this feasibility study.

<sup>113</sup> Section 17 (1) of Act on Health Care Providers

## Assessment of legal consequences of termination of the operations of the existing health care providers

### HICs

UNB is a hospital of the end network, and each HIC is obliged to enter into the contract on health care provision with the hospital.<sup>114</sup> The end network is determined in Government Regulation on Minimal Network and it may be amended by way of Government's decision. Considering the fact that nUNB will take over a portion of the capacities of UNB, nUNB should also be included into the end network. By including nUNB into the end network, the demand for nUNB services will implicitly grow.

Because, to this date there is no statutory obligation of a hospital within the end network to enter into contract with HIC, nUNB may leverage its position in negotiating the contract conditions with HICs. HICs having a smaller market share could be threatened by nUNB's decision not to sign a contract with them. This poses a significant risk of health care becoming unavailable to clients of such HICs in the region.

As a rule, HICs sign contracts with UNB for one year. HICs are obliged to sign contracts with health care providers covering no less than the minimal network. Responsibility for health care being available to patients is therefore partly borne also by HICs.

With all the considered Project models, the entity providing health care changes. The operator of nUNB will differ from the subsidised organisation operating UNB. In terms of contracts with HICs, UNB will need to negotiate a reduction of treatment limits or a reduction of lump-sum payments with respect to UNB in a way, which will reflect the transfer of capacities to nUNB or the distribution of capacities between nUNB and UNB. HICs will have a contract with both UNB and nUNB, and the treatments offered by UNB will be split between UNB and nUNB. The process of capacities transfer assumes intense cooperation between UNB and nUNB. Quality and efficiency of such cooperation will depend also in the extent of control and participation of MOH in nUNB. In the event of the Specific Model, the transfer of capacities between the providers would be done solely by MOH in cooperation with Všeobecná zdravotná poisťovňa, a.s., the sole shareholder of which is the Slovak government represented by MOH. A fluent transfer between UNB and nUNB would be controlled and managed by MOH, provided the Specific Model is implemented.

The IPPP and CPPP models would require the inclusion of a provision into the concession contract, under which MOH would be responsible for negotiating such contracts with Všeobecná zdravotná poisťovňa, a.s., which would be supportive of foreseeable and sufficient revenues or cash flow for the concessionaire and would so secure the Project's bankability, financial affordability and attractiveness. With the JV model, including a similar provision into the concession contract would not be feasible.

With the current status of legal regulation, i.e. before introducing the DRG system, the amount of payment for health care treatments and the manner of payments are agreed between HICs and the health care providers. The content of the arrangements between nUNB and HICs, but also its practical implementation by HICs thus be decisive for the success or failure of the Project. The risk embodied in the contents of the contracts with HICs and their conduct may be further mitigated by a provision in the concession contract under which MOH would be obliged to make a certain 'compensation payment' which would cover the difference between the costs of health care provision and the revenues from the health care provision contracts with HICs. As has been mentioned on several occasions in this report, there is little chance that any private partners and their financing banks would be willing to assume the demand risk in full.

The introduction of the DRG system will result in the restriction of contractual freedom or the reduction of influence HICs may exercise over the amount of payments for health care treatments and that by way of introducing a formula for calculating the payments for individual treatments as per the categorisations of the individual diagnoses. Still, most likely not event DRG implementation will result in complete acceptance of the demand risk by the private partners.

### Universities

Pursuant to applicable legal regulations, UNB is classified as an education health care facility<sup>115</sup>. UNB also has the status of University Hospital as per Section 7 (8) of Act on Health Care Providers. UNB has executed Agreements on Practical Training, in particular with Comenius University in Bratislava and its faculties, as well as with Slovak Medical University and its faculties (hereinafter jointly referred to as "Universities").

<sup>114</sup> Section 7 of Act on Health Care Providers

<sup>115</sup> MOH Regulation providing for regulation providing for specific elements of particular health care facilities

## Assessment of legal consequences of termination of the operations of the existing health care providers

Performance of obligations following from the Agreement on Practical Training affects both organisation and operation of UNB. Practical training of undergraduate and postgraduate students is carried out medical and non-medical programs. The training facilities used for University students of the relevant study program are the individual clinics and wards of UNB establishments. To date, education platforms have been created at the clinics and wards of the individual UNB hospitals.

The clinics and education establishments offer simultaneously health care and practical training of University students. Both these activities must be coordinated so that the quality and level of health care provision not be jeopardised. UNB employees provide for the practical training of the students and at the same time the employees have a part-time employment contract or an agreement on work execution with the University, as well as the teaching staff of the relevant University. In compliance with the applicable regulations, in particular the provisions of Act on Health Care Providers, the University staff may provide health care only under a labour relation with a health care facility. The head of teaching staff is responsible for practical training being in compliance with the curriculum of the applicable study program. The head of teaching staff must ensure that the practical training does not adversely affect the performance of the clinic's task and the provision of health care and in this respect he/she is responsible for guiding and managing the University students.

UNB provides the premises and the material and technical equipment for the practical training. Medicinal products, medical tools and other medical material necessary for providing treatment and preventive care is provided by UNB in its own name and on its own responsibility. The conditions under which Universities share the costs of practical training are agreed in the Agreements on Practical Training.

As a legal entity, in line with its objects, UNB caters to health care provision in the field of health care organisation. Health care is provided through the work of the employees of the individual clinics, institutes, health care or other departments, which are part of the organisation scheme of the individual hospitals.

The hospitals in Kramáre, Staré Mesto and Ružinov has about 50 University clinics. A specification of the clinics is provided in the Agreements on Practical Training. A change in the list of clinics means an amendment to Agreements on Practical Training. Agreements on Practical Training are executed for indefinite term subject to 3-months' notice for Slovak Medical University and 6-months' notice for Comenius University in Bratislava.

Reduction of the number of clinics by reason of terminating the operations of the hospitals in Kramáre, Staré Mesto and Ružinov will result in insufficient training capacities of the Universities and redundancy of the staff participating in the practical training. At this moment, it is unclear whether nUNB's capacities will be able to fully substitute all the clinics currently operating with the hospitals in Kramáre, Staré Mesto and Ružinov. Lack of capacities for practical training could affect the study programs of the Universities. Should the Universities be unable to provide for sufficient conditions for practical training, accreditation of the individual study programs could suffer.<sup>116</sup>

UNB will retain its status of university hospital if Agreements on Practical Training are executed for the centres of practical training in the hospital Nemocnica sv. Cyrila a Metoda and ŠGN. To maintain practical training and accreditation of study programs, the Universities will have to enter into Agreements on Practical Training with nUNB. By executing Agreements on Practical Training, nUNB will acquire the status of university hospital.

On one hand, practical training would be source of income for nUNB, on the other hand, it would mean a administrative, capacity and financial burden. The content of the Agreements on Practical Training is not laid down by law, and the conditions of cooperation between nUNB and Universities (each of them separately) will be subject to difficult negotiations. As independent education institutions, Universities are beyond the influence of MOH and they pursue their own interests of offer high-standard education. University resources are limited and most likely, they will be commercially unable to fully compensate the costs incurred by provision of practical training. Academic staff of the Universities will become nUNB employees working part-time and UNB will bear the responsibility for the health care provided by those employees. This practical training as such does not appear to be a significant obstacle to Project feasibility, but it may affect the personnel costs of nUNB and the Project cost.

By winding down work positions within UNB, employments of academic staff of LFUK and SZU will be terminated. It unrealistic to assume that the wound up clinics and institutions operating with the hospitals in Kramáre, Staré Mesto and Ružinov will be equally replaced by training centres within nUNB. Demand for practical training will not diminish as the number of University students will remain the same.

---

<sup>116</sup> Section 83 (14) of Act on Colleges

## Assessment of legal consequences of termination of the operations of the existing health care providers

In light of that, the task of nUNB will be to achieve more flexibility and efficiency in the area of practical training. The same goals with respect of practical training will have to be achieved by the hospital of sv. Cyril a Metod. The risk of insufficient practical training capacities for the Universities will have to be mitigated within the process of selecting the private partner as part of the detailed plan of transfer/transition of capacities from UNB to nUNB and thereafter as part of the cooperation between UNB and nUNB at the time between the selection of the private partner and the commissioning of nUNB.

### Staff

The medical staff of UNB will be affected by the Project implementation on several levels as a result of winding down the operations of the hospitals in Kramáre, Staré Mesto and Ružinov. In addition to the risk of termination of employment with UNB, it will also jeopardise the ongoing qualification procedures (circulation, attestation of medical staff).

Employment termination on account of closing down parts of UNB or organisation changes<sup>117</sup>, which are likely with respect of Project implementation and which will result in employees' entitlement to severance payments or compensation for employees who have reached retirement age<sup>118</sup>. In the event nUNB is not the legal successor of UNB, the costs of terminating the UNB employees could significantly increase the cost of the Project. For sake of completeness, please note that even if agreement are entered into with UNB employees on termination of their employment by reason of winding down parts of UNB or organisation changes, in the absence of legal successorship between UNB and nUNB the layoff costs would apply to all the employees working in the hospitals in Kramáre, Staré Mesto and Ružinov, including those who would thereafter enter into employment with nUNB. In the end, the layoff costs would be borne by the UNB founder, i.e. MOH or the government, respectively.

The applicable legal regulation enables creating a certain level of legal succession between UNB and nUNB, which would result in the need of layoffs only to the extent necessary, i.e. letting go of only those employees who would not be used by nUNB.

Creating legal succession between UNB and nUNB is enabled by way of a mechanism pursuant to Section 13c of Section 13f of Act on State Property Administration, which enables contributing state's property into the registered capital of the concessionaire (IPPP, Specific Model) or leaving the state's property in the management of the concessionaire (IPPP, CPPP, Specific Model). The specific mechanisms as such enable to transfer the state property as defined by Act on State Property Management to the concessionaire. Pursuant to Section 2 (1) of Act on State Property Management, state property management means any things owned by the Slovak Republic including any funds, receivables and other property rights of the state. Considering the fact that Act on State Property Management does not provide for disposal of state's obligations, in case the state property is contributed to capital of or use by the concessionaire, transfer of undertaking as a whole, i.e. as a sum of rights, other property values and obligations of the undertaking, will not be considered.

In terms of UNB staff, it is of relevance that nUNB should pursue the tasks of UNB. Pursuant to Article 3 (1) of Directive 2001/23/EC, The transferor's rights and obligations arising from a contract of employment or from an employment relationship existing on the date of a transfer shall, by reason of such transfer, be transferred to the transferee. Under Article 1 (1) of Directive 2001/23/EC, the Directive shall apply to any transfer of an undertaking, business, or part of an undertaking or business to another employer as a result of a legal transfer or merger. Under Directive 2001/23/EC, transfer means transfer of an economic entity which retains its identity, meaning an organised grouping of resources which has the objective of pursuing an economic activity, whether or not that activity is central or ancillary.

The directive is interpreted by way of ECJ decisions, which specify the terms and conditions under which an undertaking is transferred. According to Spijkers case, the following circumstances are critical for considering whether a transfer is concerned:

- ▶ is the nature of the activities of the undertakings of the transferor and transferee identical?
- ▶ Is property transferred from the transferor to the transferee?
- ▶ Are intangible assets transferred and of what value?
- ▶ Are a majority of employees transferred to the transferee?
- ▶ Are transferor's customers transferred?

<sup>117</sup> Section 63 (1) of Labour Code

<sup>118</sup> Section 76 and Section 76a of Labour Code

## Assessment of legal consequences of termination of the operations of the existing health care providers

- Degree of similarity of the activities carried out before and after the transfer and the period during which the activities are not carried out.

In each individual case, it is necessary to consider these factors within the context of each individual factor and in relation to other circumstances of the transfer.

The framework of the national regulation of Labour Code with respect of employer's successorship is in excess of the employee protection under Directive 2001/23/EC. Pursuant to Section 28 of Labour Code, where an economic unit is transferred (the same meaning the employer or a part thereof), or if a task or activity of the employer or a part thereof is transferred to another employer, the rights and obligations towards the transferred employees are transferred to the acquiring employer.

According to the Project assignment, it is clear that tasks or activities will be transferred between UNB and nUNB, with both being employers. It is equally clear that several criteria of Spijkers case will be satisfied, and therefore obligations under employment relations will be transferred between UNB and nUNB. What is crucial for the Project feasibility is the scope and distribution of UNB employees who will be transferred to nUNB.

ECJ case law specifies the scope of employees affected by the transfer of a part of undertaking, as per Botzen case. Further interpretation rules applicable to determine the scope of affected employees may be inferred from the position of Attorney General, Sir Gordon Slynn in Botzen dated 08 November 1984.

Basically, the scope of affected employees is determined using the *de minimis* criterion as an exception to the rule, under which those employees are transferred who carry out activities strictly attached to the transferred part of the undertaking.

Another relevant circumstance is the scope of rights and obligations of UNB with respect to its employees on the date of transfer. Pursuant to Article 3 (1) of Directive 2003/21/EC, only those rights and obligations of the transferor are to be transferred which follow from employment contracts or employment relationships existing on the date of transfer. Similarly, as per Section 28 (5) of Labour Code, rights and obligations of the existing employer owed to those employees whose employment relationships are terminated as of the transfer date, shall remain unchanged. Considering this, it will be necessary to reduce the number of UNB employees affected by the transfer of activities to nUNB.

In relation to the transfer of rights and obligations under the employment relations from UNB to nUNB, both UNB and nUNB will be obliged to inform employees' representative in writing no later than one month before the transfer of rights and obligations under employment relationships of

- (a) the date or proposed date of transfer,
- (b) transfer reasons,
- (c) employment, economic and social consequences of the transfer for the employees,
- (d) planned transfer measures affecting the employees.

Considering the need to prepare the UNB staff for the work in nUNB however, we assume that the above steps will be taken well in advance.

If the work conditions of employees are to change significantly as a result of the transfer and the employee does not agree with such change in conditions, the employment is deemed terminated by way of agreement on the grounds as per Section 63 (1) (b) of Labour Code as of the transfer date. The employer will issue to the employee a written certificate of employment termination as per the first sentence. The employee who disagrees with the significant change in work conditions is entitled to severance payment as per Section 76 of Labour Code.<sup>119</sup>

<sup>119</sup> Employees terminated on the grounds in Section 63 (l) (a) or (b) are entitled to severance payment of

- a) his/her average monthly pay, if the employment lasted less than two years,
- b) double his/her average monthly pay, if the employment lasted at least two years but no more than five years,
- c) triple his/her average monthly pay, if the employment lasted at least five years but no more than ten years,
- d) quadruple his/her average monthly pay, if the employment lasted at least ten years but no more than twenty years,
- e) quintuple his/her average monthly pay, if the employment lasted at least twenty years.



## Assessment of legal consequences of termination of the operations of the existing health care providers

Conditions of the UNB transformation process must be agreed with the nUNB operator at the stage of selecting the private partner (CPPP, IPPP, JV) or proposed at the stage of selecting the know-how provider in a transparent tender procedure, respectively.<sup>120</sup>

An alternative procedure enabling the transfer of rights to employees could be the procedure under Act on Transfer of State Property to Third Parties. Pursuant to Section 2 of the act, it is possible to transfer to nUNB the undertaking as a sum of things and funds to which the undertaking owns the right of managing the same or which are in its ownership, as well as the sum of all rights, other property values and liabilities of the undertaking. Separating the UNB staff from UNB liabilities is not allowed under Act on Transfer of State Property to Third Parties, and it is therefore unlikely that the private partner would assume the UNB undertaking or a part thereof jointly with the attached assets and liabilities.

Transfer of property under the act shall be done by way of a decision on privatisation of the undertaking or of a part thereof, or based on a decision of privatisation of property interest of the state in the undertaking of the legal person ("Privatisation Decision") issued based on a privatisation project. The Privatisation Decision in form of direct sale outside a public auction or open procedure is issued by Slovak Government upon motion of MOH. The Privatisation decision by way of public auction or open procedure is issued by MOH.

If the private partner would be willing to assume part of UNB, the state's property transferred to UNB, then be the UNB undertaking or a part of the UNB undertaking earmarked for operation termination. The advantage of this scenario for the private partner would be the assumption of control over the process of winding down the operations in the hospitals in Kramáre, Staré Mesto and Ružinov. The nUNB operator would become the employer of the UNB employees. Until such time when the rights are transferred to nUNB, UNB could reduce its number of employees to the headcount agreed, which would split the costs of layoffs between UNB and nUNB. However, considering the fact that UNB carries the burden of a myriad of complex and costly relations, it is very unlikely that the private partner would actually consider such alternative.

In any event, the transfer of staff from UNB to nUNB will depend on the nature of nUNB and the degree of state's involvement in its management. The least fluent transfer is anticipated with the JV model, followed by CPPP, IPPP and last but not least the Specific Model – being the state-managed Project.

Under Specific Model, employees would be transferred from the founder's/MOH's state subsidised organisation to a corporation founded by the state represented by MOH.

The main risk with respect of medical staff is the possibility of strike. The right to strike is anchored in Article 37 of Slovak Constitution. The tool for mitigating the consequences of the medical staff going on strike is the announcement of emergency situation and summoning workforce to provide for the provision of health care as per Article 5 (3) (b) of Act on State Security at Times of War. A situation may be classified as emergency by Slovak Government under Article 5 of the act on condition that human life and health have been endangered or there is an impending risk that they will be endangered, and they may do so in the extent and for the time necessary, but for no more than 90 days. It means that during that time, those who are affected by the emergency situation cannot refuse work and are obliged to provide health care or render medical assistance and that not only on the grounds mentioned above but also by reason of mandatory work instituted by announcing the emergency.

In this respect, again, the need of communicating with both professionals and laymen is evidenced, and the need to reasonably market the Project. What will be key is the communication with professionals and potentially also the involvement of professionals in the Project implementation on behalf of MOH.

### *Mass redundancies*

The number of employees affected by the termination of operations of the hospitals in Kramáre, Staré Mesto and Ružinov indicates that UNB will have to pursue mass redundancies as per Section 73 (1) (c) of Labour Code. Subject to maintaining a single structure of UNB, employments will be terminated by way of notice under Section 63 (1) (b) of Labour Code. If UNB will be divided, employments may be terminated also as provided in Section 63 (1) (a) Labour Code.

This means that the mass redundancies may include both employments terminated by notice on the grounds provided in Section 63 (1) (a) and (b) of Labour Code (i.e. no other termination grounds are viable) or employments may be terminated otherwise, on the grounds not attributable to the employee.

---

<sup>120</sup> See Analysis of public procurement methods applicable to the Project

## Assessment of legal consequences of termination of the operations of the existing health care providers

Regarding the mass redundancies, under this provision the employer has several obligations.<sup>121</sup>

Non-performance of employer's statutory obligations during mass redundancies may render the employment termination null and void and trigger employees' claims for compensatory pay of no less than double the average pay of the affected employees.

Under Article 18 of UNB's Collective Agreement entered for 2013 (hereinafter as "Collective Agreement"), before adopting the decision on mass redundancies, UNB is obliged to negotiate with the unions about measures enabling the bypass the mass redundancies or limit is as per Section 73 of Labour Code.

Pursuant to Article 42 of Collective Agreement, UNB is obliged to inform the trade union organisation in writing no less than one month before the transfer of rights and obligations under labour relations in particular of the date or proposed date of transfer, reasons for the transfer, labour, economic and social consequences of the transfer of employees and on the scheduled measures affecting employees.

The trade union organisations active with UNB and affected by the Project implementation are:

- ▶ Basic trade union organisation SOZ ZaSS with UNB Ružinov
- ▶ Slovak medical trade unions with UNB Ružinov
- ▶ Basic trade union organisation SOZ ZaSS with UNB akad. L. Dérera
- ▶ Slovak medical trade union association with UNB akad. L. Dérera
- ▶ Basic trade union organisation SOZ ZaSS with UNB sv. Cyrila a Metoda
- ▶ Slovak medical trade unions with UNB sv. Cyrila a Metoda
- ▶ Basic trade union organisation with UNB Staré Mesto
- ▶ Slovak medical trade unions with UNB Staré Mesto
- ▶ Basic trade union organisation with UNB Podunajské Biskupice
- ▶ Basic trade union organisation of the Slovak trade union syndicate of anaesthesiologists and intensivists with UNB.

### *Creditors and debtors*

Considering the fact that the termination of health care provision affects part of UNB, while the health care provision is slated to be continued in the hospitals in Petržalka and Hospital of sv. Cyrila a Metoda and ŠGN, what appears to be useful with respect of the legal succession with Specific Model is the division of UNB into two parts<sup>122</sup>. One part of UNB would consist of the hospitals in Podunajské Biskupice and Petržalka and the other of the hospitals in Kramáre, Staré Mesto and Ružinov. MOH as the founder decides on the division of a subsidised organisation and at the same time, it may decide which assets and liabilities are to be transferred from the divided UNB organisation to the UNB part created by such division. In the event of a division, the single personality of UNB enables its founder to divide the assets and liabilities in a manner allowing for the most fluent transfer of capacities from UNB to nUNB and at the same time minimising the costs the state would incur as a result of the termination of health care provision in the hospitals in Kramáre, Staré Mesto and Ružinov.

For a long time, UNB has been in red numbers. It is not anticipated that UNB liabilities could be satisfied from the income generated by health care provision. UNB liabilities will most likely be paid from the contribution of its founder through the state budget.

The termination of health care provision in the hospitals Kramáre, Staré Mesto and Ružinov will be without prejudice to the existence of receivables and liabilities of UNB. UNB's ability to meet its obligations will most likely be affected by the slump in turnovers following from the reduction of volumes of the health care provided. At the same time, it may be assumed that there will be costs of maintaining the unused infrastructure of the state property without any possibility of generating income from health care provision. Depending on the decision of UNB regarding the option of further using the movable and immovable property located in the hospitals in Kramáre, Staré Mesto and Ružinov,

<sup>121</sup> Section 73 (2) of Act No. 311/2001 Coll. Labour Code

<sup>122</sup> Legal succession does not appear to be viable with other models.

## Assessment of legal consequences of termination of the operations of the existing health care providers

the property could be designated redundant<sup>123</sup>. As the administrator, UNB is obliged to offer any such redundant property by way of a written notice to state-budget organisation or state subsidised organisations within the region where the redundant property is located and which could use the redundant property to perform their tasks following from their objects or relating thereto.

In the event UNB is wound up, its receivables and liabilities would be transferred to its legal successor, which could be only a state-budget or subsidised organisation. If UNB is wound up without a legal successor, all its receivables and liabilities would pass to its founder - MOH<sup>124</sup>.

### Research institutions

SAS cooperates with UNB clinics and institutes on an 'ad hoc' basis through its individual institutes (SAS Institute of Endocrinology, SAS Institute of Virology). An example of such cooperation is the work of SAS's Institute of Experimental Endocrinology with the V. Internal Clinic of LFUK on the scientific research grant project of the European Lipidomics Initiative (*Seventh Framework Program – Lipid droplets as dynamic organelles of fat deposition and release: translational towards human disease, Contract N° HEALTH 2007-2.1.1-6; SYNOPSA*).<sup>125</sup>

The conditions and duration of the individual research projects are not covered by the considerations of the Feasibility Study. That said, creating conditions for furtherance and development of scientific endeavours will be in the interest of both Universities and the research institutes.

The planning of the process of transferring capacities from UNB to nUNB will need to allow for the need to cater to the needs of research & development and based on the relevant feedback, it will be necessary to decide which part of the research capacities will be retained within UNB and which will be carried out by nUNB, also with respect of the planned development of BioMedPark.

### Patients

Patients have the right to freely choose their health care providers.<sup>126</sup> The legal basis for the provision of health care is the agreement on provision of health care, with the agreement on the provision of general health care is entered into for at least six months.<sup>127</sup>

By reason of terminating the operations of the hospitals in Kramáre, Staré Mesto and Ružinov, in terms of UNB the bearable workload of UNB will be increased, and with respect of the patients the availability of health care will worsen. The existing agreements on provision of health care entered into between UNB and the patients may be terminated by way of written notice by the health care provider. The health care provider is entitled to withdraw from the agreement on health care provision on the grounds provided by law, including the exceeding of the bearable workload.<sup>128</sup>

The agreement on provision of health care also expires upon winding up of the health care provider. Considering the unified organisation structure of UNB, patients enter into agreements on provision of health care with UNB, which provides health care under a single licence and through its employees, which are licence holders.<sup>129</sup>

Patients enter into agreements on provision of health care with UNB<sup>130</sup>. As a result of a reduction of UNB capacities, UNB will be entitled to deny the execution of the agreements on provision of health care or withdraw from the existing agreements by reason of exceeding the maximum allowed workload.

The above works on the assumption of negotiating the conditions of fluent transfer of the health care provision capacities to nUNB. Transfer of capacities will be preconditioned by nUNB's assumption of UNB tasks and is further specified in section Staff.

Patients have the right to freely choose their health care providers and it is therefore not feasible to force UNB patients to execute the agreement on provision of health care with nUNB. Despite that, it may be assumed that the

<sup>123</sup> Section 3 (3) Act on State Property Management

<sup>124</sup> Section 21 (13) of Act on Budgetary Rules of Public Administration

<sup>125</sup> Source.: <http://www.fmed.uniba.sk/?id=4463>

<sup>126</sup> Section 11 (6) of Act on Health Care

<sup>127</sup> Section 11 (7) of Act on Health Care

<sup>128</sup> Section 12 (8) of Act on Health Care

<sup>129</sup> Section 68 (1) of Act on Health Care

<sup>130</sup> Section 12 (1) of Act on Health Care

## Assessment of legal consequences of termination of the operations of the existing health care providers

patients will enter into the agreements on provision of health care with nUNB, initially in the absence of alternative providers and later, provided the Project will run as designed, because of the high quality of the health care provided.

### Specifics, risks, benefits and recommendations regarding the affected area

In terms of consideration of legal consequences of winding up the operations of the existing health care providers, basically each Project model is feasible.

When it comes to the options of creating the tools and structures of fluent transfer/transition of staff, individual models differ in terms of the options of creating such tools and structures. The individual models also differ by the degree of risks attached to the termination of operations of the existing health care providers.

Despite the fact that the Project implementation assumes changes to the existing relations within the sector, the Project implementation effects will peak at the moment of commissioning nUNB. Until such time the patients will not feel the effects of Project implementation. An exception would be the medical staff going on strike before the commissioning of nUNB. The strike of medical staff is a risk, the materialisation of which is present at any given stage of the Project implementation – from the adoption of the decision to realise the Project, through the commissioning of nUNB, to any given stage of nUNB operation. The critical factor is the element of reducing the numbers of medical staff, which was one of the key reasons of protests held against hospitals transformation. One of the key tasks of MOH in the Project implementation would be communicating to both professionals and laymen the need to reform the health care sector, the non-sustainability of the current status and the optimum solution offered by the preferred Project model including at the cost of having to reduce the headcount of medical staff.

In the section below, we elaborate on the individual models with special focus on the affected area.

#### A. CPPP

The specific feature of the CPPP model with respect of the analysed affected area is that the SPV realising the Project is wholly owned by the private partner and the state's control exercised through the concession contract. The responsibility for the Project implementation is fully transferred to the private partner and MOH is in the position of contractual partner of the concession contract.

Having evaluated the legal consequences of terminating the operations of the existing health care providers for the implementation of the CPPP model, we identified the following risks:

- ▶ Impossibility to anticipate health care demand
- ▶ Failure to execute contracts with HICs
- ▶ UNB staff going on strike
- ▶ Redundancy costs
- ▶ Interruption of health care provision
- ▶ Failure to execute contracts with patients
- ▶ Failure to execute contracts with Universities
- ▶ Unprofitable operation of the affected UNB hospital buildings after their operations are terminated
- ▶ Costs of contracts termination
- ▶ Risk of having to perform existing debts and risk of new debts arising

The risk of not being able to anticipate the demand for health care services may be mitigated in the concession contract by including a special provision on compensatory payments to be made by the state or by generally preferring the availability-based model.

To mitigate the risk of non-execution of contracts with HICs, we recommend including nUNB into the end network of hospitals, which may be effected by way of an amendment to Government Regulation No. 640/2008 Coll. on the minimal network of public health care providers. Pursuant to Section 7 of Act on Health Insurance Companies, HICs are obliged to enter into contracts on health care provision with health care providers at least in the scope of the public minimal network of health care providers. The end network of providers represents the providers of inpatient

## Assessment of legal consequences of termination of the operations of the existing health care providers

care within the minimal network, which offer inpatient health care in the relevant area.<sup>131</sup> The risk of nUNB's failure to execute contract with certain HIC may be mitigated by way of arranging the obligation of nUNB to enter into contracts on health care provision with all HICs in the concession contract.

A drawback of this mitigation measure is that it is impossible to include a hospital, which has yet to start its operations, into the end network. MOH has no capacity to oblige the Slovak Government to pass a change to the end networks of hospitals. Notwithstanding that, it is probable and legitimate to assume that the future private partner will require the undertaking of such commitment including the legal consequences of the failure to perform it.

An alternative mitigation measure could be the amendment of Section 7 (1) of Act on Health Insurance Company consisting in the addition of an obligation of the HIC to sign a contract with a concession hospital and maintain it throughout the entire life of the concession contract. In this respect, it would be necessary to add a definition of "concession hospital" to Act on Health Care Providers, specifically in Section 4 (a) (3), thus introducing a new type of health care provider with reference to the relevant provisions of Public Procurement Act.

With the CPPP model, the risk of the UNB medical staff going on strike may be mitigated by way of proper communication with both the professionals and laymen, and by way of adopting an arrangement between UNB and nUNB or SPV respectively, the subject of which would be the mutual rights and obligations covering the period between the selection of the private partner and the commissioning of nUNB ("Project Implementation Stage"), in particular the rights and obligation of nUNB to train UNB employees, communicate with employees on the method of nUNB management and performance of work within nUNB and the method of transferring capacities from UNB to nUNB.

Materialisation of the risk of redundancy costs is highly probable. In the absence of legal succession between UNB and nUNB, it will be necessary that the employment between employees and UNB is terminated and thereafter the employee would have to enter into employment with nUNB. The risk of redundancy costs may be partly mitigated by creating a relation between nUNB and UNB employees at the time preceding the commissioning of nUNB. The establishment of a relation between nUNB and UNB employees could be part of the arrangement between UNB and nUNB. The relation between nUNB and UNB employees would form the basis for the entering into employment at a later stage. nUNB could enter into part time contracts with the affected employees and the switch to full time employment could be materialised on condition of termination of employment of an UNB employee by the UNB employee.

The risk of interruption of health care provision must be mitigated by way of negotiating a detailed plan of transfer/transition of UNB capacities to nUNB as part of the procurement procedure. This plan of transfer/transition should be part of the proposed designs submitted by the tenderers in the procurement. With CPPP, the tool for implementing the transfer/transition of capacities would be the concession contract. Implementation of the plan of transferring the capacities will be part of the Project Implementation Stage, which will follow at the time between the execution of the concession contract and the commissioning of nUNB.<sup>132</sup>

The risk of failure to execute contracts with the Universities may be mitigated by way of including the obligation of nUNB to enter into contract on health care provision with Universities into the concession contract. The risk of failure to establish a relation with the patients stems from the right to choose one's health care provider freely. This is one of the basic principles of the right to protection of health. Still, patients may exercise this choice only against the background of the existing offer of health care providers. It is legally impossible to force patients to enter into contracts with any specific provider.

The risk of failure to execute contracts between nUNB and Universities may be mitigated by including obligation of nUNB to enter into contract on health care provision with Universities into the concession contract.

The risk of an unprofitable operation of the affected UNB hospital buildings after their operations are terminated may be mitigated by way of adopting a new suitable plan of redeveloping the hospitals of Kramáre, Staré Mesto and Ružinov. The proposal of such redevelopment could be part of the competitive dialogue in the public procurement process.

The risk of costs attached to contracts termination stems from the potential need to terminate the contracts early and from the relating compensation to be paid to the contractual partners. The risk may be mitigated by way of timely adoption of a measure preventing the execution of new contracts or the extension of the existing contracts.

<sup>131</sup> Section 5a of Act on Health Care Providers

<sup>132</sup> A schedule of MOH steps is depicted in Proposals of realistic legal structures and tools enabling implementation of the preferred model.

## Assessment of legal consequences of termination of the operations of the existing health care providers

The risk of having to perform existing debts and the risk of new debts is attributable to the impaired capacity of UNB to perform its own obligations as a result of the reduction of the health care provision volumes. This risk may be mitigated by way of a proper due diligence of the obligations and by adopting a plan of gradual repayment of the obligations to prevent the accrual of default interest and contractual fines. The risk of new debts arising may be mitigated by way of timely adoption of optimisation measures with respect of the scheduled termination of the operations in the hospitals in Kramáre, Staré Mesto and Ružinov directed towards a decrease of the volume of used services, by way of optimising purchases of materials and consuming existing stock.

| Model | RISK  | MITIGATION  |
|-------|---|---|
| CPPP  | Impossibility to anticipate health care demand  | Setting up compensatory payments in the concession contract, change of Project to availability-based PPP project                                |
|       | Failure to execute contracts with HICs  | Adding nUNB to the end network of hospitals<br>Introducing the obligation of HICs to enter into contract with the concession hospital           |
|       | UNB staff going on strike   | Proper communication with professionals and laymen  |
|       | Redundancy costs  | Establishing a relation between nUNB or SPV and UNB staff   |
|       | Interruption of health care provision   | Negotiating a detailed plan of transfer/transition of UNB capacities to nUNB as part of the procurement procedure                               |
|       | Failure to execute contracts with patients  | Risk cannot be mitigated legally, but an implicit increase of demand is anticipated by reason of shutting down a large part of the existing UNB |
|       | Unprofitable operation of the affected UNB hospital buildings after their operations are terminated | Suitable redevelopment plan<br>Design proposal as part of the procurement procedure   |
|       | Costs of contracts termination  | Measures preventing execution of new contracts or extension of existing contracts   |
|       | Performance of existing debts and risk of new debts arising   | Due diligence of obligations<br>Plan of gradual repayment of obligations  |

### B. IPPP

The specific feature of the IPPP model with respect of the analysed affected area is that the public-private ownership of the SPV realising the Project and at the same time the existence of the concession contract specifying the terms of Project implementation. The responsibility for the Project implementation is transferred to the private partner and MOH is in the position of contractual partner of the concession contract.

Having evaluated the legal consequences of terminating the operations of the existing health care providers for the implementation of the IPPP model, we identified the following risks:

- ▶ Impossibility to anticipate health care demand
- ▶ Failure to execute contracts with HICs
- ▶ UNB staff going on strike
- ▶ Redundancy costs
- ▶ Interruption of health care provision
- ▶ Failure to execute contracts with patients
- ▶ Unprofitable operation of the affected UNB hospital buildings after their operations are terminated

## Assessment of legal consequences of termination of the operations of the existing health care providers

- Costs of contracts termination
- Risk of having to perform existing debts and risk of new debts arising

The risk of not being able to anticipate the demand for health care services may be mitigated in the concession contract by including a special provision on compensatory payments to be made by the state.

To mitigate the risk of non-execution of contracts with HICs, we recommend including nUNB into the end network of hospitals, which may be effected by way of an amendment to Government Regulation No. 640/2008 Coll. on the minimal network of public health care providers. Pursuant to Section 7 of Act on Health Insurance Companies, HICs are obliged to enter into contracts on health care provision with health care providers at least in the scope of the public minimal network of health care providers. The end network of providers represents the providers of inpatient care within the minimal network, which offer inpatient health care in the relevant area.<sup>133</sup> The risk of failure to execute contract with a certain HIC by nUNB may be mitigated by including an obligation of nUNB to enter into contract on the provision of health care with all HICs into the concession contract.

A drawback of this mitigation measure is that it is impossible to include a hospital, which has yet to start its operations, into the end network. MOH has no capacity to oblige the Slovak Government to pass a change to the end networks of hospitals. Notwithstanding that, it is probable and legitimate to assume that the future private partner will require the undertaking of such commitment including the legal consequences of the failure to perform it.

An alternative mitigation measure could be the amendment of Section 7 (1) of Act on Health Insurance Company consisting in the addition of an obligation of the HIC to sign a contract with a concession hospital and maintain it throughout the entire life of the concession contract. In this respect, it would be necessary to add a definition of "concession hospital" to Act on Health Care Providers, specifically in Section 4 (a) (3), thus introducing a new type of health care provider with reference to the relevant provisions of Public Procurement Act.

With the IPPP model, the risk of UNB staff going on strike may be mitigated by way of proper communication with both professionals and laymen, by adopting an agreement between UNB and nUNB or SPV, the subject of which would be the regulation of mutual rights and obligations during the period between picking the private partner and commissioning nUNB ("Project Implementation Stage"), in particular the rights and obligations of nUNB to train UNB employees and communicate to the employees the methods of nUNB management and the method of transferring the capacities from UNB to nUNB. Compared to CPPP, the risk of strike is mitigated by way of MOH's role in SPV, which contributes to a better perception of SPV as with the vehicle being wholly owned by the private partner.

Materialisation of the risk of redundancy costs is highly probable. In the absence of legal succession between UNB and nUNB, it will be necessary that the employment between employees and UNB is terminated and thereafter the employee would have to enter into employment with nUNB. The risk of redundancy costs may be partly mitigated by creating a relation between nUNB or SPV and UNB employees at the time preceding the commissioning of nUNB. The establishment of a relation between nUNB and UNB employees could be part of the arrangement between UNB and nUNB or SPV. The relation between nUNB and UNB employees would form the basis for the entering into employment at a later stage. nUNB or SPV could enter into part-time employment contracts with the affected employees and the switch to full time employment would be conditional on termination of voluntary employment of a UNB employee.

The risk of interruption of health care provision must be mitigated by way of negotiating a detailed plan of transfer/transition of UNB capacities to nUNB as part of the procurement procedure. With IPPP, the tool for implementing the transfer/transition of capacities would be the concession contract. The implementation of the plan of transferring capacities will be part of the Project Implementation Stage and will follow at the time between execution of the concession contract and the commissioning of nUNB.<sup>134</sup>

The risk of failure to establish a relation with the patients stems from the right to choose one's health care provider freely. This is one of the basic principles of the right to protection of health. Still, patients may exercise this choice only against the background of the existing offer of health care providers. It is legally impossible to force patients to enter into contracts with any specific provider.

<sup>133</sup> Section 5a of Act on Health Care Providers

<sup>134</sup> The schedule of transferring capacities from UNB to nUNB is contained in Proposals of realistic legal structures and tools enabling implementation of the preferred model.

## Assessment of legal consequences of termination of the operations of the existing health care providers

The risk of failure to execute contracts between nUNB and Universities may be mitigated by including obligation of nUNB to enter into contract on health care provision with Universities into the concession contract.

The risk of an unprofitable operation of the affected UNB hospital buildings after their operations are terminated may be mitigated by way of adopting a new suitable plan of redeveloping the hospitals of Kramáre, Staré Mesto and Ružinov. The proposal of such redevelopment could be part of the competitive dialogue in the public procurement process.

The risk of costs attached to contracts termination stems from the potential need to terminate the contracts early and from the relating compensation to be paid to the contractual partner. The risk may be mitigated by way of timely adoption of a measure preventing the execution of new contracts or extension of the existing contracts.

The risk of having to perform existing debts and the risk of new debts is attributable to the impaired capacity of UNB to perform its own obligations as a result of the reduction of the health care provision volumes. This risk may be mitigated by way of a proper due diligence of the obligations and by adopting a plan of gradual repayment of the obligations to prevent the accrual of default interest and contractual fines. The risk of new debts arising may be mitigated by way of timely adoption of optimisation measures with respect of the scheduled termination of the operations in the hospitals in Kramáre, Staré Mesto and Ružinov, directed towards a decrease of the volume of used services, by way of optimising purchases of materials and consuming existing stock.

| Model | RISK  | MITIGATION  |
|-------|---|---|
| IPPP  | Impossibility to anticipate health care demand  | Setting up compensatory payments in the concession contract   |
|       | Failure to execute contracts with HICs  | Adding nUNB to the end network of hospitals<br>Introducing the obligation of HICs to enter into contract with the concession hospital |
|       | UNB staff going on strike   | Proper communication with professionals and laymen  |
|       | Redundancy costs  | Establishing a relation between nUNB and UNB staff  |
|       | Interruption of health care provision   | Negotiating a detailed plan of transfer/transition of UNB capacities to nUNB as part of the procurement procedure                     |
|       | Failure to execute contracts with patients  | Risk cannot be mitigated legally  |
|       | Unprofitable operation of the affected UNB hospital buildings after their operations are terminated | Suitable redevelopment plan<br>Design proposal as part of the procurement procedure   |
|       | Costs of contracts termination  | Measures preventing execution of new contracts, or extension of existing contracts  |
|       | Performance of existing debts and risk of new debts arising   | Due diligence of obligations<br>Plan of gradual repayment of obligations  |

### C. JV

The specific feature of the JV model with respect of the analysed affected area is the commercial driven setup of the model and the absence of any control mechanisms of the state. The responsibility for the Project implementation is transferred to JV and MOH is in the position of JV's minority shareholder.

Having evaluated the legal consequences of terminating the operations of the existing health care providers for the implementation of the IPPP model, we identified the following risks:

- Impossibility to anticipate health care demand
- Failure to execute contracts with HICs



## Assessment of legal consequences of termination of the operations of the existing health care providers

- ▶ UNB staff going on strike
- ▶ Redundancy costs
- ▶ Interruption of health care provision
- ▶ Failure to execute contracts with patients
- ▶ Unprofitable operation of the affected UNB hospital buildings after their operations are terminated
- ▶ Costs of contracts termination
- ▶ Risk of having to perform existing debts and risk of new debts arising

The risk of not being able to anticipate the demand for health care services cannot be mitigated in the concession contract by including a special provision on compensatory payments to be made by the state, as there is no concession contract.

To mitigate the risk of non-execution of contracts with HICs, we recommend including nUNB into the end network of hospitals, which may be effected by way of an amendment to Government Regulation No. 640/2008 Coll. on the minimal network of public health care providers. Pursuant to Section 7 of Act on Health Insurance Companies, HICs are obliged to enter into contracts on health care provision with health care providers at least in the scope of the public minimal network of health care providers. The end network of providers represents the providers of inpatient care within the minimal network, which offer inpatient health care in the relevant area.<sup>135</sup> The risk of failure to execute contract with a certain HIC by nUNB may be mitigated by including an obligation of nUNB to enter into contract on the provision of health care with all HICs into the contract between MOH and the JV partner.

With the JV model, the risk of the UNB medical staff going on strike may be mitigated by way of proper communication with both the professionals and laymen, and by way of adopting an arrangement between UNB and nUNB or SPV, the subject of which would be the regulation of mutual rights and obligations during the period between establishing the JV and commissioning nUNB ("Project Implementation Stage"), in particular the rights and obligations of nUNB to train UNB employees and communicate to the employees the methods of nUNB management and the method of transferring the capacities from UNB to nUNB. Compared to IPPP, the risk of strike is higher despite state's shareholding on account of JV being commercially driven.

Materialisation of the risk of redundancy costs is highly probable. In the absence of legal succession between UNB and nUNB, it will be necessary that the employment between employees and UNB is terminated and thereafter the employee would have to enter into employment with nUNB. The risk of redundancy costs may be partly mitigated by creating a relation between nUNB or SPV and UNB employees at the time preceding the commissioning of nUNB. The establishment of a relation between nUNB and UNB employees could be part of the arrangement between UNB and nUNB or SPV. The relation between nUNB and UNB employees would form the basis for the entering into employment at a later stage. nUNB or SPV could enter into part-time employment contracts with the affected employees and the switch to full time employment would be conditional on termination of voluntary employment of a UNB employee.

The risk of interruption of health care provision must be mitigated by way of negotiating a detailed plan of transfer/transition of UNB capacities to nUNB as part of a transparent tender. The implementation of the plan of transferring capacities will be part of the Project Implementation Stage and will follow at the time between execution of the concession contract with JV and the commissioning of nUNB

The risk of failure to establish a relation with the patients stems from the right to choose one's health care provider freely. This is one of the basic principles of the right to protection of health. Still, patients may exercise this choice only against the background of the existing offer of health care providers. It is legally impossible to force patients to enter into contracts with any specific provider.

The risk of failure to execute contracts between nUNB and Universities may be mitigated by including obligation of nUNB to enter into contract on health care provision with Universities into the contract with the JV partners.

The risk of an unprofitable operation of the affected UNB hospital buildings after their operations are terminated may be mitigated by way of adopting a new suitable plan of redeveloping the hospitals of Kramáre, Staré Mesto and Ružinov. The proposal of such redevelopment could be part of the transparent tender.

<sup>135</sup> Section 5a of Act on Health Care Providers

## Assessment of legal consequences of termination of the operations of the existing health care providers

The risk of costs attached to contracts termination stems from the potential need to terminate the contracts early and from the relating compensation to be paid to the contractual partners. The risk may be mitigated by way of timely adoption of a measure preventing the execution of new contracts or extension of the existing contracts.

The risk of having to perform existing debts and the risk of new debts is attributable to the impaired capacity of UNB to perform its own obligations as a result of the reduction of the health care provision volumes. This risk may be mitigated by way of a proper due diligence of the obligations and by adopting a plan of gradual repayment of the obligations to prevent the accrual of default interest and contractual fines. The risk of new debts arising may be mitigated by way of timely adoption of optimisation measures with respect of the scheduled termination of the operations in the hospitals in Kramáre, Staré Mesto and Ružinov, directed towards a decrease of the volume of used services, by way of optimising purchases of materials and consuming existing stock.

| Model | RISK  | MITIGATION   |
|-------|---|--|
| JV    | Impossibility to anticipate health care demand  | Cannot be mitigated  |
|       | Failure to execute contracts with HICs  | Adding nUNB to the end network of hospitals<br>Introducing the obligation of HICs to enter into contract with nUNB |
|       | UNB staff going on strike   | Proper communication with professionals and laymen   |
|       | Redundancy costs  | Establishing a relation between nUNB and UNB staff   |
|       | Interruption of health care provision   | Negotiating a detailed plan of transfer/transition of UNB capacities to nUNB                                       |
|       | Failure to execute contracts with patients  | Risk cannot be mitigated legally   |
|       | Unprofitable operation of the affected UNB hospital buildings after their operations are terminated | Suitable redevelopment plan<br>Design proposal as part of the selecting the private partner                        |
|       | Costs of contracts termination  | Measures preventing execution of new contracts, or extension of existing contracts                                 |
|       | Performance of existing debts and risk of new debts arising   | Due diligence of obligations<br>Plan of gradual repayment of obligations   |

### D. Specific Model

The specific feature of the Specific Model with respect of the analysed affected area is the 100% ownership of SPV by MOH. The responsibility for the Project implementation is transferred to SPV and MOH is in the position of SPV's owner and at the same time the contractual partner of the concession contract.

Having evaluated the legal consequences of terminating the operations of the existing health care providers for the implementation of the Specific Model, we identified the following risks:

- ▶ Impossibility to anticipate health care demand
- ▶ Failure to execute contracts with HICs
- ▶ UNB staff going on strike
- ▶ Redundancy costs
- ▶ Interruption of health care provision
- ▶ Failure to execute contracts with patients
- ▶ Unprofitable operation of the affected UNB hospital buildings after their operations are terminated
- ▶ Costs of contracts termination

## Assessment of legal consequences of termination of the operations of the existing health care providers

### ► Risk of having to perform existing debts and risk of new debts arising

The risk of not being able to anticipate the demand for health care services may be mitigated in the concession contract by including a special provision on compensatory payments to be made by the state.

To mitigate the risk of non-execution of contracts with HICs, we recommend including nUNB into the end network of hospitals, which may be effected by way of an amendment to Government Regulation No. 640/2008 Coll. on the minimal network of public health care providers. Pursuant to Section 7 of Act on Health Insurance Companies, HICs are obliged to enter into contracts on health care provision with health care providers at least in the scope of the public minimal network of health care providers. The end network of providers represents the providers of inpatient care within the minimal network, which offer inpatient health care in the relevant area.<sup>136</sup>

A drawback of this mitigation measure is that it is impossible to include a hospital, which has yet to start its operations, into the end network. MOH has no capacity to oblige the Slovak Government to pass a change to the end networks of hospitals.

An alternative mitigation measure could be the amendment of Section 7 (1) of Act on Health Insurance Company consisting in the addition of an obligation of the HIC to sign a contract with a concession hospital and maintain it throughout the entire life of the concession contract. In this respect, it would be necessary to add a definition of "concession hospital" to Act on Health Care Providers, specifically in Section 4 (a) (3), thus introducing a new type of health care provider with reference to the relevant provisions of Public Procurement Act.

With the Specific Model, the risk of the UNB medical staff going on strike may be mitigated by way of proper communication with both the professionals and laymen, and by way of adopting an arrangement between UNB and nUNB or SPV or SPV, the subject of which would be the regulation of mutual rights and obligations during the period between establishing the JV and commissioning nUNB ("Project Implementation Stage"), in particular the rights and obligations of nUNB to train UNB employees and communicate to the employees the methods of nUNB management and the method of transferring the capacities from UNB to nUNB. The risk of strike attached to the Specific Model is mitigated by SPV being in sole ownership of the state.

Materialisation of the risk of redundancy costs is highly probable. In the absence of legal succession between UNB and nUNB, it will be necessary that the employment between employees and UNB is terminated and thereafter the employee would have to enter into employment with nUNB. The risk of redundancy costs may be partly mitigated by creating a relation between nUNB and UNB employees at the time preceding the commissioning of nUNB. The establishment of a relation between nUNB and UNB employees could be part of the arrangement between UNB and nUNB. The relation between nUNB and UNB employees would form the basis for the entering into employment at a later stage.

The risk of interruption of health care provision must be mitigated by way of negotiating a detailed plan of transfer/transition of UNB capacities to nUNB. With the Specific Model, the tool for implementing the transfer/transition of the capacities is the concession contract. A drawback of the Specific Model is the absence of market feedback in the process of selecting the facility operator by way of public procurement.

The implementation of the plan of transferring capacities will be part of the Project Implementation Stage, which will follow during the time between execution of the concession contract with SPV and the commissioning of nUNB, ideally with assistance of the know-how provider.

The risk of failure to establish a relation with the patients stems from the right to choose one's health care provider freely. This is one of the basic principles of the right to protection of health. Still, patients may exercise this choice only against the background of the existing offer of health care providers. It is legally impossible to force patients to enter into contracts with any specific provider.

The risk of failure to execute contracts between nUNB and Universities may be mitigated by including obligation of nUNB to enter into contract on health care provision with Universities into the concession contract.

The risk of an unprofitable operation of the affected UNB hospital buildings after their operations are terminated may be mitigated by way of adopting a new suitable plan of redeveloping the hospitals of Kramáre, Staré Mesto and Ružinov. The proposal of such redevelopment could be part the public procurement procedure for selecting the operation consultant.

<sup>136</sup> Section 5a of Act on Health Care Providers

## Assessment of legal consequences of termination of the operations of the existing health care providers

The risk of costs attached to contracts termination stems from the potential need to terminate the contracts early and from the relating compensation to be paid to the contractual partners. The risk may be mitigated by way of timely adoption of a measure preventing the execution of new contracts or extension of the existing.

The risk of having to perform existing debts and the risk of new debts is attributable to the impaired capacity of UNB to perform its own obligations as a result of the reduction of the health care provision volumes. This risk may be mitigated by way of a proper due diligence of the obligations and by adopting a plan of gradual repayment of the obligations to prevent the accrual of default interest and contractual fines. The risk of new debts arising may be mitigated by way of timely adoption of optimisation measures with respect of the scheduled termination of the operations in the hospitals in Kramáre, Staré Mesto and Ružinov, directed towards a decrease of the volume of used services, by way of optimising purchases of materials and consuming existing stock.

| Model          | RISK  | MITIGATION  |
|----------------|---|---|
| Specific Model | Impossibility to anticipate health care demand  | Setting up compensatory payments in the concession contract   |
|                | Failure to execute contracts with HICs  | Adding nUNB to the end network of hospitals<br>Introducing the obligation of HICs to enter into contract with the concession hospital |
|                | UNB staff going on strike   | Proper communication with professionals and laymen  |
|                | Redundancy costs  | Establishing a relation between nUNB and UNB staff  |
|                | Interruption of health care provision   | Negotiating a detailed plan of transfer/transition of UNB capacities to nUNB as part of the procurement procedure                     |
|                | Failure to execute contracts with patients  | Risk cannot be mitigated legally  |
|                | Unprofitable operation of the affected UNB hospital buildings after their operations are terminated | Suitable redevelopment plan   |
|                | Costs of contracts termination  | Measures preventing execution of new contracts, or extension of existing contracts  |
|                | Performance of existing debts and risk of new debts arising   | Due diligence of obligations<br>Plan of gradual repayment of obligations  |

### Comparisons of the individual models

With respect of the affected area of terminating the operations of the existing health care providers, all compared models appear feasible. Risk-wise, to ensure feasibility and mitigate the risks, the best model seems to be the Specific Model on account of its low weight of risks and the high viability of the mitigation measures. It is followed by the IPPP model with its medium risk weight and medium efficiency of the mitigation measures, as it enables combining mitigation measures embodied in the concession contract and compared to CPPP, it is perceived more positively by both professionals and laymen thanks to state's shareholding. The weight of risks of CPPP appears high, with medium viability of the mitigation measures. The JV model appears to be the riskiest on account of absence of state's control mechanisms and the little options of applying mitigation measures, and also because of the most likely negative perception of the purely commercial concept of JV by the professionals and the general public.

## Assessment of legal consequences of termination of the operations of the existing health care providers

Summary table

| Risk  | CPPP  | IPPP   | JV  | Specific Model  |
|---|---|--|---|---|
| Unpredictability of health care demand  | Setting up compensatory payments in the concession contract, change of Project to availability-based PP project                                 | Setting up compensatory payments in the concession contract  | Cannot be mitigated   | Setting up compensatory payments in the concession contract   |
| Failure to execute contracts with HICs  | Adding nUNB to the end network of hospitals<br>Introducing the obligation of HICs to enter into contract with nUNB                              | Adding nUNB to the end network of hospitals<br>Introducing the obligation of HICs to enter into contract with nUNB | Adding nUNB to the end network of hospitals<br>Introducing the obligation of HICs to enter into contract with nUNB    | Adding nUNB to the end network of hospitals<br>Introducing the obligation of HICs to enter into contract with the concession hospital |
| UNB staff going on strike   | Proper communication with professionals and laymen  | Proper communication with professionals and laymen   | Proper communication with professionals and laymen  | Proper communication with professionals and laymen  |
| Redundancy costs  | Establishing a relation between nUNB and UNB staff  | Establishing a relation between nUNB and UNB staff   | Establishing a relation between nUNB and UNB staff  | Establishing a relation between nUNB and UNB staff  |
| Interruption of health care provision   | Negotiating a detailed plan of transfer/transition of UNB capacities to nUNB as part of public procurement process                              | Negotiating a detailed plan of transfer/transition of UNB capacities to nUNB as part of public procurement process | Negotiating a detailed plan of transfer/transition of UNB capacities to nUNB as part of selecting the private partner | Negotiating a detailed plan of transfer/transition of UNB capacities to nUNB  |
| Failure to execute contracts with patients  | Risk cannot be mitigated legally, but an implicit increase of demand is anticipated by reason of shutting down a large part of the existing UNB | Risk cannot be mitigated legally   | Risk cannot be mitigated legally  | Risk cannot be mitigated legally  |
| Unprofitable operation of buildings of UNB hospitals after termination of hospital operations | Suitable redevelopment plan Design proposal as part of the procurement procedure  | Suitable redevelopment plan Design proposal as part of the procurement procedure                                   | Suitable redevelopment plan   | Suitable redevelopment plan   |
| Costs of terminating contracts  | Measures preventing execution of new contracts, or extension of existing contracts  | Measures preventing execution of new contracts, or extension of existing contracts                                 | Measures preventing execution of new contracts, or extension of existing contracts                                    | Measures preventing execution of new contracts, or extension of existing contracts  |
| Performance of existing debts and risk of new debts arising                                   | Due diligence of obligations<br>Plan of gradual repayment of obligations  | Due diligence of obligations<br>Plan of gradual repayment of obligations   | Due diligence of obligations<br>Plan of gradual repayment of obligations  | Due diligence of obligations<br>Plan of gradual repayment of obligations  |

## Assessment of potential consequences for legal relations to existing assets

### Assessment of potential consequences for legal relations to existing assets (i.e. assets ownership, administration of state property and restrictions for disposal of such property) with respect of Project implementation

#### Basic description of the affected area

The analysis of the given affected area focused on the identification of the affected entities, their rights and obligations with respect to the existing assets of UNB or NSM, respectively, and also offers a brief description of the processes involving the disposal of assets to warrant successful Project implementation.

In terms Project feasibility, in light of the current MOH assignment, it is necessary to arrange the legal relations to real estate, on which the nUNB facility is slated to be built.<sup>137</sup>

Regardless of the model of Project implementation, MOH will have to settle the property situation of the site slated for the nUNB facility development. According to the information and documents provided by MOH, the new hospital should be built on the grounds of the former hospital of Ministry of Defence of the Slovak Republic, Cesta na Červený Most 1. MOH has no legal relation to the real estate, which will be affected by the nUNB development (hereinafter as "Real Estate"). The sole and exclusive owner of the Real Estate is NSM. Currently, there is no legal obligation for the owner of the Real Estate to leave, vacate or surrender the same.

The Project implementation will also affect the existence and quality of legal relations to the existing assets available to UNB. Terminating operations of the hospitals in Kramáre, Staré Mesto and Ružinov will result in major changes with respect to the regulation by Act on State Property Administration. UNB as the administrator of state property will be entitled and obliged to use the state property to perform the tasks following from its objects or in relation thereto, dispose of the property in compliance with Act on State Property Management, maintain the property in sound condition, use any and all remedies to protect the same and make sure that the property is not damages, lost, abused or reduced. By reason of terminating the operations of the in Kramáre, Staré Mesto and Ružinov, the property relating to the operation of these hospitals may become redundant, i.e. state property which no longer to serves or will not serve in future the administrator to perform its tasks defined by its objects or in relation thereto. The legal regime of disposing of such redundant state property is further specified in Assets and property managed by UNB.

Also, the closing down of the hospitals in Kramáre, Staré Mesto and Ružinov will significantly impact the manner of using the hospitals and will require a plan for further use of the facilities or disposal of the immovable and movable assets managed by UNB.

The main risks existing with respect of the analysed affected area are:

- ▶ Risk of failure to settle the relations to the nUNB development site
- ▶ Risk of inefficient use of the assets affected by the termination of operations of the hospitals in Kramáre, Staré Mesto and Ružinov
- ▶ Risk of costs attributable to maintenance and refurbishment of the unused infrastructure
- ▶ Risk of project cancellation
- ▶ Risk of project delays

#### Legal framework of the affected area

Legal position of UNB with respect to the property entrusted to the entity for the purpose of management is governed by Act on State Property Administration. The restrictions following from Act on State Property Administration interfere with the disposal authorisation of UNB and qualify such disposal and restrict UNB's capacity to acquire property.

---

<sup>137</sup> In terms of building regulations, the topic of the site to built on is detailed in the section "Assessment of legal consequences of Project implementation in terms of building regulations (in particular planning, permits and approvals of competent authorities, EIA, and conservation of historical buildings)".

## Assessment of potential consequences for legal relations to existing assets

As a state subsidised organisation, UNB has legal personality. However, under Section 2 (2) of Act on State Property Administration, it is not authorised to acquire state property into its ownership.

UNB uses state property for the purpose for which it was organised, i.e. for the purpose of providing health care. State property, which does not serve and will not serve to its administrator for performing its activities or in relation to such activities, is considered redundant state property. The administrator is obliged to dispose of such redundant property without undue delay, effectively and as economically as possible in line with the statute and special regulations. The decision granting the status of redundancy to state property must be in writing and must contain in particular a description of such redundant state property and its identification.<sup>138</sup> the legal regime of disposing of such redundant state property is further specified in Assets and property managed by UNB.

The legal framework of the affected area with respect to the legal relations to the existing assets (i.e. assets ownership, management of state property and restrictions of disposal of such property) needed to realise the Project is outlined in particular by the following regulations:

- ▶ Act on State Property Administration
- ▶ Act on Budgetary Rules of Public Government
- ▶ Civil Code
- ▶ Commercial Code.

### *Property owned by NSM*

NSM is not the administrator of state property as defined by Act on State Property Administration, as it does not comply with the definition contained in Section 1 of the act. Neither is the disposal of property owned by Nemocnica svätého Michala, a.s. subject to Act No. 92/1991 Coll. on the transfer of state property to third parties.

NSM is a joint-stock company fully governed by Commercial Code. NSM was organised for an indefinite term for purposes other than the conduct of business. Under Government Regulation No. 916 of 10.12.2008, Slovak Government approved the merger of NSM with the joint-stock company Nemocnica Ministerstva obrany SR, a.s. The merger was carried out following the decision of the sole shareholder dated 29.06.2009 and was effective upon registration in the Commercial Register of Bratislava I on 03.07.2009, with NSM being the acquiring company and Nemocnica Ministerstva obrany SR, a.s. the dissolved company.

The merger of Nemocnica Ministerstva obrany SR, a.s. and NSM did neither result in increase of the share capital of the acquiring entity – NSM nor in the issue of new shares. The real estate owned by the dissolved company, i.e. Nemocnica Ministerstva obrany SR, a.s., was not contributed to the share capital of NSM, but became part of NSM property. The transfer of the real estate of NSM therefore does not imply the need to reduce NSM's share capital.

Shareholder's rights and obligations are defined by the applicable legal regulations and the articles of association of the company. The right to participate in the company management is exercised by the shareholder by exercising the powers of the general meeting. The rights are exercised by MOI, it being the sole shareholder of the joint-stock company. Since 01.06.2012, the decisions of the sole shareholder exercising the powers of the general meeting do not require the prior written consent of Ministry of Defence of the Slovak Republic. The decision-making of the general meeting of NSM is set forth in its articles of association. Apart from other powers, the scope of authorities of the general meeting includes the approval of any sale of real estate with book value in excess of EUR 650 000.

To mitigate the risks of Project feasibility with the individual PPP models, it is essential that the Real Estate be transferred to the ownership of the state and under management of MOH or under the regime of Act on State Property Administration. Each similar project would require that the public partner realising the project has settled the rights to those real estate objects, which are key for the development of the relevant infrastructure. The risk of availability of the land plots and other infrastructure is one of the few risks, which the private partner is usually not willing to assume. The absolute assistance of the owner of the affected Real Estate is therefore essential for the Project implementation. Coordination (or the lack thereof) between the individual public administration components or poor coordination of the acts with the shareholder of the Real Estate owner may prove to be a major obstacle to successful Project realisation. Moreover, Project realisation anticipates the removal or change of the existing structures and infrastructure. This is the reason why retaining the Real Estate in NSM's ownership and creating occupancy right or lease right in favour of MOH or the concessionaire is out of the question. Decisions on removing

<sup>138</sup> Section 3 (3) of Act on State Property Administration

## Assessment of potential consequences for legal relations to existing assets

the structures, rebuilding the same, change of land use, and the building of line structures and infrastructure will have major impact on the content of the owner's title and are contrary to the fundamental purpose of lease or occupancy by a person other than the owner. The ownership structure of the Real Estate and the direct power of MOH to decide on the Real Estate disposal will increase the degree of legal certainty of the private partner and the confidence of the banking sector in the feasibility of the Project.

The subject of the analysis of the affected area is the consideration of several avenues and tools to effect the change of Real Estate ownership in favour of the Slovak Republic. As the Real Estate owner and seller, NSM is a corporation subject to Commercial Code provisions. The transfer of Real Estate ownership is accordingly governed by private law regulations.

With respect to the different positions of NSM and MOH in terms of regulation by Act on State Property Administration and Act on Budgetary Rules of Public Government, special regulation under Act on State Property Administration is not applicable to Real Estate transfer. The simplest and most practical solution would be transferring the Real Estate under an agreement on ownership title transfer as per Section 588 and foll. of Civil Code, entered into between NSM and the Slovak Republic represented by MOH in the capacity of administrator of state property.

Alternatively, an exchange agreement pursuant to Section 611 and foll. of Civil Code could be considered, provided MOH has the property suitable for exchanging for the NSM Real Estate.

By transferring the title to NSM property to the Slovak Republic represented by MOH, MOH would become administrator of the state property. MOH could further dispose of the property in the manner specified in Assets and property managed by UNB.

In terms of costs attached to the Real Estate transfer, it should be said that any transfer of NSM property at a price lower than the market price or the book value, as the case may be, would have the following implications:

- ▶ Tax and accounting issues
- ▶ Acting contrary to company's interest
- ▶ Liability towards company creditors – voidability of acts
- ▶ Liability towards company creditors – penal consequences
- ▶ Company insolvency as per Act No. 7/2005 Coll. on bankruptcy and restructuring.

The current general value of Real Estate in the ownership of NSM is unknown. We also have no information as to the existence or amount of liabilities of NSM owed to the Slovak Republic, which could be set off against the price of Real Estate transfer. We are also unaware of whether an exchange agreement could be concluded between the Slovak Republic and NSM. In light of that, what appears to be reasonable is a market transfer of the Real Estate. This is not a major obstacle to the Project feasibility, but ancillary costs should be considered with respect to further Project preparation.

Also, it should be borne in mind that MOH is the contracting authority. Public Procurement Act does not apply to acquisition or lease of real estate. Movable assets located in Real Estate should not be included in the ownership transfer to the Slovak Republic and should be removed from the premises located at Cesta na Červený most 1 by NSM.

Another feasibility risk existing with respect to Project assets is the active use of the real estate for the purpose of health care provision. We understand that the prerequisite for abandoning, vacating and surrendering the Real Estate is the transfer of capacities from Cesta na Červený Most 1 to the building in Cintorínska Street, which is currently under construction and is slated for commissioning at the end of 2015. A delay of the transfer of capacities from Cesta na Červený Most 1, or potential failure to render assistance in surrendering the Real Estate may result in Project delays and in worst case scenario jeopardise the Project.

### *State assets and property managed by UNB*

With respect of the state assets and property managed by UNB, what is relevant is the manner of terminating the operations of the individual hospitals and the issue of legal succession of nUNB.



## Assessment of potential consequences for legal relations to existing assets

For the purpose of Act on State Property Management, state property owned by the Slovak Republic includes funds and also receivables and other property values of the Slovak Republic ("state property"). Special provisions governing the management of state receivables are specified in "Receivables".

Pursuant to Section 3 (3) and (4) of Act on State Property Management, state property which no longer serves or will not serve in future the administrator to perform its tasks defined by its objects or in relation thereto. State property, which temporarily does not serve the property administrator for the performance of the tasks determined by the administrator's objects is considered temporarily redundant.

First of all, it is left to the discretion of the state property administrator, to decide whether the property may serve for the performance of tasks following from UNB activities, in particular with respect of the operation of Sv. Cyril and Metod Hospital and Špecializovaná geriatrická nemocnica Podunajské Biskupice ("ŠGN"). If the property is used for the operation of Sv. Cyril and Metod hospital or ŠGN, such property will not be classified as redundant property or temporarily redundant property and it will remain in UNB management, which will use it for its operations.

Should MOH dispose of state property, which as at this date is managed by UNB, it would require a change in the administrator from UNB to MOH under an agreement on transfer of administration as per Act on State Property Administration.

The administrator is obliged to dispose of redundant state property without undue delay, efficiency and economically in compliance with the act and other special regulations. The decision on redundancy of state property must be in writing and must contain the designation of such redundant state property and its identification data. The administrator is obliged to attach a certificate to the decision proving the disposal of the redundant state property.

With respect of the property managed by UNB, which property UNB will no longer use, the following comes into consideration:

- ▶ Transfer of state property administration to MOH as a result of termination of part of UNB
- ▶ Transfer of administration to other budgetary or subsidised organisation
- ▶ Transfer of ownership title to state property to a person other a budgetary or subsidised organisation
- ▶ Lease or loan of temporarily redundant property
- ▶ Use of state property by the concessionaire
- ▶ Contributing property managed by state to concessionaire's capital

### Transfer of state property administration to MOH as a result of termination of part of UNB

Considering the fact that the termination of health care provision affects part of UNB, while health care is slated to be further provided in the hospitals of sv. Cyril and Metod and ŠGN, what appears useful is dividing UNB into two parts<sup>139</sup>. One part of UNB would consist of the hospitals of sv. Cyril and Metod and ŠGN and the other part of the hospitals in Kramáre, Staré Mesto and Ružinov. As the founder, MOH decides on any potential division of a subsidised organisation and at the same time determines which assets and liabilities are to be transferred from the divided UNB organisation to the newly created UNB part. The single legal personality of UNB enables its founder to divide the assets and liabilities in a manner facilitating a fast transfer of the capacities from UNB to nUNB and minimising the costs the state would incur in relating to the termination of health care provision in the hospitals in Kramáre, Staré Mesto and Ružinov.

Suitable conditions for splitting UNB and potential assumption of UNB property by SPV may contribute to fluent transfer/transition of capacities from UNB to nUNB.

Also, MOH is entitled to decide on termination of part of UNB as a separate subsidised organisation.

If the separated part of UNB is terminated without legal successor, the rights and obligations of the terminated part of UNB will be transferred to MOH (founder) on the date immediately following the termination date. MOH will be in the position of state property administrator with respect of the property managed by the terminated UNB part.

Budgetary or subsidised organisation organised by reason of a decision of the founder (including UNB) may be terminated, their subordination may be changed or they may be changed from a budgetary organisation to a subsidised organisation or vice versa based on the organiser's decision starting from the first day following the

<sup>139</sup> Section 21 (13) of Act on Budgetary Rules of Public Administration

## Assessment of potential consequences for legal relations to existing assets

budget year subject to prior written decision of MOF. In reasonable cases, MOF may provide another date. Change in subordination and financing requires that the founder to amend the foundation deed of the budgetary or subsidised organisation.

### Transfer of administration to other budgetary or subsidised organisation

Act on State Property Management contains tools, which enable the concessionaire to dispose of the assets managed by its administrator. What is decisive for the use of these institutes is the existence of relation between the administrator and the concessionaire, with the relation being one of contracting authority and concessionaire under Act on Public Procurement.

The administrator is obliged to offer any redundant state property by way of a written notice to those budgetary or subsidised organisations operating within the region where the redundant property is located, and which could reasonably use the property as part of the performance of their tasks resulting from their purpose or in relation thereto.<sup>140</sup>

No tender is needed where the property is state-owned and where the administrator (MOH) acquires the property for the purpose of preparing or realising a concession as provided in Act on Public Procurement.<sup>141</sup> Transfer of administration may be realised outside a tender based on a contract between UNB and MOH. For the contract on transfer of administration of state real property consent of MOF is required.

### Transfer of ownership title to state property to a person other a budgetary or subsidised organisation

If no state subsidised or budgetary organisation expresses interest in the offered state property, the administrator is liable to organise a separate tender or an electronic auction under Act on State Property Management.<sup>142</sup>

Using the tender procedure or electronic auction is feasible with respect to redundant state property, which is not transferred into administration by the concessionaire or into SPV's capital.

### Lease or loan of temporarily redundant property

UNB may temporarily leave state property into lease to an entity under a lease agreement but only in return for rent paid in monies. UNB is obliged to offer temporarily redundant state property by way of a notice published in a newspaper and agree rent in an amount customary for lease of identical or similar property for the agreed purpose ("market rent") at such time. The notice must contain identification of the temporarily redundant state property, the period for submission of bids. If no bid reaches the market rent threshold, the administrator is obliged to withdraw the offer.

The administrator may loan temporarily redundant state property to nUNB under loan agreement for a term of no more than two years.

### Use of state property by the concessionaire

Building a certain level of legal succession between UNB and nUNB is feasible by way of the mechanism under Section 13c of Act on State Property Administration consisting in use of state property by the concessionaire (Specific Model, IPPP, CPPP). The state property used by the concessionaire under the concession contract is referred to as concession property. The right of the concessionaire to use the property may contain the following rights:

- ▶ Entering the property,
- ▶ Erecting a structure on state-owned land, if under the concession contract the state will later become the owner of the structure no later than within the period provided in the concession contract,
- ▶ Relocation and removal of any state-owned structure,

<sup>140</sup> Section 8 (1) of Act on State Property Management

<sup>141</sup> § Section 8 (2) (g) of Act on State Property Management

<sup>142</sup> Section 8 (1) of Act on State Property Management, last sentence

## Assessment of potential consequences for legal relations to existing assets

- ▶ Reconstruction, operation, maintenance and repair of state-owned property,
- ▶ Provision of services for other than commercial use,
- ▶ Letting or loaning the state property or creating an easement over the state property for the benefit of a third party,
- ▶ Disposal of state property, which because of its total wear and tear or damage, obvious obsolescence or uneconomical character of operation or on other serious grounds cannot be reasonably expected to longer serve its purpose or determination,
- ▶ Disposal of any material mined at the land owned by the state under the terms and conditions provided in a special regulation<sup>143</sup>

If so agreed in the concession contract, the concessionaire is allowed to let or loan the state property or create an easement for the benefit of a third party. The concessionaire may execute a lease or loan agreement or an easement agreement with a third party for no more than the concession term determined in the concession contract. The rent or easement consideration shall be determined by agreement between the concessionaire and the third party. For the lease, loan or easement agreement between the concessionaire and the third party to be valid, consent of MOF or the founder is not required.<sup>144</sup>

The above authorisations of the concessionaire with respect of the concession property provides avenues for using both movable and immovable UNB property by the concessionaire, including for the provision of other than commercial services.

Reasonable consideration of the avenues of using UNB administered property by nUNB (concessionaire) will be possible based on market feedback obtained during the selection of the private partner (CPPP, IPPP).

### Contributing property managed by state to concessionaire's capital

Subject to Slovak Government's consent, the administrator may contribute the state property upon establishment of the joint venture or into the capital of the joint venture, if so agreed in the concession contract.

MOH is authorised to enter into concession contract for public works if the value of the concession under the contract equals or is higher than the value provided in a special regulation only after having obtained prior consent of Slovak Government. A prerequisite of the material submitted for government negotiation is the position of MOF on the contract draft as regards the implications of the contract implementation for reporting public government debt within the single EU methodology. Upon request of MOF, the public administration entity is obliged to submit the data necessary for evaluation and reporting public government debt.<sup>145</sup>

Immovable state property contributed by its administrator to the joint venture is referred to as "priority assets". Priority assets become ownership of the joint venture. Priority assets cannot be used to secure the obligations of the joint venture, the concessionaire or the third party, or transfer it to the ownership of other persons. Priority assets are exempted from execution of a decision, enforcement and are not included in bankruptcy estate or liquidation.

If so agreed in the concession contract, priority assets may be leased, loaned or easement may be created over such property for a period no longer than the concession term provided in the concession contract or until the date when the joint venture is terminated without a legal successor. The nature of priority assets are not prejudiced by its transfer to the legal successor. After release of the easement registered in the cadastre, the administrator is obliged to apply for deletion of the easement.

The above authorisations of the joint venture with respect of the priority assets represent the avenues of using both movable and immovable UNB property by the concessionaire, including for the provision of other than commercial services.

Reasonable consideration of the avenues of contributing the property into the joint venture will be possible based on market feedback obtained during the selection of the private partner (IPPP).

<sup>143</sup> E.g. Act No. 44/1988 Coll. as amended, Slovak National Council Act No. 51/1988 Coll. on mining activities, explosives and administration of mining as amended.

<sup>144</sup> Section 13d (1) of Act on State Property Management

<sup>145</sup> Section 19 (5) of Act in Budgetary Rules of Public Administration

## Assessment of potential consequences for legal relations to existing assets

### *Movable assets*

Medicinal and technical equipment used by UNB to fulfil the purpose for which it was organised, is either subject to the state property management regime and is owned by the state, or is leased or let on hire based on agreements for hire or property entered into under Section 659 and foll. of Civil Code. A list of loan and lease agreements for movable property including their terms and termination conditions is provided in the annex hereto.

The ideal manner of disposal of the movable assets following implementation of the Project depends on the individual legal regime applicable to the specific equipment, device or other movable asset. With state ownership, the disposal authority is limited by Act on State Property Administration as described above in State assets and property managed by UNB.

If the assets are leased or loaned, it is necessary to consider the relevant agreements individually, meaning that it is necessary to review whether the Project implementation will not frustrate the agreements purpose.

### *Leases*

UNB entered into a myriad of lease agreements for movable assets owned by the state and managed by UNB. Generally, the leases were executed for a fixed term and they mostly terminate in 2016. The Project implementation schedule<sup>146</sup>, but first and foremost the estimated date of commissioning of UNB, as indicated by the conclusions of the technical and financial analyses contained herein provides ample room for changing or terminating the existing agreements.

Should MOH opt for Project implementation, in the capacity of founder, MOH will have to instruct UNB to carry out the acts needed to terminate or not extend the existing leases. In this respect, standard practice is the agreement of provisions regarding change of lease terms to fixed, i.e. 6 months with renewal options, or indefinite term allowing for termination without the need to provide a reason.

Considering the fact that to date it remains unclear what use will be earmarked by MOH or the Slovak Republic for the immovable and movable state assets managed by UNB, it is impossible to exclude that some of the leases to the premises affected by the Project implementation could be maintained. As such, termination of the leases does not pose a risk for the Project feasibility. Still, the slump in UNB's rent income has to be taken into account.

### *Receivables*

UNB is the administrator of state receivables, which have arisen from UNB activities or in relation to the property managed by UNB. UNB is also the administrator of obligations, which are attributable to UNB operations or to the property managed by UNB.

UNB is obliged to ensure that all of debtor's obligations be satisfied duly and on time, that the state receivables be enforced timely with the competent bodies and that the decisions of such bodies be executed timely.

UNB may, by reason of efficiency, transfer administration of state receivables. Administration of state receivables is transferred under agreement on transfer of state receivables. Transfer of state receivables into administration of a budgetary organisation is also free of consideration.<sup>147</sup>

The ownership of state receivable may be transferred free of consideration only to secure the enforcement of state's receivable abroad.

Receivables managed by UNB are owned by the state and are subject to the regime specified in State assets and property managed by UNB.

### *Specifics, risks, benefits and recommendations regarding the affected area*

In terms of reviewing the legal consequences for the Project assets, each Project model appears to be feasible.

In terms of the avenues of disposing of the state property managed by UNB, differences may be found between IPPP and the Specific Model, which both enable contributing the state property to the concessionaire's capital. IPPP,

<sup>146</sup> The schedule of implementation of the PPP projects is contained in "Analysis of public procurement methods applicable to the Project"

<sup>147</sup> Section 6 (5) of Act on State Property Management

## Assessment of potential consequences for legal relations to existing assets

CPPP and the Specific Model all enable making the state property available to the concessionaire for it to manage the property.

The individual models also differ in the degree of risks attached to the need to dispose of Project assets.

Below we describe the individual models, paying special attention to the evaluated affected area.

### A. CPPP

A specific feature of CPPP with respect to the analysed affected area is that the SPV realising the Project is wholly owned by the private partner and it enables providing the state property to the concessionaire for the purpose of management.

Having reviewed the legal consequences of terminating the operations of the existing health care providers for the implementation of the CPPP model, we have identified the following risks:

- ▶ Risk of failure to settle relations with respect to the nUNB site
- ▶ Risk of inefficient disposal of the assets affected by termination of operations in the hospitals in Kramáre, Staré Mesto and Ružinov
- ▶ Risk of maintenance and refurbishment costs of the unused infrastructure

The risk of failing to settle the relations attached to the nUNB site may be mitigated by way of a Slovak Government resolution instructing MOH to carry out the acts needed to transfer the Real Estate to MOH.

The risk of inefficient disposal of the assets affected by the termination of operations in the hospitals in Kramáre, Staré Mesto and Ružinov may be mitigated by conducting a proper due diligence of UNB assets or also within the competitive dialogue by the private partner, and by potential (including partial) takeover thereof by the private partner. In this respect, what could be considered is that the use of the property administered by the state by the concessionaire.

The risk of costs of maintenance and refurbishment of the unused infrastructure may be mitigated by adopting a detailed plan of redeveloping the hospitals, potentially jointly with the private partner as part of the public procurement procedure.

| Model | RISK                                   | MITIGATION   |
|-------|--|--|
| CPPP  | Failure to settle property relations   | Obligation imposed by way of a Slovak Government resolution  |
|       | Inefficient disposal of Project assets | Conducting a proper due diligence in the competitive dialogue process<br>Solution proposals of tenderers allowing for potential takeover of some assets<br>Use of the state assets by the concessionaire |
|       | Maintenance and refurbishment costs    | Adopting a detailed redevelopment plan, with the private partner potentially participating as part of the public procurement procedure   |

### B. IPPP

A specific feature of IPPP with respect to the analysed affected area is the joint public-private ownership of the SPV realising the Project and it enables providing the state property to the concessionaire for the purpose of management and contributing the property to SPV's capital.

Having reviewed the legal consequences of terminating the operations of the existing health care providers for the implementation of the IPPP model, we have identified the following risks:

## Assessment of potential consequences for legal relations to existing assets

- Risk of failure to settle relations with respect to the nUNB site
- Risk of inefficient disposal of the assets affected by termination of operations in the hospitals in Kramáre, Staré Mesto and Ružinov
- Risk of maintenance and refurbishment costs of the unused infrastructure

The risk of failing to settle the relations attached to the nUNB site may be mitigated by way of a Slovak Government resolution instructing MOH to carry out the acts needed to transfer the Real Estate to MOH.

The risk of inefficient disposal of the assets affected by the termination of operations in the hospitals in Kramáre, Staré Mesto and Ružinov may be mitigated by conducting a proper due diligence of UNB assets, or also within the competitive dialogue by the private partner, and by potential (including partial) takeover thereof by the private partner.

In this respect, what could be considered is that the use of state property by the concessionaire or contribution of the state property to SPV's capital.

The risk of costs of maintenance and refurbishment of the unused infrastructure may be mitigated by adopting a detailed plan of redeveloping the hospitals, potentially jointly with the private partner as part of the public procurement procedure.

| Model | RISK                                   | MITIGATION   |
|-------|--|--|
| IPPP  | Failure to settle property relations   | Obligation imposed by way of a Slovak Government resolution  |
|       | Inefficient disposal of Project assets | Conducting a proper due diligence in the competitive dialogue process<br>Solution proposals of tenderers allowing for potential takeover of some assets<br>Use of state the assets by the concessionaire<br>Contributing the assets to SPV's capital |
|       | Maintenance and refurbishment costs    | Adopting a detailed redevelopment plan, with the private partner potentially participating as part of the public procurement procedure   |

### C. JV

A specific feature of JV with respect to the analysed affected area is the absence of public procurement processes, and reduced opportunities to receive market feedback. The JV model does not enable to employ the tools of disposing of state's assets as per Act on State Property Administration with respect to the concession.

Having reviewed the legal consequences of terminating the operations of the existing health care providers for the implementation of the JV model, we have identified the following risks:

- Risk of failure to settle relations with respect to the nUNB site
- Risk of inefficient disposal of the assets affected by termination of operations in the hospitals in Kramáre, Staré Mesto and Ružinov
- Risk of maintenance and refurbishment costs of the unused infrastructure

The risk of failing to settle the relations attached to the nUNB site may be mitigated by way of a Slovak Government resolution instructing MOH to carry out the acts needed to transfer the Real Estate to MOH. Still, MOH will not be able to provide the property to JV to manage it or to contribute the property to JV's capital as per the provisions of Act on State Property Management regarding the concession.

## Assessment of potential consequences for legal relations to existing assets

The risk of inefficient disposal of the assets affected by the termination of operations in the hospitals in Kramáre, Staré Mesto and Ružinov cannot be mitigated if the JV model is used, as the applicable legal regulation does not enable entrusting the state property to JV's management.

The risk of costs of maintenance and refurbishment of the unused infrastructure may be mitigated by adopting a detailed plan of redeveloping the hospitals, but again with the JV model it is impossible to use the UNB property for JV purposes.

| Model | RISK                                   | MITIGATION  |
|-------|--|---|
| JV    | Failure to settle property relations   | Obligation imposed by way of a Slovak Government resolution                                       |
|       | Inefficient disposal of Project assets | Conducting a proper due diligence<br>Effect of the mitigation measure significantly impaired      |
|       | Maintenance and refurbishment costs    | Adopting a detailed redevelopment plan<br>Effect of the mitigation measure significantly impaired |

### D. Specific Model

A specific feature of the Specific Model with respect to the analysed affected area is that the state property may be provided to the concessionaire for the purpose of management and the property can also be contributed to SPV's capital.

Having reviewed the legal consequences of terminating the operations of the existing health care providers for the implementation of the Specific Model, we have identified the following risks:

- Risk of failure to settle relations with respect to the nUNB site
- Risk of inefficient disposal of the assets affected by termination of operations in the hospitals in Kramáre, Staré Mesto and Ružinov
- Risk of maintenance and refurbishment costs of the unused infrastructure

The risk of failing to settle the relations attached to the nUNB site may be mitigated by way of a Slovak Government resolution instructing MOH to carry out the acts needed to transfer the Real Estate to MOH.

The risk of inefficient disposal of the assets affected by the termination of operations in the hospitals in Kramáre, Staré Mesto and Ružinov may be mitigated by conducting a proper due diligence of UNB assets. In this respect, what could be considered is the use of state property by the concessionaire or contributing the assets managed by the state to SPV's capital. The effect of this mitigation measure is reduced on account of the absence of the market feedback.

The risk of costs of maintenance and refurbishment of the unused infrastructure may be mitigated by adopting a detailed plan of redeveloping the hospitals, but the effect of the mitigation measure is impaired by reason of absence on market feedback.

| Model          | RISK                                   | MITIGATION   |
|----------------|--|--|
| Specific Model | Failure to settle property relations   | Obligation imposed by way of a Slovak Government resolution  |
|                | Inefficient disposal of Project assets | Conducting a proper due diligence (effect of the mitigation measure impaired)<br>Use of the state assets by the concessionaire<br>Contributing the assets to SPV's capital |

## Assessment of potential consequences for legal relations to existing assets

|  |                                     |  |
|--|-------------------------------------|--|
|  | Maintenance and refurbishment costs | Adopting a detailed redevelopment plan (effect of the mitigation measure impaired) |
|--|-------------------------------------|--|

### Comparison of individual models

With respect of the affected area of the impact on the Project assets, all the compared models appear to be feasible. Mitigation of the risks associated with the evaluated affected area nevertheless assumes the working out of a detailed redevelopment plan for the hospitals and a due diligence of the assets.

In terms of the mitigation measures, the most suitable model seems to be the IPPP model, which enables employing the widest range of mitigation measures. Still, both PPP models appear to be more suitable compared to JV and the Specific Model on account of the availability of market feedback.

The JV model seems to be the riskiest because of zero opportunity to dispose of state property as per Act on State Property Administration.

### Summary table

| Risk                                   | CPPP   | IPPP   | JV   | Specific Model   |
|--|--|--|--|--|
| Failure to settle property relations   | Obligation imposed by way of a Slovak Government resolution  | Obligation imposed by way of a Slovak Government resolution  | Obligation imposed by way of a Slovak Government resolution                                  | Obligation imposed by way of a Slovak Government resolution  |
| Inefficient disposal of Project assets | Conducting a proper due diligence in the competitive dialogue process<br>Solution proposals of tenderers allowing for potential takeover of some assets<br><br>Use of the state assets by the concessionaire | Conducting a proper due diligence in the competitive dialogue process<br>Solution proposals of tenderers allowing for potential takeover of some assets<br>Use of state the assets by the concessionaire<br><br>Contributing the assets to SPV's capital | Conducting a proper due diligence<br>Effect of the mitigation measure significantly impaired | Conducting a proper due diligence (effect of the mitigation measure impaired)<br>Use of the state assets by the concessionaire<br>Contributing the assets to SPV's capital |
| Maintenance and refurbishment costs    | Adopting a detailed redevelopment plan (effect of the mitigation measure impaired)   | Adopting a detailed redevelopment plan (effect of the mitigation measure impaired)   | Adopting a detailed redevelopment plan (effect of the mitigation measure impaired)           | Adopting a detailed redevelopment plan (effect of the mitigation measure impaired))  |



## Assessment of legal consequences of Project implementation in terms of building regulations

### Assessment of legal consequences of Project implementation in terms of building regulations (in particular planning, permits and approvals of competent authorities, EIA, and conservation of historical buildings)

#### Basic description of the affected area

This section of the report focuses on the revaluation of legal consequences of the Project realisation in area of building regulation, which is essential by reason of the construction of nUNB is a major part of the Project. A thorough and consistent preparation of the design and engineering stage is critical for the Project feasibility within the limits of the contemplated schedule. Any shortcomings in the preparation and solution of those areas, which tend to carry potential problems, such as the issuance of a planning permit, environmental issues, ownership issues and the construction process, may mean significantly higher costs or delays of the Project realisation.

#### Legal framework of the affected area

The legal framework of this affected area is primarily embodied in Building Act, which provides the requirements and procedures of obtaining a planning permit, building permit, occupancy permit and permits for removing structures.

Further relevant for the construction is the process of environmental impact assessment (hereinafter as "EIA"), governed by EIA Act. The evaluation also covered the impact structures, equipment and other activities will have on the environment. The impact assessment process usually has the following stages:

- ▶ Submitting the plan for the EIA,
- ▶ Drafting the EIA report,
- ▶ Reading and public discussion of the assessment report
- ▶ Drafting an expert opinion, and
- ▶ Drafting the final opinion.

Pursuant to Building Act, the environmental impact assessment is a prerequisite for entering the permit stage. Before starting construction, it is necessary to obtain the planning permit and then the building permit. Once construction is completed, the applicant may apply for occupancy permit before the structure is commissioned. Planning and building permits are issued by the competent building authority. The planning permit outlines the building site, the structure to be erected, specifies the conditions of locating the structure, the conditions applicable to the project documentation and the validity of the planning permit. The planning permit must be in compliance with the planning and zoning documentation. With PPP projects, the obligation to obtain the planning permit rests with the state, as the private partner generally does not assume the risk of obtaining the planning permit. It is necessary to note that currently, the Property is not owned by the state and most likely this will not change as long as NSM will need the Property for its operation. In this respect, it may be recommended that MOH enter into a contract with NSM under which MOH will be entitled and authorised to realise the preparation and engineering activities with respect of nUNB and at the same time NSM will be obliged to provide all the necessary assistance to MOH to take the necessary steps, in particular in compliance with Building Act. Pursuant to Section 139 (1) of Building Act, the right to land and structures, which entitled the concerned person to initiate proceedings under Building Act may be created for instance under an easement agreement providing the right to realise construction or agreement to agree a future purchase agreement providing the right to realise construction. Alternatively, MOH and NSM could enter into an agreement under which NSM would be the party to the planning proceedings and building proceedings by title of its ownership title to the Property. The building and planning permits would be then transferred to MOH jointly with the ownership title. The second alternative contains the risk of insufficient control over the outcome of the planning and building proceedings by MOH and we therefore do not recommend it.

Building permit is issued by the building authority to approve the construction work to be realised. The building permit is rendered invalid if the developer failed to start construction within two years of permit validity, unless in special cases the building authority provided a longer period for starting construction. The building permit sets forth

- ▶ binding conditions applicable to the realisation and use of the structure,
- ▶ general technical requirements,
- ▶ requirements imposed by the affected bodies,

## Assessment of legal consequences of Project implementation in terms of building regulations

- requirements regarding protection of general interest, health and the environment, and
- period for completing the structure.

Occupancy permits are issued after construction is completed and in the permit the building authority confirms that the construction was realised in a proper manner and that the structure is fit for the earmarked purpose. Structures may not be released into use without a valid occupancy permit. The occupancy permit is also a prerequisite for obtaining a house number, which in turn is essential for registration in the cadastre.

Similar rules apply to change of structures, in particular to any extensions and structural changes.

Pursuant to Building Act, the developer must prove that he is the owner of the land plot or that he holds other right to the land plot, which authorises him to erect the contemplated structure on the land plot. The other right authorising the developer to build on the land plot may be

- occupancy of the land plot or structure under a lease contract, agreement to agree a future purchase agreement or agreement to agree a future easement agreement, which establish the right to build on the land plot or change an existing structure,
- right under easement attached to land plot or structure,
- right under other legal regulations, or
- occupancy of the land plot or structure under a concession contract, which lays down the right to to build on the land plot or change an existing structure.

To remove a structure from a land plot a separate permit must be obtained from the building authority. It may be applied for the structure owner. The application must contain the type, purpose, location and designation of the structure, reasons why the structure should be removed and the estimated date of start and finish of removal work, whether the applicant will remove the structure himself or through a contractor, information on waste disposal and further use of the vacated land plot and what measures are needed to secure neighbouring land plots and structures. We recommend that the agreement to be entered between MOH and NSM to secure the right to build as mentioned above, also contain the obligation of NSM under which it will be obliged to obtain the permit for removing the structure. Equally as with the building and planning permits, the rights and obligations under the permit to remove the structure would be transferred to the legal successor of the structure owner.

In light of the above, we did not identify any need for legislative changes with respect of the affected area.

### Specifics, risks, benefits and recommendations regarding the affected area

With respect of the construction, it is necessary to analyse the legal relations attached to the affected Real Estate and the handling thereof for the purpose of realising the Project through a private partner. Below we provide a brief assessment of legally relevant facts with respect of the Real Estate affected by the nUNB construction, which is relevant with any of the considered models:

#### Land plots

The land plots are located in the cadastral area of Karlova Ves, district: Bratislava IV, municipality: BA - Karlova Ves, and they are owned by NSM and registered in title deeds No. 2830 and 2827 as follows:

| Land plot No. | Area/m <sup>2</sup> | Type of land       | Use   | Easements | Title deed No. |
|---------------|---------------------|--------------------|---|-----------|----------------|
| 2596/1        | 19786               | Other areas        | Land containing rock, slopes, ravines, potholes, high balks with bushes or rock, and other surfaces of no permanent use | No record | 2827           |
| 2596/2        | 660                 | Other areas        | Land containing rock, slopes, ravines, potholes, high balks with bushes or rock, and other surfaces of no permanent use | No record | 2827           |
| 2596/3        | 162                 | Built-up areas and | Land containing a non-residential building  | No record | 2827           |

## Assessment of legal consequences of Project implementation in terms of building regulations

| Land plot No. | Area/m <sup>2</sup> | Type of land                  | Use  | Easements | Title deed No. |
|---------------|---------------------|-------------------------------|--|-----------|----------------|
|               |                     | courtyards                    | with a house number  |           |                |
| 2596/4        | 447                 | Other areas                   | Land containing rock, slopes, ravines, potholes, high balks with bushes or rock, and other surfaces of no permanent use                        | No record | 2827           |
| 2597/1        | 548                 | Built-up areas and courtyards | Land containing other engineering structures and its appurtenances   | No record | 2827           |
| 2597/2        | 101                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2597/3        | 28                  | Built-up areas and courtyards | Land used depending on its type  | No record | 2827           |
| 2597/4        | 126                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2830           |
| 2598/1        | 6664                | Other areas                   | Land containing rock, slopes, ravines, potholes, high balks with bushes or rock, and other surfaces of no permanent use                        | No record | 2827           |
| 2598/2        | 218                 | Built-up areas and courtyards | Land containing other engineering structures and its appurtenances   | No record | 2827           |
| 2598/3        | 201                 | Built-up areas and courtyards | Land containing other engineering structures and its appurtenances   | No record | 2827           |
| 2598/4        | 42                  | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2599          | 441                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2600/1        | 78                  | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2830           |
| 2601/1        | 338                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2602/1        | 1792                | Built-up areas and courtyards | Land containing a courtyard  | No record | 2827           |
| 2602/2        | 14134               | Built-up areas and courtyards | Land containing a courtyard  | No record | 2827           |
| 2602/3        | 968                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2602/4        | 351                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2602/5        | 193                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2602/6        | 276                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2602/7        | 44                  | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2602/8        | 30                  | Other areas                   | Land containing rock, slopes, ravines, potholes, high balks with bushes or rock, and other surfaces of no permanent use                        | No record | 2827           |
| 2602/9        | 695                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2603/1        | 2640                | Other areas                   | Land containing a garden, street and residential greenery, park and other functional greenery and forest land for recreational use and hunting | No record | 2827           |
| 2603/2        | 628                 | Other areas                   | Land containing a garden, street and   | No record | 2827           |

## Assessment of legal consequences of Project implementation in terms of building regulations

| Land plot No. | Area/m <sup>2</sup> | Type of land                  | Use  | Easements | Title deed No. |
|---------------|---------------------|-------------------------------|--|-----------|----------------|
|               |                     |                               | residential greenery, park and other functional greenery and forest land for recreational use and hunting                                      |           |                |
| 2605/1        | 3128                | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2606/1        | 3004                | Other areas                   | Land containing a garden, street and residential greenery, park and other functional greenery and forest land for recreational use and hunting | No record | 2827           |
| 2606/2        | 121                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2606/3        | 789                 | Other areas                   | Land containing a garden, street and residential greenery, park and other functional greenery and forest land for recreational use and hunting | No record | 2827           |
| 2607          | 166                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2608          | 113                 | Other areas                   | Land containing rock, slopes, ravines, potholes, high balks with bushes or rock, and other surfaces of no permanent use                        | No record | 2827           |
| 2609          | 46                  | Other areas                   | Land containing rock, slopes, ravines, potholes, high balks with bushes or rock, and other surfaces of no permanent use                        | No record | 2827           |
| 2610          | 1839                | Other areas                   | Land containing a garden, street and residential greenery, park and other functional greenery and forest land for recreational use and hunting | No record | 2827           |
| 2611          | 691                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2830           |
| 2612          | 700                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2613          | 290                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2830           |
| 2614          | 87                  | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2830           |
| 2615/1        | 23244               | Other areas                   | Land containing a garden, street and residential greenery, park and other functional greenery and forest land for recreational use and hunting | No record | 2827           |
| 2615/2        | 2099                | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2830           |
| 2615/4        | 426                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2827           |
| 2615/5        | 271                 | Built-up areas and courtyards | Land containing a non-residential building with a house number   | No record | 2830           |
| 2615/6        | 1162                | Other areas                   | Land containing a garden, street and residential greenery, park and other functional greenery and forest land for recreational use and hunting | No record | 2827           |

(hereinafter as “Buildings”)

## Assessment of legal consequences of Project implementation in terms of building regulations

### Buildings

The Buildings are located in the cadastral area of Karlova Ves, district: Bratislava IV, municipality: BA - Karlova Ves, and they are owned by NSM and registered in title deeds No. 2830 and 2827 as follows:

| House No. | Located on land plot No. | Type  | Description             | Easements | Title deed No. |
|-----------|--------------------------|---|-------------------------|-----------|----------------|
| 1791      | 2602/9                   | Health care and social facility building  | Surgical pavilions      | No record | 2827           |
| 5703      | 2597/2                   | Other building  | House                   | No record | 2827           |
| 5705      | 2597/4                   | Other building  | Menagerie               | No record | 2830           |
| 5706      | 2599                     | Administrative building   | Administrative building | No record | 2830           |
| 5707      | 2607                     | Administrative building   | Administrative building | No record | 2830           |
| 5708      | 2602/5                   | Stand-alone garage  | garage                  | No record | 2830           |
| 5709      | 2614                     | Other building  | Storage                 | No record | 2830           |
| 5710      | 2596/3                   | Other building  | Storage                 | No record | 2830           |
| 5711      | 2600/1                   | Other building  | Gate-house              | No record | 2830           |
| 5712      | 2615/5                   | Building housing technical facilities (exchanger station, energy distributions, pumping station, water treatment and distribution, water tower, waste water treatment plant, and other) | Transformer station     | No record | 2830           |
| 5713      | 2611                     | Other building  | Storage                 | No record | 2830           |
| 5714      | 2612                     | Other building  | Storage                 | No record | 2830           |
| 5715      | 2613                     | Health care and social facility building  | Dormitory and VSB       | No record | 2830           |
| 5716      | 2615/2                   | Health care and social facility building  | Health care centre      | No record | 2830           |
| 5717      | 2598/4                   | Other building  | Storage                 | No record | 2830           |
| 5718      | 2601/1                   | Administrative building   | Administrative building | No record | 2830           |
| 5719      | 2602/3                   | Health care and social facility building  | Operating theatre       | No record | 2830           |
| 5720      | 2602/4                   | Building housing technical facilities (exchanger station, energy distributions, pumping station, water treatment and distribution, water tower, waste water treatment plant, and other) | Thermal power supply    | No record | 2830           |
| 5721      | 2602/7                   | Other building  | Storage                 | No record | 2830           |
| 5722      | 2605/1                   | Health care and social facility building  | Hospital                | No record | 2830           |
| 5723      | 2606/2                   | Other building  | Storage                 | No record | 2830           |
| 5728      | 2602/6                   | Stand-alone garage  | Garages                 | No record | 2830           |
| 5730      | 2615/4                   | Health care and social facility building  | Dormitory and neurology | No record | 2830           |

(hereinafter as “Buildings”)

## Assessment of legal consequences of Project implementation in terms of building regulations

### *Acquisition title to Real Estate*

NSM has acquired the Real Estate as a result of merger of the companies Nemocnica Ministerstva obrany SR, a.s. and Nemocnica svätého Michala, a.s. drawn-up in Notarial Deed N698/2009, Nz21870/2009, NCR1s22256 of 29.06.2009 (Z-7432/09). Until that event, the Land was owned by the Slovak Republic under the Delimitation Protocol No. 60782 of 14.2.1994 and Establishment Deed No. 22.12.1993 (while NSM held the status of administrator of the property). The Ministry of Health of the Slovak Republic does not hold any legal title to the Real Estate. NSM is not the manager/administrator of any State-owned property for the purposes of the State-Held Property Administration Act as it does not meet the requirements laid down in definition of the "Administrator" given in Section 1 of that Act. Disposal of the property held by NSM also does not fall under the regime introduced by Act No. 92/1991 Coll. on the transfer of state-owned property to third parties. NSM is a joint-stock company governed in the fullest extent by the provisions of the Commercial Code.

The documents made available to us have not revealed any defects relating to the process of acquisition of the ownership title to the Real Estate by NSM.

General value of the Real Estate has been determined according to

- ▶ expert opinion No. 8/2009 of 23.02.2009 prepared by Ing. Mgr. Jana Pecníková (general value determined at EUR 31,820,000), and
- ▶ expert opinion No. 278/2009 of 22.09.2009 prepared by the University of Žilina (general value determined at EUR 36,270,000).

No rights for the benefit of the owner of the Real Estate are registered in the cadastre, and neither are there any easements, pre-emptive rights or mortgages encumbering the Real Estate. It also follows from the cadastral map and other publicly available information that the Real Estate are directly accessible from public road(s). As far as any third party rights attached to any immovable property owned by NSM are concerned, it follows from the background information made available up to now that leases are attached to non-residential premises and land; in particular, these included premises leased out to physicians who carry out their respective medical practices there. Nonetheless, leases have been concluded either for indefinite period, subject to one or three months' notices, or for a definite period ending on 31.12.2015 in most cases, and on 31.03.2016 in one particular case. This would indicate that, having also regard to the envisaged time schedule of the Project, third party rights attached to the Real Estate do not pose any risk from the Project feasibility.

More details about the Real Estate are given in the section Assessment of potential consequences for legal relations to existing assets with respect of Project implementation.

### *Compliance with planning documentation and requirements to obtain permits*

Evaluation of the feasibility of the Project also requires an assessment of the Project in terms of planning, environmental and construction aspects.

According to the planning information No. MAGS ORM 47647/14-258592 of 14.05.2014, the affected territory is deemed a stabilized area designated for utilization as "civil amenities of local, municipal and supra-municipal significance". The following is permitted to be built in this territory: integrated civil amenities facilities, leisure facilities and multi-purpose facilities, purpose built facilities built for public administration and self-government institutions, green areas, utilities and communications/traffic networks serving the territory.

Certain restrictions on utilization of the affected territory follow from the planning information, as the southern part of the territory (approximately 1/3 thereof) is included in the heliport protection areas and the north-western part of land plot No. 2596/1 is situated within the railway protection area. The exact scope of the above restrictions and their impact will have to be evaluated separately and taken into account at the nUNB designing stage so that the designed new structures do not interfere with the concerned protection areas.

Stabilized area is an area where the land plan does not change the existing functional utilization and any construction activities are envisaged mainly in the form of finishing works, extensions of existing buildings/structures, rebuilding of existing buildings and erection of new building without, however, changing in any appreciable manner the nature of the stabilized territory.

## Assessment of legal consequences of Project implementation in terms of building regulations

The benchmark and limits for implementation of new construction projects in stabilized territories are given mainly by the characteristic landscape and the proportions of any particular area which must be accepted, conserved and further developed in the process of procurement of the required documentations for, or evaluation of new construction projects in stabilized areas. Building finishing works, building extensions and remodelling/rebuilding works are evaluated according to the indicators of intensity of landscape utilization.

Given the comprehensive nature of the process of implementation of new construction projects in stabilized areas, area utilization intensity indicators are not determined globally. Any new proposal must take into account the regulatory elements representing the existing development.

Having regard to the above, we maintain that the intention to build the nUNB is not contrary to the zoning and planning of the Capital City of Bratislava. Nonetheless, it cannot be ruled out that competent authorities will present – as part of any particular planning permit or building permit proceedings – positions that might either obstruct or complicate the process of obtaining the required permits and approvals. Having said that, it might be recommendable to commence the EIA process and to apply for initiation of the land planning proceedings as soon as possible so that delays, if any, caused by such obstructions be the shortest possible. The costs associated with the EIA process and land planning proceedings should be taken into account in further Project planning.

### A. CPPP

Evaluation of the legal impacts of implementation of the CPPP model against building regulations has identified the following risks:

- ▶ Duration of the preparatory process
- ▶ Environmental and planning permit / building permit related issues
- ▶ Settlement of land ownership
- ▶ Construction stage (archaeology, geology, utilities networks, etc.)
- ▶ Exceeding the budget
- ▶ Changes in projects and technical standards

To ensure smooth implementation of the Project, it is primarily envisaged that the Real Estate will be transferred to MOH. A transparent ownership structure in relation to the Real Estate, and direct control exercised by MOH over the decision-making process with respect to disposal of the Real Estate, will provide legal certainty to the private partner and will assure the banking sector that the Project is feasible. In the case of the CPPP model, the private partner's right, in its capacity as building investor, will be derived directly from the concession contract in line with Building Act. Thus, it is not necessary to provide for transfer of the Real Estate to the private partner's direct ownership. On the contrary, if the private partner builds new structures and building on the Land, the legal relationship to newly built structures must be set in advance in order to ensure that general interest is maintained and to eliminate the risk associated with using the buildings for other than the envisaged purpose. The private partner can either be the owner of any newly built Real Estate during the Project implementation phase (concession period) and the ownership title to the same will be transferred to the public partner after the concession period will have terminated, or the newly built real estate can be transferred to the public partner immediately upon termination of the construction phase. In the latter case, the private partner would be only a beneficial owner of the newly constructed structures, i.e. it would not be their legal owner, which appears as the best option as far as ensuring the protection of these buildings is concerned. The concession contract should contain special regulation the subject of which would be the settlement of rights and obligations of the parties with respect to the ownership of the newly built buildings. The provisions should be drafted at the stage of selecting the private partner.

Compliance with Act on State Property Administration must also be ensured in the process of disposal of the Real Estate. If the Real Estate continue to be owned by the state and the private partner is only their beneficial owner, the provisions of Section 13c of Act on State Property Administration apply. According to this legal provision, any concession property is the property owned by the state and used by the concessionaire in the extent, on the terms and conditions and for the period as may be agreed in the concession contract for public works or for services. Also, the concessionaire is not allowed to transfer such property to other parties. Apart from the administrator, the private partner uses the concession property in its own name and does not hold the status of 'administrator' pursuant to Act on State Property Administration. The private partner has the obligation to maintain the property in good repair, to



## Assessment of legal consequences of Project implementation in terms of building regulations

use it for the designated purpose, to ensure its maintenance and operation and to pay the associated costs, to ensure the protection of the property, inform the administrator on the situation of the concession property in a scope of the obligations agreed in the concession contract, and to perform any other duties/obligations as may be agreed in the concession contract. In the concession contract, it will be necessary to agree on the private partner's entitlement to lease out the concession property, to lend the same and to encumber the concession property with an easement for the benefit of a third party. On the other hand, if the Real Estate were to be transferred from the state in the ownership of the private partner, the procedure described in Section 11 *et seq.* of Act on State Property Administration applies. Any transfer of a state property must be for a consideration. In exceptional cases, the administrator is allowed to transfer state property for a price lower than the fair market price to an operator of health care services for the purposes of provision of health care; however, state property designated for the provision of health care must be concerned and the transferee must be a legal person who is not an entrepreneur, has provided health care for at least one year and must undertake to maintain the agreed purpose of transfer for at least five years after the acquisition of the ownership title. In order to be valid, the agreement under which state property is transferred must be approved by MOH. In the case of non-compliance with the provisions of Act on State Property Administration in the process of transfer of the state property, the state may seek judgement for annulment of the transfer of ownership title.

Also, implementation of the Project as a CPPP model is associated with a number of risks related to the duration of the preparatory process, environmental and planning permit/building permit proceedings and potential construction works-related problems (archaeological artefacts, geology, utilities networks, etc.). While these risks cannot be eliminated entirely, they may be mitigated through appropriate management of the construction process by outside counsel. Also, these risks must be reflected in the concession contract, primarily by their appropriate distribution between the parties. The provisions should be drafted at the stage of selecting the private partner.

| Model | RISK  | MITIGATION  |
|-------|---|---|
| CPPP  | Duration of preparatory works                                       | Appropriate setup and management of the preparatory engineering and procurement process with the support from outside counsel   |
|       | Environmental and planning permit / building permit related issues  | Appropriate planning, with the support from outside counsel, if needed  |
|       | Settlement of ownership of the land                                 | Appropriate planning and settlement of ownership relationships sufficiently in advance; securing transfer of the required land under state administration in advance                              |
|       | Construction stage (archaeology, geology, utilities networks, etc.) | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with proper distribution of related risks between the parties     |
|       | Exceeding the budget  | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with proper distribution of the related risks between the parties |
|       | Changes in the project and technical standards                      | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with proper distribution of the related risks between the parties |

### B. IPPP

Evaluation of the legal impacts of implementation of the IPPP model against building regulations has identified the following risks:

- Duration of the preparatory process



## Assessment of legal consequences of Project implementation in terms of building regulations

- ▶ Environmental and planning permit / building permit related issues
- ▶ Settlement of ownership of the land
- ▶ Construction stage (archaeology, geology, utilities networks, etc.)
- ▶ Exceeding the budget
- ▶ Changes in projects and technical standards

As was the case with CPPP, smooth implementation of the Project requires that the Real Estate be transferred from NSM to MOH. Subsequently, the Real Estate can be secured in a number of ways in order to implement the Project. One of such ways being direct transfer of ownership title to SPV and/or contributing the Real Estate to SPV's capital. Alternatively, MOH might continue to be the owner of the Real Estate, while SPV's rights to use the Real Estate would be set out directly in the concession contract. The advantages and drawbacks attached to the individual models of securing the Real Estate may be seen from different vantage points. For instance, with respect to realisation of construction and the obtaining of the applicable permits and decisions, the most suitable seems to be the transfer of ownership title to SPV, which should bear the construction risks, which would mean that the liability with respect of property occupancy and the construction proper would be concentrated in SPV. Conversely, in terms of Real Estate protection and administration of state property, the most suitable solution seems retaining the ownership title to the Real Estate in the hands of MOH.

As far as the concession is concerned, Act on State Property Administration provides for a special IPPP regime in the form of a "joint-venture", that may be a

- ▶ legal entity established jointly by the property administrator and the concessionaire, or
- ▶ legal entity established by the concessionaire; state property has been contributed to the registered capital of such legal entity under the concession contract.

With the consent of Slovak Government, the administrator may contribute a state property under its administration

- ▶ as contribution to the registered capital upon the establishment of the joint venture, or
- ▶ as contribution to the registered capital of the joint venture as agreed in the concession contract.

Any state property so contributed is subject to a special 'priority property/assets' regime. Special restrictions applicable to priority assets include the ban on using such property as security securing the obligations/liabilities of the concessionaire or any third party, and the ban on transfer of such property to third persons. In addition, priority assets must not be the subject of execution of a judgement/order, enforcement, may not be included in the bankrupt's estate and may not be subject to liquidation. Based on an application lodged by the administrator, priority assets are marked with a note in the cadastre. If so agreed in the concession contract, priority assets may be leased out, lent or encumbered with mortgage for a period not exceeding the concession term, or until the joint-venture is dissolved without legal successor. The nature of a priority assets are not altered by reason of its transfer to the legal successor. If an easement registered in the cadastre is released, the administrator must file an application for deregistration of the easement.

Similarly as with the CPPP model, implementation of the construction project through IPPP is associated with a number of risks related to the duration of the preparatory process, environmental and planning permit / building permit related issues and potential construction works-related problems (archaeological artefacts, geology, utilities networks, etc.). While these risks cannot be eliminated entirely, they can be mitigated through appropriate management of the construction process by outside counsel. Also, these risks must be reflected in the concession contract, primarily by their even distribution between the parties.

| Model | RISK                          | MITIGATION  |
|-------|-------------------------------|---|
| IPPP  | Duration of preparatory works | Appropriate setup and management of the preparatory engineering and procurement process with the support from outside counsel |

## Assessment of legal consequences of Project implementation in terms of building regulations

|   |   |
|---|---|
| Environmental and planning permit / building permit related issues  | Appropriate planning, with the support from outside counsel, if needed  |
| Settlement of ownership of the land                                 | Appropriate planning and settlement of ownership relationships sufficiently in advance; securing transfer of the required land under state administration in advance                              |
| Construction stage (archaeology, geology, utilities networks, etc.) | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with proper distribution of the related risks between the parties |
| Exceeding the budget  | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with proper distribution of the related risks between the parties |
| Changes in the project and technical standards                      | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with proper distribution of the related risks between the parties |

### C. JV

Evaluation of the legal impacts of implementation of the JV model against building regulations has identified the following risks:

- ▶ Duration of the preparatory process
- ▶ Environmental and planning permit / building permit related issues
- ▶ Settlement of ownership of the land
- ▶ Construction stage (archaeology, geology, utilities networks, etc.)
- ▶ Exceeding the budget
- ▶ Changes in projects and technical standards.

As, in the case of JV, no concession is granted to such entity and the joint venture is not established for the purpose of performance of a concession, no specific regime under Act on State Property Administration applies in relation to JV. Nonetheless, if the Real Estate is transferred to JV, the general rules defined in the above act apply. As is the case with IPPP, the Real Estate may be contributed in JV's capital upon its establishment, but this contribution of property into JV capital is subject to consent of Slovak Government and prior consent of MOF<sup>148</sup>. Subsequently, JV would exercise and perform the rights and obligations attached to the ownership of the Real Estate in its own name and on its own account. Also, the Real Estate could be transferred directly from NSM to JV and this would eliminate the restrictions associated with a regime governed by Act on State Property Administration. This issue is dealt with in more detail in the part entitled 'Evaluation of the risks resulting from potential bankruptcy of the private partner'.

Like with the CPPP and IPPP models, implementation of the construction project through the JP model is associated with a number of risks related to the duration of the preparatory process, environmental and planning permit / building permit related issues and potential construction works-related problems (archaeological artefacts, geology, utilities networks, etc.). While these risks cannot be eliminated entirely, they can be mitigated through appropriate management of the construction process by outside counsel. Also, these risks must be reflected in contracts with suppliers, primarily by their even distribution between the parties.

<sup>148</sup> Section 13a (5) (b) of Act on State Property Management

## Assessment of legal consequences of Project implementation in terms of building regulations

| Model | RISK  | MITIGATION   |
|-------|---|--|
| JV    | Duration of preparatory works                                       | Appropriate setup and management of the preparatory engineering and procurement process with the support from outside counsel                  |
|       | Environmental and planning permit / building permit related issues  | Appropriate planning, with the support from outside counsel, if needed   |
|       | Settlement of ownership of the land                                 | Appropriate planning and settlement of ownership relationships sufficiently in advance   |
|       | Construction stage (archaeology, geology, utilities networks, etc.) | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with the works contractor |
|       | Exceeding the budget  | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with the works contractor |
|       | Changes in the project and technical standards                      | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with the works contractor |

### D. Specific Model

Evaluation of the legal impacts of implementation of the Specific Model against building regulations has identified the following risks:

- Duration of the preparatory process
- Environmental and planning permit / building permit related issues
- Settlement of ownership of the land
- Construction stage (archaeology, geology, utilities networks, etc.)
- Exceeding the budget
- Changes in projects and technical standards.

The issues relating to the construction process through the Specific Model are associated mainly with those parts of the contracts awarded to the private partner, which are public works contracts. In the case of the Specific Model, the contractor should be an SPV established by the state for the purpose of implementation of the Project; the SPV would not perform any construction works itself; rather, it would grant a contract to the winner in a public tender for public works. The SPV might derive its position of 'contractor' either from its ownership title to the Real Estate, provided these are contributed to SPV's registered capital or transferred to SPV, or from the concession contract that would provide for the right to erect a structure on the Real Estate provided this remains state property.

| Model          | RISK   | MITIGATION  |
|----------------|--|---|
| Specific Model | Duration of preparatory works                                      | Appropriate setup and management of the preparatory engineering and procurement process with the support from outside counsel |
|                | Environmental and planning permit / building permit related issues | Appropriate planning, with the support from outside counsel, if needed  |

## Assessment of legal consequences of Project implementation in terms of building regulations

|  |   |  |
|--|---|--|
|  | Settlement of ownership of the land                                 | Appropriate planning and settlement of ownership relationships sufficiently in advance; securing transfer of the required land under state's administration sufficiently in advance                              |
|  | Construction stage (archaeology, geology, utilities networks, etc.) | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with proper distribution of the related risks between the parties                           |
|  | Exceeding the budget  | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with the works contractor with proper distribution of the related risks between the parties |
|  | Changes in the project and technical standards                      | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with proper distribution of the related risks between the parties                           |

### Comparison of individual models

From the construction process regulation aspect, there is no appreciable difference between the risks, advantages and disadvantages attached to the individual models. The most important differences can be identified with respect to the relationship to the entity that will carry out the construction works and that will be bound by the rights and obligations/liabilities resulting from the Building Act. No matter which of the models is applied, it will be necessary to ensure that the private partner holds a title empowering it to implement the construction project as required by the Building Act. In the case of CPPP, such a title might be constituted by the concession contract that would specify the contractor's right to erect the structure on the Real Estate. If IPPP is selected, such title can be inferred from the ownership rights (if the Real Estate is contributed in the registered capital) or the concession contract (if the Real Estate remains in state ownership). The Specific Model allows for a number of scenarios and under any of them, the contractor would be a SPV established by the Slovak State.

From the construction regulation perspective and the construction process itself, both CPPP and IPPP models appear to be the most advantageous. The concession contract would define the title empowering the private partner to obtain the required permits and to carry out the construction works. Also, both models make it possible to take into account the risks and problems associated with the construction process and to deal with them through their appropriate distribution between the parties.

### Summary table

| Risk   | CPPP  | IPPP  | JV  | Specific Model  |
|--|---|---|---|---|
| Duration of preparatory works                                      | Appropriate setup and management of the preparatory engineering and procurement process with the support from outside counsel | Appropriate setup and management of the preparatory engineering and procurement process with the support from outside counsel | Appropriate setup and management of the preparatory engineering and procurement process with the support from outside counsel | Appropriate setup and management of the preparatory engineering and procurement process with the support from outside counsel |
| Environmental and planning permit / building permit related issues | Appropriate planning, with the support from outside counsel, if needed  | Appropriate planning, with the support from outside counsel, if needed  | Appropriate planning, with the support from outside counsel, if needed  | Appropriate planning, with the support from outside counsel, if needed  |

## Assessment of legal consequences of Project implementation in terms of building regulations

|   |   |   |   |  |
|---|---|---|---|--|
| Settlement of ownership of the land                                 | Appropriate planning and settlement of ownership relationships sufficiently in advance; securing transfer of the required land under state's administration sufficiently in                       | Appropriate planning and settlement of ownership relationships sufficiently in advance; securing transfer of the required land under state's administration sufficiently in                       | Appropriate planning and settlement of ownership relationships sufficiently in advance  | Appropriate planning and settlement of ownership relationships sufficiently in advance; securing transfer of the required land under state's administration sufficiently in                                      |
| Construction stage (archaeology, geology, utilities networks, etc.) | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with proper distribution of the related risks between the parties            | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with proper distribution of the related risks between the parties            | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with supplier            | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with proper distribution of the related risks between the parties                           |
| Exceeding the budget  | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with proper distribution of the related risks between the parties | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with proper distribution of the related risks between the parties | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with supplier | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with the works contractor with proper distribution of the related risks between the parties |
| Changes in the project and technical standards                      | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with proper distribution of the related risks between the parties | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with proper distribution of the related risks between the parties | Appropriate management of the construction process, with the support from outside counsel and well-balanced concession contract with supplier | Appropriate management of the construction process, with the support from outside counsel and well-balanced contract with proper distribution of the related risks between the parties                           |

## Assessment of the risk associated with potential bankruptcy of the private partner

### Assessment of the risk associated with potential bankruptcy of the private partner and potential loss of control by both the private and the public partner of the Project over the Project assets

#### Basic description of the affected area

As the Project is implemented in the health care area covering the capital's catchment area, it will be necessary to ensure in the process of evaluation of potential application of a PPP model that the public partner in no case loses control over the infrastructure. Nonetheless, PPP models require that financing entities to have reasonable control over the Project so that participation in the Project is sufficiently attractive for them.

For each of the models, the evaluation deals with the possible consequences of

- ▶ private partner's bankruptcy;
- ▶ debts that might result in the execution of a court order (enforcement) involving a major part of the private partner's assets;
- ▶ bankruptcy or enforcement involving SPV's assets, if an SPV is established.

Private partner (or SPV) would be adjudicated bankrupt if it became insolvent or overindebted. Insolvent is an entity unable to satisfy at least two payment obligations owed to more than one creditor and such obligations are more than 30 days overdue. Overindebted is an entity that is obliged to maintain bookkeeping, has more than one creditor and the value of its liabilities exceeds that of its assets. Enforcement might also have a significant impact on the Project if it involved the private partner's (or SPV's) assets in an extent that might have impact on the Project implementation process.

Possible bankruptcy of the private partner or enforcement involving its assets must be assessed at two levels: during the construction process and during operation. During the construction phase, the main risk is the complete halt of the Project; during the operation stage, provision of health care itself may be threatened. For these reasons, all these risks must be eliminated through appropriate general setup of the Project, through amendment/modification of the concession contract, through adoption of special legal regulation or through other measures. We therefore deal to a certain extent with the manner of protection of the private partner's assets against bankruptcy or enforcement.

#### Legal framework of the affected area

The basic legal framework for this area is provided by Enforcement Code and Bankruptcy Act. Bankruptcy Act deals with bankruptcy of a debtor whose assets are turned into money in order to satisfy the claims of creditors, either collectively or individually, in a manner agreed in the restructuring plan; this act also deals with threatened bankruptcy. Bankruptcy Act does not apply to settlement of the obligation of a debtor who is the state, a budgetary organization, subsidised organisation, state fund, municipality, higher territorial unit, budgetary organisation and subsidised organisation organised by the municipality or higher territorial unit or any other person whose liabilities are guaranteed by the state.

According to Enforcement Code, a bailiff takes its role when liabilities are not satisfied when due and payable, namely if the obligor does not perform voluntarily what has been ordered under a final court order; in such case, the beneficiary may file for enforcement. Enforcement Code defines the procedure the bailiff must follow when carrying out the enforcement, the methods, etc. Also, the Enforcement Code grants immunity, either absolute or relative, to certain types of assets from the execution.

Absolute immunity is granted to:

- ▶ state-owned immovable property managed by a property administrator, save for immovable properties under temporary management according to special regulation;
- ▶ income of the state budget, money held in current accounts of budgetary organisations and receivables arising out of legal relationships constituting such income,
- ▶ state-owned securities and interest held by the state in legal entities;
- ▶ funds earmarked for covering a state budget deficit and government debt;
- ▶ other state-owned assets, if so required by special legal regulation.

## Assessment of the risk associated with potential bankruptcy of the private partner

Relative immunity from enforcement is granted to other state-owned assets and the assets of the Export-Import Bank of the Slovak Republic. Such immunity is granted by the court upon application.

Special regulation having impact on this area in the context of PPP projects is provided by Act on State Property Administration, "Disposal of the state assets for concession purposes". This part defines the restrictions on disposal of state-owned assets, purpose/manner of their use, lease of state-owned properties, borrowing such properties, protection against enforcement, bankruptcy, etc. Evaluation of this part relies also on other legal regulations, such as Act on Budgetary Rules of Public Administration, Civil Code and Commercial Code.

### Specifics, risks, benefits and recommendations regarding the affected area

Bankruptcy of the private partner or enforcement involving its assets has different implications for the Project feasibility for each of the reviewed models. For this reason, the measures aimed at mitigating the identified risks also vary. Nonetheless, no matter which of the models is chosen, it is paramount that the state be able to maintain direct control over implementation of the Project and the infrastructure built. The most advantageous solution appears to be that under which all immovable property comprising nUNB either remain in state's ownership or is contributed to the capital of the joint venture established under IPPP. The majority of additional measures involve careful and consistent preparation of the contracts & agreements and corporate documents; in an extreme case, it may be necessary to adopt special regulation exempting the assets of nUNB (and/or SPV) in the fullest extent from applicability of Enforcement Code and Bankruptcy Act. From all the envisaged alternatives, the highest level of protection is afforded by CPPP and IPPP (in this order), which fall under special regulations within the Slovak law. Subject to a suitable setup, the Specific Model is also a feasible alternative.

#### A. CPPP

Evaluation of the impacts of implementation of the CPPP model has identified the following risks:

- ▶ Loss of control over nUNB's assets, in particular immovable property,
- ▶ Loss of control over other concessionaire's assets.

To implement this model, steps must be taken to ensure that the Real Estate be placed under the administration by administrator of state property, i.e. MOH, which is an organization fully funded from the public purse in line with Act on Budgetary Rules of Public Administration. Budgetary organisations act as administrators of state assets pursuant to Section 1 of Act on State Property Administration<sup>149</sup>.

The impact the private partner's bankruptcy and insolvency would have on any immovable property owned by NSM was not the subject of this evaluation. Immovable property managed by the administrator, i.e. MOH, may be left for the use of the concessionaire. Such assets would then enjoy the protection in line with the provisions of Act on State Property Administration and other legal regulations dealing with protection of state property.

Concession assets are state-owned assets left for administration by the administrator that uses these assets, as concessionaire, in the scope, on the terms and conditions and for the period of time set out in the concession contract for public works, or in a concession contract for public services. The concessionaire is not entitled to dispose of such assets; rather, it has the right to use the same in line with the provisions of Act on State Property Administration and the concession contract.

Such property remains to be owned by the state and enjoys the same protection as any other state property. State property is protected also under the Bankruptcy Act, according to which the act *"does not apply to settlement of the obligation of a debtor who is the state, budgetary organization, subsidised organisation, municipality, higher territorial unit, budgetary organisation and subsidised organisation organised by the municipality or a higher territorial unit or any other person whose liability are guaranteed by the government."*

Not every state property enjoys immunity under Enforcement Code. After the delivery of an award of the Constitutional Court of the Slovak Republic limiting the protection granted to state property, an amendment to Enforcement Code has been adopted defining state property enjoying full and relative immunity. The award of the Constitutional Court SR (PL ÚS 111/2011) confirmed the unquestionable general interest in the maintenance of use of certain state assets for the purpose of performance of certain specific tasks, such as defence; at the same time,

<sup>149</sup> Specified in Assessment of potential consequences to legal relations to existing assets (i.e. assets ownership, administration of state property and restrictions for disposal of such property) with respect of Project implementation

## Assessment of the risk associated with potential bankruptcy of the private partner

the Constitutional Court dismissed the then valid regulation of the protection of such assets as contrary to the Constitution, as the rights of other natural and legal persons remain to be only illusory. Thus, the Constitutional Court dismissed absolute immunity against enforcement as regulated until that time by Act on State Property Administration and opted to define assets whose absolute immunity was to be retained and those, whose immunity should be only relative. A court, acting upon an application may decide that certain assets be granted relative immunity and the bailiff will stay the execution proceedings in such a case.

Immovable properties entrusted to an administrator for their management under Act on State Property Administration enjoy absolute immunity. The risk is posed only by interpretation of the act, according to which the concessionaire would not be considered the administrator of state property under Act on State Property Administration. Administration or occupancy of state property by a concessionaire differs from the "classical" administration under Act on State Property Administration. The concessionaire would not act in the capacity of property administrator in accordance with Act on State Property Administration, even if the transfer of such administration might have been agreed upon in the concession contract. On the other hand, the Enforcement Code regulates the absolute immunity of immovable property administrated by an administrator, save for those put under temporary administration. However, temporary administration is not administration performed by a concessionaire; it can be therefore assumed that the legislator's intention is to maintain the absolute immunity in the case of immovable properties remaining in the administration and occupancy of the concessionaire.

Consequently, bankruptcy of the private partner should have no impact on any state property, either movable or immovable, as the Bankruptcy Act does not apply to settlement of any property relationships with respect to state-owned assets. Similarly, Enforcement Code is not applicable to immovable property administrated by administrator of state property. Certain parts of the assets owned by nUNB, such as equipment, may be affected by the private partner's bankruptcy or insolvency that might result in enforcement proceedings in relation to its assets, depending on the particular ownership title to such property. Both Act on State Property Administration and Enforcement Code may be applicable to such assets. The concessionaire (SPV) might face certain risks in the case of its potential overindebtedness; according to the Bankruptcy Act, entities become overindebted if the value of their liabilities exceeds that of their assets. Assessment of the sum of liabilities and value of the assets is based on the entity's accounting, taking into account administration of other property and operation of other businesses, if any, if it can be reasonably assumed – considering all the circumstances – that administration of property or operation of a business will continue. A newly established SPV might face the risk of overindebtedness due to extensive loans/credits. Evaluation of the overindebtedness status is based only on the actual value of assets as such; nonetheless, it is necessary to take into account also future profits associated with future operation of the undertaking. If future operation of nUNB and its future earnings/profits were taken into account, SPV would not necessarily have to be considered overindebted. This model has been verified and tested in practice; nonetheless, we are unable to exclude the above risk. The risk of concessionaire's bankruptcy may be mitigated in the concession contract. The concession contract may set out the manner of settlement of the ownership title to nUNB's equipment and manner of delivering those assets.

The way in which assets will be delivered depends on the arrangements set out in the concession contract and to a great extent also on the stage of the Project and ownership of the immovable property of nUNB. These processes, together with the issue of ownership title to immovable property, may be the subject matter of negotiations with tenderers during the public procurement procedure; given, however, the nature of the Project and the protection against bankruptcy and enforcement, we recommend that the owner of the immovable property be the state from the very beginning.

If the contract is terminated in the Project construction phase, it will be necessary to conclude an agreement for settlement of mutual rights and obligations. Such an agreement will define the manner of hand-over and acceptance of the construction site, documentation and other movable things. We assume that no "transfer" of human resources will be necessary in such a stage and, consequently, labour-related legal regulations will not have to be considered.

If the contract is terminated in the operation stage, a more sensitive approach to the agreement on transfer of immovable property, movable things and human resources to the state will have to be taken. Given the nature of this Project, it will be necessary to secure non-stop (i.e. round-the-clock) operation of nUNB. The concession contract must provide that the concessionaire is obliged to ensure the operation of nUNB until its hand-over to the state and/or a state-owned company. At the same time, the mechanism of the concession contract will have to be adjusted in order to allow the state to receive the Project practically immediately if it happens that the Concessionaire will become unable/unfit to operate it any further so that the delivery of health care not be compromised. If the state wished to have the hospital operated by a third party, a new public tender for selection of the private partner would have to be announced in line with Public Procurement Act.



## Assessment of the risk associated with potential bankruptcy of the private partner

| Model | RISK   | MITIGATION  |
|-------|--|---|
| CPPP  | Loss of control over nUNB's assets, in particular immovable property | The immovable property of nUNB would remain state-owned. The concessionaire would occupy the property under a concession contract   |
|       | Loss of control over other concessionaire's assets                   | Appropriate setup of the concession contract to ensure direct control over the Project, such as intervention mechanism made available to the contracting authority in the case of threatened bankruptcy, manner of acceptance of the Project and its surrender to the state |

### B. IPPP

Evaluation of the impacts of implementation of the IPPP model has identified the following risks:

- ▶ Structures that will be constructed as a result of activities of the joint venture are not part of the priority assets enjoying the required protection against bankruptcy and enforcement
- ▶ Loss of control over other concessionaire's assets.

The administrator of state property and the concessionaire may establish a joint venture pursuant to Act on State Property Administration. The administrator may contribute, with the consent of the government, the state property it manages, to the joint-venture's registered capital upon the establishment of the joint-venture, if so agreed in the concession contract. The disposal, use and protection of priority assets would be provided for separately in Act on State Property Management. Unlike in the CPPP case, protection pursuant to Enforcement Code and Bankruptcy Act does not apply to these assets. Priority assets may not be used to secure the obligations or liabilities of the joint venture, the concessionaire or a third person, and may not be transferred to the ownership of third parties. Nonetheless, they may be leased out, lent or encumbered with easement.

The joint venture has the obligation to maintain the purpose of any priority assets it has acquired in its ownership, and this obligation applies also to its legal successor. The purpose of any priority assets is registered in the cadastre in the form of a note in the relevant file.

If the private partner goes bankrupt, priority assets are not subject to the execution of any court order or enforcement, and are not included in the bankrupt's estate and are not subject to liquidation. If the joint venture is adjudicated bankrupt, the right to act in the joint venture's name in the matters related to operation and maintenance of priority assets passes onto the administrator of the state property who acts in the name of the joint venture but on its own account. If the joint venture is adjudicated bankrupt, priority assets pass onto the state as at the date on which the court order adjudicating the joint venture bankrupt becomes final; such transfer of ownership title is performed for a consideration set out in the concession contract and it will not exceed the value determined according to an expert opinion.

If the joint venture is dissolved, the priority assets are transferred onto the state for a consideration which is set out in the concession contract and which will not exceed the value determined according to an expert opinion. Administrator of the state property may contribute assets in the joint venture upon its establishment or at any time thereafter.

If the Real Estate owned by NSM becomes the subject of administration by the state property administrator, i.e. MOH, it may be subsequently contributed to the joint venture and will thus become part of the priority assets. In line with Act on State Property Administration, only immovable property contributed to the registered capital by the property administrator becomes protected priority assets; however, the law does not provide for any specific protection regime for the immovable property arising out of the joint venture activities, such as the buildings comprising the new hospital. These, if built by, and having passed in the ownership of the joint venture, would not be protected under Act on State Property Administration as priority assets and might be thus included in the bankrupt's estate or be subject to liquidation. If they were owned by the state from the very beginning, they would enjoy protection just like any other state property and would not become the subject of either execution proceedings or bankrupt's estate.

## Assessment of the risk associated with potential bankruptcy of the private partner

The risks arising during the hospital construction stage could be eliminated through appropriate adjustment of the concession contract, under which the building comprising the hospital would first become the property of the state property administrator (MOH) that would then contribute these assets to the joint venture's capital whereby they would become part of the priority assets. The buildings of the hospital would be used as in-kind contribution as a set of things whose value can be assessed and expressed in money; such in-kind contribution may be any assets whose value can be expressed in money. Immovable property registered in the cadastre may be contributed in the joint venture. In order to be registered in the cadastre, an unfinished structure must be in a stage allowing the preparation of an expert opinion in which it will be possible to define the structural and functional layout at least of its first floor.

The remaining assets of the joint venture, such as certain parts of the property of nUNB, such as equipment, may be affected by the private partner's bankruptcy or overindebtedness, depending on the ownership title. Both the Bankruptcy Act and Enforcement Code may apply to those assets. The risk that the joint venture becomes bankrupt due to excessive loans and subsequent overindebtedness is less pronounced compared to CPPP, if the Real Estate is contributed in the joint venture's registered capital (for more detail see section on JV model). The above risk can be mitigated in the concession contract. The concession contract may provide for regulation of the manner of settlement of the ownership of nUNB's equipment and the method of handover of those assets. The manner of handover of those assets depends on the arrangements agreed in the concession contract and, to an appreciable extent, also on the stage of the Project and ownership of the immovable property comprising the nUNB

The impacts of the private partner's bankruptcy or enforcement of its assets may be mitigated through a careful and consistent drafting of the concession contract and the joint venture's corporate documents. In particular in the operation stage of the Project, it will be necessary to agree on procedures ensuring a smooth and hassle-free handover of nUNB assets to the state without any unfavourable impacts on the provision of health care.

However, the private partner or its financing entities may perceive such a control and/or takeover of the Project by the state in a less favourable manner. The private partner, in order to be able to ensure efficient operation of nUNB, will insist on retaining certain control over the Project. Both the concession contract and corporate documents should also include a mechanism for the transfer of ownership interest or shares to the state, and an algorithm for calculating an appropriate consideration (compensation) so that the Project remains to be attractive also to the financing entities.

| Model | RISK  | MITIGATION  |
|-------|---|---|
| IPPP  | Structures that will be built as a result of activities of the joint venture are not part of the priority assets enjoying the required protection against bankruptcy and enforcement. | Ownership title to buildings would be first acquired by the administrator of state property (MOH) that would then contribute the same in the joint venture's registered capital, whereby the assets would become part of priority assets. Alternatively, buildings would remain state-owned. In such a case, the liabilities of the joint venture might exceed the value of its assets and the joint venture might become overindebted. |
|       | Loss of control over other concessionaire's assets.   | Appropriate drafting of the concession contract and corporate documents in order to ensure control over the Project, such as various mechanisms for intervention by the contracting authority in the case of threatened bankruptcy, manner of takeover of the Project, mandatory sale of ownership interest or shares and their handing over to the state.  |

### C. JV

Evaluation of the impacts of implementation of the JV model has identified the following risks:

- ▶ JV is subject to Bankruptcy Act
- ▶ JV is subject to Enforcement Code

## Assessment of the risk associated with potential bankruptcy of the private partner

- ▶ JV could become automatically overindebted under Bankruptcy Act once it receives loans; this risk may be even more pronounced if the state remained the owner of immovable property

Protection of property depends on the particular model, but only immovable state property enjoys absolute immunity. If all the assets will be owned by JV, no immunity pursuant to Enforcement Code and Bankruptcy Act will be applicable. Consequently, the level of protection of JV's assets will be significantly reduced. The level of protection of JV's assets will be reduced also due to the fact that it would not be protected like the concession or priority assets (CPPP and IPPP models) under Act on State Property Administration and the concession contract. If the state remained the owner of the immovable property comprising nUNB and JV would only operate nUNB then – from the ECJ case law aspect and probably from that of the OPP and Commission – such model would be evaluated as avoidance of Public Procurement Act. According to the ECJ case law, receipt of benefits by the private partner might be evaluated as avoidance of the Directives dealing with public procurement and, consequently, state ownership of the immovable assets could not be efficiently defended in this particular case.

Certain level of protection might be afforded if the state assumed guarantees for such property. Bankruptcy Act does not apply to settlement of relationships with creditors in the case of a debtor whose liabilities are guaranteed by the state. If such guarantees were given, then legal regulations dealing with state aid and state guarantees would have to be also considered.

According to Enforcement Code, execution proceedings do not apply to other state assets if classified as such by special law. To ensure absolute immunity to be enjoyed by JV's assets, special law would have to be adopted exempting such assets from Enforcement Code. Otherwise, such assets might enjoy only relative immunity, meaning that immunity would be granted by a court under application by, or agreement with the bailiff. Due to all this, this particular model would carry the largest amount of risk to the state. Even if the court awarded such immunity because state assets would be concerned requiring protection due to general interest, awarding such protection would be in the court's discretion. First, the court would decide about the application for an award of relative immunity and, subsequently, about discontinuation of the enforcement proceedings.

As follows from what has been indicated above, this model carries the highest risk in the case of the private partner's bankruptcy or indebtedness, as all its assets may become the subject of enforcement or may be included in the bankrupt's estate, provided that they are owned by JV.

Also the very JV concept may pose problems from Bankruptcy Act aspect, in particular if the immovable properties remained to be owned by the state for the purpose of their protection. If JV took loans in any amount exceeding the value of its assets, it would face the risk of being adjudicated bankrupt

According to Bankruptcy Act, an entity is overindebted if the sum of all its liabilities exceeds the value of its assets. Assessment of the sum of liabilities and value of the assets is based on the entity's accounting, taking into account administration of other property and operation of other undertaking, if any, if it can be reasonably assumed – taking into account all the circumstances – that the administration of property or operation of a business will continue. This means that evaluation of overindebtedness should not be based solely on the value of the debtor's actual assets; if the debtor is objectively able to continue the operation of its business and it may be reasonably assumed that will be able to generate profits in the future, then it is necessary to take into account also future profits associated with future operation of the undertaking. If future operation of nUNB and its future earnings/profits were to be taken into account, JV would not necessarily have to be considered over indebted. Nonetheless, full elimination of this risk could be achieved only through the adoption of special legal regulation.

| Model | RISK  | MITIGATION  |
|-------|---|---|
| JV    | JV is subject to Bankruptcy Act   | Providing guarantees for JV's assets, or adoption of special legal regulation   |
|       | JV is subject to Enforcement Code   | Adopting special legal regulation providing absolute immunity to JV assets. Alternative: the state remains the owner of immovable property and other assets |
|       | JV could become automatically overindebted under Bankruptcy Act once it receives loans; this risk may be even more pronounced if the state remained the owner of immovable property | Providing guarantees for assets. Providing evidence of future potential earnings. Adopting special legal regulation.  |

## Assessment of the risk associated with potential bankruptcy of the private partner

### D. Specific Model

Evaluation of the impacts of implementation of the Specific Model on the bankruptcy area has identified the following risks:

- ▶ contractor of public works or services goes bankrupt
- ▶ Bankruptcy or enforcement of SPV fully controlled by the state and its assets
- ▶ As the result of taking loans, JV might automatically become overindebted in the sense of Bankruptcy Act; this risk may be even more pronounced if the state remained the owner of immovable property

This model is based on the assumption that the state remains the exclusive owner of SPV and that the concession will be granted to SPV as "in house" contract. Legal regulation of "in house" contracts has been so far dealt with only in the case law of the ECJ and the methodology of OPP. New Directive 2014/23/EU already provides for comprehensive regulation of awarding "in house" contracts between the contracting authority and the controlled entity.

The Specific Model envisages full control by the state over the SPV. If contracts were awarded for individual partial deliverables, such as construction of the hospital, then bankruptcy of the private partner would result only in temporary discontinuation of the Project and announcement of a new public tender. Neither bankruptcy nor indebtedness of the private partner should therefore have such an impact on implementation of the Project as they would have in the case of PPP models.

Bankruptcy of SPV may have a number of consequences for the outcome of the project, depending on the particular model. Specific, however, will be the manner of evaluation of the method for protection of state property if the state retained its ownership title to the land and newly built hospital and in the case of transfer of the ownership title to SPV. If the state retains the ownership title and the land and hospital will be left for the use of the concessionaire (SPV), such concession property will enjoy protection pursuant to Act on State Property Administration. Concession property is *"state property used by a concessionaire in the scope, on the terms and conditions and for a period as agreed in the concession contract for public works or services concluded pursuant to special legal regulation."* Such 'special legal regulation' is the Public Procurement Act. Apart from setting out the definition of the 'concessionaire', this act also regulates the procedure for awarding contracts by the contracting authority. The outcome of the process is the conclusion of a concession contract.

What remains uncertain is the applicability of Act on State Property Administration in the case of "in house" concessions and concession contract which have not been concluded, for various reasons, according to procedures introduced by Public Procurement Act. Public Procurement Act is the only law dealing in more detail with concession contracts, and link to this law is therefore quite evident. Apparently, the legislator intended to grant protection also to assets which are the subject of concession contract not granted according to Public Procurement Act. On the other hand, the phrase *"concession contract ... concluded pursuant to special regulation"* indicates quite clearly that a concession contract should be concluded pursuant to Public Procurement Act, which implies also compliance with the procedures introduced by this particular law. If an interpretation is accepted according to which no protection pursuant to Act on State Property Administration is granted, then it would be more expedient if the state retained its ownership title to immovable property. The immovable property would thus be protected as any other state property and would not become subject to bankruptcy or enforcement proceedings. Alternatively, special law, or legal regulation may be enacted with respect to hospitals of this type exempting the property owned by nUNB (SPV) from applicability of Enforcement Code and Bankruptcy Act.

Thus, conclusion of a concession contract between two public entities may not offer any advantage when compared with other models, such as a purely corporate solution where under the state would delegate specific tasks to SPV. Just like in the case of the JV model, SPV's assets, in particular immovable property would not enjoy appropriate protection, having regard to the specific purpose, which is the provision of health care services. Consequently, it would appear advisable either to provide guarantees, or to adopt special law under which the property would be granted protection against bankruptcy, liquidation and enforcement proceedings.

According to Bankruptcy Act, overindebtedness is a situation where the sum of all the debtor's liabilities exceeds the value of its assets. Assessment of the sum of liabilities and value of the assets is based on the entity's accounting, taking into account administration of other property and operation of other undertaking, if any, if it can be reasonably assumed – taking into account all the circumstances – that administration of property or operation of a business will continue. This means that evaluation of overindebtedness should not be based solely on value of the debtor's actual assets; if the debtor is objectively able to continue the operation of its business and it may be reasonably assumed that will be able to generate profits in the future, then it is necessary to take into account also future profits

## Assessment of the risk associated with potential bankruptcy of the private partner

associated with future operation of the undertaking. If the future operation of nUNB and its future earnings/profits were to be taken into account, SPV would not necessarily have to be considered overindebted. Nonetheless, the above risk cannot be entirely eliminated in the construction stage of the Project and adoption of special legal regulation exempting SPV's assets from bankruptcy proceedings would therefore be advisable.

| Model          | RISK   | MITIGATION   |
|----------------|--|--|
| Specific Model | Public works or services contractor goes bankrupt  | Appropriate drafting of the public works or service contract, e.g. sanction mechanisms, payment for the price of the works after completion, etc.  |
|                | Bankruptcy or enforcement of SPV fully controlled by the state and its assets  | Protection pursuant to the Act on State Property Administration cannot be guaranteed in the case of "in house" contracts. Adopting special legal regulation granting absolute immunity from enforcement and protection against bankruptcy. |
|                | As the result of taking loans, SPV might automatically become overindebted in the sense of Bankruptcy Act; this risk may be even more pronounced if the state remained the owner of immovable property | Providing guarantees for the assets. Evidence of potential future earnings. Adopting special legal regulation  |

### Comparison of individual models

As far as feasibility is concerned, all the above models appear to be viable and feasible. If individual models are evaluated from the aspect of protection of the private partner's property without the need to adopt additional legal regulation, the CPPP and IPPP models appear to be the most feasible as, in both cases, protection of the private partner's assets against bankruptcy and enforcement is ensured by operation of law.

The JP model appears to be the most risky of all, as it would provide less protection against bankruptcy and enforcement on the immovable and other properties owned by nUNB. The Specific Model also appears to be feasible from the risk mitigation aspect, under which bankruptcy of the private partner (contractor of public works or services) would have the least impact on the model as such; what remains to be resolved in more detail, however, is the protection of the state-owned SPV itself. The most appropriate way of mitigation appears to be the adoption of special regulation. As for other mitigation measures applicable to all of the above models, these would include a careful and consistent drafting of the concession contract and corporate documents and efficient public tender procedure, where all these measures can be agreed upon and tested.

From the aspects of risks to feasibility and their mitigation, the CPPP model appears to be the alternative offering most advantages; this alternative is characterized with medium risk weight and high to medium efficiency of the mitigation measures. The IPPP model follows, with medium risk weight and medium to high efficiency of the mitigation measures. Due to the low weight of risks and high efficiency of the mitigation measure, the Specific Model is also feasible, provided that issues surrounding the protection of the SPV are resolved. The JV model is associated with a high risk rate and medium to low efficiency of mitigation measures.

### Summary table

| Risk   | CPPP   | IPPP  | JV  | Specific Model |
|--|--|---|---|----------------|
| Loss of control over nUNB assets, in particular immovable property | The immovable property of nUNB would remain state-owned. The concessionaire would occupy the property under a concession | Buildings being the result of joint venture will not be included in priority assets enjoying the necessary protection against | JV is subject to bankruptcy and enforcement. State may assume guarantees, or adoption of special legal regulation | Not identified |

## Assessment of the risk associated with potential bankruptcy of the private partner

|  |   |  |   |  |
|--|---|--|---|--|
|  | contract  | enforcement and bankruptcy. Ownership to the hospital buildings would be first acquired by the administrator of state property (MOH) that would then contribute the same in the joint venture's registered capital, whereby the assets would become part of priority assets. Alternatively, buildings would remain state-owned.                            |   |  |
| Loss of control over other property of the concessionaire          | Appropriate setup of the concession contract to ensure direct control over the Project, such as intervention mechanism made available to the contracting authority in the case of threatened bankruptcy, manner of acceptance of the Project and its surrender to the state | Appropriate drafting of the concession contract and corporate documents in order to ensure control over the Project, such as various mechanisms for intervention by the contracting authority in the case of threatened bankruptcy, manner of takeover of the Project, mandatory sale of ownership interest or shares and their handing over to the state. | Not identified  | Not identified   |
| JV is subject to Bankruptcy Act                                    | Not identified  | Not identified   | Assumption of guarantees for JV assets or adoption of special regulation.   | Not identified   |
| JV is subject to Enforcement Code                                  | Not identified  | Not identified   | Adopting special legal regulation providing absolute immunity to JV assets. Alternative: the state remains the owner of immovable property and other assets | Not identified   |
| Bankruptcy of supplier of construction works or services           | Not identified  | Not identified   | Not identified  | Appropriate drafting of the works or service contract, e.g. sanction mechanisms, payment for the price of the works after completion, etc  |
| Bankruptcy or enforcement of SPV assets wholly controlled by state | Not identified  | Not identified   | Not identified  | Protection pursuant to the Act on State Property Administration cannot be guaranteed in the case of "in house" contracts. Adopting special legal regulation granting absolute immunity from enforcement and protection against bankruptcy. |

## Assessment of the risk associated with potential bankruptcy of the private partner

|  |  |  |   |  |
|--|--|--|---|--|
| SPV or the concessionaire could automatically become overindebted as a result of loans provision as per Bankruptcy Act; risk increases if the ownership of real estate remains with the state. | Only concerns the concessionaire. With respect to future nUNB operation and its future revenues the concessionaire would so not become automatically overindebted. | Only concerns SPV<br>In the event the real estate is not part of IPPP there is the risk above. With respect to future nUNB operation and its future revenues the concessionaire would so not become automatically overindebted | Only concerns SPV<br>Assumption of guarantees for assets. Evidence of potential future revenues. Adopting special legal regulation. With respect to future nUNB operation and its future revenues the concessionaire would so not become automatically overindebted | Only concerns SPV. With respect to future nUNB operation and its future revenues the concessionaire would so not become automatically overindebted. Adoption of special legal regulation feasible. |
|--|--|--|---|--|

## Assessment of legal aspects of the proposed payment mechanism between partners

### Assessment of legal aspects of the proposed payment mechanism between partners

#### Basic description of the affected area

This part of the report deals with evaluation of the legal mechanisms the application of which can be taken into account in relation to individual models under the review. Correct definition and application of payment mechanisms are critical for the Project's feasibility, in particular from the aspects of its bankability and financial affordability. The payment mechanisms should

- ▶ be reasonably attractive in order to attract the interest in the project among private sector players;
- ▶ be sufficiently motivating *vis-a-vis* the private partner to ensure as efficient implementation of the Project as possible;
- ▶ create adequate trust among financing entities in the stability, sustainability of, and return on their investments;
- ▶ provide for adequate mechanisms allowing the private partner to correct potential unfavourable developments in the Project.

We understand that the MOH prefers a demand-based PPP model, under which the private partner would receive payment for the provided services from end-users. As we have already mentioned when defining individual PPP models, we expect that implementation of a project of this type will be a particularly big challenge. A large PPP-type project, in order to be bankable and affordable from the financial aspect, requires a predictable and stable cash-flow and revenues from the Project; given the current Slovak legislative environment and the required costs of construction and operation of nUNB, this is extremely difficult to ensure. Consequently, we deal here also (primarily) with payment mechanisms associated with payment from the State.

#### Legal framework of the affected area

The payment mechanisms applied in contracts concluded as part of PPP projects are not addressed in any greater detail in our legal environment. The most important tools for addressing the related issues will therefore be the Project-related agreements (namely concession contracts in the case of CPPP, IPPP and Specific Model, and the corporate documentation in the case of the JV model). An important place, in relation to the legal framework surrounding payment mechanisms, will be held also by contractual arrangements between the entity implementing the Project and health insurers. Agreements with HICs will therefore fix the terms and conditions governing financing of the Project from public health insurance resources; in other words the demand element (i.e. payments for actually performed treatments) will be present in each of these cases.

Despite of being convinced (in terms of feasibility of the Project) that the demand element will not be entirely viable without additional payments from the state, we also think that the Project should receive support and that it will be necessary to ensure that direct payments from the state, if any, should not jeopardize the feasibility of the Project in terms of its financial affordability. Considering the context of the legal framework governing the affected area, we recommend that a change in the legislation be made in order to facilitate the process of changing the health insurer by the insured. To this end, it will be necessary to amend Section 7(2) of Act on Health Insurance<sup>150</sup>. The aim of such an amendment would be to create competitive pressure on health insurers and also to offer to the insured a more flexible mechanism for change of their health insurers, as this would motivate health insurers to conclude agreements with nUNB that will offer to the insured the broadest possible options in using the services of nUNB. We also recommend considering a change in the wording of Section 7(1) of Act on Health Insurance to the effect that HICs would be obliged to conclude agreements/contracts with the concession hospital and maintain them valid throughout the entire term of the concession contract.

<sup>150</sup> Current wording: "The client may change his health insurance provider always as of the 1<sup>st</sup> January of the following calendar year. The application may be filed no later than the 30<sup>th</sup> September of the calendar year. The first and the second sentence do not apply if the client changed his health insurance company by reason of becoming a dependant family member as per special regulations. 3a) In the event of expiration and initiation of public health insurance under Section (4) and (5) during the same calendar year, the client must file his application with the health insurance company which insured him last."



## Assessment of legal aspects of the proposed payment mechanism between partners

### Specifics, risks, benefits and recommendations regarding the affected area

There are significant differences between individual models in terms of the applicable and proposed payment mechanisms. On one hand, payment mechanism typical for PPP projects must be evaluated, i.e. availability payments, demand payment or combined payments. At the same time, payment mechanisms typical for PPP projects are extended by certain additional mechanisms as the result of the specific nature of the Project. In the cases of IPPP, Special Mode and JV, payment mechanisms of corporate nature can also be considered.

#### A. CPPP

Evaluation of the impacts of implementation of the CPPP model on the payment mechanism area has revealed the following risks:

- ▶ Financial credibility of the private partner
- ▶ Bankability
- ▶ Correct balance between the demand element, availability payment and performance value
- ▶ Appropriate calibration motivating the private partner to provide over-the-standard efficiency, significant but fair deductions
- ▶ Inclusion in the public debt (in the case of inappropriate structuring)
- ▶ Higher, or lower than expected demand
- ▶ Regular payment by HICs, duration and stability of contracts

Correct setting of the CPPP payment mechanism is essential for the Project to be successful. It will be crucial to ensure adequate motivation of end-users to use the services provided by nUNB. We understand that this will be achieved through termination of the activities of the three large hospitals forming UNB. Nonetheless, given that the state will continue operating a full-scale hospital of Sv. Cyril and Metod, and given the presence of private competition, the private partner probably won't be able to ensure adequate manageability of the demand element to ensure full-scale bankability of the Project. For this reason, it is highly improbable that a project based solely on demand and not able to guarantee a foreseeable cash-flow would be attractive to a private partner.

Consequently, it will probably be necessary to strike a balance between the payments from public health insurance, payments from the state (through availability payment) and the performance value in order to achieve adequate value for the money. As a mitigation factor, either governmental guarantees or a balancing payment eliminating demand-based shortages can be applied. To eliminate this risk, it will be necessary to carefully evaluate any financial tools, guarantees and cash-flow securing mechanisms that should be applied in relation to the Project<sup>151</sup>. The objective is to propose measures that would reduce the need for state aid to a manageable minimum.

As far as bankability of projects of this type is concerned, one of the key elements appears to be financial (non)credibility of the private partner, as well as the impact of political instability on the sustainability of the support to the Project from the state. Having this in mind, it is highly improbable that a project having as its party an entity other than directly the state itself would be attractive to a private partner. From the private partner's perspective, the obligation to include the Project in the public debt in the case of badly structured payment mechanism is yet another risk.

As already mentioned above, and viewing the issue from the private partner perspective and the perspective of overall sustainability and success of the Project, the project might be compromised by unforeseeable market mechanisms, such a demand that is either higher or lower than what has been forecasted. Another risk factor is the behaviour of HICs and the unpredictable nature of payments from HICs which may put at risk the private partner's revenues and the Project itself. From the above perspective, it will be crucial to secure the conclusion of sufficiently stable contracts with HICs for the longest possible terms. Contracts with HICs should be set so as to provide to the private partner sufficient comfort in terms of stable and regular revenues.

<sup>151</sup> See Analysis of state aid in relation to the preferred Project model

## Assessment of legal aspects of the proposed payment mechanism between partners

The basis for correct functioning of the payment mechanism (and the entire Project) is a balanced concession contract adequately considering the private partner's expectations, market feedback and the EUROSTAT Rules, and which also motivates the private partner to perform properly and efficiently.

We assume that the Project, given its required attributes, will require that the concessionaire's revenues be secured through financial mechanisms going beyond the framework of public health insurance and revenues from ancillary services provided by the concessionaire. The applied financial mechanisms are to serve to guarantee revenues to the concessionaire so that the Project is attractive and bankable, efficient, and sustainable at the time of its implementation. The following financial guarantees can be considered:

- ▶ Contract with Všeobecná zdravotná poisťovňa, a.s. – the longest possible contract term should be negotiated; ban on its termination; terms and conditions to be set so as to ensure stable and continuous revenues to the concessionaire;
- ▶ Contracts with other public HICs –incentives and motivation to encourage the conclusion of contracts with these HICs; to provide release mechanism allowing the insured to change their health insurer more freely (to create competition pressure and to provide to the insured a more flexible choice in HICs);
- ▶ Catchment area – to guarantee demand in the catchment area, e.g. through close-down of certain hospitals or their parts, a guarantee that new hospitals will not be established;
- ▶ Providing a mechanism for a balancing payment to the concessionaire, while the amount of such payment would depend on preset objective quantitative parameters according to the concession contract, e.g. if the actual demand is below what was expected.

| Model | RISK  | MITIGATION  |
|-------|---|---|
| CPPP  | Private partner's financial credibility   | State as party to the contract (or state guarantees)  |
|       | Bankability   | Well balanced concession contract taking into account market feedback, availability payment element, state guarantees, if any   |
|       | Correct balance between the demand element, availability payment and performance value  | Balanced concession contract is key, reflecting the needs and requirements of the private partner, while adequately taking into account the market feedback                               |
|       | Appropriate calibration motivating the private partner to provide over-the-standard efficiency, significant but fair deductions | Balanced concession contract is key, reflecting the needs and requirements of the private partner, while motivating the private partner to ensure efficient implementation of the Project |
|       | Inclusion in the public debt (in the case of inappropriate structuring)   | Appropriate setup of the concession contract, taking into account the EUROSTAT Rules  |
|       | Higher, or lower than expected demand   | Balanced concession contract taking into account the market feedback and allowing for flexible application of measures in order to correct any unexpected fluctuations on the demand side |
|       | Predictability of payments to be made by HICs, the terms and stability of contracts   | Balanced concession contract taking into account the market feedback, minimum payments, potential state guarantees  |
|       | Behaviour of HICs   | Changes in legal regulations <i>vis-a-vis</i> the state-owned HIC; balanced concession contract taking into account the market feedback, minimum payments, potential state guarantees     |
|       | Need for assorted tools to fill gaps in finance   | Balanced concession contract taking into account the market feedback, minimum payments, potential state   |

## Assessment of legal aspects of the proposed payment mechanism between partners

|  |                                 |  |
|--|---------------------------------|--|
|  |                                 | guarantees; nUNB should be allowed to provide commercial services  |
|  | Potential threat to competition | Appropriately drafted Project, taking into account any feedback from tenderers in order to reduce the need for state aid to a manageable minimum |

### B. IPPP

Evaluation of the impacts of implementation of the IPPP model on the payment mechanism area has revealed the following risks:

- ▶ Financial credibility of the private partner
- ▶ Correct balance between the availability payment and performance value
- ▶ Appropriate calibration motivating the private partner to provide over-the-standard efficiency, significant but fair deductions
- ▶ Inclusion in the public debt (in the case of inappropriate structuring)
- ▶ Higher, or lower than expected demand
- ▶ Predictability of payments to be made by HICs, term and stability of contracts
- ▶ Behaviour of HICs
- ▶ Need for assorted tools to fill gaps in finance
- ▶ Potential threat to competition
- ▶ Bankability
- ▶ Distribution of profit
- ▶ Shared losses

In addition to what has been said above in relation to the CPPP model, bankability of the project might be compromised if the state overshoots its demands in terms of its share in the SPV's profits. Profit sharing must be balanced and must appropriately reflect the market feedback to ensure attractiveness of the Project. It must be also noted that the share in of losses must also be considered in the case of the IPPP model; the state will have to bear its share in potential losses mainly during the construction stage and also if any complications occur in the Project implementation process. The related obligations will have to be addressed in SPV's corporate documentation in a sufficient detail at the stage of selecting the private partner in order to ensure that the Project is sustainable and bankable.

| Model | RISK   | MITIGATION  |
|-------|--|---|
| IPPP  | Private partner's financial credibility  | State as party to the contract (or state guarantees)  |
|       | Correct balance between the demand element, availability payment and performance value   | Balanced concession contract is key, reflecting the needs and requirements of the private partner, while adequately taking into account the market feedback                               |
|       | Appropriate calibration motivating the private partner to provide above-the-standard efficiency, significant but fair deductions | Balanced concession contract is key, reflecting the needs and requirements of the private partner, while motivating the private partner to ensure efficient implementation of the Project |

## Assessment of legal aspects of the proposed payment mechanism between partners

|  |   |
|--|---|
| Inclusion in the public debt (in the case of inappropriate structuring)        | Appropriate setup of the concession contract, taking into account the EUROSTAT Rules  |
| Higher, or lower than expected demand  | Balanced concession contract taking into account the market feedback and allowing for flexible application of measures in order to correct any unexpected fluctuations on the demand side |
| Predictability of payments to be made by HICs, term and stability of contracts | Balanced concession contract taking into account the market feedback, minimum payments, potential state guarantees  |
| Behaviour of HICs  | Changes in legal regulations <i>vis-a-vis</i> the state-owned HIC; balanced concession contract taking into account the market feedback, minimum payments, potential state guarantees     |
| Need for a variety of tools to fill financial gaps                             | Balanced concession contract taking into account the market feedback, minimum payments, potential state guarantees; nUNB should be allowed to provide commercial services                 |
| Potential threat to competition  | Appropriately drafted Project, taking into account any feedback from tenderers in order to reduce the need for state aid to a manageable minimum  |
| Bankability  | Well balanced concession contract taking into account market feedback, Project sustainability, minimum payments, potential state guarantees   |
| Distribution of profit   | Well balanced distribution of profit taking into account market feedback to ensure Project attractiveness   |
| Shared losses  | Comprehensive corporate documentation and appropriate but significant participation of the state  |

### C. JV

Evaluation of the impacts of implementation of the JV model on the payment mechanism area has revealed the following risks:

- ▶ Higher, or lower than expected demand
- ▶ Predictability of payments to be made by HICs, term and stability of contracts
- ▶ Behaviour of HICs
- ▶ Bankability and financial credibility of JV
- ▶ Distribution of profit

The JV model does not involve a standard concession award to a private partner, i.e. the payment mechanism is not based on availability payments and/or is not present at all. Upon establishment of JV, the state may contribute property and assets to the company to be used for the purpose of implementation of the Project; subsequently, JV carries out its business independently and takes steps aimed at successful implementation of the project. Also, JV faces the risk associated with unpredictability of the market; in the case of lower than expected demand, which may be accompanied with unfavourable reputation of the Project, the Project can be either discontinued or taken over by the state. Such a feasibility risk can be potentially mitigated through participation of the state in the Project and the associated sharing of the profits and losses; this, however, requires a carefully drafted and appropriately balanced corporate documentation and transparent selection of the private partner.

## Assessment of legal aspects of the proposed payment mechanism between partners

To ensure an efficient and long-term functioning of the Project, it will be indispensable to secure favourable contracts with HICs that would guarantee regular and stable payments from HICs in the longest possible term. If the Project is successful, the JV model provides an additional benefit in the form of profit.

| Model | RISK   | MITIGATION   |
|-------|--|--|
| JV    | Higher, or lower than expected demand  | Mitigated through participation of the state in the Project and the associated profit and loss sharing mechanism, carefully drafted corporate documentation and transparent selection of the partner |
|       | Predictability of payments to be made by HICs, term and stability of contracts | Mitigated through participation of the state in the Project and the associated profit and loss sharing mechanism   |
|       | Behaviour of HICs  | Mitigated through participation of the state in the Project and the associated profit and loss sharing mechanism; enhanced attractiveness of the new hospital  |
|       | Bankability and financial credibility of JV                                    | Carefully drafted corporate, project and loan documentation taking into account feedback from the market; state guarantees   |
|       | Distribution of profit   | Balanced sharing of profits taking into account feedback from the market in order to make the Project attractive   |
|       | Shared losses  | Carefully drafted corporate documentation and appropriate but significant participation of the state   |

### D. Specific Model

Evaluation of the impacts of implementation of the Specific model on the payment mechanism area has revealed the following risks:

- ▶ Financial credibility of SPV
- ▶ Appropriate calibration motivating SPV to provide over-the-standard efficiency, significant but fair deductions
- ▶ Inclusion in the public debt
- ▶ Higher, or lower than expected demand
- ▶ Predictability of payments to be made by HICs, term and stability of contracts
- ▶ Behaviour of HICs
- ▶ Need for assorted tools to fill gaps in finance
- ▶ Potential threat to competition
- ▶ Bankability
- ▶ Distribution of profit
- ▶ Shared losses

Implementation of the Specific Model necessarily assumes financing by the state in the form of capital injections (contributions in the registered capital) and will probably require granting state guarantees to the banking sector securing external financing of SPV. The manner of financing of SPV will play a key role in evaluation of financial affordability, primarily in relation to compliance with the rules of budgetary responsibility and increase of the public debt.

## Assessment of legal aspects of the proposed payment mechanism between partners

We understand that if the Specific Model is applied, MOH (and/or any other entity representing the state), as the sole shareholder, will establish a SPV. The state will contribute to SPV's registered capital either funds and/or assets designated for implementation of the Project. The pros and cons of contribution of assets to SPV's registered capital are dealt with in 'Evaluation of risks associated with potential bankruptcy of the private partner'.

The state may grant to SPV a concession in the form of an in-house contract which is exempted from the applicability of Public Procurement Act. The concession may have as its subject matter the implementation of the entire Project (i.e. design, construction, maintenance and operation of nUNB), or of its part to be implemented directly by SPV, i.e. operation of nUNB as health care facility. In terms of payment mechanism, a distinction must be made between fundraising for the purpose of financing of individual contracts that are to be awarded through the public procurement procedure, and making payment to SPV for deliverables provided under an in-house concession (operation of nUNB as health care facility).

Individual contracts awarded to SPV through the public procurement procedure should be financed from SPV's resources (including loans). Operation of the health care facility should be financed from public health insurance funds and payments from MOH that must ensure the sustainability and efficiency of the Project and can be made in a number of ways:

- ▶ Payment mechanism under the concession contract based on similar assumptions and principles as in the case of PPP-based alternatives;
- ▶ MOH will make payments to SPV under the obligation to contribute towards the coverage of losses pursuant to Commercial Code, related special regulations and applicable corporate documents;
- ▶ SPV will be compensated through increases of the value of its registered capital;
- ▶ SPV will take a loan and MOH will participate as co-borrower, i.e. SPV will be financed through loan instalments.

The mechanism based on the concession contract appears to be the most transparent alternative. On the other hand, the least transparent alternative appears to be financing through loan instalments.

Payment mechanism-related issues contain a number of layers in the case of the Specific Model. First of all, a payment mechanism between the state and SPV as described above will be concerned. On the other hand, it will be necessary to design a payment mechanism applicable to payment between SPV and suppliers of individual partial deliverables. The stages of design, construction and maintenance will probably involve standard payments for properly delivered works/services; such payments can be made either as continuous (flat payments) or single payment after due hand-over of the works/delivery of services. A specific mechanism should be defined in relation to providers off know-how, and should be incentive-driven. The most basic mechanism would foresee split of the payments payable to know-how providers in two parts, namely:

- ▶ Flat payment component – fixed amount of monthly instalments, and
- ▶ Variable component – would be set on a quarterly or annual basis and would depend on SPV's performance.

| Model          | RISK  | MITIGATION   |
|----------------|---|--|
| Specific Model | Financial credibility of SPV  | State as a party to the contract (or state guarantees)   |
|                | Appropriate calibration motivating SPV to provide over-the-standard efficiency, significant but fair deductions | Balanced concession contract; strict application of sanctions mechanisms   |
|                | Inclusion in the public debt  | No mitigation possible if SPV fails to meet the definition of ordinary market participant  |
|                | Higher, or lower than expected demand   | Balanced concession contract; financial mechanisms allowing for adjustments for unfavourable developments on the demand side; strict application of sanctions mechanisms |
|                | Predictability of payments to be made by HICs, term and stability of contracts                                  | Balanced concession contract taking into account minimum payments, potential state guarantees  |

## Assessment of legal aspects of the proposed payment mechanism between partners

|   |  |
|---|--|
| Behaviour of HICs                               | Changes in legal regulations in relation to the state-owned HIC; balanced concession contract taking into account feedback from the market; minimum payments, potential state guarantees                                   |
| Need for assorted tools to fill gaps in finance | Balanced concession contract taking into account feedback from the market; minimum payments, potential state guarantees; new UNB is allowed to provide commercial services, etc.; balanced contract with know-how provider |
| Potential threat to competition                 | Appropriately drafted Project, taking into account any feedback from tenderers in order to reduce the need for state aid to a manageable minimum   |
| Bankability                                     | Balanced concession contract taking into account feedback from the market; minimum payments, potential state guarantees; balanced contract with know-how provider  |
| Distribution of profit                          | Balanced contract with know-how provider   |
| Shared losses                                   | Balanced contract with know-how provider   |

### Comparison of individual models

In term of payment mechanisms, all of the models appear to be feasible. Payment mechanisms applicable to individual models offer possibilities for application of an array of financial instruments. Due to the feasibility of mitigation measures, we would deem the CPPP model as the most appropriate. The risks associated with the CPPP model will have to be addressed in an efficient manner in the concession contract through a clear and consistent specification of the payment mechanisms. A similar conclusion applies to the IPPP model, although it is associated with certain possible negative financial connotations of corporate nature, such as the obligation to contribute towards the coverage of potential losses. Among other things, both these models offer a possibility of fine-tuning the payment mechanisms directly as part of the public procurement process. A somewhat higher level of risk is attached to the JV model, while the efficiency and feasibility of the mitigation mechanisms requires that the state hold an interest in the JV. The impact of the state-held interest in the JV on mitigation of the Project feasibility-related risks depends on the level of stability and support the state would provide to the Project. In other words, participation of the state might be beneficial during certain periods of time, while the opposite might be true under other distribution of political power and setting, which makes the JV model somewhat less favourable. Similar conclusions can be applied also to the Specific Model which, in the long run, depends on the political will and, moreover, features the least transparent payment mechanisms. The risk of inclusion of the Project in the public debt also cannot be excluded.

### Summary table

| Risk  | CPPP  | IPPP  | JV             | Specific Model |
|---|---|---|----------------|----------------|
| Financial credibility of the public partner                           | State as a party to the contract (or state guarantees)  | State as a party to the contract (or state guarantees)  | Not identified | Not identified |
| Appropriate calibration of demand-based payment and performance value | We consider a balanced concession contract key; it should reflect the needs and requirements of the public partner but at the | We consider a balanced concession contract key; it should reflect the needs and requirements of the public partner but at the | Not identified | Not identified |

## Assessment of legal aspects of the proposed payment mechanism between partners

|   | same time adequately allow for market feedback  | same time adequately allow for market feedback  |   |  |
|---|---|---|---|--|
| Appropriate calibration motivating to provide over-the-standard efficiency, significant but fair deductions | We consider a balanced concession contract key; it should reflect the needs and requirements of the public partner but at the same time motivate the private partner to efficient Project realisation | We consider a balanced concession contract key; it should reflect the needs and requirements of the public partner but at the same time motivate the private partner to efficient Project realisation | Not identified  | Balanced concession contract; strict application of sanctions mechanisms   |
| Inclusion in the public debt (in case of inappropriate structuring)   | Appropriate setup of the concession contract allowing for EUROSTAT principles   | Appropriate setup of the concession contract allowing for EUROSTAT principles   | Not identified  | No mitigation possible if SPV fails to meet the definition of ordinary market participant  |
| Higher, or lower than expected demand   | Balanced concession contract allowing for market feedback and enabling flexible application of measures to counter unexpected market fluctuations on the demand side                                  | Balanced concession contract allowing for market feedback and enabling flexible application of measures to counter unexpected market fluctuations on the demand side                                  | Mitigated by state's presence in the Project and related mechanism of sharing revenues and losses, well-drafted corporate documentation and transparent partner selection | Balanced concession contract allowing for market feedback and enabling flexible application of measures to counter unexpected market fluctuations on the demand side;  |
| Predictability of payments to be made by HICs, term and stability of contracts                              | Balanced concession contract allowing for market feedback, minimum payments and possible state guarantees   | Balanced concession contract allowing for market feedback, minimum payments and possible state guarantees   | Mitigated by state's presence in the Project and related mechanism of sharing revenues and losses   | Balanced concession contract allowing for market feedback, minimum payments and possible state guarantees  |
| Behaviour of HICs   | Changes in legal regulations in relation to the state-owned HIC; balanced concession contract taking into account feedback from the market; minimum payments, potential state guarantees              | Changes in legal regulations in relation to the state-owned HIC; balanced concession contract taking into account feedback from the market; minimum payments, potential state guarantees              | Mitigated by state's presence in the Project and related mechanism of sharing revenues and losses; increased attractiveness of the new hospital                           | Changes in legal regulations in relation to the state-owned HIC; balanced concession contract taking into account feedback from the market; minimum payments, potential state guarantees                           |
| Need for assorted tools to fill gaps in finance   | Balanced concession contract allowing for market feedback, minimum payments and possible state guarantees; nUNB should be allowed to offer commercial services  | Balanced concession contract allowing for market feedback, minimum payments and possible state guarantees; nUNB should be allowed to offer commercial services  | Not identified  | Balanced concession contract allowing for market feedback, minimum payments and possible state guarantees; nUNB should be allowed to offer commercial services, etc.; balanced contract with the know-how provider |
| Potential threat to competition   | Appropriately drafted Project, taking into account any feedback from tenderers in order to reduce the need for state aid to a manageable minimum  | Appropriately drafted Project, taking into account any feedback from tenderers in order to reduce the need for state aid to a manageable minimum  | Not identified  | Appropriately drafted Project, taking into account any feedback from tenderers in order to reduce the need for state aid to a manageable minimum   |



## Assessment of legal aspects of the proposed payment mechanism between partners

|                                |   |   |   |   |
|--------------------------------|---|---|---|---|
| Bankability                    | Balanced concession contract taking into account feedback from the market; availability-based payment, potential state guarantees | Balanced concession contract taking into account feedback from the market, Project sustainability, minimum payments, potential state guarantees | Well-drafted project, corporate and loan documentation allowing for market feedback; state guarantees | Balanced concession contract taking into account feedback from the market; minimum payments, potential state guarantees<br>Balanced contract with the know-how provider |
| Risk distribution              | Not identified  | Balanced profit distribution allowing for market feedback to make the Project attractive  | Balanced profit distribution allowing for market feedback to make the Project attractive              | Balanced contract with the know-how provider  |
| Risk distribution              | Not identified  | Well-drafted corporate documentation and adequate but significant state participation   | Well-drafted corporate documentation and adequate but significant state participation                 | Balanced contract with the know-how provider  |
| Bankability and JV credibility | Not identified  | Not identified  | Well-drafted project, corporate and loan documentation allowing for market feedback; state guarantees | Not identified  |
| Financial credibility of SPV   | Not identified  | Not identified  | Not identified  | State as party to the contract (or state guarantees)  |

## Assessment of exit strategies and options of modifying the project by the private partner and the public partner

### Assessment of exit strategies and options of modifying the project by the private and the public partner

#### Basic description of the affected area

One of the underlying features of PPP projects is a long-term cooperation between the private and the public partner. Nonetheless, situations may occur where it is no longer possible to carry on the Project subject to its original settings up to a point where the "exit" of the private partner becomes desirable, or external circumstances arise due to which it will no longer be possible to continue the Project with the involvement of the original private partner.

Such circumstances may occur as a result of the private partner's bankruptcy, less than satisfactory performance of the contract, force majeure events, or otherwise. To address such circumstances, it will be necessary to deal with partner exit strategies in a manner that will not threaten the delivery of health care at the very beginning of the preparatory stage of the Project.

Identification of appropriate solutions can be the subject of competitive dialogue or negotiated procedure as part of the tender for selecting the private partner. However, certain rules have to be complied with, such as those relating to compensation that will ensure that the Project will remain attractive for the involvement of the private partner and that the interests of the financing parties remain unaffected by potential termination of the Project.

#### Legal framework of the affected area

The legal framework surrounding this area in the case of the private partner's bankruptcy or enforcement is defined by Enforcement Code and Bankruptcy Act and is dealt with elsewhere in this paper.

Act on State Property Administration deals with PPP projects in its part addressing "disposal of state property for concession purposes", setting out restrictions on the disposal of state property, and addressing the purposes of its use, lease, borrowing, immunity from enforcement, bankruptcy, etc. These legal provisions are applicable also to termination of cooperation with private partners.

General regulation of contract relationships is contained in the Commercial Code and, on the subsidiary level, also in the Civil Code.

Modifications of the Project and changes to the private partner will require the application of Public Procurement Act, which sets out the procedure for the conclusion of amendments and organizing public tenders for the selection of a new contracting partner. All these models will require a very careful drafting of the corporate documents, i.e. the foundation deed/memorandum of incorporation/memorandum of association and/or articles of association

#### Specifics, risks, benefits and recommendations regarding the affected area

Exit of the private partner must be addressed very carefully in the contract documentation primarily for those of the PPP models which involve long-term cooperation with the private partner. As the Specific Model does not involve a form of cooperation in the above sense, no corresponding exit would be involved. From this point of view, this model carries the least risks.

As far as the JV and IPPP models are concerned, the exit of the private partner would have to be addressed – apart from contract-related aspects – also from the corporate aspect of termination of cooperation with the private partner.

#### A. CPPP

Evaluation of the impact of implementation of the CPPP model on exit-related issues has revealed the following risks:

- ▶ The concessionaire leaves the construction works unfinished
- ▶ Less than satisfactory performance of the concession contract. The concessionaire will discontinue provision of health care
- ▶ The state will take over control over the Project. Inefficient performance by the state.

## Assessment of exit strategies and options of modifying the project by the private partner and the public partner

Situations may occur in the course of implementation of the Project that will require modification of the procedure for the exit of either of the partners. These cases should be addressed in detail in the concession contract.

Early exit from the Project, i.e. before end of the agreed concession term, is possible in the following stages of the Project:

- ▶ during the construction stage;
- ▶ during the operation stage.

Early exit may occur mainly for the following reasons:

- ▶ for reasons on the concessionaire's side, such in the case of material breach/non-performance of the contract, less than satisfactory performance, etc. In order to terminate the contract, prior notice from the contracting authority is usually required, providing a grace period for amendment of the situation. Reasons on the concessionaire's side include also concessionaire's liquidation or bankruptcy (for more detail, please see the part dealing with private partner's bankruptcy);
- ▶ for reasons on the side of the contracting authority, e.g. failure to make any required payment, if payment from the contracting authority are envisaged in the Project; failure to procure the required land, permits, etc.;
- ▶ as a result of force majeure or similar events, mainly of circumstances making continuation of the Project impossible and/or events to which considerable risk is attached from the Project perspective and such risks cannot be mitigated through e.g. insurance;
- ▶ termination by the contracting authority without stating a reason (e.g. in the event of political changes, or the state will deem the Project so profitable that it will opt for its independent operation);
- ▶ for other reasons.

Termination of the contract during the construction stage of the Project will require settlement of the mutual rights and obligations by way of an agreement. Immovable property and the rights to the unfinished construction structure registered in the cadastre will be probably owned by the state; otherwise, it will be necessary to make arrangements for transfer of the ownership title to the state or a state-owned legal person. Also, the construction site, documentation and other movable things should be handed over and accepted as provided for in the concession contract. We rely on the assumption that no transfer of "human resources" will be required at this stage and that the applicable labour regulations will not have to be addressed.

If exit occurs at the Project operation stage, transfer of immovable properties (if they are not entirely state-owned), movable assets and human resources will have to be dealt with in a more sensitive manner. Having regard to the nature of the Project, non-stop (round-the-clock) operation of nUNB will have to be secured. It must be set out in the concession contract that the concessionaire is obliged to operate nUNB until it will have been handed over to the state and/or a state-owned company. The concession contract must also contain a mechanism allowing for practically instant hand-over of the Project to the state if a situation occurs that the concessionaire will no longer be able to operate the Project. If the state intended to have the hospital operated by a third party, new public tender for selection of the private partner will have to be announced in line with Public Procurement Act.

If the Project is terminated, compensation is usually paid to the concessionaire at an amount as set out in the concession contract. The amount of such compensation depends, apart from the Project stage (guarantees are granted for lower amounts when the Project is terminated at the construction stage as compared to the operation stage), also on the reasons for termination. If the contracting authority terminates the contract without stating a reason, the contracting authority may have to pay the entire debt owed to the creditors financing the Project, or to compensate the investors for certain part of the expected equity. If the agreement is terminated for reasons on the concessionaire's side, the amount of such compensation is usually derived from "market value" of the Project reduced by all the costs the contracting authority may incur in relation to termination of the contract and procurement of a new operator.

Indispensable part of any PPP project is regulation of the rights of the financing creditors. In particular, the "*step-in rights*" are concerned, i.e. the right of the financing entities to oversee the activities of the concessionaire in the case of its non-performance of the contract which, under other circumstances, would result in termination of the contract and to step in its rights and, in fact, to replace the concessionaire as party to the contract without the obligation to

## Assessment of exit strategies and options of modifying the project by the private partner and the public partner

announce new public tender until the concessionaire becomes fit to perform the contract duly and properly. Public Procurement Act does not allow for such replacement without the announcement of a new public tender; nonetheless, there is a legally feasible and efficient solution to this situation (takeover of the concessionaire's business at the corporate level without the need for a change in its identity); given the nature of the Project, such a solution will probably not be attractive. Namely, operation of a university hospital is far more complex than operation of any other traditional infrastructure, such as highway or court building. It is therefore very likely than financing banks will prefer take-over of the Project by the state in the case of its non-performance.

To ensure legal certainty, a trilateral agreement is usually concluded among the contracting authority, the concessionaire and the creditors. Most often, such an agreement is defined as direct agreement. According to such agreement, the contracting authority undertakes to exercise some of its rights under the concession contract only after it has allowed creditors to step in the project for the purpose of its salvation. The direct agreement may provide for a number of mechanisms for notification of creditors in the case of breach or less than satisfactory performance of the contract by the concessionaire, for granting a period of to creditors in order to amend the situation, replacement of sub-contractors, independent engineer, etc.

Having regard to the Project's nature, it will be necessary to grant certain intervention rights to the contracting authority allowing it to address any threats to proper delivery of health care by the concessionaire, as operation of the nUNB will be secured by the private partner.

| Model | RISK  | MITIGATION   |
|-------|---|--|
| CPPP  | The concessionaire leaves the construction works unfinished   | Appropriately drafted concession contract, including handover of the construction site and payment of partial compensation to the financing entities. Direct agreement with the creditors. |
|       | Less than satisfactory performance of the concession contract. The concessionaire will discontinue provision of health care | Appropriately drafted concession contract, including handover of the Project and payment of compensation to the financing entities. Direct agreement with the creditors.                   |
|       | The state will take over control over the Project. Inefficient performance by the state                                     | Setting an efficient management regime. Bankruptcy.  |

### B. IPPP

The IPPP model is based on the same assumption as CPPP, as far as Project stages and reasons for its termination are concerned. Like in the former case, mutual obligation of the parties will have to be addressed in the concession contract and the direct agreement with creditors (we refer to Evaluation of exit strategies and possibilities of modifying the project by the private and the public partners for CPPP for more detailed information).

Evaluation of the impact of implementation of the IPPP model on exit-related issues has revealed the following risks:

- ▶ Loss of control over the joint venture. Construction of nUNB is compromised
- ▶ Loss of control over the joint venture. Provision of health care is compromised

The need to transfer the title to immovable properties will depend on whether they have been included in the priority infrastructure assets by administrator of state property. In such a case, they would remain unaffected by potential liquidation or bankruptcy of the SPV established for the Project implementation purpose. Risks occurring during the construction stage can be eliminated through careful drafting of the concession contract, according to which the first owner of the buildings comprising the hospital would be the administrator of the state property (MOH) who would subsequently contribute them to the capital of the joint venture whereby they would be granted the priority assets status. If the joint venture is adjudicated bankrupt, the administrator of the state property is entitled to exercise the rights of the joint venture in all matters related to operation and maintenance of priority assets (more detail is given in the part dealing with Evaluation of the risks resulting from potential bankruptcy of the private partner and the associated possibility that both the private and public partners of the Project lose control over the Project assets in the case of IPPP).

## Assessment of exit strategies and options of modifying the project by the private partner and the public partner

In addition to the PPP concept, the corporate structure of the newly formed company will also have to be considered. In the case of a joint venture established with a private partner, special attention needs to be given to corporate documents, such as the memorandum of association/foundation deed/memorandum of incorporation. The memorandum of association should address options for or ban on any transfers of ownership interest, either to a third party or other member. If ban on transfers of ownership interest is introduced, no pledge over such ownership interest is permissible and this fact may play a role from the financing creditors' perspective.

In order to prevent undesirable takeover if cooperation with the private partner is terminated, the right of first refusal with respect to the ownership interest held by the private partner may be granted in the memorandum of association. The right of first refusal should be granted with respect to any disposal, including donation.

The Civil Code allows the following actions if the right of first refusal is not complied with:

- ▶ to seek a court order for relative invalidity (in the case of co-owners);
- ▶ request the transferee to offer the thing for sale on identical terms and conditions;
- ▶ to retain the right of first refusal *vis-à-vis* the transferee;
- ▶ to claim damages.

Violation of the right of first refusal is not associated with absolute nullity directly by operation of law and the reasons for relative nullity may not be extended; consequently, it is possible to request, that the transferee sell the ownership interest to the state or a state-owned legal entity on identical terms and conditions. If the transferee disagrees, its consent may be replaced with a court order. To prevent any further alienation, the State may seek preliminary injunction. The disadvantage of this course of action is the lengthy nature of the associated judicial proceedings and uncertainty as to their actual outcome.

In order to retain control over the Project, restriction on the transfer of shares can be agreed in the memorandum of incorporation, if the joint venture is a joint-stock company. Such restriction of transferability will be registered in the Commercial Register. Any transfer(s) of shares may be made subject to approval by the company (general meeting). The procedure for transfers of shares among existing shareholders or affiliated persons may be simplified. The memorandum of incorporation may specify the cases where the consent to the transfer(s) of shares to persons other than existing shareholder(s) may be withheld. As in the case of the ownership interest, the right of first refusal can also be agreed on. Both the concession contract and memorandum of incorporation should be appropriately linked so that the state has the right to request other shareholder(s) to sell their shares if the concessionaire performs less than satisfactorily.

| Model | RISK   | MITIGATION  |
|-------|--|---|
| IPPP  | Loss of control over the joint venture. Construction of nUNB is compromised.     | Appropriately drafted concession contract, including handover of the construction site and payment of partial compensation to financing entities. Carefully drafted corporate documents. Conclusion of direct agreement with creditors. Right of first refusal with respect to shares or ownership interest. Mandatory (contract) sale of shares. |
|       | Loss of control over the joint venture. Provision of health care is compromised. | Appropriately drafted concession contract, including handover of the Project and compensation to financing entities. Conclusion of direct agreement with creditors. Carefully drafted corporate documents. Right of first refusal with respect to shares or ownership interest. Mandatory (contract) sale of shares.                              |

## Assessment of exit strategies and options of modifying the project by the private partner and the public partner

### C. JV

Evaluation of the impact of implementation of the JV model on exit-related issues has revealed the following risks:

- ▶ Loss of control over the joint venture. Construction of nUNB is compromised
- ▶ Loss of control over the joint venture. Provision of health care is compromised

In the JV model, drafting of the memorandum of association and corporate documents will be key. The memorandum of association should regulate the cases, or ban on transfer(s) of the ownership interest, either to a third party or existing member, and should grant the right of first refusal with respect to the ownership interest. Where a joint-stock company is concerned, restriction on the transfer of shares can be agreed in the memorandum of incorporation. Such restriction on transferability will be registered in the Commercial Register. Any transfer(s) of shares may be made subject to approval by the company (general meeting). Transferability of shares among existing shareholders or affiliated persons may be made simpler. The memorandum of incorporation may specify the cases where the consent to transfer(s) of shares to persons other than existing shareholder(s) may be withheld. As in the case of the ownership interest, the right of first refusal can also be agreed on (please refer to Evaluation of exit strategies and possibilities to modify the project by the private and the public partner in CPPP for more detailed corporate information).

Issues related to bankruptcy, liquidation and enforcement are described in more detail in the part dealing with Evaluation of the risks associated with bankruptcy of the private partner and the possibility that the private and the public partner lose control over the Project. In the case of JV (similarly as with IPPP), the ownership interest will be held by the private partner and the impact of enforcement or bankruptcy needs to be addressed here. If the private partner is declared bankrupt, the ownership interest becomes part of the bankrupt's estate. If the property to which the right of first refusal is attached, either by operation of law or established as an *in rem* right, the trustee in bankruptcy will offer the ownership interest, in writing and on the terms and conditions set out in special law, to the person entitled to receive such an offer. If the trustee in bankruptcy were to offer the ownership interest first to the state or a state-owned legal person, such right of first refusal would have to be addressed in special legal regulation. The right of first refusal with respect to immovable property owned by the JV could be established as *in rem* right. If the JV goes bankrupt and the ownership interest becomes part of the bankrupt's estate, the company may go into liquidation pursuant to the Commercial Code, and the same would apply in the case of enforcement.

If the ownership interest becomes subject to enforcement pursuant to Enforcement Code, the company will be dissolved. Issue of the enforcement order will not result in dissolution of the company in the case of a limited liability company where the sale of the ownership interest is not subject to approval by the general meeting. In such case, the ownership interest would be turned into money just as any other movable property. However, no restriction on transferability of the ownership interest would apply, even if such restriction would be desirable if the state were to retain control over the Project.

It will be necessary to address the possibilities left to the state for retaining control over the Project in the case of bankruptcy, indebtedness or other reasons for exit of the private partner from JV. This may be achieved through establishment of a pledge over or security transfer of rights. In such a case, the interests of the financing entities must also be considered so that the Project remains attractive for financing.

As the relationships between the private and the public partner in the joint venture will be based on corporate mechanisms, any termination of cooperation, including voluntary, must be tested against the corporate documents and Commercial Code. Consequently, classical sanctions such as contractual arrangements or penalties are out of question here. The private and public partners will be either members, or shareholders.

The reasons for exit should be defined in advance; in the case of the private partner, such reason might be established as a result of failure to pay the share in losses, or failure to increase the value of registered capital. Depending on the performance of JV, the private partner might be compensated for its investments. As the nature of the Project is quite strategic (provision of health care), corporate documents should address very carefully the obligation to sell the ownership interest or shares to the state in order to allow it to take over the Project and secure full operation of nUNB.

## Assessment of exit strategies and options of modifying the project by the private partner and the public partner

| Model | RISK   | MITIGATION   |
|-------|--|--|
| JV    | Loss of control over the joint venture. Construction of nUNB is compromised.     | Careful drafting of corporate documents. Right of first refusal with respect to shares or ownership interest, or other mechanisms, such as pledge, mandatory (contract) sale of shares, etc. |
|       | Loss of control over the joint venture. Provision of health care is compromised. | Careful drafting of corporate documents. Right of first refusal with respect to shares or ownership interest, or other mechanisms, such as pledge, mandatory (contract) sale of shares, etc. |

### D. Specific Model

Under the Specific Model, with SPV fully controlled and owned by MOH, it would be awarding individual contracts to tenderers pursuant to Public Procurement Act. In such a case, no long-term cooperation will be involved and, consequently, no robust drafting of the private partner's exit terms and conditions will be needed. Individual agreements will be terminated pursuant to the applicable provisions of the Commercial Code governing termination of contracts for public works or operation; these should contain provisions providing for payment of the purchase price for duly performed orders which may be reduced by contractual penalties for non-compliance with contractual obligations.

While no exit of the private partner is envisaged under the Specific Model, evaluation of the impact of implementation of the Specific Model on exit-related issues has revealed the following risks:

- Non-compliance by suppliers of public works or services with their obligations

| Model          | RISK   | MITIGATION   |
|----------------|--|--|
| Specific Model | The "classic exit is not involved here. Non-compliance by suppliers of works or services with their obligations. | Appropriate drafting of contracts for works and/or operation, such as sanction mechanisms, payment of the price for the works only after due and proper completion, etc. |

### Comparison of individual models

In terms of feasibility, all of the models are viable and implementable. When compared in terms of health care continuity, the Specific Model appears to carry the least risks; this model would not involve the "classic" exit by the private partner but rather termination of the customer/supplier relationships under an agreement. This model therefore features the lowest risk rate with high to medium efficiency of mitigation measures.

The CPPP model is also feasible, showing medium risk weight and medium to high efficiency of mitigation measures through careful drafting of the concession contract and direct agreement with creditors. These mitigation measures may be tested within the competitive dialogue in the public procurement process for selection of the private partner. When the Project parameters are set appropriately, both IPPP and JV models are feasible, too. In the case of IPPP and JV, mitigation measures should oscillate around a thorough drafting of contract relationships and corporate documents and efficient public procurement process where these measures can be agreed upon and tested. Both the IPPP and JV models are accompanied with medium risk rate and medium to low efficiency of the mitigation measures. From the Project control aspect, the JV model appears to carry the highest risks.

## Assessment of exit strategies and options of modifying the project by the private partner and the public partner

Summary table

| Risk  | CPPP  | IPPP   | JV  | Specific Model |
|---|---|--|---|----------------|
| The concessionaire leaves the construction works unfinished   | Appropriately drafted concession contract, including handover of the construction site and payment of partial compensation to the financing entities. Direct agreement with the creditors | Appropriately drafted concession contract, including handover of the construction site and payment of compensation to the financing entities. Direct agreement with the creditors. Comprehensive setup of the corporate documentation.   | Not identified  | Not identified |
| Less than satisfactory performance of the concession contract. The concessionaire will discontinue provision of health care | Appropriately drafted concession contract, including handover of the Project and payment of compensation to the financing entities. Direct agreement with the creditors.                  | Appropriately drafted concession contract, including handover of the construction site and payment of compensation to the financing entities. Direct agreement with the creditors. Comprehensive setup of the corporate documentation.   | Not identified  | Not identified |
| The state will take over control over the Project. Inefficient performance by the state                                     | Setting an efficient management regime.   | Not identified   | Not identified  | Not identified |
| Loss of control over the joint venture. Construction of nUNB is compromised   | Not identified  | Appropriately drafted concession contract, including handover of the construction site and payment of compensation to the financing entities. Direct agreement with the creditors. Comprehensive setup of the corporate documentation. Right of first refusal with respect to shares or ownership interest. Mandatory (contract) sale of shares. | Comprehensive setup of the corporate documentation. Right of first refusal with respect to shares or ownership interest or other mechanisms such as pledge, mandatory (contract) sale of shares, etc. | Not identified |
| Loss of control over the joint venture. Construction of nUNB is compromised   | Not identified  | Appropriately drafted concession contract, including handover of the construction site and payment of compensation to the financing entities. Direct agreement with the creditors. Comprehensive setup of the corporate documentation. Right of first refusal with respect to shares or  | Comprehensive setup of the corporate documentation. Right of first refusal with respect to shares or ownership interest or other mechanisms such as pledge, mandatory (contract) sale of shares, etc. | Not identified |



**Assessment of exit strategies and options of modifying the project by the private partner and the public partner**

|  |                | ownership interest.<br>Mandatory (contract) sale of<br>shares. |                |  |
|--|----------------|--|----------------|--|
| Non-compliance by suppliers of works or services with their obligations with respect of Specific Model | Not identified | Not identified   | Not identified | Appropriate drafting of contracts for works and/or operation, such as sanction mechanisms, payment of the price for the works only after due and proper completion, etc. |

## Analysis of state aid in relation to the preferred Project model

### Analysis of state aid in relation to the preferred Project model

#### Basic description of the affected area

As already stated a number of times, the basic condition of feasibility of the Project is the stability and predictability of nUNB operator's cash-flow. Correct setting of payment mechanisms and guarantees provided by MOH are the assumptions of sustainability of nUNB operator's revenues, and add significantly to the Project's bankability. Any measures adopted in order to ensure the stability of nUNB's revenues must comply with the restrictions imposed by the state aid regulations and must not be contrary to the common market rules as set out in TFEU. Analysis of state aid-related issues is therefore crucial for evaluation of the Project's feasibility.

As far as the affected area under the review is concerned, the principal responsible party is the Slovak Republic that is obliged to perform its obligations resulting from membership in EU a Community law.

Evaluation of state aid-related issues and holding entities responsible for violation of the state aid-related rules fall under the competence of the EU, and the EC in particular; EC is authorized to evaluate whether competition is restricted or threatened due to granting illegal state aid. At the same time, the EC is empowered to impose correctives measures.

At the national level, it is MOF which acts as the coordinating body for state aid-related issues.

Beneficiary having received, in the Commission's view, any illegal state aid must repay the amount corresponding to the illegally granted state aid, plus the interest calculated at a rate set by the Commission, to the budget from which it has been granted, or paid back to the budget into which it should have been paid. This obligation applies also to the beneficiary's legal successor.

Under the Commission decision declaring certain state aid illegal and under the notice from MOF, the state aid grantor is obliged to file application for initiation of execution proceedings under special regulation within 30 days of delivery of the notice of MOF; the grantor named in the notice is the obligee in the enforcement proceedings.

For the above reasons, violation of the rules regulating state aid poses a significant risk with respect to the Project's feasibility, with potentially fatal impacts on the beneficiary of the state aid. Any performance provided by the state must therefore be reviewed from the aspect of compliance with the rather complex state aid rules. Criteria, on which such review is based, are specified in the Legal framework of the affected area.

Even if it is established that any performance provided by the state is in line with the state aid rules, we recommend considering that any envisaged performance be notified to the EC that is authorized to decide on its compliance with the state aid rules before the performance by the state is provided to the beneficiary.

#### Legal framework of the affected area

State aid issues are primarily regulated in TFEU. Permissibility, impermissibility and the terms and conditions of state aid must be reviewed in the context of Article 107 of the Treaty on Functioning of the European Union ("TFEU"), sector-specific regulation and application practice.

According to Article 107 of TFEU, any aid granted by a member state or through state resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between member states, be incompatible with the internal market, save as otherwise provided in the Treaty. It follows from the preceding sentence that certain exemptions from this general ban on state aid may be permissible. Four conditions, that must be fulfilled cumulatively, follow from Article 107 of TFEU:

- ▶ Aid must be granted by the member state or from state resources;
- ▶ Such intervention favours certain (selected) beneficiary;
- ▶ Such intervention is capable of affecting trade between the member states;
- ▶ Competition is or could be distorted.

Unless all of the above conditions are met, state aid not compatible with the internal market is present. In this analysis, we evaluate only cases where state aid is granted. For the sake of completeness, we submit that selection

## Analysis of state aid in relation to the preferred Project model

of the private partner, which is carried out in a transparent manner, and does not constitute state aid provided no economic advantages are granted, either during the selection process or thereafter, to the private partner favouring it to other similar persons active in the same sector that would distort competition.

As far as the health care sector is concerned, health care services are considered part of social services provided in general interest (Social Services of General Interest, SSGI). SSGI can be divided to services of economic nature (SGEI) or services of non-economic nature having to impact on the economics. Such division depends on the nature of the activities performed in individual cases. Accordingly, construction and operation of health care infrastructure are considered activities of economic nature.

According to the Commission's decisions, health care services provided either in hospitals or elsewhere are considered services of economic nature. Provision of health care services, or their supporting by public authorities, may constitute state aid granted within the framework of economic services provided in general interest (SGEI).

Costs associated with investments, in particular costs of development of infrastructure, are considered SGEI, insofar they are indispensable for operation and provision of SGEI. If, however, part of the infrastructure is used for services that, due to their nature, are not services provided in general interest (such as catering facilities or other ancillary services operated in hospitals), only the proportional part of the costs associated with the infrastructure in question may be considered for the purposes of funding from the public purse according to the SGEI support rules.

According to the conditions cited in the Altmark Case (Case C-280/00 Altmark Trans [2003] ECR I-7747 Altmark Judgement), the law of the European Union applies to SGEI for the purposes of evaluation whether state aid is involved. SGEI do not constitute state aid if all of the following conditions, as defined in the Altmark Judgement, are fulfilled cumulatively:

- ▶ the recipient undertaking must actually have public service obligations to discharge, and the obligations must be clearly defined;
- ▶ the parameters on the basis of which the compensation will be calculated must be established in advance in an objective and transparent manner
- ▶ the compensation cannot exceed what is necessary to cover all or part of the costs incurred in the discharge of public service obligations, taking into account the relevant receipts and a reasonable profit for discharging those obligations;
- ▶ where the undertaking which is to discharge public service obligations, in a specific case, is not chosen pursuant to a public procurement procedure which would allow for the selection of the tenderer capable of providing those services at the least cost to the community, the level of compensation needed must be determined on the basis of an analysis of the costs which a typical undertaking, well run and adequately provided with means.

If the above conditions are not fulfilled in the process of compensation for SGEI, state aid may be present which must not be necessarily illegal. Such a state aid granted in association with discharge of SGEI may be TFEU compliant according to the rules set out in SGEI Decision 2012 (Commission Decision of 20 December on the application of Article 106(2) of the Treaty on the Functioning of the European Union to State aid in the form of **public service compensation** granted to certain undertakings entrusted with the operation of services of general economic interest). Compensation meeting the conditions of the in SGEI Decision 2012 is exempted from the otherwise obligatory notification obligation and obtaining an approving decision of the Commission.

Apart from the above, according to the SGEI De Minimis Regulation (Commission Regulation (EU) No. 360/2012), compensation for the provisions of SGEI not exceeding EUR 500,000 during any three consecutive fiscal years is not deemed state aid, given its negligible effect on the intensity of competition on the internal market.

Public authorities have been given considerable powers in organizing, and securing the organization the provision of SGEI, provided that the compensation they grant in this respect does not go beyond what is necessary to ensure that SGEI be provided on economically acceptable terms in line with Article 106(2) of the TFEU.

First of all, the subject entrusted with the operation of services of general economic interest must be formally mandated to operate services of general economic interest under a formal entrustment act in line with Article 4 of the SGEI Decision 2012.

The entrustment act must include, among other things, the content and duration of the public service obligations; the undertaking and, where applicable, the territory concerned; the nature of any exclusive or special rights assigned to the undertaking by the granting authority; a description of the compensation mechanism and the parameters for

## Analysis of state aid in relation to the preferred Project model

calculating, controlling and reviewing the compensation; the arrangements for avoiding and recovering any overcompensation; and a reference to operation of services in line with the legal framework defined by the SGEI Decision 2012.

SGEI Decision 2012 allows hospitals to be compensated without any limits. However, The amount of compensation shall not exceed what is necessary to cover the net cost incurred in discharging the public service obligations, including a reasonable profit (Article 5 of the SGEI Decision 2012); the calculation must take into account all the relevant costs and also the revenues earned from operating the SGEI. Any compensation granted in excess of what is described above is considered as granted in breach of the state aid rules and must be repaid under a decision issued either by the Commission, if any compensation is to be granted.

As far as the method for calculation of the amount of eligible costs, the SGEI Decision 2012 offers two alternative methods for calculation of the net costs of operating a service of general economic interest (Article 5(2) of the SGEI Decision 2012):

- ▶ methodology based on cost allocation - calculated as the difference between costs as defined in paragraph 3 and revenues where the undertaking also carries out activities falling outside the scope of the service of general economic interest, only the costs related to the service of general economic interest shall be taken into consideration;
- ▶ method of calculation of the net costs that can be avoided - calculated as the difference between the net cost for the undertaking of operating with the public service obligation and the net cost or profit of the same undertaking operating without the public service obligation.

According to the SGEI Decision 2012, members States may decide which of the above methods is the most appropriate in any particular case.

Risk is a factor that might reduce the anticipated profit and depends on the particular sector, type of service and nature of compensation; e.g. if the net costs incurred in providing the GSEI are compensated *ex post* in full, the risk rate will be negligible and reasonable profit will therefore be limited. On the other hand, an *ex ante* determined flat fee for the provision of SGEI carries a greater risk to the service provider. Also, competitive sectors with fluctuating demand and offer, or with costly assets that are difficult to resell are deemed more risky by the EC.

According to Article 5(8) of the SGEI Decision 2012, where, by reasons of specific circumstances, it is not appropriate to use the rate of return on capital, it is allowed to rely on profit level indicators other than the rate of return on capital to determine what the reasonable profit should be, such as the average return on equity, return on capital employed, return on assets or return on sales.

According to Article 2(2) of the SGEI Decision 2012, all of the above applies where the period for which the undertaking is entrusted with the operation of the service of general economic interest does not exceed 10 years, unless a significant investment is required from the operator of services that needs to be amortised over a longer period of time.

As preparation for the construction and construction of the nUNB will very probably involve a period longer than 10 years, the only option – in order to retain the benefits offered by the SGEI Decision 2012 – is to follow a procedure compliant with the need of amortisation of a "significant investment". According to the Guide on the application of the EU rules on state aid pursuant to the SGEI 2012 package, significance of any investment depends on both the absolute and relative values that are to be amortized over a period exceeding 10 years, as compared to the value of other assets required for operation of the relevant service. The entrustment period should be directly proportional to the period of time required for amortization of assets. In principle, duration of the entrustment should be justifiable by reference to objective criteria, such as the need to amortize non-transferable fixed assets. Basically, the period of entrustment should not exceed the period required to amortize the most significant assets required for operation of the SGEI, where non-transferable fixed assets correspond to assets that are difficult to sell or turn to account. As already stated, the period required for amortization of the most significant asset required for operation of the SGEI must not be exceeded. Having regard to the above reasons for interdependence of the period of entrustment and period of amortization, entrustment for indefinite period is out of the consideration under the SGEI Decision 2012.

In the case of compensation paid to a hospital or for operation of social services which are not compliant with the SGEI Decision 2012 (e.g. the entrustment act does not specify all the elements required pursuant to Article 4 of the SGEI Decision 2012), such compensation will be evaluated pursuant to the conditions set out in the SGEI 2012 Framework – Framework for 2012 SGEI (Commission Note – European Union Framework for State Aid in the Form

## Analysis of state aid in relation to the preferred Project model

of Compensation for Services in General Interest (2011)) and must be therefore notified to the Commission, and approved as compatible with the internal market by a Commission decision.

Even in such a case and in agreement with Section 6, such aid need not necessarily comply with all the compatibility conditions according to the Framework for SGEI 2012, such as mandatory public consultations prior to defining the scope of the SGEI, non-discrimination among suppliers, mandatory application of the method of calculation of avoidable net costs, obligation to introduce incentive to increase efficiency, compliance with the public procurement rules and the condition of application of the method having the least impact on competition. On the other hand, if the entrustment period exceeds 10 years without due and proper justification (the need to amortize the most significant assets), aid will not be deemed compatible pursuant to the SGEI 2012 Framework and must not be granted.

From the state aid aspect and in reference to what has been said above, in order to evaluate the nature of any compensation granted in any form, first it will be needed to evaluate whether the conditions according to the Altmark Judgement have been met. If the conditions of this test are cumulatively fulfilled, the compensation in question will not be deemed state aid and the above conditions pursuant to the SGEI 2012 package need not be considered.

From this perspective, evaluation of the fulfilment of the fourth condition appears to be the most important, namely the manner of determination and/or test of the level of compensation that is deemed state aid:

- ▶ any compensation granted on the basis of open, transparent and non-discriminating selection pursuant to a public procurement procedure which would allow for the selection of the tenderer capable of providing those services at the least cost to the community; or
- ▶ any compensation granted according to a procedure whereby the public authority defines the level of compensation on the basis of an analysis of the costs which a typical undertaking, well run and adequately provided with means.

This means that compensation must not exceed the level that would be requested by an efficient undertaking able to be successful in a public tender, or which would have been determined on the cost comparison basis. If the above is not complied with and the level of any compensation will exceed what is permitted and/or neither the other three conditions of the Altmark Judgement are complied with, this would not mean that such compensation is automatically contrary to the applicable provisions of TFEU dealing with state aid.

In such a case, state aid to be evaluated pursuant to the above SGEI Decision 2012 rules is concerned. As long as the conditions of the SGEI Decision 2012 are met, the granted compensation will be state aid which is deemed state aid granted in compliance with the EU law without the need of any individual evaluation by, and decision of the EC.

To ensure that the granted compensation will be compliant with the EU law without the need of prior notification to the EC and its individual evaluation, the following conditions must be fulfilled:

- ▶ compensation will be granted solely for the purposes of operation of the SGEI and any other activities not directly related to, and not required for the provision of health care in the nUNB (operation of catering facilities and kiosks, sale of ancillary goods and services in nUNB premises that can be provided on commercial basis and no compensation should be granted for the purpose of construction and operation of such facilities even if they are part of the nUNB project) will be exempted from the compensation;
- ▶ compensation will be granted under an entrustment act meeting all the conditions pursuant to the SGEI Decision 2012 and such act may be in any form;
- ▶ total level of compensation is not limited if investment in the hospital is made; nonetheless, and as already stated above, it must not exceed the amount required for coverage of the costs associated with operation of the SGEI in the scope of eligible costs and reasonable profit;
- ▶ if the same infrastructure is used for operation of the SGEI and, at the same time, for other commercial purposes, total costs of all the involved activities must be considered. Costs assignable to the SGEI may cover all variable costs incurred in operation of the SGEI and a proportional contribution to fixed assets common to all activities, whether or not falling under the SGEI.

Unlike the fourth condition in the Altmark Judgement, the SGEI does not include any requirements for efficiency. The level of compensation need not necessarily be determined on the basis of the outcome of the public procurement procedure or comparison with the costs of a standard, well managed undertaking:

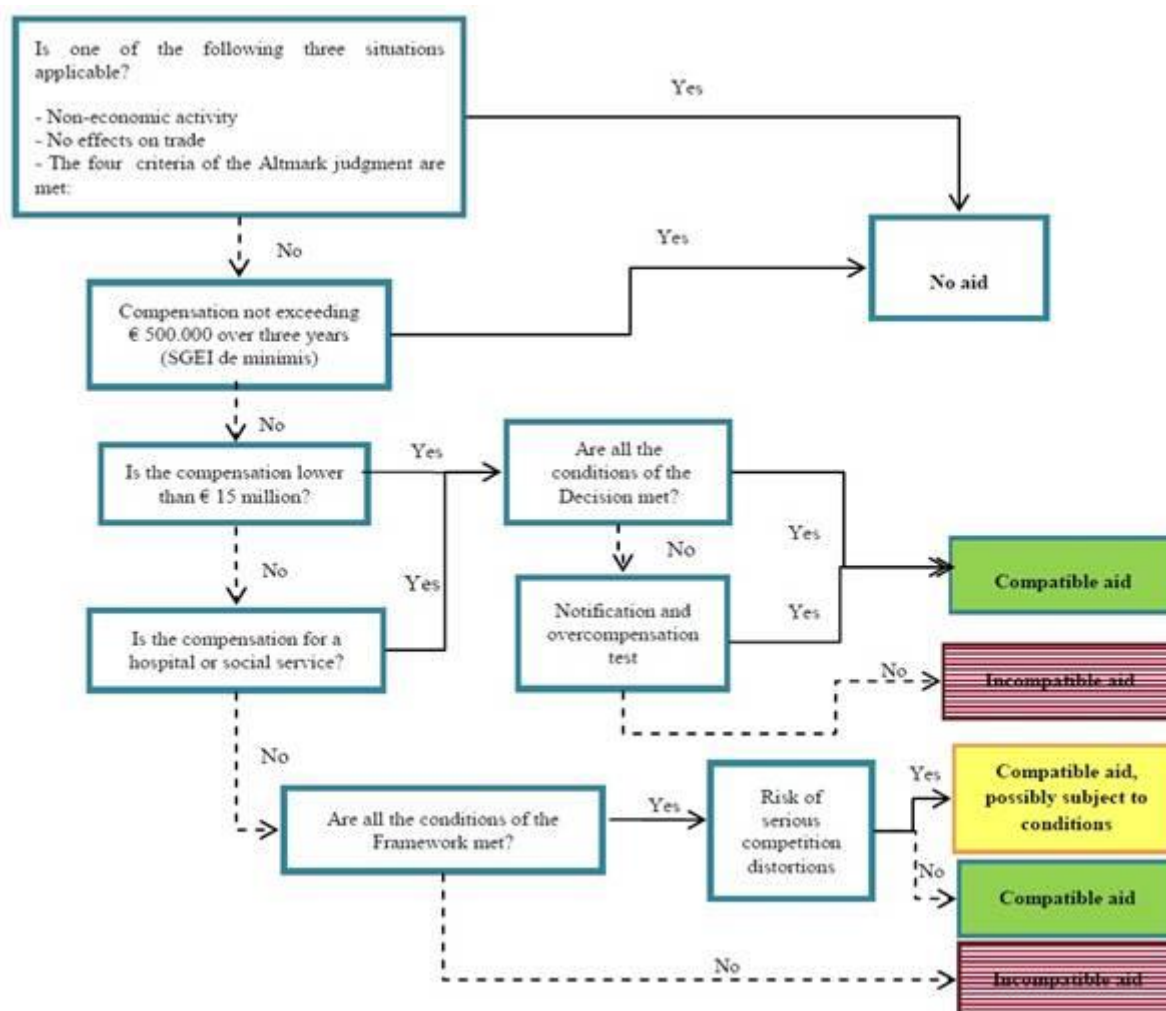
## Analysis of state aid in relation to the preferred Project model

- compensation period must exceed 10 years or, in the case of a longer period, must be properly justified by the need of longer lasting amortization of a "significant investment";

and in such a case, it may only be justified by the need of a longer amortization of non-transferable fixed assets and total entrustment period must not exceed the period required for amortization of the most significant assets required for operation of the SGEI in question.

If the competent body confirms that the approved compensation corresponds to the amount of the net costs determined according to exactly defined parameters as set out in the entrustment act, the compensation is not excessive according to the above rules and all the other conditions of the SGEI Decision 2012 are complied with, such a compensation is deemed state aid granted in compliance with the TFEU rules.

The process of evaluation of the nature of the granted compensation and selection of an appropriate tool within the SGEI 2012 package is described in the following chart (Article 20 of the Guidelines on application of the European Union concerning state aid, public procurement and internal market to services in general economic interest and in particular to social services in general interest):



Specifics, risks, benefits and recommendations regarding the affected area

In this part, we present conclusions and recommendations concerning the evaluation of state aid aspects applicable to the nUNB Project. As far as the assumptions for compliance with the above described conditions of granting state aid are concerned, utilization of the following sector-specific tools appears to be the most appropriate at the moment:

## Analysis of state aid in relation to the preferred Project model

- ▶ compensation in the form of a bonus for payments made by health insurance companies for the health care provided in the nUNB, in the form of payment for completed hospitalization or diagnosis;
- ▶ compensation in the form of guarantee for a pay floor below which nUNB operator's earning must not fall which, if not earned on the basis of demand, will be compensated for by the state;

on the assumptions that negotiations with respect to such payment floor will respect the above criteria concerning the period of compensation and its maximum level corresponding to the maximum of the investment made and reasonable profit, tested against the SGEI Decision 2012, while all of the remaining conditions of the SGEI Decision 2012 are also complied with. In such a case, the above mentioned form of compensation may be granted without the need of prior notification to and approval by the EC;

- ▶ a similar regime might apply also to other State guarantees, or earning compensation method (either by direct payments, reliefs or indirect payments through e.g. health insurers), including a guaranteed long-term contract with the State-owned health insurance company, or granting state guarantees for the operator's liabilities, provide that it will be doubtless that each individual case concerns compensations aimed at ensuring the provision of health care, i.e. delivery of health care services in general interest.

The conditions according the SGEI Decision 2012 must also be complied with, and this will ensure that such compensation will not be subject to prior notification to, or decision of the EC.

- ▶ if losses and/or reduction of anticipated earnings are compensated due to e.g. later changes in legal regulations, such course of action will not be subject to prior notification to, or decision of the EC on the assumption that legal conditions for such an *ex post* compensation are created and that its conditions are defined directly in the entrustment act, and that such compensation will be granted in compliance with the terms and conditions of the SGEI Decision 2012, primarily to prevent overcompensation and exceeding the permissible compensation period. Also here, any compensation must be granted for the unambiguous purpose of operating SGEI, namely SGEI in the health care and/or social services areas in order to be able to benefit from the specific and more benevolent state aid evaluation conditions.
- ▶ in the above cases and in other cases where compensation is granted which is co-financed by a public authority and its beneficiaries and/or a third party, and where the activities generate losses due to a lower level of financial involvement by beneficiaries or due to reduced demand, the public authority may compensate for such losses, unless overcompensation occurs and provided that this is allowed under the parameter set for calculation of the level of compensation by the public authority.
- ▶ Tools outside the regime set by the state aid rules can be deemed measures aimed at optimizing the number of state-controlled and/or public health providers (i.e. liquidation of other hospitals or their parts) in response to implementation of the nUNB Project.
- ▶ If the nUNB operator (private partner and operator of the SGEI) is authorized to use certain pre-defined premises or structures within the nUNB for commercial purposes outside the SGEI with the operation of which it has been entrusted (whether by means of direct operation of commercial activities, or through leases for consideration concluded with third parties from which the nUNB operator earns revenues), the value of such authorization must be duly determined and the so earned amount must be taken into consideration as income in calculation of the level of compensation to be granted by the State; all relevant criteria determining the receipt of compensation pursuant to the SGEI Decision 2012 must be taken into account also in this case.
- ▶ In general, granting guarantees for obtaining assorted required permits/approvals, e.g. in the construction phase, would be deemed an inappropriate tool. On the other hand, granting guarantees for obtaining the required permits/approvals, on the assumption of compliance with all the statutory conditions and requirements, should not be a problem and should not be subject to the state aid rules, as the nature of such guarantees would not be that of state aid. On the other hand, a guarantee for non-granting such permits/approval to other (private) providers of health care services in the region, in particular if granting such permits/approvals is conditioned upon the fulfilment of certain objective conditions which the affected applicant would have fulfilled, would not appear as appropriate.

## Analysis of state aid in relation to the preferred Project model

Anyway, we would not recommend granting any guarantees for purposes other than those aimed at ensuring the operation of concrete SGEI by a selected private partner, i.e. operation of health care services in nUNB, and that would concern third parties. If the purpose of such guarantees were other than to ensure the operation of defined SGEI, such form of support could not benefit from the SGEI support regime (either pursuant to the SGEI Decision 2012 or SVZ 2012 Framework); in addition, this would be contrary to Article 107 of TFEU as it might establish discrimination between individual undertakings (providers of health care) which would be capable of distorting competition in the given market.

We recommend that any of the above forms and alternatives of granting compensations – after particular terms and conditions of, and possibilities for its granting, given the selected project implementation, method have been specified – be subsequently thoroughly evaluated from the aspect of the conditions governing state aid.

We recommend that the process of selection of individual options for, and forms of granting compensation in relation to the nUNB Project rely on forms and tools that will be able to benefit from the specific and more benevolent state aid rules applicable to operation of the SGEI as recommended above. Appropriately selected tools and forms of compensation allow granting compensation without the need of its prior notification to, and approval by the EC.

In the case of doubts, we recommend that any problematic transaction be notified, and that any time schedule applicable to implementation of the project take into account the time required for obtaining the required approval of the state aid and/or for obtaining a confirmation from the European Commission that no state aid is involved in any particular case.

### A. CPPP

A specific trait of the CPPP model in relation to the affected area is the selection of the private partner in a transparent public procurement process. The obligation to repay any illegal state aid lies in the fullest extent with the private partner.

Evaluation of the impact of implementation of the CPPP model on the state aid area revealed the following risks:

- ▶ Obligation of the beneficiary to repay any performance received from the state
- ▶ Obligation of the state to enforce the payment of the performance provided.

The risks that the beneficiary incurs the obligation to repay any support received from the state in breach of the state aid rules, together with the interest accrued on such funds must be mitigated through appropriate drafting of the concession contract.

The risk that the state incurs the obligation to enforce the repayment of funds by the beneficiary must be mitigated through appropriate drafting of the concession contract.

The concession contract between the public and the private partner for implementation of the nUNB Project according to the DBFOT model should be subjected to a detailed analysis from the aspect of the state aid that might be granted in the stages of construction and operation of health care infrastructure. Permissibility, impermissibility and the terms and conditions of the state aid must be reviewed in the context of Article 107 of the Treaty on Functioning of the European Union, sector-specific regulation and application practice. The mechanism to be applied to the review of individual measures aimed at ensuring the concessionaire's cash-flow is contained in Legal framework of the affected area.

Even if compliance of the concession contract with the state aid rules is confirmed, we recommend considering notification of the envisaged payments to the EC which is authorized to decide on their compliance with the state aid rules even before actual payments of state aid to the beneficiary are made.

| Model | RISK  | MITIGATION   |
|-------|---|--|
| CPPP  | Obligation of the beneficiary to repay the benefits received from the state | Appropriate drafting of the concession contract<br>Notification to the EC of the payments intended to be paid by state |



## Analysis of state aid in relation to the preferred Project model

|  |  |  |
|--|--|--|
|  | Obligation of the state to enforce the repayment of granted benefits | Appropriate drafting of the concession contract<br>Notification to the EC of the payments intended to be paid by state |
|--|--|--|

### B. IPPP

A specific trait of the CPPP model in relation to the affected area is the selection of the private partner in a transparent public procurement process. The obligation to repay any illegal state aid lies in the fullest extent with the private partner and MOH as a result of its shareholding in the SPV.

Evaluation of the impact of implementation of the CPPP model on the state aid area has revealed the following risks:

- ▶ Obligation of the beneficiary to repay any performance received from the state
- ▶ Obligation of the state to enforce the payment of the performance provided

The risks that the beneficiary incurs the obligation to repay any support received from the state in breach of the state aid rules, together with the interest accrued on such funds must be mitigated through appropriate drafting of the concession contract.

The risk that the state incurs the obligation to enforce the repayment of funds by the beneficiary must be mitigated through appropriate drafting of the concession contract.

Concession contract between the public and the private partner for implementation of the nUNB Project according to the DBFOT model should be subjected to a detailed analysis from the aspect of the state aid that might be granted in the stages of construction and operation of health care infrastructure. Permissibility, impermissibility and the terms and conditions of the state aid must be reviewed in the context of Article 107 of TFEU, sector-specific regulation and application practice. The mechanism to be applied to the review of individual measures aimed at ensuring the concessionaire's cash-flow is contained in the part Legal framework of the affected area.

Even if compliance of the concession contract with the state aid rules is confirmed, we recommend considering notification of the envisaged payments to the EC who is authorized to decide on their compliance with the state aid rules even before actual payments of state aid to the beneficiary are made.

| Model | RISK  | MITIGATION   |
|-------|---|--|
| IPPP  | Obligation of the beneficiary to repay the benefits received from the state | Appropriate drafting of the concession contract<br>Notification to the EC of the payments intended to be paid by state |
|       | Obligation of the state to enforce the repayment of granted benefits        | Appropriate drafting of the concession contract<br>Notification to the EC of the payments intended to be paid by state |

### C. JV

A specific trait of the JV model in relation to the analyzed affected area is reduced transparency in the case of selection of the private partner outside the public procurement process. The obligation to repay any illegal state aid lies in the fullest extent with the private partner and MOH as a result of its shareholding in the SPV.

Evaluation of the impact of implementation of the JV mode on the state aid area has revealed the following risks:

- ▶ Transparency
- ▶ State aid avoidance
- ▶ Obligation of the beneficiary to repay any performance received from the state

## Analysis of state aid in relation to the preferred Project model

### ► Obligation of the state to enforce the payment of the performance provided

The risks associated with non-application of the procedures pursuant to Public Procurement Act may be mitigated through a transparent selection process. Apart from a transparent and non-discriminating tender, the process should allow that the tenderer submitting the most favourable bid (which need not necessarily be the cheapest option) has a realistic chance to participate in the project. All potential tenderers should be given access to all the necessary information and data required for preparation of a qualified bid in the public tender. Also, implementation of the JV Model will not constitute any state aid as long as participation of the state and/or its bodies (regardless of their institutional form and/or material nature) is not below as the share held by the state JV's registered capital, meaning that there will be no disproportion between the value of the investment made by the state and its share in JV's registered capital and share in the profits generated by JV, if any, in favour of the private partner.

In addition to the risk that the JV model may be perceived as an attempt to avoid proper procurement of the concession and may thus constitute a breach of the principle of free movement of services, establishment of the JV may be also perceived as an attempt to avoid the state aid rules. If the JV model is implemented, we strongly recommend that the state secure such shareholding in the JV and such share in the profits generated by the JV, if any, that will correspond to the amount to its contribution in the business, i.e. investment in the nUNB project from the public purse determined on the basis of well prepared and competent expert opinion.

If the JV model involved such form of participation of the state and/or an entity disposing of funds from the public budget that would go beyond what is stated above, such form of state participation might constitute state aid which, however, will be governed by the same rules as described for the PPP projects. Compliance with the terms and conditions according to the SGEI Decision 2012 framework will be required and our conclusions and recommendation relating to the evaluation of the state aid aspect applicable to the nUNB Project will apply also to the JV model.

In any case, state aid issues will require a more detailed analysis depending on the final structure of the JV and the method selected for the actual construction and operation of the new university hospital.

Neither the risks that the beneficiary incurs the obligation to repay any support received from the State in breach of the state aid rules, together with the interest accrued on such funds, nor the risk that the State incurs the obligation to enforce the repayment of funds by the beneficiary can be mitigated by the manner of drafting the concession contract.

Any payments made by the state should be subjected to an in-depth analysis from the aspect of state aid that might be granted in the process of construction and operation of health care infrastructure. Permissibility, impermissibility and the terms and conditions of the state aid must be reviewed in the context of Article 107 of TFEU, sector-specific regulation and application practice. The mechanism to be applied to the review of performance made to the JV is contained in the part Legal framework of the affected area.

Even if compliance of the state's performance with the state aid rules is confirmed, we recommend considering notification of the envisaged payments to the EC who is authorized to decide on their compliance with the state aid rules even before actual payments of state aid to the beneficiary are made.

| Model | RISK  | MITIGATION  |
|-------|---|---|
| JV    | Non-transparency  | Transparent private partner selection process   |
|       | State aid rules avoidance   | Appropriate structuring of the JV   |
|       | Obligation of the beneficiary to repay the benefits received from the state | Analysis of individual performances<br>Notification to the EC of performance by the state |
|       | Obligation of the state to enforce the repayment of granted benefits        | Analysis of individual performances<br>Notification to the EC of performance by the state |

## Analysis of state aid in relation to the preferred Project model

### D. Specific Model

The Specific Model as per the assignment from MOH is designed so that the SPV, which will be granted an "in-house" concession, is established by the state and/or MOH as its wholly-owned subsidiary. If the assumption that no private sector player will hold any interest in the SPV is maintained, then the conditions set out in Article 107 of TFEU will not apply in relation to performance provided to SPV by the state, as SPV will not be deemed recipient of aid (compensation provided to SPV by the state and/or from the public funds will *de facto* remains in the state). In the case of SPV wholly owned by the state, no distortion, or threat of distortion, of competition in relation to its financing from the public funds is applicable.

In the case of change of SPV's shareholding structure and potential involvement of a private partner, individual performances provided to the SPV by the state would have to be evaluated in the manner specified in the case of IPPP and/or CPPP models.

Analysis of the affected area in relation to the Specific Model is therefore relevant only with respect to performances in favour of suppliers of the know-how. Mutual contract relationships with know-how providers will have to feature such forms of remuneration of the know-how provider that will not meet the terms and conditions defined in Article 107 of TFEU. The described risk can be mitigated through a transparent process of selection of the know-how provider.

Evaluation of the impact of implementation of the Specific Model in relation to potential performance by the state to the know-how provider has revealed the following risks:

- ▶ Obligation of the beneficiary to repay any performance received from the state
- ▶ Obligation of the state to enforce the payment of the performance provided

The risks that the beneficiary incurs the obligation to repay any support received from the state in breach of the state aid rules, together with the interest accrued on such funds, and must be mitigated through appropriate drafting of the contract to be concluded with the know-how supplier.

The risk that the state incurs the obligation to enforce the repayment of funds by the beneficiary must be mitigated appropriate drafting of the contract to be concluded with the know-how supplier.

The contract with the know-how provider should be subjected to a detailed analysis from the aspect of state aid that might be granted in the stages of construction and operation of health care infrastructure. Permissibility, impermissibility and the terms and conditions of the state aid must be reviewed in the context of Article 107 of TFEU, sector-specific regulation and application practice. The mechanism to be applied to the review of the performance in favour of the know-how provider is contained in Legal framework of the affected area. Given that this will be a classical public contract with only a slight assumption of contractual arrangements implying any state aid, we would classify the risk attached to the Specific Model as marginal from this point of view.

| Model          | RISK  | MITIGATION  |
|----------------|---|---|
| Specific Model | Obligation of the beneficiary to repay the benefits received from the state | Appropriate drafting of the concession contract<br>Notification to the EC of performance by the state<br>Transparent selection of the know-how provider |
|                | Obligation of the state to enforce the repayment of granted benefits        | Appropriate drafting of the concession contract<br>Notification to the EC of performance by the state<br>Transparent selection of the know-how provider |

## Analysis of state aid in relation to the preferred Project model

### Comparison of individual models

As far as state aid-related implications are concerned, there is no appreciable difference between the IPPP and CPPP models. From the state aid aspect, the JV model poses a significant risk due to lesser transparency due to which even performance that would be permitted under the IPPP or CPPP models might be deemed illegal state aid; potential avoidance of state aid poses yet another risk in the case of the JV model.

While potential recipients of state aid are concerned in both the IPPP and CPPP models, state aid is considered at the theoretical level in the case of the Specific Model in the context of performance in favour of the know-how provider, as no distortion of competition, or threatened distortion of competition can be considered in the context of funding a state-owned SPV from public finances.

### Summary table

| Risk  | CPPP  | IPPP  | JV  | Specific Model  |
|---|---|---|---|---|
| Obligation of the beneficiary to repay the benefits received from the state | Appropriate drafting of the concession contract<br>Notification to the EC of performance by the state | Appropriate drafting of the concession contract<br>Notification to the EC of performance by the state | Analysis of individual performances<br>Notification to the EC of performance by the state             | Appropriate drafting of the concession contract<br>Notification to the EC of performance by the state<br>Transparent selection of the know-how provider |
| Obligation of the state to enforce the repayment of granted benefits        | Appropriate drafting of the concession contract<br>Notification to the EC of performance by the state | Appropriate drafting of the concession contract<br>Notification to the EC of performance by the state | Appropriate drafting of the concession contract<br>Notification to the EC of performance by the state | Appropriate drafting of the concession contract<br>Notification to the EC of performance by the state<br>Transparent selection of the know-how provider |
| Non-transparency  | Not identified  | Not identified  | Transparent private partner selection process   | Not identified  |
| State aid rules avoidance   | Not identified  | Not identified  | Appropriate structuring of the JV   | Not identified  |

## Analysis of the applicable methods of public procurement of a hospital PPP project

Analysis of the applicable methods of public procurement of a hospital PPP project in the case of (i) institutional or (ii) contractual scenario with the objective to achieve the best possible value to price ratio

### Basic description of the affected area

This part of the report deals with the applicable public procurement methods aimed at selection of the private partner for implementation of the Project. Correct selection of the private partner is crucial from the Project feasibility aspect, in particular with the objective to achieve the best value-to-price ratio.

Public procurement, in particular in the case of the competitive dialogue procedure, is a valuable means of obtaining feedback from the market. In the course of the public procurement process, the Project may (and should) be polished and specified in a great detail into a form that is feasible in the context of the actual market conditions. For the above reasons, a Project implementation model should be chosen which

- ▶ allows for addressing best the risks associated with inappropriate selection of the private partner;
- ▶ carries the least possible level of risks as to its implementation, and
- ▶ represents the most attractive alternative in terms of its bankability

### Legal framework of the affected area

In the Slovak law, the area of public procurement is regulated by Public Procurement Act, which governs the process of granting contracts for supplies of goods, contracts for public works, contracts for services, public tenders and management of the public procurement process. Public Procurement Act defines, among other things, also contracts that are exempted from its applicability, defines the entities like the contracting authority and the contracting entity and their respective obligations, individual procedures applicable in the public procurement procedure, controlling and inspection procedures for the contract awarding procedure.

Regulation contained in the Community Law must also be mentioned, in particular Directive 2004/18/EC. In addition, we deal also with regulation of the public procurement procedure contained in the new Directives replacing the original directive, namely Directive 2014/24/EU and Directive 2014/23/EU.

In our analysis of the legal framework surrounding the public procurement, we considered the Public Procurement Act, as valid an effective, Directive 2001/18 and 2004/17, both of them as valid and effective, the existing case law of the ECJ and the "soft-law" of the Commission. In a limited extent, we considered also Directive 2014/23 and Directive 2014/24 that must be implemented in the national laws of the EU Member States by spring 2016. Neither the form nor the content of the transposition of these directives in the Slovak law is known at the moment. Consequently, we will be monitoring the developments in the area of their transposition in the course of implementation of the Project, and will consider such developments in the process of structuring the project from the public procurement regulation aspect.

Other methods of selection of the private partner outside the regulation provided by the Public Procurement Act are regulated mainly by the provisions of the Commercial Code setting out the basic legal regulation of public tenders (Sections 281 *and foll.* of Commercial Code).

Having regard to the above context, we have not identified any such obstacles that would obstruct the feasibility of the Project and that could be mitigated solely through legislative changes. As far implementation of PPP projects is concerned, the amendment of the Public Procurement Act that has occurred in the preceding years provides, also in the context of the Community law, a sufficient legal framework required for projects of this type.

### Specifics, risks, benefits and recommendations regarding the affected area

Individual models differ considerably as far as the applicable methods of public procurement are concerned. While CPPP and IPPP models rely on public procurement procedures utilized in the concessions areas, namely the competitive dialogue, the Specific Model is based on the assumption that public procurement methods typical for classical public contract will have to be necessarily applied. On the contrary, the JV model rests on the assumption that it would have to be implemented outside the legal framework defined by Public Procurement Act.

## Analysis of the applicable methods of public procurement of a hospital PPP project

### A. CPPP

It can be submitted that the CPPP model would be deemed a concession according to Section 15 of the Public Procurement Act<sup>152</sup>, Directive 2014/18/EC<sup>153</sup> and Directive 2014/23/EU<sup>154</sup>. The same principle applies to service concessions. The subject of a concession contract is the award of works or services by way of a concession in exchange for the right to occupy the structure or use the services or this right is connected with a monetary performance. These contracts may, but need not necessarily, involve the transfer of ownership to the public partner, but at all times the public partner receives benefits deriving from the specific works or services. Concessions are governed by Public Procurement Act, provided the estimated concession value is equal or higher than EUR 5 000 000.

Evaluation of the impacts of implementation of the CPPP model for the public procurement area has identified the following risks:

- ▶ Concession contract is not concluded with any of the tenderers
- ▶ The philosophy and proposed procurement procedure ensuring the required market feedback
- ▶ Selection of appropriate private partner
- ▶ Non-bankability risk associated with flaws in the procurement process

In line with Public Procurement Act, two preferred options can be considered for the selection of the public procurement procedure for granting concession to a private partner:

- ▶ Negotiated procedure with publication, or
- ▶ Competitive dialogue,

as these two procedures are appropriate for complex projects, they reflect best the conditions prevailing on the relevant market, requirements of the public partner, feedback from tenderers and demand for potential private partners. On the other hand, other options, such as public tender or restricted tender are not recommended, mainly due to the absence of the required market feedback and negotiations on the terms and conditions of the Project.

The contracting authority may rely on the negotiated procedure with publication pursuant to Section 55(1) of Public Procurement Act if any of the conditions specified in this legal provision is met. The conditions are as follows:

- ▶ where the nature of the supplies, public works or services provided or the risks related thereto exceptionally do not allow determine the requirements as regards the pricing method, or
- ▶ the requirements for services, in particular financial services, cannot be determined sufficiently precisely to use open procedure or restricted procedure.

Both cases are applicable to PPP projects. The public partner may restrict the number of tenderers that will be invited to submit their tenders to at least three so that competition is ensured. The public partner will specify the following in the concession notice:

<sup>152</sup> 1) "public works concession" is a contract of the same type as a public works contract, except for the fact that the consideration for the public works to be carried out consists either solely of the right to exploit the work for an agreed time or of that right together with payment; In a concession contract, the contracting authority and the concessionaire agree the scope of the right to exploit the work which may include the receiving of its benefits as well as the amount and terms of payment, if any.

(2) "service concession" is a contract of the same type as a service contract, except for the fact that the consideration for the services to be provided consists either solely of the right to exploit the services provided for an agreed time or of that right together with payment. In a concession contract, the contracting authority and the concessionaire agree the scope of exploitation of the service provided, which may include the receiving of its benefits as well as the amount and terms of payment, if any.

<sup>153</sup> Article 1(3) "Public works concession" is a contract of the same type as a public works contract except for the fact that the consideration for the works to be carried out consists either solely in the right to exploit the work or in this right together with payment."

Article 1(4). " "Service concession" is a contract of the same type as a public service contract except for the fact that the consideration for the provision of services consists either solely in the right to exploit the service or in this right together with payment."

<sup>154</sup> Article 5(1) (a) 'works concession' means a contract for pecuniary interest concluded in writing by means of which one or more contracting authorities or contracting entities entrust the execution of works to one or more economic operators the consideration for which consists either solely in the right to exploit the works that are the subject of the contract or in that right together with payment

(b) services concession' means a contract for pecuniary interest concluded in writing by means of which one or more contracting authorities or contracting entities entrust the provision and the management of services other than the execution of works referred to in point (a) to one or more economic operators, the consideration of which consists either solely in the right to exploit the services that are the subject of the contract or in that right together with payment

## Analysis of the applicable methods of public procurement of a hospital PPP project

- ▶ time limit for the submission of letter of interest,
- ▶ restriction on the number of tenderers, where appropriate
- ▶ rules for evaluation of the qualification conditions.

The public partner should conduct negotiations with tenderers concerning their tenders, with the aim to bring them in line with the requirements specified in the concession notice, tender documentation and other potential supporting documentation, and also with the aim to select the best tender on the basis of either the economically most favourable, or the least expensive bid. Negotiated procedure with publication is divided in two parts: 1. pre-qualification stage, during which tenderers provide evidence of meeting the qualification requirements, and 2. tender evaluation and negotiations stage.

The public partner may resort to the competitive dialogue method in the case of exceptionally complex projects, if neither open nor restricted tender can be used. The aim of the competitive dialogue is to identify and define the most appropriate way of satisfaction of the public authority's needs. Tenders must be evaluated solely according to their economical advantages. Exceptionally complex contract is deemed a contract where the contracting authority is objectively not able

- ▶ to define technical requirements which would meet the contracting authority's needs and objectives, or
- ▶ specify the legal or financial conditions of the project.

Similarly as with the negotiated procedure with publication, the public authority may restrict the number of tenderers to at least three in order competition is ensured. In the concession notice, the public partner will specify

- ▶ description of the project and its requirements;
- ▶ time limit for submission of requests for participation;
- ▶ rules for evaluation of the qualification conditions;
- ▶ other information as may be required.

During the dialogue process, the public partner may negotiate on all aspects of the project with the selected tenderers. The competitive dialogue is also divided in a number of stages: 1. pre-qualification stage during which tenderers prove that they are qualified to participate; 2. dialogue stage that should result in detailed description of the project, legal and/or financial conditions of the project stating that the project itself could be divided in several sub-stages, and 3. tenders evaluation.

In the public tender procedure itself, the following criteria for the selection of the private partner will have to be specified very precisely:

- ▶ conditions of participation;
- ▶ criteria governing the tenders evaluation procedure.

The conditions of participation may concern:

- ▶ personal situation,
- ▶ financial or economic situation,
- ▶ technical or professional competence.

Financial or economic situation may be evaluated through submission of appropriate evidence, such as: confirmations by banks, submission of balance sheets, profit and loss accounts for the last three years or evidence of the company's turnover for the last three years. In public procurement procedure, turnover-related data may be requested up to the amount that must not exceed, during a period of one year, the estimated value of the contract calculated over the period of 12 months, if an above the limit contract is concerned.

## Analysis of the applicable methods of public procurement of a hospital PPP project

In the case of consortia (groups of suppliers), the conditions of qualification relating to the financial or economic situation, or technical / professional competence are evidenced jointly, i.e. one member of the consortium provides evidence of compliance with the economic or financial situation condition, other member of the consortium will furnish evidence of compliance with the technical / professional competence condition. To prove compliance with the conditions of participation concerning economic/financial situation or technical/professional competence, resources of other person(s) maybe used regardless of such person's relationship with the tenderer (or group of tenderers). Such third party must also comply with the personal situation condition. If a part of the contract is performed references with relation to which have been furnished by a third party, such performance must be delivered either by the affected third party or the tenderer itself.

Tenders may be evaluated either on the basis of the price/value ratio, or on the basis of the economically most advantageous bid (only the latter option is available in the case of competitive dialogue). If tenders are evaluated or on the basis of the economically most advantageous bid, the public authority determines individual criteria, such as quality, price, technical finishing, costs of operation, efficiency of incurred costs, after-warranty servicing and technical support, duration of construction stage, etc. Minimum availability payment to concessionaire can be also taken as one of the criteria.

In the tender procedure itself, conditions of participation are evaluated first, followed by evaluation of tenders. Individual stages vary depending on the procedure selected by the contracting authority.

As far as the concessionaire itself is concerned, we would like to stress that the concessionaire should proceed in line with the obligations set out on Sections 70 *and foll.* of Public Procurement Act. This means that a concessionaire who is not a contracting authority/contracting entity pursuant to Public Procurement Act should, in spite of that fact, follow the rules contained in Section 71 of Public Procurement Act, if awarding contract to third parties with the estimated value of at least EUR 5,000,000. Groups of persons formed in order to win a concession, or affiliated undertakings, are not deemed third parties. Given that the concessionaire is usually established by companies covering all aspects of the particular project, it is likely that the exception mentioned in the preceding sentence will be applied and the likelihood that the concessionaire will be obliged to apply public procurement procedures is very small. This is a difference when compared with the Specific Model, where SPV will have to organize a series of public procurement events for individual parts of the Project (design, construction, operation or other than medical services, and supplier of know-how).

Also, it has to be noted that the public procurement procedure for the Project itself should be preceded with public procurement for selection of the advisor for the public procurement for the project.

Theoretically, implementation of the CPPP model may be associated with the highest input costs of the procedure for awarding the Project to a private partner, and with potential delays due to the complexity of the procedure for awarding a project of such a size. In the Project preparation stage, appropriate stress should be placed on the manner in which the public procurement is carried out. If this is underestimated, the risk of lengthy revision procedures would have to be faced, potentially resulting in discontinuation of the Project due to defects in the procurement procedure. Obtaining market feedback will be crucial for successful implementation of the Project. Otherwise the project may fail due to being non-bankable, or due unavailability of funds. The public procurement procedure itself and selection of the winning tenderer require an appropriate setting and management of the public procurement procedure relying on a support from external advisors. Otherwise, public procurement process may result in selection of an unsuitable private partner that will be unable to either obtain funds for, or properly operate the Project.

| Model | RISK  | MITIGATION   |
|-------|---|--|
| CPPP  | Concession contract is not be concluded with any of the tenderers                       | Appropriate setup and management of the public procurement procedure, including setting of the qualification conditions adequately reflecting the possibilities of the private sector  |
|       | The philosophy and proposed procurement procedure ensuring the required market feedback | Appropriate setup and management of the public procurement procedure in reliance on the support from outside counsel disposing of the required know-how and who may significantly facilitate the process of defining the basic aspects of the public procurement |



## Analysis of the applicable methods of public procurement of a hospital PPP project

|  |   |  |
|--|---|--|
|  | Selection of appropriate private partner                              | Appropriate setup and management of the public procurement procedure in reliance on support from outside counsel   |
|  | Non-bankability risk associated with flaws in the procurement process | Appropriate setup and management of the public procurement procedure in reliance on support from outside counsel; taking into account the required market feedback |

### B. IPPP

In the case of IPPP model, the concession should be awarded to a private partner subject to the obligation

- ▶ of the private partner to either enter into SPV established upfront by the public partner, or
- ▶ jointly establish SPV, which will implement the concession, with the public partner.

In the end both models will result in existence of SPV which will be awarded the concession. Since also in the case of IPPP model the Project should be carried out under the awarded concession, it is necessary to proceed in line with Public Procurement Act, if this is the case.

Preferred models for selected forms of public procurement are the same as in the case of CPPP, namely:

- ▶ negotiated procedure with publication; or
- ▶ competitive dialogue <sup>155</sup>.

Evaluation of the impacts of implementation of the IPPP model for the public procurement area has identified the following risks:

- ▶ failure to enter into the concession contract with any of the tenderers
- ▶ philosophy and proposal of the procurement procedure that ensures obtaining the necessary market feedback
- ▶ selection of the appropriate private partner
- ▶ non-bankability risk associated with the shortcomings of the procurement process

From the public procurement viewpoint the main difference, when compared to CPPP, lies in that in addition to the terms and conditions of the concession contract, the constituting documents of SPV must be negotiated as a part of the public procurement.

Just as in the case of CPPP it must be noted that the Project-related public procurement should be preceded by public procurement concerning selection of the advisor for the phase of Project-related public procurement.

As far as the concessionaire is concerned we hereby emphasise the fact that the concessionaire should proceed in line with the obligations stipulated in the provisions of Section 70 and foll. of Public Procurement Act. This means that the concessionaire, which is not a contracting authority / entity under Public Procurement Act, should despite this fact proceed in line with the rules set out in provisions of Section 71 of Public Procurement Act if the concessionaire awards the contracts to the persons with the estimated value equal to or greater than EUR 5,000,000. Groups of persons established for the purpose of being awarded a concession or related enterprises are not considered third persons. Given the fact that the concessionaire is mostly established by the companies covering all aspects of a particular project, it is highly improbable that the exception under the previous sentence will be applied and therefore probability that the concessionaire will be obliged to apply the public procurement procedure is very low.

Please also note that under the IPPP Interpretative Communication the fact that the private and public partners cooperate within one entity with combined capital may not excuse non-compliance with the provisions on the public

<sup>155</sup> For more detailed description of the public procurement, please see section on CPPP

## Analysis of the applicable methods of public procurement of a hospital PPP project

procurement and concessions, if such private entity or entity with combined capital is awarded the public contract or concession. In this regard the case law of ECJ is significant, for example the judgment in case C-26/03, Stadt Halle, where ECJ stated that the participation, even as a minority, of a private undertaking in the capital of a company in which the contracting authority in question is also a participant excludes in any event the possibility of an in-house relationship between the entity and such company, to which, in principle, the public procurement law does not apply.

The principles of transparency and equal treatment based on the EU Directives require that potential tenderers have equal access to adequate information about the intention of the contracting authority to establish a public-private entity and award a public contract or concession. Adequate information can be best guaranteed by publication of a notice that is sufficiently accessible to entities which might be interested, before the private partner is selected. The Commission holds that Community law requires that the contracting authority publish the criteria for selecting private partners for IPPP according to the principle of equal treatment. According to the Commission the public partner should include the basic information on the following in the notice of public procurement or contractual documents:

- ▶ public contracts and/or concessions, which should be awarded to the future public-private entity,
- ▶ statute and bylaws, shareholders' agreement and
- ▶ any other particulars relating to contractual relationship between the contracting authority and the private partner on the one hand, and the contracting authority and the future public-private entity on the other hand.

If the contracting authority applies the competitive dialogue or negotiated procedure, some information need not be evident in advance, but they can be left for further specification during the dialogue or negotiations with the candidates. The invitation to tender should include information on the intended term of the contract or concession to be implemented by a public-private entity.

With regard to the phase following the establishment of IPPP company, the IPPP Interpretative Communication emphasises that the procurement rules, whether derived from the EC Treaty or from the Public Procurement Directives, should not be applied only with regard to selecting a private partner, but also must be respected when awarding to the public-private entity public contracts or concessions, other than those public contracts and concessions that have already been subject to competition in the tender procedure for the founding of the IPPP in question.

Similarly as in the case of CPPP, the implementation of IPPP model may theoretically result in long and costly procurement process. When preparing the Project it is therefore necessary to put adequate emphasis on the implementation of procurement. In the event this is underestimated, there is a threat of long review procedures or even possible cancelation of the Project due to shortcomings in the procurement process. For the Project to be successful, the feedback from the market is essential. Otherwise the project may result in failure due to non-bankability or unavailability of funds. In the public procurement process and the process of selecting the successful tenderer it is important to appropriately set and manage the public procurement process using the support of the external advisors. Otherwise, the public procurement process may result in selection of unsuitable private partner who will not be able to obtain funding for the Project or operate the Project properly.

Similarly as in the case of JV model, it must be noted with regard to the IPPP model that IPPP could fit in the definition of a contracting authority under Section 6, par. 1(f) of Public Procurement Act or Section 6, par. 2 of the Public Procurement Act. In the first case the contracting authority is a legal person, in which the contracting authority exercises direct or indirect exclusive control, where the exclusive control is defined by Act on Competition Protection.

In the second case the contracting authority is a legal person established or incorporated for the specific purpose of meeting the needs in the general interest, which do not have the industrial or commercial character, and

- ▶ is fully or mostly funded by the contracting authority,
- ▶ is controlled by the contracting authority or
- ▶ the contracting authority appoints or elects more than half of its management or supervisory body.

If a particular entity is considered a contracting authority, not only the wording of the Public Procurement Act (and the procurement directives) but also the comprehensive case law of ECJ must be taken into account. Under the case law the characteristics must be satisfied cumulatively, i.e. it must be the entity meeting the needs in the general interest, which do not have the industrial or commercial character, and at the same time such entity must be funded,

## Analysis of the applicable methods of public procurement of a hospital PPP project

controlled by the contracting authority, or the entity's management or supervisory bodies are appointed or elected by the contracting authority. The requirements of control, appointment or funding are equal and it is sufficient to satisfy only one of them. Under the interpretation rules the control is different and understood in a broader sense when compared to the control under Section 6 (1)(f) of Public Procurement Act, i.e. under Act on Competition Protection. Appropriate structuring of SPV and the state- concessionaire relationship is essential for feasibility of the Project.

| Model | RISK   | MITIGATION   |
|-------|--|--|
| IPPP  | Failure to enter into the concession contract with any of the tenderers  | Appropriate setup and management of the procurement process, including also the settings of the conditions for participation, which would adequately reflect the avenues on the side of the private sector     |
|       | Philosophy and proposal of the procurement procedure that ensures obtaining necessary feedback from the market | Appropriate setup and management of the procurement process using support of the outside counsel, who have necessary know-how and can significantly help to define the essential aspects of public procurement |
|       | Selection of the appropriate private partner   | Appropriate setup and management of the procurement process using support of the outside counsel   |
|       | Non-bankability risk associated with shortcomings of the procurement process                                   | Appropriate setup and management of the procurement process using support of the outside counsel   |

### C. JV

Implementation of the Project through JV may, in the case the relationships between the private and public partners are set adequately, fall outside the scope of Public Procurement Act. Even in such case it is, however, necessary to ensure transparent, non-discriminatory and legitimate process of selecting a private partner. This could be achieved for example by performing the public tender. In the public tender the caller will call uncertain persons on the competition of the best proposal for entering into a contract. Notice of public tender should include the subject matter of the required obligation and principle of other content of the intended contract, on which the proponent insists, the method of filing the proposal, time limit within which the proposal can be filed, and time limit for notification of the selected proposal. The content of the terms and conditions of the proposal must be disclosed adequately.

Evaluation of the impacts of implementation of the JV model for the public procurement area has identified the following risks:

- ▶ Transparency issues
- ▶ Political risk/PR risk – cancellation of the Project
- ▶ Non-bankability risk associated with shortcomings in the procurement process
- ▶ Risk of contradiction with the public procurement regulations

Establishment of JV should be preceded by the resolution of the Government of the Slovak Republic, which (i) will impose the obligation to ensure performance of necessary measures resulting in creation of JV established for the purpose of implementing the Project and (ii) will subsequently approve the draft constituting documents of JV. JV should be established by and between the private and public partners so that none of the partners exercises control over JV. The constituting documents should specify the intention and obligations related to implementation of the Project. The process of establishing JV should also include contribution of the assets, determined for implementation of the Project, in JV.

With regard to implementation of the Project through JV it must be noted that JV could fit in the definition of a contracting authority under Section 6 (1) (f) of Public Procurement Act or Section 6 (2) of Public Procurement Act. In the first case the contracting authority is a legal person, in which the contracting authority exercises direct or indirect exclusive control, where the exclusive control is defined by Act on Competition Protection.

## Analysis of the applicable methods of public procurement of a hospital PPP project

In the second case the contracting authority is a legal person established or incorporated for the specific purpose of meeting the needs in the general interest, which do not have the industrial or commercial character, and

- ▶ is fully or mostly funded by the contracting authority,
- ▶ is controlled by the contracting authority, or
- ▶ the contracting authority appoints or elects more than half of its management or supervisory body.

In considering the particular entity as a contracting authority, not only the wording of the Public Procurement Act (and the procurement directives) but also the comprehensive case law of ECJ must be taken into account. Under the case law the characteristics must be satisfied cumulatively, i.e. it must be the entity meeting the needs in the general interest, which do not have the industrial or commercial character, and at the same time such entity must be funded, controlled by the contracting authority, or the entity's management or supervisory bodies appointed or elected by the contracting authority. The requirements of control, appointment or funding are equal and it is sufficient to satisfy only one of them. Under the interpretation rules the control is different and understood in a broader sense when compared to the control under Section 6 (1) (f) of Public Procurement Act, i.e. under Act on Competition Protection.

In this regard it must be noted that the contracting authority, as defined in Section 6 (1) (f) of Public Procurement Act, is not grounded neither in Directive No. 18/2004 nor in the ECJ case law. Both Directive No. 18/2004/EU and ECJ case law set out the definition of a body governed by public law, which corresponds to the definition under Section 6 (2) of Public Procurement Act.

This extensive case-law was also taken into account by the newly adopted Directive No. 2014/24/EU, under which “a body which operates in normal market conditions, aims to make a profit, and bears the losses resulting from the exercise of its activity should not be considered as being a ‘body governed by public law’ since the needs in the general interest, that it has been set up to meet or been given the task of meeting, can be deemed to have an industrial or commercial character.” Hence such institution is not a body governed by public law, which is the contracting authority from the viewpoint of the EU regulation.

The case law of ECJ understands the state and organisation governed by public law in a broader “functional” sense. The court dealt with each case individually, while it formulated certain principles, which may be relevant for reviewing the JV model as a potential contracting authority (body governed by public law):

- ▶ Existence of significant competition or non-existence of competition is not a relevant condition. The needs in the general interest means the needs which the state decided to provide itself or over which the state decided to maintain influence (judgement C-360/96 Arnhem).
- ▶ The term body governed by public law must be interpreted extensively (judgment C-214/2000 Commission v. Spain).
- ▶ If the primary aim is not generation of profits, the entity does not bear the economic risks associated with performance of the activities, in particular, the authorities would not admit its bankruptcy, and is funded from public resources, it concerns a body governed by public law. Interpretation to the contrary would result in circumvention of the Directive (judgment C-18/01 Varkauden Taitotalo Oy). The company is part of the state policy and the state should prevent its liquidation (judgment C-283/00 Commission v. Spain).
- ▶ The primary purpose of the establishment is essential, even if that purpose forms a small part when compared to the size of the business (judgment C-44/96 Mannesmann).

Given the “commercial” setup of nUNB one could theoretically assume that it could be an institution operating in the normal market conditions focused on generating the profit and bearing the losses associated with performance of its activities; in such case it would not be a contracting authority under the ECJ case law. On the other hand it is necessary to take into consideration the concept of nUNB comprehensively. It should be a hospital with significant catchment area, where state ownership and control are therefore likely to be necessary. Provision of guarantees and protection from bankruptcy should not be omitted. It is also necessary to take into account that the Office for Public Procurement considers provision of health services, social and schooling services to be satisfaction of the needs in the general interest (for example, under Methodological Guidance No. 317-2000/2010).

Application of Public Procurement Act could be excluded with regard to the JV model in the context of the above if JV

## Analysis of the applicable methods of public procurement of a hospital PPP project

- shows all the characteristics of commercial behaviour, i.e. as part of the normal market conditions it is focused on generating profit, bears the losses, if any, associated with the performance of its activities, while the public partner does not exercise direct or indirect exclusive control, or
- does not show commercial character, but it will be established or incorporated for the special purpose of meeting the needs in the general interest, and at the same time it is funded by a private partner in the extent exceeding 50%, controlled by a private partner and the private partner appoints or elects more than 50% of members of the management or supervisory body.

Nonetheless, one should bear in mind the fact that even in the case of JV, a specific or another model, SPV must act as the contracting authority in providing more than 50% of the funds for supply of goods, performance of construction works and provision of services by the contracting authority (Section 7 of Public Procurement Act).

Implementation of the Project using the JV models renders several other risks. If the private partner is not selected using the procedure in line with the Public Procurement Act, it is very probable that this will pose the questions on transparency of selecting the private partner, which may result in delay, non-bankability of the Project as well as its cancellation, if any, for political reasons. We consider this risk to be considerably high and its mitigation can be achieved by ensuring a transparent selection, even application outside the Public Procurement Act, for example through the aforementioned public tender. At the same time it must be stressed that JV model renders the risk of reduced control over implementation of the Project, since the concession contract (or similar contract) is absent in such case, which would clearly determine the obligations of the participating partners in implementing the Project and penalise failure to comply with them. JV is a separate entity, which could perhaps be established in order to implement the Project, but the state in this case cannot use contractual control mechanisms for the implementation of the Project to the extent as in the case of IPPP and CPPP.

| Model | RISK   | MITIGATION  |
|-------|--|---|
| JV    | Transparency issues  | The choice of the private partner selection procedure, which, despite the absence of application of Public Procurement Act, allows transparent and open competition |
|       | Political risk/PR risk – cancellation of the Project                         | The choice of the private partner selection procedure, which, despite the absence of application of Public Procurement Act, allows transparent and open competition |
|       | Non-bankability risk associated with shortcomings in the procurement process | The choice of the private partner selection procedure, which, despite the absence of application of Public Procurement Act, allows transparent and open competition |
|       | Risk of contradiction with public procurement regulation                     | Adequate setup of the relationship between the private partner and the public partner within JV so that this entity does not fall under Public Procurement Act      |

### D. Specific Model

The Specific model will require implementing a series of public procurements goods supply contract, works contract, service contract initiated by SPV fully controlled by the state. As defined by MOH, the medical facility nUNB should be carried out by SPV and not by a private partner. Nevertheless, know-how of the private medical sector should be ensured for the Project under the service contracts (of the management character). This concept should prevent that the contracts in question to be awarded by SPV be considered a concession. However, the concession should be directly awarded by SPV as an in-house contract. Primarily SPV should specify all contracts that should be awarded to third persons in order to ensure implementation of the Project using the Specific model. With reference to specification of contracts it will be necessary to select a specific procurement procedure under Public Procurement Act, on the basis of

- estimated value of the contract,

## Analysis of the applicable methods of public procurement of a hospital PPP project

- ▶ type of contract, and
- ▶ details of the contractual terms and conditions.

It is probable that the applicable procedures will include the public tender and restricted procedure, while unlike CPPP and IPPP, applicability of the negotiated procedure or a competitive dialogue is unlikely.

With regard to the Specific Model the concession awarded by the state directly to SPV as an in-house contract can be taken into consideration. Justification of the in-house concession lies in the fact that without the concession contract SPV will act only under the state's governance of the enterprise, i.e. may act more or less arbitrarily or according to the requirements of the management. It follows also from the practical experience concerning the Slovak legal environment that the enterprises having state-private character (e.g. NDS<sup>156</sup>, ŽSR<sup>157</sup>, ŽSSK<sup>158</sup> and the like) are governed by the laws regulating their activities. The reason for such procedure is just inevitability to ensure that the entities concerned perform the activities, for which they are determined. Despite the special legislative regulation these companies often have additional special contracts with the state. In the case of implementing the Project the Concession Contract is significant because it helps SPV meet the parameters of the Project as determined by the state and/or so that the state could compensate revenue shortfalls or unexpected market response, in the form of availability of payments, etc. The following two options can be taken into consideration

- ▶ concession for implementation of the entire Project, or
- ▶ concession for medical operation of nUNB.

In the case of concession for performance of the entire Project SPV would ensure the major part of performances through subcontractors, namely successful tenderers from the individual public tenders. In the case of concession for medical operation of nUNB the subject matter of the concession contract would include only the rights and obligations related to ensuring medical operation of nUNB. Other performances and activities for the purpose of implementing the Project would be based on the foundation documents of SPV and decisions of the SPV's sole shareholder.

By assessing the impacts of Specific Model implementation on the public procurement, the following risks were identified:

- ▶ Non-bankability risk associated with shortcomings of the procurement process
- ▶ Long and inconsistent procurement process carried out in several rounds
- ▶ Philosophy and proposal of the procurement procedure that ensures obtaining necessary feedback from the market
- ▶ Selection of the appropriate know-how provider
- ▶ Absence of synergies.

The Specific Model can result in the long and inconsistent public procurement process. Implementation of a series of public procurements also renders the amplified risk of the review procedures, which can result in postponing deadlines for performance of the individual contracts. Complications can also result from coordination of the individual contracts for the purpose of implementing a compact, flexible and functional Project. The state control over SPV also renders the risks in the form of political instability and sustainability of decisions in the long run. The important deficiency in the feasibility of the Project also includes absence of the synergy of the individual parts of the Project, which is on the contrary an advantage of PPP projects that with proper management and terms and conditions automatically include mutual effective involvement of individual parts of the Project in order to synergistically achieve the highest possible value for money.

<sup>156</sup> Act No. 639/2004 Coll. on National Highway Company as amended by Act No. 135/1961 Coll. on Roads (Road Act), as amended

<sup>157</sup> Act No. 258/1993 Coll. Railways of the Slovak Republic, as amended

<sup>158</sup> Act No. 259/2001 Coll. on Železničná spoločnosť, a. s., as amended by Act of the National Council of the Slovak Republic No. 258/1993 Coll. on Railways of the Slovak Republic, as amended by Act No. 152/1997 Coll. as amended

## Analysis of the applicable methods of public procurement of a hospital PPP project

| Model          | RISK   | MITIGATION  |
|----------------|--|---|
| Specific Model | Non-bankability risk associated with shortcomings in the procurement process                                   | Appropriate setup and management of the procurement process using support of outside counsel  |
|                | Long and inconsistent procurement process carried out in several rounds  | Very difficult to mitigate. Appropriate setup and management of the procurement process using support of outside counsel can help mitigate the risk impact  |
|                | Philosophy and proposal of the procurement procedure that ensures obtaining necessary feedback from the market | Appropriate setup and management of the procurement process using support of outside counsel  |
|                | Selection of appropriate know-how provider   | Appropriate setup and management of the procurement process using support of outside counsel  |
|                | Absence of synergy   | Very difficult to mitigate. Highly effective and professional management of the Project and appropriate setup of the relationships between the entities concerned could help mitigate the risk impact |

### Comparison of individual models

From the viewpoint of public procurement all models appear to be feasible, whether directly using the procedure under Public Procurement Act or procedure outside Public Procurement Act, if not applicable. The main differences between the models, however, lie in the possibility of applying specific procedures for the selection of the private partner. In terms of transparency, open competition and equal treatment of candidates they are considered the most appropriate procedures resulting from the application of a system under Public Procurement Act. In this context the most appropriate models seem to be CPPP or IPPP, associated with lower risk weight and high throughput of mitigation measures. Risks associated with CPPP and IPPP models can be effectively mitigated by appropriate setup and management of the procuring process using the support of experienced external advisors. CPPP and IPPP allow the use of the negotiated procedure and competitive dialogue, i.e. the procedures that are transparent, allow open competition and reflect the feedback from the candidates and the financial sector. We consider these factors significant in implementing the Project with regard to its bankability and compliance with acts, laws and principles of EU. From the viewpoint of feasibility the Specific Model is associated with greater risk level with medium throughput of the mitigation risks. Therefore the Specific Model seems to be less advisable, given *inter alia* the risks rendered by the series of public procurements. Moreover, in this case the feedback from the market, synergy of individual parts of the Project and the total effective involvement of the private sector are absent. Thus the implementation of the Project in the form of Specific Model does not render benefits usually associated with PPP projects. From the aspect of feasibility risks, the JV model seems to be the least appropriate in the context of public procedure due to high weight of risks and low throughput of mitigation measures, and it would be necessary to set the private partner selection process very carefully and precisely in order to avoid doubts on its transparency. However, in the JV model the public partner exercises the weakest influence on the Project management, as it may not have control over JV if the procedure under Public Procurement Act is not applied.

The schemes presented after summary table depict indicative time consumption of the public procurement processes of the selected PPP options. Figures on the vertical axis represent months.

### Summary table

| Risk  | CPPP   | IPPP   | JV             | Specific Model |
|---|--|--|----------------|----------------|
| Failure to enter into the concession contract with any of | Appropriate setup and management of the procurement process, | Appropriate setup and management of the procurement process, | Not identified | Not identified |

## Analysis of the applicable methods of public procurement of a hospital PPP project

|  |  |  |   |   |
|--|--|--|---|---|
| the tenderers  | including also the settings of the conditions for participation, which would adequately reflect the avenues on the side of the private sector  | including also the settings of the conditions for participation, which would adequately reflect the avenues on the side of the private sector  |   |   |
| Philosophy and proposal of the procurement procedure that ensures obtaining necessary feedback from the market | Appropriate setup and management of the procurement process using support of the outside counsel, who have necessary know-how and can significantly help to define the essential aspects of public procurement | Appropriate setup and management of the procurement process using support of the outside counsel, who have necessary know-how and can significantly help to define the essential aspects of public procurement | Not identified  | Appropriate setup and management of the procurement process using support of the outside counsel  |
| Selection of the appropriate private partner   | Appropriate setup and management of the procurement process using support of the outside counsel   | Appropriate setup and management of the procurement process using support of the outside counsel   | Appropriate setup and management of the JV partner selection using support of the outside counsel   | Not identified  |
| Non-bankability risk associated with shortcomings of the procurement process                                   | Appropriate setup and management of the procurement process using support of the outside counsel   | Appropriate setup and management of the procurement process using support of the outside counsel   | The choice of the private partner selection procedure, which, despite the absence of application of Public Procurement Act, allows transparent and open competition | Appropriate setup and management of the procurement process using support of the outside counsel  |
| Transparency issues  | Not identified   | Not identified   | The choice of the private partner selection procedure, which, despite the absence of application of Public Procurement Act, allows transparent and open competition | Not identified  |
| Political risk/PR risk – cancellation of the Project (on account of non-transparency)                          | Not identified   | Not identified   | The choice of the private partner selection procedure, which, despite the absence of application of Public Procurement Act, allows transparent and open competition | Not identified  |
| Risk of contradiction with public procurement regulation   | Not identified   | Not identified   | Adequate setup of the relationship between the private partner and the public partner within JV so that this entity does not fall under Public Procurement Act      | Not identified  |
| Long and inconsistent procurement process carried out in several rounds  | Not identified   | Not identified   | Not identified  | Very difficult to mitigate. Appropriate setup and management of the procurement process using support of outside counsel can help mitigate the risk |

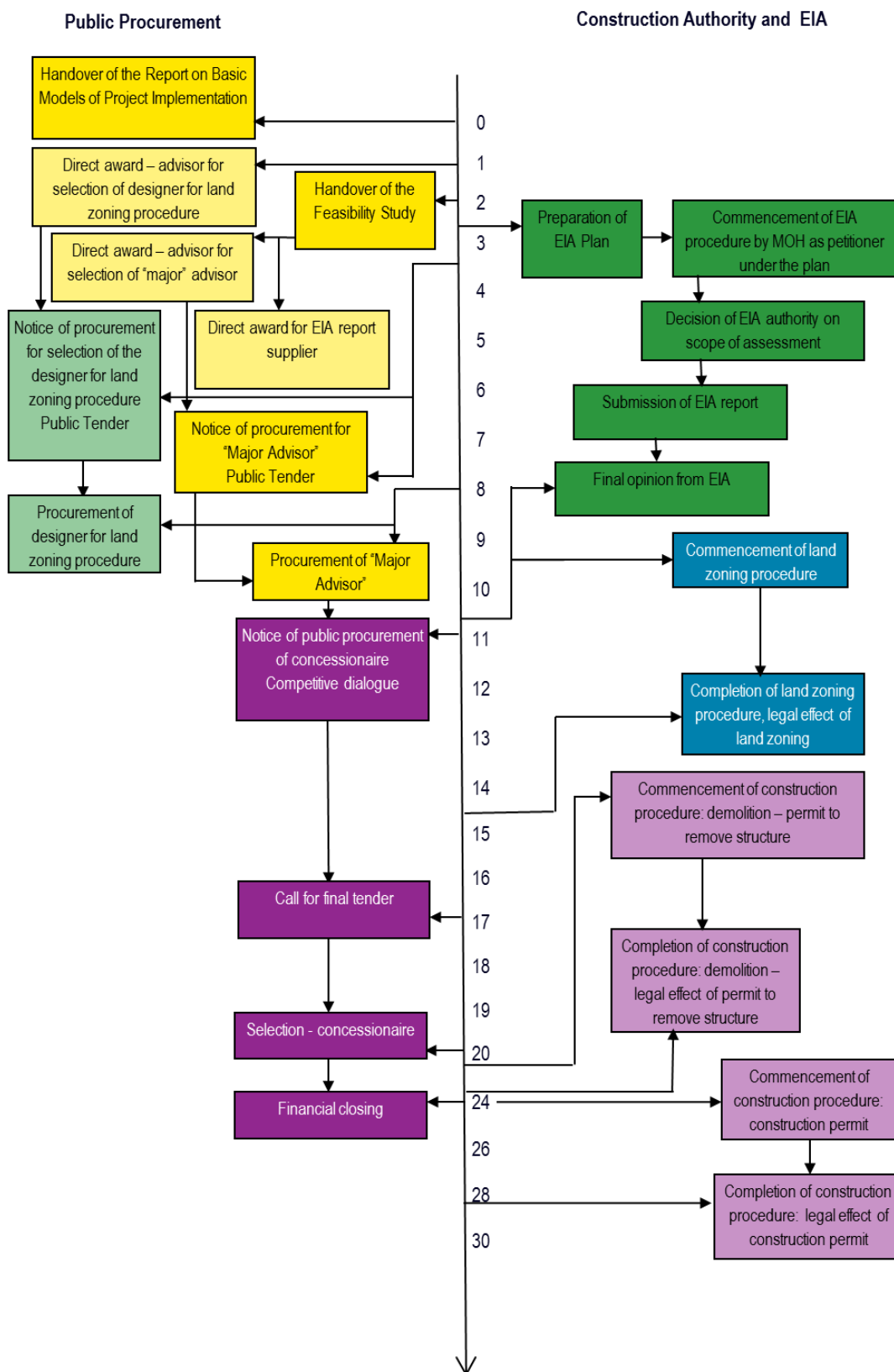


## Analysis of the applicable methods of public procurement of a hospital PPP project

|  |                |                |                | impact  |
|--|----------------|----------------|----------------|---|
| Selection of appropriate know-how provider | Not identified | Not identified | Not identified | Appropriate setup and management of the procurement process using support of the outside counsel  |
| Absence of synergies                       | Not identified | Not identified | Not identified | Very difficult to mitigate. Highly effective and professional management of the Project and appropriate setup of the relationships between the entities concerned could help mitigate the risk impact |

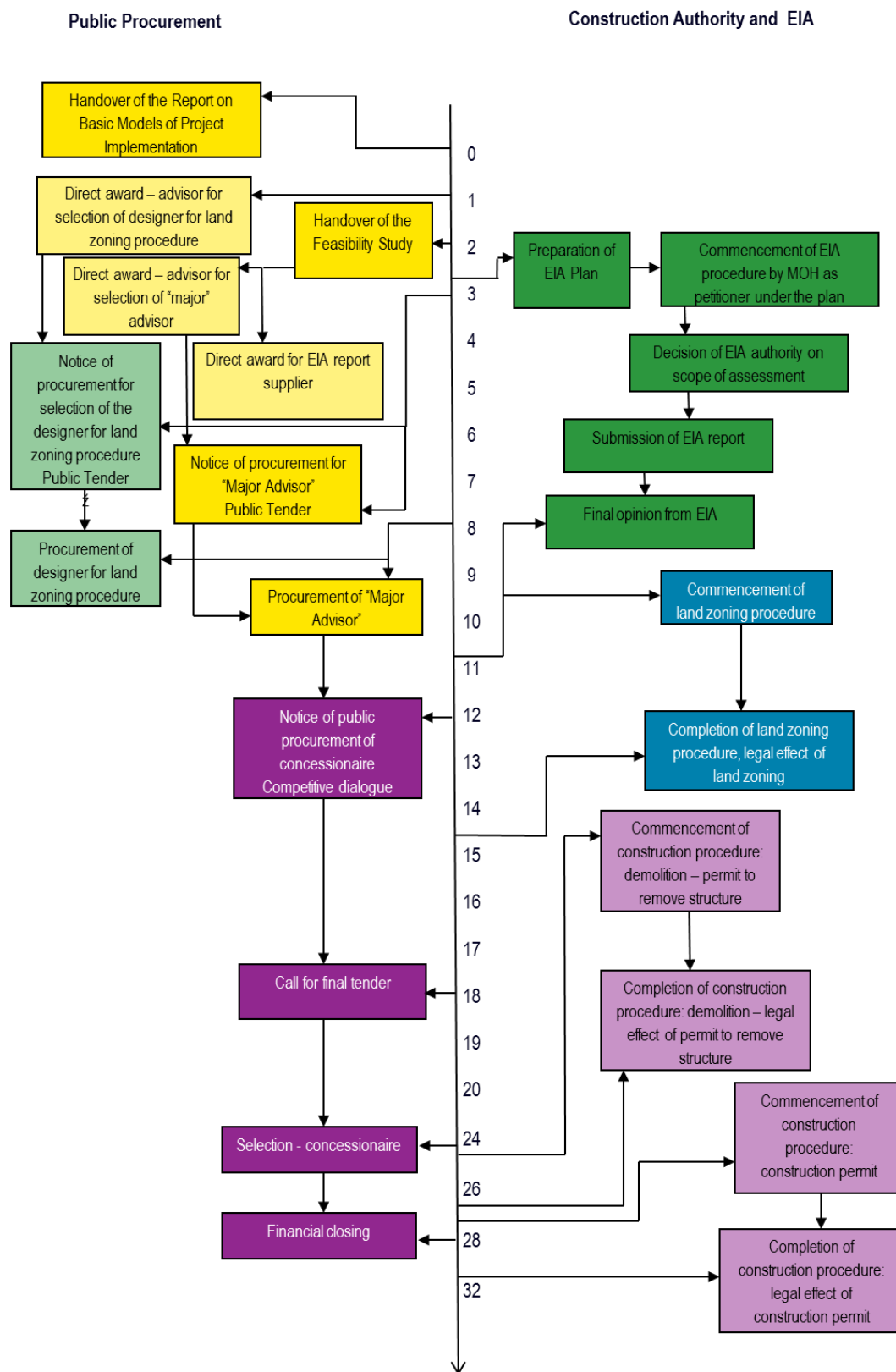
# Analysis of the applicable methods of public procurement of a hospital PPP project

CPPP



# Analysis of the applicable methods of public procurement of a hospital PPP project

IPPP



## Analysis of the applicable methods of public procurement of a hospital PPP project

| STAGE   |  | DURATION      | ACTS BY MOH   |
|---|--|---------------|---|
| Drafting tender documents for the tender to select Project tender advisor |  | 2 - 3 months  | Establishing relation with NSM to realise acts within planning and building proceedings<br>EIA start  |
| Tender for selecting the Project tender advisor                           |  | 3 - 4 months  | EIA   |
| Project tender  | Preparatory stage <ul style="list-style-type: none"> <li>Drafting tender documents</li> <li>Publication of tender notice</li> </ul>  | 3 - 5 months  | EIA termination<br>Start of planning proceedings  |
|   | Qualification stage <ul style="list-style-type: none"> <li>clarification of participation criteria</li> <li>evaluation of participation criteria satisfaction</li> </ul>   | 3 - 4 months  | Completion of planning proceedings  |
|   | Dialogue <ul style="list-style-type: none"> <li>sending invitation to take part in the dialogue</li> <li>clarification of informative documents</li> <li>drafting and submitting solutions</li> <li>presentation of solutions by tenderers and solutions evaluation by the contracting authority</li> <li>reducing the number of solutions and further dialogue stages (optional)</li> <li>drafting the final informative document – contract documents</li> </ul> | 5 - 10 months | Identification of optimum avenues of transformation process: <ul style="list-style-type: none"> <li>Detailed plan of transfer of capacities from UNB to nUNB</li> <li>Redevelopment plan</li> </ul>   |
|   | Tender stage <ul style="list-style-type: none"> <li>Sending notice to submit final tenders</li> <li>Clarification and evaluations of tenders</li> </ul>  | 2 - 3 months  | Selection of preferred choices of realising the transformation process: <ul style="list-style-type: none"> <li>Detailed plan of transfer of capacities from UNB to nUNB</li> <li>Redevelopment plan</li> </ul><br>Negotiation of mutual rights and obligations of MOH and nUNB regarding transformation process, such as conditions precedent or contractual obligations of MOH: <ul style="list-style-type: none"> <li>Transfer of land to MOH</li> <li>Adopting decision on terminating operations of certain parts of UNB</li> </ul> |

## Analysis of the applicable methods of public procurement of a hospital PPP project

|                               |                                 |  |
|-------------------------------|---------------------------------|--|
| Concession contract execution | Within the commitment period    | Finalising and adopting obligations by MOH re transformation process: <ul style="list-style-type: none"> <li>• Transfer of land to MOH</li> <li>• Adopting decision on terminating operations of certain parts of UNB</li> </ul>         |
|                               |                                 | Start of building proceedings re demolition works  |
| Financial closing             | 3 – 6 months                    | Performance of conditions precedent and obligations under concession contract: <ul style="list-style-type: none"> <li>• Transfer of land to MOH</li> <li>• Passing decision on termination of activities of certain UNB parts</li> </ul> |
|                               |                                 | Start of building proceedings regarding nUNB construction  |
|                               |                                 | Completion of building proceedings re demolition works   |
| UNB construction              | Not subject to our legal review | Building permit issuance   |
|                               |                                 | Preparatory actions of the detailed plan of transfer of capacities from UNB to nUNB and redevelopment plan   |
|                               |                                 | Preparing the disposal of assets managed by UNB  |
| Commissioning                 |                                 | Terminating operations of parts of UNB<br>Realisation of transformation process actions attached to the commissioning of nUNB  |
|                               |                                 | Realisation of actions to dispose of redundant UNB assets  |

## Proposals of realistic legal structures and tools enabling implementation of the preferred model

### Proposals of realistic legal structures and tools enabling implementation of the preferred model including justification, considering the analysed legal issues

#### CPPP

Public-private partnership of the contractual type is created in the process of public procurement (see separate chapter). The key to successful implementation of the Project is distribution of the risks between the private partner and public partner in the manner, which will correspond to the bankability requirements, financial resources of the public partner, and provide sufficient instruments for control by the public partner, while it remains motivating in terms of generating profits for the private partner and attractive in terms of funding for investors.

The basis of public procurement concerning a concessionaire must be thorough preparation of the competitive project. This report can serve as the background for preparation of such project. The feasibility study specifies certain parameters that must be addressed in order to make the Project feasible. However, in the Project preparation phase it will be necessary to complete the Project parameters with iterations along with MOH into such phase so that the tenderers could submit their solution proposals based on the clear assignment of MOH in the public procurement process. It does not change the fact that the public procurement process will have to be used to the maximum extent for searching the optimal solutions in all aspects of the Project (takeover of the employees, existing assets, design, construction, operation, etc.).

The basic tool for implementation of CPPP model is the concession contract. The concession contract will regulate the rights and obligations of the public and private partners in various phases and areas of the Project such as design, financing, construction, reconstruction, operation, specific services or maintenance. The concession contract is an extraordinary comprehensive legal act which “sets the rules” of cooperation of the partners for the entire Project implementation period. Both the concession contract and the final solution, which will be the scenario of the project implementation, will be created in the public procurement process. Given complexity of the nUNB Project, at this stage it is not possible to estimate and predict all the legal issues that may threaten, hinder or overprice the Project. Therefore it is extremely important that this process fully exploit the possibilities of obtaining feedback from the tenderers and the Project caller who will, in their dialogue based on their own proposals taking into account the needs of funding institutions and expectations of investors, create the optimal solution that best satisfies the requirements of MOH. In this process the options and realistic models of takeover, if any, of part of the existing assets, rights and obligations by a new entity, the plan of transferring the necessary staff and form / content of the agreements with the existing participants of the health care sector that will be needed to operate nUNB, will become clear.

Creation of the relationship between the state and concessionaire in the process of public procurement allows use of the tools under the Act on State Property Administration<sup>159</sup> and acquisition of the concessionaire's right to use such state property which is not redundant.

As a rule the signed concession contract provides the public partner with tools for monitoring performance of the private partner's obligations and their effective enforcement. The basic tool for setting preferences of MOH with regard to the Project type and considering expected bankability requirements of the Project is payment for availability, the amount of which may vary depending on performance or non-performance of the set contractual standards or actual demand for services of nUNB (for example in the form of compensation, which will ensure fluctuations in demand so as to provide for coverage of payables to creditors and reasonable expectations for return on investment of the equity investors).

In the CPPP mode the concessionaire is a business company, where the public partner has no capital and as a rule also no staff. However, in the hospital type of PPP project, due to complexity of the Project and its significant impact there must be a body, which will be able to assess concessionaire's performance of obligations objectively. Such body may be established outside the concessionaire's structure, but, for example, even membership of the public partner's nominee in the concessionaire's Supervisory Board can be considered. Acceptability of such option will also be tested in the context of creating the proposed solution during the public procurement process.

We assume based on the international experience in implementation of the hospital PPP projects that the concession contract will require revisions, in particular during the initial phases of nUNB operation. Varying priorities of the public and private partners will result in situations that cannot be resolved by agreement. Therefore the

<sup>159</sup> Section 13c (1) of Act on State Property Administration

## Proposals of realistic legal structures and tools enabling implementation of the preferred model

concession contract will have to include mechanisms applicable to resolving any disputes during the whole its term, which needs to be taken into account when setting it up.

With regard to CPPP model we assume that the concessionaire will be the business company with probable equity interest of the investor, construction firm and medical facility operator.

Given the facts above it is desirable that MOH received strong support of experienced advisory team during further preparation and implementation of the Project. The public procurement process concerning the concessionaire does not include only procedural obligations related to the formal regulation under the Public Procurement Act, it concerns comprehensive process, which will include, without limitation, preparation of the competitive project, negotiating proposals for solutions, a strong tenderer's opponency efforts to implement appropriate solutions primarily for the private partner, support in implementation of measures necessary to ensure feasibility and attractiveness and bankability of the Project and many other acts necessary for the implementation of the Project. It is also appropriate that the caller involve a strong advisory team for selection of the private partner, i.e. during the implementation of the Project. Naturally, selection of the advisor must be preceded by a transparent process of the public procurement.

### IPPP

All the facts above concerning CPPP model apply to IPPP accordingly. From the viewpoint of legal structures and tools, the IPPP model can be considered a superstructure of CPPP. Beyond the tools and structures of CPPP, the public and private partners are more closely interconnected in the SPV's corporate structures, which results in increased level of control of the public partner and access to all information on the activities of the private partner. This can have positive impact on perception of the Project by both the professionals and public at large, and result in released tension caused by significant entry of the private element in provision of health care in Bratislava region. Last but not least, this aspect can motivate the state to support the Project implementation effectively and help constructive cooperation of the individual participants in the health care sector necessary for successful Project implementation.

It is unrealistic to expect that the private partner and the financing institutions will be inclinable to significant level of state's participation, especially with regard to the management and decision-making processes in SPV. After all, this corresponds to the Project's nature, which stems in significant transfer of the operating risk on the concessionaire, who must be sufficiently flexible to manage such risk. At the same time the major interest in the public partner can be understood as positioning SPV as the contracting authority under the law, which is evidently undesirable due to effectiveness of managing the company. Therefore the public partner will probably be only a minor shareholder in/member of SPV having representatives in the Board of Directors and the Supervisory Board and will not be able to directly influence management of the concessionaire. This restriction is ultimately essential for the purpose of setting-off/not setting-off the Project related costs against the public debt of the Slovak Republic.

As aforementioned several times in this report, the joint equity interests of the public and private partners in SPV can be created either by joint establishment of the business company SPV, alternatively establishment of SPV by the public partner and subsequently acquisition of the equity interest in SPV by the private partner. Realistically it can be expected that the definite structure will be created during public procurement, which may include a proposal to create SPV and corporate documents which will be created into the shape optimal for both partners of the Project during public procurement.

### JV

Under the definitions of the Commercial Code the state is considered an entity engaging in the business and legal relationships. Therefore it is entitled to establish a business company. Thus JV would be a business company, in which none of the partners exercises control, i.e. adoption of JV's decisions requires consent of both partners. This is important from the aspect of possibility to use more flexible methods of transparent selection of a private partner. In order to use them, SPV would have to be purely commercial entity or the state could not exercise a direct or indirect control in JV, hold majority in the management or supervisory bodies, or to perform major funding in the entity. Along with the absence of the concession contract, which represents the basic tool for regulation and parameterisation of the Project, the state would have minimum impact on the activities and decision-making of JV, which must be considered in relation to the strategic goals of the Project.

## Proposals of realistic legal structures and tools enabling implementation of the preferred model

Even in the case of JV the participation of the private partner should be subject to transparent selection of the partner in the form of the public tender regulated by the provisions of the Commercial Code or other form of procurement, which, however, would have to comply with parameters of transparency and non-discrimination.

### Specific Model

When compared to other models, in practice the Specific Model the most resembles the structure, in which UNB operates today. Therefore, its implementation should be the easiest.

With regard to the Specific Model the state created the business company through MOH, in which the state will have exclusive control and exclusive interest. Subsequently, the state awards the contract to this business company in the form of the so-called in-house contract, which can be amended without any restrictions during its term. The subject matter of the contract will be construction and operation of new hospital in Bratislava.

A considerable advantage of this solution is that the state can relatively freely handle its property, assets, liabilities and staff and enable to use or contribute to management and/or registered capital of the business company by immovable property – lands and structures in more detail specified in part Review of Legal Consequences of the Project Implementation from the viewpoint of construction legal regulations<sup>160</sup> as well as other substrate that is currently controlled by UNB.

The series of the public contracts will ensure for the business company the design, construction, operation and maintenance of a new hospital<sup>161</sup>. The funds for financing can be obtained by the business company from the investment banks or from structures related to the Slovak Investment Holding (*Slovenský investičný holding*)<sup>162</sup>. After having been established in the market, the Slovak Investment Holding can play a significant role in allocating the funds from the EU Structural Funds as well as private capital using the so-called “leverage effect”. As at today these structures are being developed only and the exact role or participation level of the Slovak Investment Holding in financing the Project cannot be realistically defined now.

After obtaining the permit to use the premises of nUNB, SPV will subsequently obtain the permit to provide health care. SPV in coordination with UNB will enter into the employment contracts with medical and technical staff. As mentioned above, given the award of the in-house concession to SPV and/or existence of the relationship concessionaire – state, use of the mechanism where employees are transferred from UNB to nUNB as with CPPP and IPPP models can be taken into consideration<sup>163</sup>.

Know-how of the private sector will be obtained by SPV under the management contract in the transparent selection procedure.<sup>164</sup>

It is evident that the Specific Model is the most acceptable model from the viewpoint of control and regulatory mechanisms of the state in relation to the health care provider. In this case the state can keep full control over the process of attenuation and completion of the provision of health care in the affected hospitals of UNB. On the other hand the risk of Project's failure is fully borne by the state. Interest of the private partner in investment return and the related process optimization and maximization of efficiency will not be present with the Specific Model. The individual contracts procurement process generating various contractors of various services will not ensure full synergy between the design, construction and operation of nUNB.

<sup>160</sup> Contribution of immovable property in the registered capital seems to be more complicated due to the fact that during the project implementation the value of the immovable property will change, which would affect the amount of the registered capital.

<sup>161</sup> More detailed specification of the public procurement processes is included in section Analysis of the applicable methods of public procurement.

<sup>162</sup> As at today the Slovak Investment Holding (*Slovenský investičný holding*) is not created and does not have a clear structure. However, we can state that the similar “funds of funds” are successfully operated in Poland and Hungary.

<sup>163</sup> Detailed specification of the employees transfer mechanisms is included in section Review of legal consequences of termination of the existing health care providers' activities.

<sup>164</sup> Specification of the selection processes is included in section Analysis of the Applicable Methods of Public Procurement of Hospital PPP Project.



## Technical assessment appendices

---

1. Phase 1 options scoring
2. Phase 2 options scoring
3. Phase 3 options scoring
4. Petržalka profile assumptions details
5. General description of the AFM
6. Productivity, performance and healthcare infrastructure -  
moving towards a networked model of care

## Phase 1 options scoring

### Options appraisal

| Appraisal ID | Appraisal category   | Weighting factor | Score option 1 | Weighted score option 1 | Score option 2 | Weighted score option 2 | Score option 3 | Weighted score option 3 | Motivation for weighing factor  | Motivation for scores  |
|--------------|--|------------------|----------------|-------------------------|----------------|-------------------------|----------------|-------------------------|---|--|
| A.           | Design and scope   |                  | 6              | 26                      | 7              | 30                      | 12             | 56                      |   |  |
| A.1          | Central coordinating point of a networked regional model of health services delivery                             | 8                | 2              | 16                      | 2              | 16                      | 4              | 32                      | Key objective of strategic MoH policy. Hospital development is seen as a catalyst in this process   | <p><b>Option 1:</b> Continues current organisational state of affairs. Current inefficiencies and quality problems leave no room to direct energy towards changing role. Status quo sends perverse "no change" signal</p> <p><b>Option 2:</b> Refurbishment continues organisational state of affairs and only limited opportunities for efficiency and quality gains. Refurbishment of existing stock sends out "no change message".</p> <p><b>Option 3:</b> New build of hospital offers natural opportunity to rethink organisation of services and devolve reposition parts of the portfolio. Large new build project has iconic value sending out "change" signal in the professional and public domain</p>   |
| A.2          | Provide range of tertiary services, including some at Slovak national level                                      | 4                | 1              | 4                       | 2              | 8                       | 4              | 16                      | Provision of tertiary services is a core function of a university hospital. But volume of tertiary care is small relative to total care volume  | <p><b>Option 1:</b> Quality of physical infrastructure and equipment insufficient to provide tertiary care at anything like an internationally acceptable level. Organisational inefficiencies prohibit sufficient attention being paid to provision of high-end services.</p> <p><b>Option 2:</b> Addresses quality of physical infrastructure, but only to a limited degree; constraints in unalterable characteristics of current stock (e.g. ceiling heights, building depths, load-bearing typologies) limit quality level that can be achieved. Continuation of current sites profile and bandwidth of dimensions only very partially addresses organisational inefficiencies.</p> <p><b>Options 3:</b> New build scenario offers opportunity to provide state-of-the-art facilities and is a catalyst for organisational reform</p> |
| A.3          | Provide comprehensive range of of secondary care, offering inpatient, outpatient and diagnostic medical services | 2                | 3              | 6                       | 3              | 6                       | 4              | 8                       | Options are open to take parts of secondary care provision out of the UNB portfolio, either by devolving them to other secondary hospitals, or by devolution of care to other sectors (primary care, long-term care). Note that criterion H.1 needs to be satisfied | <p><b>Options 1 and 2:</b> These services are being offered at present, but operational losses which cannot be solved in these scenarios (because of no or limited efficiency gains) will put pressure on the sustainability of provision of the full range of services at the required volumes in the public health care sector.</p> <p><b>Options 3:</b> No particular problems in satisfying this criterion. Match not perfect, because residual operational losses may put some pressure on providing services in the public domain, and/or reimbursement system may disincentivise hospital management from offering certain types of care.</p>   |
| A.4          | Offer a sustainable, fit-for-purpose model for healthcare provision  | 8                | 2              | 16                      | 2              | 16                      | 4              | 32                      | Key objective of the hospital redevelopment.  | <b>Options 1 and 2:</b> Previous explorations by the Client have already established that the current configuration of health care services by the UNB is not compatible with sustainable effective health care provision.   |

## Phase 1 options scoring

|            |  |   |   |    |   |    |   |    |  |  |
|------------|--|---|---|----|---|----|---|----|--|--|
|            |  |   |   |    |   |    |   |    | <b>Option 3:</b> Offers better and more direct long-term steerage. Nevertheless New hospital will need careful incentivisation and effective steerage from policy makers and contracting partners: long-term sustainability decisions may conflict with short-term efficiency considerations |  |
| <b>B.</b>  | <b>Accountability, governance and participation</b>  |   | 3 | 16 | 4 | 20 | 6 | 44 |  |  |
| <b>B.1</b> | Minimise risk for public sector finances   | 8 | 1 | 8  | 1 | 8  | 3 | 24 | Current operational losses of the UNB and the fragile state of Slovak national budgets make this an absolute necessity   | <b>Option 1:</b> Current operation of the UNB presents a major strain on public resources.<br><b>Option 2:</b> Efficiency gains from refurbishment will be limited and not significantly address process efficiency, hence a substantial yearly strain on public resources will remain.<br><b>Option 3:</b> Represents a significant investment burden, but offers the best opportunities to introduce efficiency enhancing and cost-cutting measures in the operation of the UNB.   |
| <b>B.2</b> | Align strategy and operations of hospital with national health policy objectives   | 4 | 2 | 8  | 3 | 12 | 5 | 20 | Hospital development is a catalyst for health system reform. But in the longer term, there will be opportunities to pursue policy objectives through interventions in other areas of the health system   | <b>Option 1:</b> Short-term problems in operation of hospital don't leave room for effective strategy development.<br><b>Option 2:</b> Refurbished continuation of current configuration limits possibilities of effective reconfiguration of services and systems reform.<br><b>Option 3:</b> New hospital offers best fit of hospital and national policy objectives.  |
| <b>C.</b>  | <b>Financial assessment</b>  |   | 2 | 10 | 3 | 12 | 6 | 30 |  |  |
| <b>C.1</b> | Cover capital and operational costs from the hospital revenue stream, no burden placed on public resources                             | 8 | 1 | 8  | 1 | 8  | 3 | 24 | Absolute necessity to minimize current burden on public resources caused by operational losses of UNB  | <b>Option 1:</b> Current operation of the UNB presents a major strain on public resources.<br><b>Option 2:</b> Efficiency gains from refurbishment will be limited and not significantly address process efficiency, hence a substantial yearly strain on public resources will remain.<br><b>Option 3:</b> Public sector (government) risk for both capital expenditure and operational expenditure.  |
| <b>C.2</b> | Operate at a level of functional and organisational efficiency at least equal to the current average for European University Hospitals | 2 | 1 | 2  | 2 | 4  | 3 | 6  | Blanket objective. In reality, there will be (and will need to be) considerable flexibility to determine performance standards tailored to regional/national needs and preferences   | <b>Option 1:</b> Client assessment is that there are major inefficiencies in the current operations of the UNB.<br><b>Option 2:</b> Refurbishment in present configuration will yield only limited organisational efficiency gains, primarily in reducing to a degree the current overcapacity of clinical beds.<br><b>Option 3:</b> This option offers by far the best opportunities. However, current efficiency and quality is at a low point, current expertise is limited, and careful balancing of efficiency gains in health services delivery with objectives in policy domains will be necessary. While there is no reason to assume that the desired efficiency level cannot be achieved eventually, this may take a longer time than the time to the expected opening of the New hospital |
| <b>D.</b>  | <b>Quality of services</b>   |   | 4 |    |   |    |   |    |  |  |

## Phase 1 options scoring

|     |  |   |    |    |    |    |    |    |  |  |
|-----|--|---|----|----|----|----|----|----|--|--|
| D.1 | Provide quality of care meeting European standards and benchmark averages                | 4 | 1  | 4  | 2  | 8  | 3  | 12 | Blanket objective. In reality, there will be (and will need to be) considerable flexibility to determine performance standards tailored to regional/national needs and preferences. Also: current standards and instruments in use in the EU are unsatisfactory in terms of measuring health outcomes. However, from a public interest perspective quality is more important than efficiency | <p><b>Option 1:</b> Current state of premises offers direct threats to quality of care.</p> <p><b>Option 2:</b> Refurbishment will offer limited improvements in physical facilities, but won't yield sufficient operational efficiency gains to free organisation effort to improve quality of procedures and patient care.</p> <p><b>Options 3:</b> New build will offer opportunities of substantial improvements, but expected gap that needs to be closed to reach European standards is sizable.</p> |
| D.2 | Meet European standards and benchmark averages for patient safety and operational safety | 4 | 1  | 4  | 2  | 8  | 3  | 12 | Blanket objective. In reality, there will be (and will need to be) considerable flexibility to determine performance standards tailored to regional/national needs and preferences. Also: current standards and instruments show considerable divergence, harmonisation process is not very far along. However, from a public interest perspective quality is more important than efficiency | <b>Options 1, 2 and 3:</b> See arguments at D.1.   |
| D.3 | Achieve patient satisfaction scores at European average or better                        | 2 | 2  | 4  | 2  | 4  | 4  | 8  | Patient satisfaction is a result of a complex of factors, in which "hard" criteria play only a limited role, precedence going to "emotional" and culturally dependent factors  | <p><b>Options 1 and 2:</b> Patient satisfaction will be adversely affected by poor healthcare outcomes, poor quality building stock and perception of "status quo" in healthcare delivery.</p> <p><b>Option 3</b> will provide better objective conditions, and a perception of "change on the way".</p>   |
| E.  | Regional economy and community   | 9 | 60 | 9  | 54 | 9  | 48 |    |  |  |
| E.1 | Provide a basic scale of potential commercial activities                                 | 2 | 2  | 4  | 3  | 6  | 4  | 8  | Outside the core objectives of the redevelopment. Also, these small-scale activities have very limited impact on overall cash flow for the hospital  | <p><b>Option 1:</b> the technical advisers understand that at present there are few commercial facilities at the UNB sites.</p> <p><b>Option 2:</b> Some space for these functions can be created through modest efficiency gains in usage of floor area, but these commercial spaces will be at the current sites.</p> <p><b>Option 3:</b> New build offers much better opportunities to figure in attractive spaces for basic commercial facilities.</p>   |
| E.2 | Provide employment opportunities for medical staff                                       | 8 | 4  | 32 | 3  | 24 | 2  | 16 | The UNB is one of the largest employers in the Bratislava region, and probably the major employer in Slovakian health care   | <p><b>Option 1:</b> Medical staff levels to be continued at more or less present rate.</p> <p><b>Option 2:</b> Limited efficiency gains will mean some reduction in staffing levels relative to production.</p> <p><b>Option 3:</b> substantial organisational efficiency gains will mean substantial reduction of staffing levels relative to production.</p>   |
| E.3 | Provide employment opportunities for support and services                                | 8 | 3  | 24 | 3  | 24 | 3  | 24 | The UNB is one of the largest employers in the Bratislava region. Chances in employment opportunities will significantly affect Bratislava region economy  | <p><b>Options 1 and 2:</b> Service provision most likely continued at roughly current levels.</p> <p><b>Option 3:</b> Employment level in service provision to hospital reduced (efficiency drive), but probably balanced by scaling up of certain services to other institutions in the Bratislava region</p>   |

## Phase 1 options scoring

| F.  | Quality of employment  | 3 | 12 | 5  | 20 | 9  | 36 |    |   |   |
|-----|--|---|----|----|----|----|----|----|---|---|
| F.1 | Offer premises of sufficient size and quality for clinical teaching of students, postgraduate students and medical students                | 4 | 2  | 8  | 3  | 12 | 5  | 20 | Precondition for keeping up the quality and numbers of Slovak health care professionals. But: also dependent on quality of Medical Faculties (outside scope of study), and not the primary focus of the feasibility study | <b>Option 1:</b> Premises are generally in poor condition.<br><b>Option 2:</b> Improves quality of current facilities for clinical teaching.<br><b>Option 3:</b> New build offers opportunity to update clinical teaching facilities to state-of-the-art (including e.g. skills labs, serious gaming applications etc). This will in all cases, however, need to generate a sufficient return on investment, in monetary terms, quality terms or both |
| F.2 | Offer an attractive working environment to medical specialists, medical staff and support staff  | 4 | 1  | 4  | 2  | 8  | 4  | 16 | Required for proper performance of tertiary functions, and for attracting high-end professionals  | <b>Option 1:</b> There seems to be consensus that the current working environment is poor and unattractive. <b>Option 2:</b> Limited improvements, but within the confines of the present configuration and functional and technical constraints of the present building stock. <b>Option 3</b> represent a substantial improvement in attractiveness of the working environment.   |
| G.  | Sustainable development  | 1 | 4  | 2  | 8  | 4  | 16 |    |   |   |
| G.1 | Compliance with the recast (2010) Energy Performance of Buildings Directive (EPBD)   | 4 | 1  | 4  | 2  | 8  | 4  | 16 | Key concern identified by the Client. However, achieving energy efficiency goals is to a large degree independent of other efficiency and quality objectives  | <b>Option 1:</b> Performance in terms of energy consumption is extremely poor.<br><b>Option 2:</b> Major improvements in energy performance can be realised in refurbishment projects, but this does not address the inefficiency in floor use and will not get near to EPBD performance standards. These standards are a major challenge, but in principle achievable in <b>Option 3</b> .   |
| H.  | Address inequalities in healthcare access  | 3 | 24 | 3  | 24 | 4  | 32 |    |   |   |
| H.1 | Satisfy constraints on proximity, accessibility and affordability of appropriate care equal or superior to those for state-owned hospitals | 8 | 3  | 24 | 3  | 24 | 4  | 32 | Supremely important, to ensure healthcare for all, and prevent "cherry picking" as part of the redevelopment.   | <b>Options 1 and 2</b> satisfy constraints on proximity and accessibility of care, but affordability of care can come under strain through persistent yearly operational losses.<br><b>Option 3:</b> offers the opportunity to maximise response to these constraints in the public sector.   |
| I.  | Adaptability to change   | 1 | 4  | 2  | 8  | 4  | 16 |    |   |   |
| I.1 | Provide sufficient lifetime flexibility to cope with qualitative and quantitative changes in demand and operational principles             | 4 | 1  | 4  | 2  | 8  | 4  | 16 | Necessary to provide a fit for purpose solution. However, especially for flexibility issues popping up in the longer term, there will be adjustment possibilities in other areas of the health care system                | <b>Option 1:</b> Flexibility is very limited and current quality of the stock is poor.<br><b>Option 2:</b> Improves quality but leaves limitations of current inefficient configuration and functional and technical constraints of the current stock.<br><b>Option 3:</b> New builds on new sites. Flexibility and adaptability requirements can be figured into the design.   |
| J.  | Added value  | 4 | 16 | 4  | 16 | 8  | 32 |    |   |   |
| J.1 | Serve as a centre of excellence for the region   | 4 | 2  | 8  | 2  | 8  | 4  | 16 | Important for the position of the hospital as a tertiary hospital and centre of excellence. However, relatively small percentage of total turn-over so more limited effect on financial feasibility                       | <b>Options 1 and 2:</b> Current premises even after refurbishment are not sufficiently attractive and don't offer enough functional possibilities to attract top level medical specialists and top level students necessary to establish a centre of excellence.<br><b>Option 3:</b> New build projects allow integration of these  |

## Phase 1 options scoring

|                     |  |           |            |           |            |           |            |    |  |  |
|---------------------|--|-----------|------------|-----------|------------|-----------|------------|----|--|--|
|                     |  |           |            |           |            |           |            |    |  | requirements into the design specifications.   |
| <b>J.2</b>          | Offer opportunities for public sector and commercial R&D         | 4         | 2          | 8         | 2          | 8         | 4          | 16 | Would provide a boost to Bratislava region and Slovak high-end economic activity. But: R&D component optional element not included in feasibility study  | <b>Options 1 and 2:</b> Current premises even after refurbishment are not sufficiently attractive and don't offer enough functional possibilities to attract top level R&D.<br><b>Option 3:</b> New build projects allow integration of these requirements into the design specifications.   |
| <b>K.</b>           | Corporate impact on public sector                                |           | 8          | 24        | 7          | 20        | 4          | 10 |  |  |
| <b>K.1</b>          | Minimise need for legislative changes                            | 2         | 4          | 8         | 4          | 8         | 3          | 6  | Given the poor state of current building stock and considerable yearly losses, there is considerable time-pressure on the hospital redevelopment. Necessary changes in legislation represent potential delays to timing and feasibility that are hard to control | <b>Option 1 and 2:</b> Essentially represent continuation of the present health services delivery model and will not require any major legislative effort.<br><b>Option 3:</b> Planning permission problems may come into play. Also, reconfiguration of services may require legislative changes.   |
| <b>K.2</b>          | Minimise organisational changes required for project realisation | 4         | 4          | 16        | 3          | 12        | 1          | 4  | The proposed changing role of the hospital in combination with redevelopment constitutes a sizable change management challenge   | <b>Option 1:</b> Does not assume any significant organisational changes.<br><b>Option 2:</b> Does assume some organisational changes, predominantly in the use of clinical wards.<br><b>Option 3:</b> Requires substantial changes which will challenge the adaptive capabilities of the UNB organisation to the maximum. Also, given the nature and very high visibility of the project, changes will require a very complicated and politically sensitive change management process. |
| <b>Total scores</b> |  | <b>46</b> | <b>224</b> | <b>54</b> | <b>248</b> | <b>80</b> | <b>384</b> |    |  |  |

Source: TNO

## Phase 2 options scoring

### Options appraisal – Site replacement options

| Appraisal ID | Appraisal category   | Weighting factor | Score option 1 | Weighted score option 1 | Score option 2 | Weighted score option 2 | Score option 3 | Weighted score option 3 | Motivation for weighing factor   | Motivation for scores  |
|--------------|--|------------------|----------------|-------------------------|----------------|-------------------------|----------------|-------------------------|--|--|
| L.           | Health Care Provision  |                  | 10             | 68                      | 17             | 120                     | 11             | 76                      |  |  |
| L.1          | Consequences for accessibility and availability of acute (emergency) care and chronic care | 8                | 2              | 16                      | 4              | 32                      | 3              | 24                      | Ensuring a timely and adequate response to emergency health care needs is a prime requirement of any acute health care provision model. It is a legitimate concern given the major reconfiguration of services across the greater Bratislava regions involved in most of the options analysed. Chronic care represents an inherent burden on patients, who have to visit hospital at a regular, fairly frequent basis. Chronic care is predominantly provided to vulnerable citizens, who generally have limited means of transport and a limited action radius. | <p><b>Option 1:</b> Replacing all four hospitals means concentration of hospital care provision at one single site. For the population of western Bratislava this means a substantial deterioration of availability of emergency care and chronic care. Detailed analysis in a subsequent project phase would have to show whether norms on maximum travel time to emergency care are compromised. Redressing any problems arising would fall outside the scope of the nUNB concession and would present an extra burden on the public sector.</p> <p><b>Option 2</b> tackles the main obstacle by keeping functional the Petržalka site in western Bratislava. Given adequate coordination between sites, the model of a Petržalka site with basic A&amp;E and extensive chronic care provision coupled with an nUNB site concentrating complex A&amp;E (including traumatology) and high-complexity chronic care offers an efficient model for regionally coordinated care provision.</p> <p><b>Option 3</b> also keeps the Petržalka site, but scores less well than Option 2, because it involves continued use of the poor quality Ružinov building stock for complex functions. If A&amp;E is kept in place in Ružinov, redundancies and inefficiencies between the Ružinov and nUNB sites will very probably occur.</p> |
| L.2          | Consequences for accessibility and availability of elective care                           | 4                | 3              | 12                      | 4              | 16                      | 3              | 12                      | Research has shown that patients are generally willing to travel further for elective care provision, if there are adequate trade-offs in terms of quality, patient-centredness, waiting times et cetera. Nevertheless, a growing percentage of the patient population for elective care, too, is made up of vulnerable, often elderly patients, for whom travel to service sites farther away is a burden.  | <p><b>Option 2</b> scores best on this criterion. The combination of availability of sites in the west and east of the catchment area + the model of one smaller with one much bigger site offers a natural platform for site-specific elective care provision profiles.</p> <p><b>Options 1 and 3</b> do equally well. The absence of a hospital site in western Bratislava in option 1 being balanced by the need in option 3 to continue making use of the (functionally) poor quality Ružinov site and the much more awkward puzzle in this option to define an efficient elective care portfolio per site</p>   |
| L.3          | Availability of buffer capacity in case of efficiency gain shortfalls                      | 8                | 2              | 16                      | 4              | 32                      | 3              | 24                      | In dimensioning the new UNB, substantial gains in efficiency of production capacity utilisation and staffing efficiency have been assumed. Various factors outside (or only partially inside) the span of control of the future operator of the nUNB constitute risks for the attainment of these efficiency gains within the timeframe available up   | <p><b>Option 1</b> scores poorly on this criterion. In this option there is considerable stress on attaining efficiency goals in time, because shortfalls mean: revenue loss because of diminished production capacity; or substantial extra investments to build extra capacity; or the need to use very poor quality back-up capacity in the present sites, in which in this option no investments will have been done in the meantime; or using extra capacity in other hospitals, at considerable extra cost and with the risk of loss of market share.</p> <p><b>Option 2</b> scores best. Buffer capacity will be available at the</p>   |

## Phase 2 options scoring

|            |   |   |    |    |    |    |   |    |   |   |
|------------|---|---|----|----|----|----|---|----|---|---|
|            |   |   |    |    |    |    |   |    | to the planned opening of the new UNB. Examples are: delays in necessary legislative changes, employment effect concerns, training requirements for physicians and staff. Adequate buffer capacity to deal with these contingencies should they occur is crucial to ensure availability of care in the greater Bratislava region  | Petržalka site, depending on the profile selected for that site. Depending on the profile selected for Petržalka, the risk of shortfalls actually occurring can be reduced, e.g. by moving long-term admissions to this site.<br><b>Option 3</b> also offers plenty of buffer capacity, but with a three site model not actually all that different from the current nUNB configuration, and with the need to use the functionally poor Ružinov site as a full hospital site, the risk of efficiency gain shortfalls actually occurring is significant  |
| <b>L.4</b> | Facilitate and support transition to regional model of care | 8 | 3  | 24 | 5  | 40 | 2 | 16 | The transition towards a more sustainable, integrated regional model of care is the key policy objective informing the redevelopment of the UNB. This process will take longer than the redevelopment of the nUNB itself, so the new hospital configuration will have an important role to play in facilitating the further process of reform. Also: the longer term operation of the nUNB will require flexibility to deal with qualitative and quantitative changes in demand as a result of future reform. | <b>Option 1</b> succeeds in creating the high-complexity tertiary hospital hub at the centre of regional models like the one being developed in Northern Ireland. However, unless the scope of the nUNB concession is extended to include primary care and long term care, putting in place the other nodes in the regional network rests with other stakeholders and presents a risk of extra burden to the public sector. In <b>option 3</b> it is doubtful whether the nUNB without the Ružinov programme would have enough critical mass to function as a tertiary hospital regional hub. The option also largely continues the present configuration (effectively only replacing the hospitals in Kramáre and Staré Mesto with one new site), sending a "no change" signal that conflicts with long-term policy objectives.<br><b>Option 2</b> scores best: it represents a model of a tertiary hospital + general hospital configuration, and depending on the profile selected for the Petržalka site there may be spare capacity which can be reallocated to use by other providers   |
| <b>M.</b>  | <b>Quality, efficiency and risks</b>                        |   | 20 | 70 | 15 | 52 | 8 | 26 |   |   |
| <b>M.1</b> | Technical and structural quality and risks                  | 4 | 5  | 20 | 3  | 12 | 1 | 4  | Any UNB redevelopment must provide a healthcare environment that offers technically adequate and safe conditions for patients, employees and visitors. For new build there must be a reasonable certainty of safe conditions for 25-50 years, for refurbishment options for 15-20 years   | <b>Option 1</b> completely gets rid of the current building stock and replaces it with a new hospital complex built to contemporary structural and technical standards.<br><b>Option 2</b> gets rid of the worst quality sites. The Petržalka sites is not yet 20 years old and it should be possible to get it up to an acceptable technical and structural level with investments. However, site visit has shown that little maintenance has been carried out over the lifetime of the building; also construction has gone on over a period of 10 years, increasing the risk of deficiencies having been introduced over the construction periods. Also, some poor quality building materials (e.g. window frames) have been used. In a following project phase, a full due diligence analysis to ascertain the technical and structural quality of the site would be necessary.<br><b>Option 3</b> also keeps in use the site at Ružinov. To fully ascertain structural and technical risks, a due diligence analysis in a following project phase would be required for this site, too. However, the buildings at Ružinov date from 1984, with no major mid-life investments having been done, and only minimal maintenance performed. Visual inspection during a site visit indicates poor quality building material having been used, and some major |



## Phase 2 options scoring

|            |   |   |   |    |   |    |   |   |  |   |
|------------|---|---|---|----|---|----|---|---|--|---|
|            |   |   |   |    |   |    |   |   |  | structural/technical problems noted or suspected. Notably: there are major problems with the facade cladding, and there is suspicion of damage to the load bearing concrete construction at the lower building levels.  |
| <b>M.2</b> | Functional quality, efficiency and risks  | 4 | 5 | 20 | 4 | 16 | 2 | 8 | Any UNB redevelopment must provide a healthcare environment that offers long-term conditions enabling efficient utilisation of production facilities and provision of care according to contemporaneous standards  | <p><b>Option 1</b> scores best. It represents a completely new UNB, designed to contemporary standards and taking into account operator preferences for spatial, logistical and process structuring.</p> <p><b>Option 2</b> keeps to this principle for (roughly) 75-80% of the total production volume, but will need to reckon with limitations on quality and inefficiency imposed by the physical dimensions and main design principles of the current Petržalka site. The exact extent of these limitations depends on the functional profile selected for the site, and would need to be determined in a following project phase on the basis of a full redevelopment plan for the Petržalka site.</p> <p><b>Option 3</b> additionally keeps operational the Ružinov site. If this option were selected, the full extent of quality and efficiency limitations would need to be established in a following phase on the basis of a full redevelopment plans. However, the site visit conducted and the floor plans made available for the current site already indicate a number of deficiencies not easily remedied in a refurbishment scheme. These include a pavilion type spatial organisation, with little clusters of operating theatres and special care beds scattered throughout the building; a "Breitfuss" type bed tower, yielding a very poor gross to net floor area ratio; limited vertical transport capacity, not easily remedied because of constraints imposed by elevator shaft dimensions; limited ceiling heights; and very poor quality lab facilities in outlying buildings</p> |
| <b>M.3</b> | Staffing efficiency: primary processes    | 4 | 5 | 20 | 4 | 16 | 2 | 8 | A major expected deficit reduction effect from redevelopment of the nUNB is in cutting down on staffing inefficiencies occasioned by the poor quality current healthcare environment and considerable redundancy due to retention of four separate sites with a more or less full acute hospital profile. Staff costs are a major driver in hospital costs. Also, job profiles and task levels fitting competencies and ambitions of health care professionals are important to attract and retain good quality staff. Because primary processes are patient-related, achieving the required staffing efficiency is a direct outcome of the successful redevelopment of the nUNB | <p><b>Option 1:</b> Replacing the four current hospital sites of the UNB with one new building offers optimum possibilities to increase staff efficiency.</p> <p><b>Option 2:</b> Still leaves open this possibility for (roughly) 75-80% of total production volume, but may need to accommodate some inefficiency due to two-site model and functional constraints of Petržalka site. Degree of inefficiency would vary according to the profile selected for the Petržalka site.</p> <p><b>Option 3</b> is a three-site model and would have to deal with the substantial functional constraints of the hospital at Ružinov, making this by far the worst option.</p>  |
| <b>M.4</b> | Staffing efficiency: support and services | 2 | 5 | 10 | 4 | 8  | 3 | 6 | Cutting down on redundancy and (in the present circumstances   | Centralisation of services like laundry, catering and warehouses can to a large degree be implemented regardless of number of sites   |

## Phase 2 options scoring

|            |  |   |    |    |    |    |    |   | unavoidable) inefficiencies in support and services provision is another major strategy in improving the cost effectiveness of the nUNB. However, as these staff functions are not directly patient-related, there will be alternative options to improve efficiency (e.g. outsourcing of services, camera surveillance instead of security etc) independent of the main option pursued for the nUNB redevelopment  | served. Options 2 and 3 scores less well because extra transport of goods between sites would be needed. The main difference between options is in the number of site-related support staff needed, like security, reception, restaurant staff et cetera.   |
|------------|--|---|----|----|----|----|----|---|---|---|
| N.         | Financial assessment   | 9 | 30 | 11 | 36 | 7  | 24 |   |   |   |
| <b>N.1</b> | Volume of initial CapEx required and size of concession                                | 4 | 3  | 12 | 3  | 12 | 2  | 8 | The current nUNB has very low capital expenditures, due to the almost total lack of investments in built infrastructure over the past 20+ years. Redevelopment of the nUNB will incur substantial capital expenditures, influencing total operational costs. Logically, the larger the capital investment, the higher capital expenditures will result. But the level of capital expenditure is also influenced by the depreciation period for capital investments. While capital expenditure is a substantial influence, operational costs are THE determining factor over the lifetime of the nUNB determining efficiency and profitability                                     | Using the assumptions outlined in the Report on Options, the lowest initial CapEx in absolute terms is that for <b>Option 3</b> . However, in terms of value for money this option is the least attractive, because almost half of initial CapEx goes on refurbishment of Petržalka and Ružinov.<br><b>Options 1 and 2</b> require almost equal initial CapEx and offer similar value for money, with the greater operational efficiency in Option 1 being balanced by lower capacity risks in Option 2 |
| <b>N.2</b> | Required return on investment for private investor (in case of PPP option development) | 2 | 3  | 6  | 4  | 8  | 2  | 4 | In the case of a private investor running the nUNB, or even a private investor taking responsibility for construction, financing and maintenance of the nUNB in a PFI-type set-up, the private investor will calculate in a required return on investment on capital costs to cover loans, profit margin and perceived risks. The return on investment required will depend both on the total volume of capital expenditure, and on the perceived risks associated these capital expenditures. However, for the options analysis, this factor is less relevant, as other strategies to cut down capital costs and reduce risks can be pursued independent of the site replacement | <b>Option 2</b> is the best option in the light of this criterion. It offers the lowest capacity risks, and the best options for continuous adaptation to further reforms, while still allowing maximum operational efficiency for 75-80% of the program. <b>Option 3</b> scores worst: it involves refurbishment and continued operation of the Ružinov site which (to be determined later on by due diligence analysis) may not even be feasible at all   |

## Phase 2 options scoring

| option selected.    |                                   |  |            |           |            |           |            |    |
|---------------------|-----------------------------------|--|------------|-----------|------------|-----------|------------|----|
| <b>N.3</b>          | Remaining burden on public sector | 4  | 3          | 12        | 4          | 16        | 3          | 12 |
|                     |                                   | <p>The current UNB incurs very substantial yearly losses without even considering maintenance and capital costs or return on investment. In the event of Petržalka, or Petržalka and Ružinov being kept out of the scope of the nUNB development, these site(s) will have to be run at a lower level of efficiency given their constraints on technical and functional efficiency and adaptability. Extra costs related to this lower level of efficiency will devolve back onto the public sector; either directly, when these sites are run as public hospitals, or indirectly through prices charged by a private contractor.</p> <p>In <b>option 1</b>, the introduction of new types of health care facilities and provision models to attain long-term policy objectives falls outside the scope of operations of the nUNB and would constitute a strain on public resources.</p> <p><b>Option 2</b> is better in this respect, because the Petržalka site (depending on profile) could form a natural platform for implementing new models of care provision with the active involvement of the nUNB.</p> <p><b>Option 3</b> requires continued operation of a three site hospital in a model not dissimilar to the current model and also involves retention of the Ružinov site with attendant probable deficits devolving back onto the public sector either directly or indirectly.</p> |            |           |            |           |            |    |
| <b>Total scores</b> |                                   | <b>39</b>  | <b>168</b> | <b>43</b> | <b>208</b> | <b>26</b> | <b>126</b> |    |

Source: TNO

## Phase 3 options scoring

### Options appraisal – Petržalka profile options

| Petržalka profile options |   |                     | Option 1<br>Petržalka current<br>profile |                               | Option 2<br>Petržalka revised<br>profile, in<br>concession |                               | Option 3<br>Petržalka revised profile,<br>separate legal entity |                               | Motivation for weighing factor  | Motivation for scores  |
|---------------------------|---|---------------------|--|-------------------------------|--|-------------------------------|---|-------------------------------|---|--|
| Appraisal<br>ID           | Appraisal category  | Weighting<br>factor | Score<br>option 1                        | Weighted<br>score<br>option 1 | Score<br>option 2  | Weighted<br>score<br>option 2 | Score<br>option 3   | Weighted<br>score<br>option 3 |   |  |
| <b>O.</b>                 | <b>Health Care Provision</b>  |                     | <b>10</b>                                | <b>68</b>                     | <b>15</b>  | <b>104</b>                    | <b>15</b>   | <b>104</b>                    |   |  |
| <b>O.1</b>                | Contribution to policy objectives: regional cooperation and integration of care | 8                   | 2  | 16                            | 3  | 24                            | 4   | 32                            | The long-term policy objective for the Bratislava region (and Slovakia) is to move towards an integrated, regionally coordinated model of healthcare delivery. The UNB redevelopment is a mid-term flagship initiative highlighting this shift. Its organisational principles and its spatial organisation must be consistent with this shift and must offer encouragement and capacity building for further reform   | Retention of a full-profile acute hospital apart from the concession ( <b>Option 1</b> ) would not encourage cooperation between New hospital and Petržalka, but would be more likely to result in a competition for market share model. A revised profile for Petržalka outside the New hospital concession <b>Option 2</b> works better, but has not received a maximum score, because tensions will undoubtedly exist between New hospital and regional interests and concerns, and there may be financial disincentives for the New hospital to implement new models of care. In fact, preliminary revenue projections carried out in the preparation of this feasibility study have shown a detrimental revenue effect from care reforms that are desirable from the public interest point of view.<br><b>Option 3</b> scores best, because in this option the public sector has hands-on influence at the site where the major reform movement needs to be made. Success is however dependent on good coordination and cooperation between the different operators of the site |
| <b>O.2</b>                | Capacity risk management and facilitation of transition model                   | 8                   | 2  | 16                            | 4  | 32                            | 3   | 24                            | The main capacity risk facing the New hospital site when it opens is insufficient bed capacity, if measures to increase occupancy rates, reduce average length of stay and shift patients from inpatient to day patient run into delays or difficulties. (Other efficiency objectives may encounter similar problems, but these are much more amenable to simpler contingency measures such as longer opening hours). The preferred option must thus first of all offer spare bed capacity that can be used in emergencies. Furthermore, the preferred option for the Petržalka functional profile should present a functional profile for the Petržalka site that reflects the direction of reform, and that can easily be downsized or partially reallocated when further reforms are implemented | Given the limited efficiency gains possible at the Petržalka site, continuation of the current profile means that most of the site will continue in use, with very little spare capacity available as a buffer for the New hospital. Moreover, Petržalka will be run by a different entity in what is likely to be a competition model, so there seems no great likelihood that any spare capacity would be available to the New hospital. Option 3 provides much more spare capacity, with the drawback that this capacity is not run by the New hospital but by another entity, though probably not in a competition model. Option 2 has the added advantage that the spare capacity is run by the entity also running the New hospital  |

## Phase 3 options scoring

|            |  |   |           |           |           |           |           |           |  |   |
|------------|--|---|-----------|-----------|-----------|-----------|-----------|-----------|--|---|
| <b>O.3</b> | Accessibility, availability and quality of acute (emergency) care and chronic care | 8 | 3         | 24        | 4         | 32        | 4         | 32        | Ensuring a timely and adequate response to emergency health care needs is a prime requirement of any acute health care provision model. Chronic care represents an inherent burden on patients, who have to visit hospital at a regular, fairly frequent basis. Chronic care is predominantly provided to vulnerable citizens, who generally have limited means of transport and a limited action radius. The preferred option for the Petržalka site profile should find the appropriate balance between concentration of high-complexity emergency care, provision of low-complexity emergency care and chronic care close to home | In all three options, provision of adequate emergency care at Petržalka site can be assumed. <b>Options 2 and 3</b> offer better opportunities of developing a sustainable and efficient regional emergency care model. In the current profile model of <b>Option 1</b> it is likely that chronic care provision will remain fragmented over multiple hospitals, while <b>Options 2 and 3</b> are predicated on rational allocation of chronic care to hospital sites according to profile  |
| <b>O.4</b> | Accessibility, availability and quality of elective care                           | 4 | 3         | 12        | 4         | 16        | 4         | 16        | In contemporary service delivery models, elective care, too, is increasingly approached from an integrated care pathway perspective, distinguishing between appropriate environments for different steps in the care process. The preferred option for the Petržalka profile must facilitate an integrated care pathway approach. Additionally, for elective care processes as well as for emergency and chronic care, it is preferable that high-frequency hospital procedures are available close to home  | While a competition model is likely to result in higher quality and lower prices for certain types of (profitable) elective care, Option 1 carries the risk of hospital operators overfocusing on elective care business opportunities to the detriment of less profitable but medically necessary elective care. This risk is much less pronounced in Options 2 and 3, with the proviso for Option 2 that even a public operator running this hospital configuration might overfocus on profitable business cases, and for Option 3 that good coordination and cooperation between the operators of the New hospital and Petržalka sites would be required |
| <b>P.</b>  | <b>Quality, efficiency and risks</b>   |   | <b>12</b> | <b>40</b> | <b>17</b> | <b>60</b> | <b>17</b> | <b>60</b> |  |   |
| <b>P.1</b> | Structural and technical quality New hospital site                                 | 2 | 4         | 8         | 4         | 8         | 4         | 8         | Depending on the profile preferred for Petržalka, the functional capacity to be housed at the New hospital site may vary, creating a better or lesser fit with the site area and characteristics, as well as possibly resulting in a different intrinsic risk profile for the New hospital site. However, it is felt that the total impact of this variance between options considered at this stage of the analysis will be limited.  | There is nothing to separate the three options on this criterion. In all three cases there is every reason to assume that an New hospital will be constructed according to contemporary technical and structural standards  |
| <b>P.2</b> | Structural and technical quality Petržalka site                                    | 4 | 2         | 8         | 4         | 16        | 4         | 16        | The preferred option should take account of and avoid conflict with known structural and technical limitations at the Petržalka site (e.g. limited ceiling heights, lack of full climate control, restraints from load bearing construction etc), to avoid risks to safety and continuity of care provision  | As stated in the analysis of site replacement options, a full due diligence analyse would be needed in a subsequent project phase to ascertain fully the structural and technical limitations and risks of the Petržalka site. On the basis of the information available for the purposes of the current assignment (primarily the site visit), there will be limitations on the technical quality level that can be achieved if the use of Petržalka is continued with the current profile, meaning that the   |

## Phase 3 options scoring

|            |   |   |   |    |    |    |    |    |   |  |
|------------|---|---|---|----|----|----|----|----|---|--|
|            |   |   |   |    |    |    |    |    |   | technical quality will fall short of contemporary standards, a gap that will increase as time goes by and standards evolve. In <b>Options 2 and 3</b> the functional profile is both less technically complex and smaller in scale, allowing workarounds around any technical limitations that may be encountered.   |
| <b>P.3</b> | Functional quality and efficiency New hospital site | 4 | 4 | 16 | 5  | 20 | 5  | 20 | In selecting the preferred profile for the Petržalka site, an extra efficiency consideration must be introduced in addition to economies of scale: economies of scope. Inefficiencies in organisation and use of production facilities in general and tertiary hospitals accrue in part from the fact that processes with many different typological characteristics need to run together, interfering and placing irreconcilable demands on production capacity. By differentiating profiles between sites (e.g. high-complexity inpatient care versus low-complexity outpatient care) a more uniform typology of processes and demands is introduced reducing the risk of interference and efficiency loss at each site | All three options score well on this criterion, but <b>Options 2 and 3</b> have the added advantage of introducing economies of scope, presenting a more uniform functional profile at the New hospital site which should ease the task of creating a functionally efficient facility. The functional quality and efficiency of redevelopment of Petržalka using the current profile is expected to be fairly poor compared to contemporary standards; the medically simpler and less extensive functional programme supposed in Options 2 and 3 offers better opportunities to avoid the major inefficiencies |
| <b>P.4</b> | Functional quality and efficiency Petržalka site    | 4 | 2 | 8  | 4  | 16 | 4  | 16 |   |  |
| <b>Q.</b>  | <b>Financial assessment</b>                         |   | 8 | 20 | 11 | 30 | 10 | 26 |   |  |
| <b>Q.1</b> | Capital expenditure New hospital                    | 2 | 4 | 8  | 3  | 6  | 3  | 6  | The functional profile and scope (see P.3 and P.4 above) determined for the New hospital site have an influence on the total CapEx required for the initial investment to erect the building. Investment levels per m2 vary from functional group to functional group depending on the constructive and technical complexity of the function. A higher percentage of high-complexity functions will result in higher CapEx. This difference would be even more marked when the Layers methodology is applied to the design of the New hospital (not addressed in this high-level analysis, but used in the detailed analysis of the preferred option)   | <b>Option 1</b> scores best. The reason is that because of the economies of scope presumed in <b>Options 2 and 3</b> , the New hospital will have a greater proportion of high-tech, medically complex functions with a higher associated investment level.  |
| <b>Q.2</b> | Capital expenditure Petržalka site                  | 2 | 2 | 4  | 4  | 8  | 4  | 8  | The functional profile and scope (see P.3 and P.4 above) determined for the Petržalka site have an influence on the total CapEx required for the initial investment to bring the Petržalka site up to a technical and functional fit-for-purpose state. Investment levels per   | Redevelopment of the Petržalka site for its current functional profile requires a mid-life level or beyond refurbishment for most of the site and will incur very substantial investment costs. In <b>Options 2 and 3</b> the total floor area required is substantially smaller, with an attendant decrease in investment costs. The two options  |

## Phase 3 options scoring

|              |                                   |    |     |    |     |    |     |    |  |   |
|--------------|-----------------------------------|----|-----|----|-----|----|-----|----|--|---|
|              |                                   |    |     |    |     |    |     |    | m2 vary from functional group to functional group depending on the constructive and technical complexity of the function. In addition, continuation of the current production profile for Petržalka, given the limited efficiency gains that can be assumed for a refurbishment scenario, means that approximately 90% of the current site will have to be refurbished. If a different functional scope and profile are selected, there may be substantial effect in the percentage of current floor space needing refurbishment and the investment level per m2 associated with those refurbishments  | balance out: a private operator is more likely than a public sector operator to be successful in cost containment, but will have to deal with higher costs of capital and will want to figure in a return on investment.  |
| Q.3          | Remaining burden on public sector | 4  | 2   | 8  | 4   | 16 | 3   | 12 | In the case of a private investor running the New hospital, or even a private investor taking responsibility for construction, financing and maintenance of the New hospital in a PFI-type set-up, the private investor will calculate in a required return on investment on capital costs to cover loans, profit margin and perceived risks. The return on investment required will depend both on the total volume of capital expenditure, and on the perceived risks associated these capital expenditures. However, for the options analysis, this factor is less relevant, as other strategies to cut down capital costs and reduce risks can be pursued independent of the site replacement option selected. | <b>Option 1</b> represents the most substantial likely burden on the public sector. Extensive refurbishment needs and functioning at technical and functional levels below functional standards will incur sizable deficits.<br><b>Option 2</b> probably scores best, because an operator running Petržalka as part of the New hospital will be directly incentivised to contain costs. But note that vigilance on the part of the public sector is required to prevent deficits being devolved back onto the public sector in the form of higher prices, reduced service etc |
| Total scores |                                   | 30 | 128 | 43 | 194 | 42 | 190 |    |  |   |

Source: TNO

## Petržalka profile assumptions details

- The percentages indicate which percentage of the level 2 line production is situated at Petržalka. The resulting production figures listed indicate the level of production left at the nUNB site

### Petržalka profile assumption details – part 1/5

#### PART IV

| Petržalka programme            |                              | PP.01               | PP.02                  | PP.03             | PP.04                | PP.05     | PP.06       |
|--------------------------------|------------------------------|---------------------|------------------------|-------------------|----------------------|-----------|-------------|
|                                |                              | Clinical admissions | Dayclinical admissions | Outpatient visits | Diagnostic treatment | Surgeries | Deliveries  |
|                                |                              | UH                  | OHV                    | ŠAS               | SVLZ                 | SUR       | DEL         |
| Blood bank                     | Blood bank                   | 0                   | 0                      | 0                 | 31.073               | 0         | 0           |
| Central staff accomodation     | Support                      | 0                   | 0                      | 0                 | 0                    | 0         | 0           |
| Central sterilization          | Central Sterilization        | 0                   | 0                      | 0                 | 0                    | 0         | 0           |
| Child care                     | Pediatrics                   | 975                 | 50% 22                 | 0                 | 0                    | 0         | 0           |
| Child care                     | Pneumology                   | 419                 | 0                      | 0                 | 0                    | 0         | 0           |
| Child care                     | Infectious and geo- medicine | 1.076               | 0                      | 0                 | 0                    | 0         | 0           |
| Civil services                 | Support                      | 0                   | 0                      | 0                 | 0                    | 0         | 0           |
| Community spaces               | Support                      | 0                   | 0                      | 0                 | 0                    | 0         | 0           |
| Day nursing                    | Day nursing                  | 0                   | 50% 6.284              | 0                 | 0                    | 0         | 0           |
| Delivery                       | Department                   | 0                   | 0                      | 0                 | 0                    | 0         | 25,0% 5.829 |
| Education                      | Support                      | 0                   | 0                      | 0                 | 0                    | 0         | 0           |
| Emergency care and GP-post A&E | Admissions                   | 0                   | 0                      | 25% 84.600        | 0                    | 0         | 0           |
| Emergency care and GP-post A&E | Pediatrics                   | 0                   | 0                      | 10% 502           | 0                    | 0         | 0           |
| Emergency care and GP-post A&E | Traumatology                 | 0                   | 0                      | 0% 17.991         | 0                    | 0         | 0           |
| Emergency care and GP-post A&E | Department                   | 0                   | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Anesthesiology               | 212                 | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Intensive medicine           | 307                 | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Transplantation              | 0                   | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Surgery                      | 20% 5.246           | 50% 1.465              | 0                 | 0                    | 0         | 0           |
| General nursing                | Hematology                   | 378                 | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Oncology                     | 50% 376             | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Pneumology                   | 50% 747             | 100% 0                 | 0                 | 0                    | 0         | 0           |
| General nursing                | Long-term care               | 80% 301             | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Occupational medicine        | 568                 | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Infectious and geo- medicine | 1.044               | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Dermatology                  | 20% 730             | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Gastroenterology             | 786                 | 160                    | 0                 | 0                    | 0         | 0           |
| General nursing                | Geriatrics                   | 2.492               | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Gyneacology                  | 10% 9.347           | 25% 3.036              | 0                 | 0                    | 0         | 0           |
| General nursing                | Healing                      | 456                 | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Internal medicine            | 30% 7.140           | 0                      | 0                 | 0                    | 0         | 0           |
| General nursing                | Burns                        | 2                   | 0                      | 0                 | 0                    | 0         | 0           |



## Petržalka profile assumptions details

## Petržalka profile assumption details – part 2/5

|                                   |                        |      |       |      |     |     |       |     |         |  |   |
|-----------------------------------|------------------------|------|-------|------|-----|-----|-------|-----|---------|--|---|
| General nursing                   | Neurosurgery           |      | 1.327 |      | 102 |     | 0     |     | 0       |  | 0 |
| General nursing                   | Ophthalmology          | 100% | 0     | 100% | 0   |     | 0     |     | 0       |  | 0 |
| General nursing                   | ORL                    |      | 1.421 | 100% | 0   |     | 0     |     | 0       |  | 0 |
| General nursing                   | Orthopaedics           |      | 2.740 | 100% | 0   |     | 0     |     | 0       |  | 0 |
| General nursing                   | Audiology              |      | 306   |      | 0   |     | 0     |     | 0       |  | 0 |
| General nursing                   | Traumatology           |      | 3.472 |      | 596 |     | 0     |     | 0       |  | 0 |
| General nursing                   | Urology                |      | 3.351 |      | 417 |     | 0     |     | 0       |  | 0 |
| General nursing                   | Vascular surgery       |      | 437   | 100% | 0   |     | 0     |     | 0       |  | 0 |
| General organ function diagnostic | ORL                    |      | 0     |      | 0   |     | 9     |     | 0       |  | 0 |
| General organ function diagnostic | Pneumology             |      | 0     |      | 0   | 30% | 243   |     | 0       |  | 0 |
| General organ function diagnostic | Neurology              |      | 0     |      | 0   | 30% | 3.241 |     | 0       |  | 0 |
| General organ function diagnostic | Internal medicine      |      | 0     |      | 0   | 30% | 2.108 | 30% | 3.371   |  | 0 |
| General organ function diagnostic | Gastroenterology       |      | 0     |      | 0   |     | 13    |     | 1.704   |  | 0 |
| General organ function diagnostic | Gyneacology            |      | 0     |      | 0   | 25% | 3.505 | 25% | 362     |  | 0 |
| General organ function diagnostic | Department             |      | 0     |      | 0   |     | 0     |     | 0       |  | 0 |
| General organ function diagnostic | Immunology             |      | 0     |      | 0   |     | 0     |     | 206     |  | 0 |
| General organ function diagnostic | Pathology              |      | 0     |      | 0   |     | 0     |     | 433     |  | 0 |
| General organ function diagnostic | Densitometry           |      | 0     |      | 0   |     | 0     | 50% | 1.981   |  | 0 |
| General organ function diagnostic | Cardiology             |      | 0     |      | 0   |     | 0     |     | 0       |  | 0 |
| General organ function diagnostic | Functional diagnostics |      | 0     |      | 0   |     | 0     | 50% | 6.542   |  | 0 |
| General organ function diagnostic | Neurophysiology        |      | 0     |      | 0   |     | 0     |     | 0       |  | 0 |
| I&D conventional radiography      | Angiology              |      | 0     |      | 0   |     | 4.438 |     | 0       |  | 0 |
| I&D conventional radiography      | Department             |      | 0     |      | 0   |     | 0     |     | 0       |  | 0 |
| I&D conventional radiography      | Internal medicine      |      | 0     |      | 0   |     | 0     | 25% | 1.544   |  | 0 |
| I&D conventional radiography      | Neonatology            |      | 0     |      | 0   |     | 0     |     | 1       |  | 0 |
| I&D conventional radiography      | Neurology              |      | 0     |      | 0   |     | 0     | 25% | 205     |  | 0 |
| I&D conventional radiography      | Diagnostic imaging     |      | 0     |      | 0   |     | 0     | 25% | 190.565 |  | 0 |
| I&D echography                    | Department             |      | 0     |      | 0   |     | 0     |     | 0       |  | 0 |
| I&D echography                    | Diagnostic imaging     |      | 0     |      | 0   |     | 0     |     | 1.328   |  | 0 |
| I&D echography                    | Gyneacology            |      | 0     |      | 0   |     | 0     | 25% | 35.174  |  | 0 |
| I&D echography                    | Surgery                |      | 0     |      | 0   |     | 0     |     | 0       |  | 0 |
| I&D echography                    | Urology                |      | 0     |      | 0   |     | 0     |     | 364     |  | 0 |
| I&D mammography                   | Diagnostic imaging     |      | 0     |      | 0   |     | 0     |     | 0       |  | 0 |

## Petržalka profile assumptions details

## Petržalka profile assumption details – part 3/5

|                                  |                              |       |   |            |            |            |
|----------------------------------|------------------------------|-------|---|------------|------------|------------|
| I&D MRI                          | Diagnostic imaging           | 0     | 0 | 0          | 4.159      | 0          |
| I&D scanner                      | Angiography                  | 0     | 0 | 0          | 0          | 0          |
| I&D scanner                      | Clinical pharmacology        | 0     | 0 | 0          | 9.053      | 0          |
| I&D scanner                      | Diagnostic imaging           | 0     | 0 | 0          | 25% 14.064 | 0          |
| Kitchen                          | Support                      | 0     | 0 | 0          | 0          | 0          |
| Laboratory clinical chemistry    | Neurophysiology              | 0     | 0 | 2.227      | 0          | 0          |
| Laboratory clinical chemistry    | Laboratory                   | 0     | 0 | 0          | 5.827      | 0          |
| Laboratory clinical chemistry    | Immunology                   | 0     | 0 | 0          | 401        | 0          |
| Laboratory clinical chemistry    | Internal medicine            | 0     | 0 | 0          | 1.384      | 0          |
| Laboratory clinical chemistry    | Psychiatry                   | 0     | 0 | 0          | 4          | 0          |
| Laboratory clinical pathology    | Burns                        | 0     | 0 | 0          | 0          | 0          |
| Laboratory clinical pathology    | Ophthalmology                | 0     | 0 | 0          | 0          | 0          |
| Laboratory clinical pathology    | Pathology                    | 0     | 0 | 0          | 4.782      | 0          |
| Laboratory medical microbiology  | Densitometry                 | 0     | 0 | 0          | 0          | 0          |
| Laboratory medical microbiology  | Genetics                     | 0     | 0 | 0          | 9.196      | 0          |
| Laboratory medical microbiology  | Medical microbiology         | 0     | 0 | 0          | 32.706     | 0          |
| Laboratory medical microbiology  | Dermatology                  | 0     | 0 | 0          | 1.580      | 0          |
| Neonatology                      | Neonatology                  | 7.806 | 0 | 0          | 0          | 0          |
| Nuclear medicine                 | Internal medicine            | 65    | 0 | 0          | 0          | 0          |
| Operating theatres high turnover | Department                   | 0     | 0 | 0          | 0          | 30% 34.962 |
| Outpatient clinic                | Physical therapy             | 0     | 0 | 8.103      | 0          | 0          |
| Outpatient clinic                | Admissions                   | 0     | 0 | 25% 14.652 | 0          | 0          |
| Outpatient clinic                | Infectious and geo- medicine | 0     | 0 | 50% 7.509  | 0          | 0          |
| Outpatient clinic                | Allergology                  | 0     | 0 | 50% 8.055  | 0          | 0          |
| Outpatient clinic                | Anesthesiology               | 0     | 0 | 50% 7.660  | 0          | 0          |
| Outpatient clinic                | Andrology                    | 0     | 0 | 50% 2.451  | 0          | 0          |
| Outpatient clinic                | Angiology                    | 0     | 0 | 50% 4.142  | 0          | 0          |
| Outpatient clinic                | ORL                          | 0     | 0 | 50% 5.670  | 0          | 0          |
| Outpatient clinic                | Burns                        | 0     | 0 | 4.039      | 0          | 0          |
| Outpatient clinic                | Cardiology                   | 0     | 0 | 50% 15.686 | 0          | 0          |
| Outpatient clinic                | Dermatology                  | 0     | 0 | 50% 12.060 | 0          | 0          |
| Outpatient clinic                | Surgery                      | 0     | 0 | 50% 30.133 | 0          | 0          |
| Outpatient clinic                | Pediatrics                   | 0     | 0 | 6.994      | 0          | 0          |

## Petržalka profile assumptions details

## Petržalka profile assumption details – part 4/5

|                   |                        |   |   |     |        |     |       |   |
|-------------------|------------------------|---|---|-----|--------|-----|-------|---|
| Outpatient clinic | Neonatology            | 0 | 0 | 25% | 2.752  | 0   | 0     | 0 |
| Outpatient clinic | Immunology             | 0 | 0 | 50% | 1.596  | 0   | 0     | 0 |
| Outpatient clinic | Neurophysiology        | 0 | 0 | 50% | 4.610  | 0   | 0     | 0 |
| Outpatient clinic | Oncology               | 0 | 0 | 50% | 3.019  | 0   | 0     | 0 |
| Outpatient clinic | Clinical psychology    | 0 | 0 | 50% | 2.097  | 0   | 0     | 0 |
| Outpatient clinic | Pneumology             | 0 | 0 | 50% | 12.415 | 0   | 0     | 0 |
| Outpatient clinic | Psychiatry             | 0 | 0 | 50% | 15.313 | 0   | 0     | 0 |
| Outpatient clinic | Sports medicine        | 0 | 0 | 50% | 717    | 0   | 0     | 0 |
| Outpatient clinic | Diabetology            | 0 | 0 | 50% | 10.321 | 0   | 0     | 0 |
| Outpatient clinic | Pharmacotherapy        | 0 | 0 | 50% | 4.868  | 0   | 0     | 0 |
| Outpatient clinic | Geriatrics             | 0 | 0 | 50% | 2.168  | 50% | 346   | 0 |
| Outpatient clinic | Internal medicine      | 0 | 0 | 50% | 43.758 | 50% | 1.239 | 0 |
| Outpatient clinic | Ophthalmology          | 0 | 0 | 50% | 25.288 | 50% | 4.381 | 0 |
| Outpatient clinic | FRO                    | 0 | 0 | 50% | 4.958  | 0   | 0     | 0 |
| Outpatient clinic | Functional diagnostics | 0 | 0 |     | 0      | 0   | 0     | 0 |
| Outpatient clinic | Gastroenterology       | 0 | 0 | 50% | 9.494  | 0   | 0     | 0 |
| Outpatient clinic | General specialist     | 0 | 0 | 50% | 1.405  | 0   | 0     | 0 |
| Outpatient clinic | Genetics               | 0 | 0 |     | 1.971  | 50% | 288   | 0 |
| Outpatient clinic | Hematology             | 0 | 0 | 25% | 27.837 | 0   | 0     | 0 |
| Outpatient clinic | Hepatology             | 0 | 0 |     | 7.488  | 0   | 0     | 0 |
| Outpatient clinic | Osteology              | 0 | 0 |     | 26     | 0   | 0     | 0 |
| Outpatient clinic | Occupational medicine  | 0 | 0 | 50% | 2.659  | 0   | 0     | 0 |
| Outpatient clinic | Nefrology              | 0 | 0 | 50% | 1.596  | 0   | 0     | 0 |
| Outpatient clinic | KAIM                   | 0 | 0 | 50% | 1.893  | 0   | 0     | 0 |
| Outpatient clinic | Logopedy               | 0 | 0 | 50% | 1.713  | 0   | 0     | 0 |
| Outpatient clinic | Nephrology             | 0 | 0 | 50% | 1.561  | 0   | 0     | 0 |
| Outpatient clinic | Neurology              | 0 | 0 | 50% | 25.182 | 50% | 956   | 0 |
| Outpatient clinic | Neurosurgery           | 0 | 0 |     | 4.200  | 0   | 0     | 0 |
| Outpatient clinic | Chemotherapy           | 0 | 0 |     | 0      | 0   | 0     | 0 |
| Outpatient clinic | Children               | 0 | 0 |     | 2.018  | 0   | 0     | 0 |
| Outpatient clinic | Clinical genetics      | 0 | 0 |     | 3.712  | 0   | 0     | 0 |
| Outpatient clinic | Urology                | 0 | 0 | 50% | 22.745 | 0   | 0     | 0 |
| Outpatient clinic | Orthodontics           | 0 | 0 |     | 2.319  | 0   | 0     | 0 |
| Outpatient clinic | Orthopedics            | 0 | 0 | 50% | 12.277 | 0   | 0     | 0 |
| Outpatient clinic | Phoniatrics            | 0 | 0 | 50% | 2.503  | 0   | 0     | 0 |
| Outpatient clinic | Plastic surgery        | 0 | 0 | 50% | 6.331  | 0   | 0     | 0 |
| Outpatient clinic | Reproductive medicine  | 0 | 0 |     | 3.719  | 0   | 0     | 0 |

## Petržalka profile assumptions details

## Petržalka profile assumption details – part 5/5

|                                       |                             |       |     |            |            |   |   |
|---------------------------------------|-----------------------------|-------|-----|------------|------------|---|---|
| Outpatient clinic                     | Stomatology                 | 0     | 0   | 1.616      | 0          | 0 | 0 |
| Outpatient clinic                     | Vascular                    | 0     | 0   | 50% 2.037  | 0          | 0 | 0 |
| Outpatient clinic                     | Department                  | 0     | 0   | 0          | 0          | 0 | 0 |
| Outpatient clinic                     | Clinical pharmacology       | 0     | 0   | 0          | 46         | 0 | 0 |
| Outpatient treatment                  | Dental                      | 0     | 0   | 211        | 0          | 0 | 0 |
| Outpatient treatment                  | Ophthalmology               | 0     | 0   | 0          | 0          | 0 | 0 |
| Outpatient treatment                  | Department                  | 0     | 0   | 0          | 0          | 0 | 0 |
| Outpatient treatment                  | Pneumology                  | 0     | 0   | 0          | 0          | 0 | 0 |
| Outpatient treatment                  | Internal medicine           | 0     | 0   | 0          | 50% 1.456  | 0 | 0 |
| Outpatient treatment                  | Gastroenterology            | 0     | 0   | 0          | 389        | 0 | 0 |
| Outpatient treatment                  | Urology                     | 0     | 0   | 0          | 50% 913    | 0 | 0 |
| Pharmacy                              | Pharmacy                    | 0     | 0   | 0          | 0          | 0 | 0 |
| Physiotherapy inpatient               | Rehabilitation              | 1.577 | 0   | 0          | 0          | 0 | 0 |
| Physiotherapy outpatient              | Physiotherapy               | 0     | 0   | 50% 12.244 | 50% 71.618 | 0 | 0 |
| Psychiatry                            | Psychiatry                  | 2.459 | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Burns                       | 280   | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Surgery                     | 865   | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Infectious and geo-medicine | 73    | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Gastroenterology            | 24    | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Geriatrics                  | 289   | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Gynaecology                 | 484   | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Hematology                  | 36    | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Internal medicine           | 1.352 | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Traumatology                | 162   | 10  | 0          | 0          | 0 | 0 |
| Special care                          | Metabolic                   | 95    | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Neurology                   | 551   | 0   | 0          | 0          | 0 | 0 |
| Special care                          | ORL                         | 12    | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Orthopaedics                | 117   | 334 | 0          | 0          | 0 | 0 |
| Special care                          | Pneumology                  | 81    | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Urology                     | 264   | 0   | 0          | 0          | 0 | 0 |
| Special care                          | Vascular surgery            | 72    | 0   | 0          | 0          | 0 | 0 |
| Staff facilities                      | Support                     | 0     | 0   | 0          | 0          | 0 | 0 |
| Workrooms medical specialists         | Support                     | 0     | 0   | 0          | 0          | 0 | 0 |
| Workshops (medical) technical service | Support                     | 0     | 0   | 0          | 0          | 0 | 0 |

Source: TNO

## Description of the AFM

The illustrations, graphs and charts in this Appendix are solely intended as general illustrations of the Abstract Functional Model and do not necessarily present calculations, inputs or outcomes actually used in the technical modelling described in the main report.

### What is the AFM-model?

The AFM is a simulation model and gives guidance on the potential efficiency, productivity and quality gains from a new model of hospital care, while adhering to the principles of flexibility to adapt to future demands, with constraints on additional public funding and government guarantee or security. The AFM shows the relation between production data from the hospital in its catchment area and a first hospital programme. It gives insight in the sizing of the hospital as well as the future operational and capital expenditure of the hospital. The model helps during the programming phase to monitor important parameters in terms of gross floor area as a whole or per function group/specialism, differentiated square meter pricing, exploitation costs and production parameters like annual admissions, nursing days, surgeries and, related to this, average lengths of stay, bed occupancy and ratios of clinical and day-capacity in the hospital.

The modelling is based on expectations of future demand for healthcare provision, ambitions for the hospital and the model of care as a whole, a functional (space) and financial (cost) translation of a model of care with several ambition levels fit for the Slovak setting.

With the input of demographic trends, the market share of the UNB and a range of organisational, technical and financial parameters, it is possible to generate a systematic translation of assumptions about future health care in the catchment area of the project into a detailed quantitative description of possible infrastructural responses. In other words, the model produces abstract but detailed pictures of what the future facility could look like and how it could function over the coming decades.

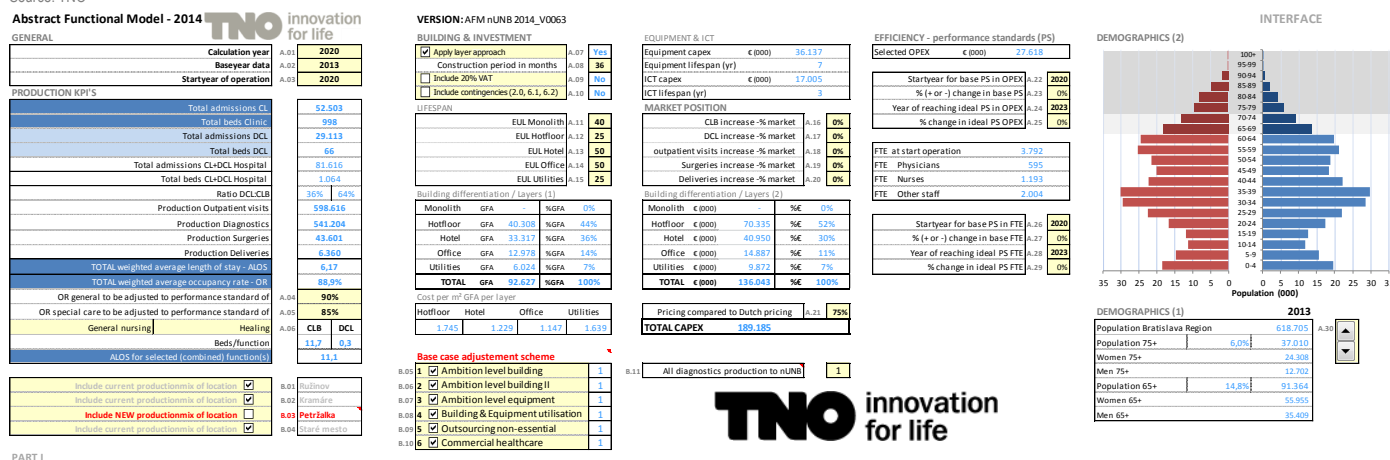
The AFM provides insight into costs and programming in time and per specialism. With the AFM, the financial consequences of the choices are made visible in both the first year and during the course of the hospital's economic lifespan.

Together, the model of care, key production parameters and epidemiological trends and future quantitative and qualitative volumes of health care to be serviced by the UNB represent the "demand" side of the AFM.

A highly detailed analysis has taken place using the AFM by the technical advisors. The AFM produces input data for the financial and risks analysis of the preferred option or options.

### Interface with management information and adjustment parameters

Source: TNO



## Data and data structure

- ▶ As a starting point, various databases were used for the calculations in the model. The model uses data from the UNB, TNO-costs database, the data book composed by EY based on insurance company data and hospital data and data from the MoH, benchmark data and some hypotheses.
- ▶ Firstly, the data supplied by the hospital, about care production, are included in the model. It refers to the average number of admissions per specialism for 2010, 2011 and 2012. Care production in these years is divided into clinical admissions and day cases. Then, on the basis of demographics of the statistical office of the Slovak Republic (Štatistický úrad Slovenskej republiky (ŠÚ SR)), these data are extrapolated to the year 2060.
- ▶ In addition to the admissions, the average length of stay (if available) for the various specialisms is used. Where the length of stay was missing, the average of the respective department/specialism is taken as starting point. Furthermore, the average occupancy rate of the hospital, the bed occupancy of day care and the relationship between the clinical admissions and one-day admissions are used as input for the calculated base year.
- ▶ In addition to the output data from the hospital, data files of TNO are used. It involves the construction of the investment per m<sup>2</sup> gross floor surface, the (Dutch) construction standards for hospitals with the floor area per specialism, the average economic lifespan of hospital buildings and underlying layers. The other basic data in the model consists of operational cost figures from the hospital itself and corresponding benchmark data for operational expenditure.
- ▶ An extensive list of the data sources and references can be found in the chapter References at the end of the General description of the AFM section.

### Data levels

For (part of) the calculations in the AFM, the input data is converted to a higher level of aggregation. The production data in provided by by Client] is listed by location, with a breakdown by the different departments (see *Examples of departments and the corresponding data levels*, name department – SK).

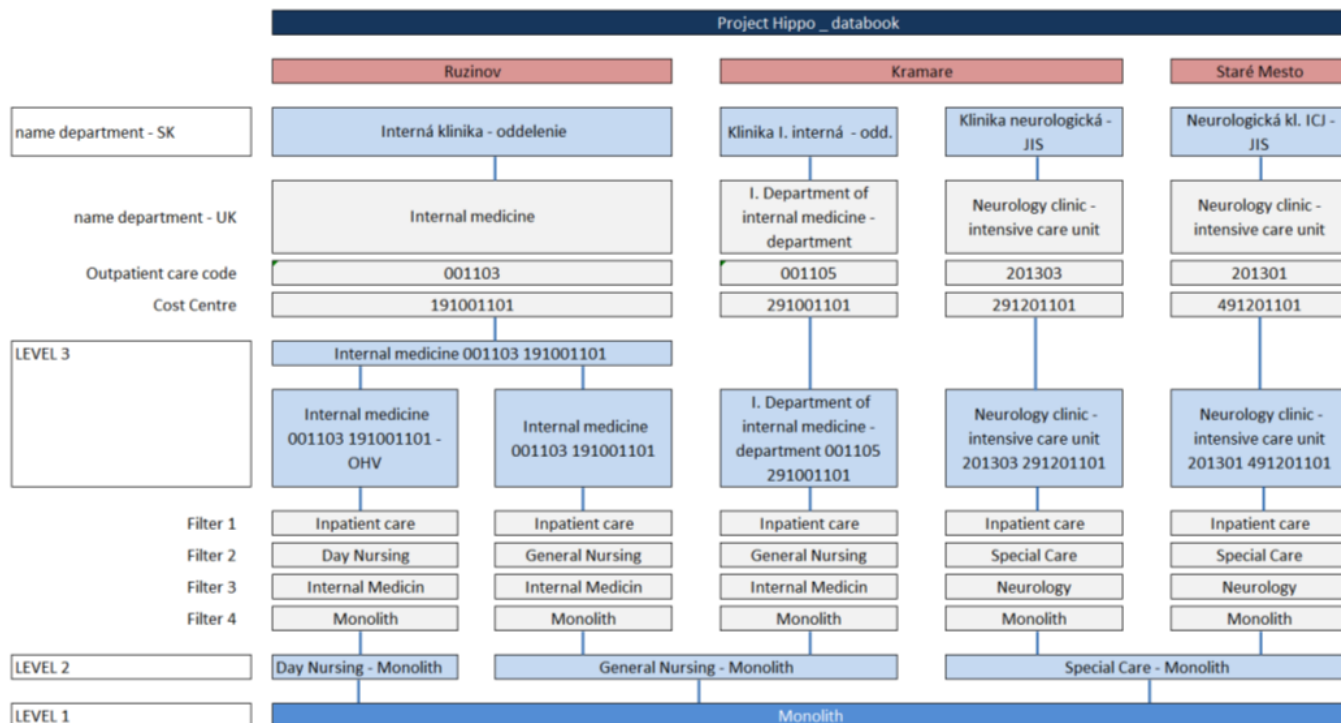
- ▶ Since different locations have departments with the same name, the English names in the data book are combined with the Outpatient care code (OCC) and the cost centre code (OC) as mentioned in the data book. This combination provides unique names for each department, the so called level 3 departments.
- ▶ Each unique level 3 department can, in turn, be combined with production for six different production types:
  - Completed hospitalisations (CL [UH])
  - One-day admissions (DCL [OHV])
  - Outpatient care visits (OC [SĀS])
  - Diagnostics (DIAG [SVLZ])
  - Surgeries (SURG)
  - Deliveries (DEL)

Most level 3 departments will have production in only one of the production types mentioned above. In that case the unique level 3 department name will be enough to make a link with the provided production data. There are however departments that are providing services in multiple production types as well as departments of which a shift to another production type can be expected in the near future. In those cases extra level 3 department names are created by extending the original level 3 department name with an abbreviation unique to the production types they serve. For instance the provided data mentions UH production as well as OHV production for the level 3 department “Internal Medicine 001103 191001101” in Ružinov (see *Examples of departments and the corresponding data levels*). In this case an extra level 3 department is created by the name of “Internal Medicine 001103 191001101 – OHV” for the OHV-production, while the original level 3 department is used for the UH production.

## Data and data structure

### Interface with management information and adjustment parameters

Source: TNO



► In the next step all the unique level 3 departments, linked with a unique production type, are combined with four filters.

- Filter 1: Type of care (inpatient care, outpatient care, diagnostics, surgery, deliveries and support)
- Filter 2: Functional type (see the description in the subsection *Functional type* below)
- Filter 3: Department (Internal medicine, Neurology, Burns etc.)
- Filter 4: Layer type (see the description in the subsection *Layers* below)

Using these filters makes it possible to combine the level 3 departments to a higher aggregation level, the so called level 2. In *Figure - Examples of departments and the corresponding data levels* the level 2 categories consist of a combination of functional type and layer type. Combining the level 2 categories gives information on level 1, for instance that all production is concentrated in layer type 'Monolith'.

## Filters used

### Functional type

- ▶ As described in the previous subsection, four filters are used to combine level 3 departments to the higher aggregated level 2. One of these filters is the functional type. A functional type is based on the different activities that take place in a hospital. In the first place these are activities that concern the primary process, in other words the direct interaction between the patient and the care provider (nursing, diagnostics and treatment). In addition there are activities that have no direct relationship with the primary process, but are mainly focused on providing support and services in a general sense.
  - ▶ Translated into spatial facilities, these different activities may be subdivided into three 'blocks':
    - 1 patient-related facilities where hospital patients are/may be present;
    - 2 patient-related facilities where hospital patients are not present;
    - 3 general & technical support services.
  - ▶ It should be mentioned that this subdivision is not a blueprint for the way in which a hospital should be configured, but merely forms a plan based on the different activities within a hospital.
1. Patient-related facilities where hospital patients are/may be present
- ▶ Three main function groups can be distinguished within this 'block' in the following way:
    - nursing;
    - diagnostics & treatment;
    - special functions (as far as these are present).
2. Patient-related facilities where hospital patients are not present
- ▶ This 'block' includes the spatial facilities for central sterilizing services, pharmacy and laboratories (clinical chemistry, medical microbiology, clinical pathology).
3. General & technical support services
- ▶ This 'block' includes general and staff facilities (such as central kitchen, linen service, restaurant and technical service), as well as facilities for management and training.

In the table *Complete list of functional types*, a descriptive overview of the functional types that can be found under the level 2 filter is given.



## Filters used

### Complete list of functional types

Source: TNO

#### Patient-related facilities - Nursing (patient present)

General nursing  
Special care  
Child care  
Maternity nursing  
Neonatology  
Day nursing  
Physiotherapy inpatient  
Burns  
Psychiatry

#### Patient-related facilities - Diagnostics & Treatment (patient present)

Outpatient clinic  
General organ function diagnostic  
I&D conventional radiography  
I&D mammography  
I&D echography  
I&D scanner  
I&D MRI  
Nuclear medicine  
Nuclear medicine In-vivo  
Outpatient treatment  
Emergency care and GP-post A&E  
Operating theatres High turnover  
Operating theatres Low turnover  
Delivery

#### Patient-related facilities - Specials (patient present)

Acute admissions department  
Radiotherapy  
Radiotherapy - brachytherapy  
Physiotherapy outpatient  
Blood bank  
Dialysis

#### Patient-related facilities (patient not present)

Central sterilization  
Pharmacy  
Laboratory clinical chemistry  
Laboratory medical microbiology  
Laboratory clinical pathology

## Filters used

| General & technical support services  |
|---------------------------------------|
| Community spaces                      |
| Central staff accomodation            |
| Workrooms medical specialists         |
| Staff facilities                      |
| Kitchen                               |
| Civil services                        |
| Workshops (medical) technical service |
| Education                             |

- ▶ All the functional types can be linked to variables. These variables can be used to determine the number of units needed to perform a certain activity and thus the size of the functional types (net floor area), the departments (gross department floor area) and the hospital as a total (gross floor area). The main variables connected to one or more of the functional types are:
  - Size of unit: the net floor area per unit
  - Unit type: the unit type which releases to the activity, for example a bed, a room, a department etc.
  - Unit capacity: the production capacity a certain unit has to perform the activity. For example an operating theatre is fitted to perform 20.000 surgeries per year.
  - Duration of treatment: the duration of one activity, for example the average duration of a scan expressed in minutes or hours.
  - Occupancy rate: the average time (in percentage) of the total operating time a certain unit is in use.
  - Operating days and operating hours: the days per year and hours per day a certain activity is performed.
  - Net/gross ratio functional type (department level): the ratio between the net floor area and the gross floor area of the department.
  - Price level (compared to price level monolith); the price level for a certain functional type compared to the average price level for the hospital as a monolithic archetype.
- ▶ Each functional type is also connected to a calculation type, which is used to convert the different variables (per functional type) to a net floor area per functional type. The size of some of the functional types (support-types) depend on the size of the other functional types (core-types). This dependency is expressed as a percentage of the core functions and linked as variable tot the support functional types.

## Layers

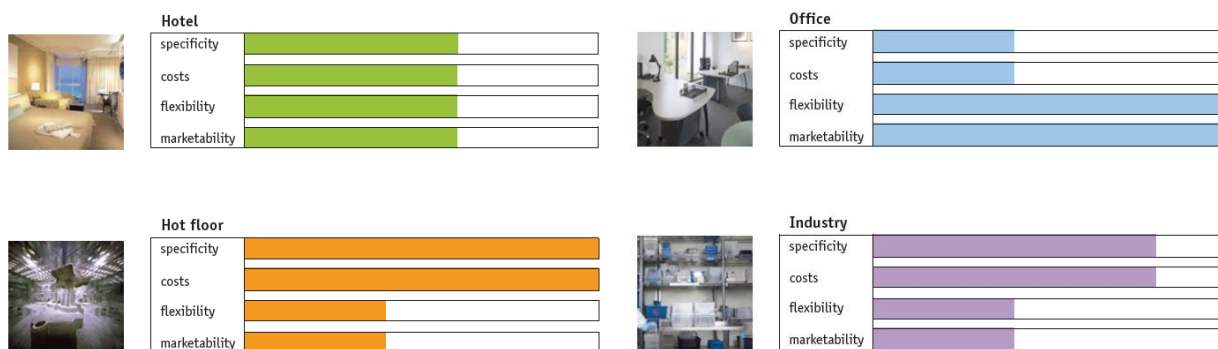
- ▶ The perception of the use of buildings in healthcare is changing. Immovable property is no longer a given, but a means of production contributing to efficient business operations in healthcare, where integral funding takes over from a separate financing flow for construction. This creates new opportunities for the operator, but also necessitates different considerations. The layers approach (Building Differentiation of Hospitals - layers approach, report number 611, Netherlands Board for Healthcare Institutions, 2007) introduces a new approach for considering investment decisions for hospitals.
- ▶ This approach divides the functions according to the specific building requirements into four accommodation typologies, referred to as “layers”. The approach is based on categorization of functions setting similar requirements for the built environment, for the purpose of optimizing the property. The layers are:
  - Hotel: hotel-like functions, this layer includes the larger part of the patient accommodations.
  - Hot Floor: the capital intensive high-tech functions that are unique to the hospital.
  - Office: office-like functions, this layer includes outpatient units, accounting, management and training functions.

## Filters used

- Utilities: this layer accommodates those functions that are capital intensive, such as laboratories and the production unit.
- Each of these layers has its own properties profile with regards to specificity, investments costs, growth/downsizing requirements, and marketability of the property (see figure below).

### Complete list of functional types

Source: Building Differentiation of Hospitals – layers approach 2007



- As a result of a differentiated constructional approach, part of the property can be realized on arm's length conditions, which is favourable as an established construction approach can be used for a specific type of building and designs can be adjusted more specifically to the regulations governing the relevant typology. Another advantage of construction on arm's length conditions is that, should the profitability be jeopardized in the future, parts of the building can be disposed of. The most essential feature of the layers approach is the high degree of flexibility over the lifetimes of the buildings.
- Each level 2 combination of functional type and department is linked to one of the layer types mentioned above with the exception of four functional types within the support category: community spaces, central Staff accommodation, workrooms medical specialists and staff facilities. Because of their general aspects these functional types are spread over different layers. When not using the layer-approach, all functions are considered to be accommodated in one undifferentiated building complex: the monolith.

## Interface

### Interface

- For the simulation of the model, an interface is available. The interface consists of parameters that relate to the production data and projections between 2013 and 2060 and the spatial programming of certain elements within the various layers/functional surface. Also, the interface includes parameters related to the capital expenditure and operational expenditure of the hospital, the staff in the hospital, demographic data for the catchment area of the hospital and lifecycle costs.
- The interface of the AFM can be divided in several blocks of information and parameters to be adjusted. First, the blocks of information will be described followed by the adjustable parameters of the AFM and the effect on the outcomes. The soft yellow cells in the interface can be adjusted.

### General

- In this section of the interface inputs are required that influence the outcome of all calculations in the AFM.

### General Input section of the interface

Source: TNO

|                        |      |      |
|------------------------|------|------|
| Calculation year       | A.01 | 2020 |
| Baseyear data          | A.02 | 2013 |
| Startyear of operation | A.03 | 2020 |

- A.01 – “calculation year” indicates the year for which all parameters are shown on the interface. All prices that are shown on the interface are in current pricing excluding any indexation or price correction for time.
- A.02 – “baseyear data” indicates the status of the base data as used for all extrapolations and calculations. All parameters in the interface use this year as a reference point.
- A.03 – “startyear of operation” indicates the first year of operation of the new build. The start year of operation effects the calculation for efficiency measures and thus operational expenditure and capital expenditure calculations. It forms the basis for calculations for FTE's, timing instalments and start and end dates for economic useful lives of building typology.

### Production KPIs

- The production KPI's section of the AFM interface gives insight into performance of the hospital configuration based on all interface settings. It shows the amount of admissions, surgeries, outpatient visits etc. in the selected calculation year (A.01). This section also gives the possibility to make high level adjustments to the occupancy rate for general nursing beds (A.04) and special care beds (A.05). If insight into specific departments or specialties is needed these can be selected (A.06).

### Production KPI section on the interface

Source: TNO

|   |          |
|---|----------|
| Total admissions CL                                       | 52.503   |
| Total beds Clinic   | 998      |
| Total admissions DCL                                      | 29.113   |
| Total beds DCL  | 66       |
| Total admissions CL+DCL Hospital                          | 81.616   |
| Total beds CL+DCL Hospital                                | 1.064    |
| Ratio DCL:CLB   | 36% 64%  |
| Production Outpatient visits                              | 598.616  |
| Production Diagnostics                                    | 541.204  |
| Production Surgeries                                      | 43.601   |
| Production Deliveries                                     | 6.360    |
| TOTAL weighted average length of stay - ALOS              | 6,17     |
| TOTAL weighted average occupancy rate - OR                | 88,9%    |
| OR general to be adjusted to performance standard of      | A.04 90% |
| OR special care to be adjusted to performance standard of | A.05 85% |
| General nursing   | A.06 CLB |
| Healing   | DCL      |
| Beds/function   | 11,7 0,3 |
| ALOS for selected (combined) function(s)                  | 11,1     |

## Interface

### Building & Investment

The block building and investment shows the effect of used price levels based on a given benchmark (A.21) or building period (A.08) and calculation of contingencies such as insurances, price changes during the building period or VAT rate (A.09 and A.10). The application of the layer approach and differentiation in building archetypes can be chosen by selecting a tick box (A.07). By unselecting the same tick box a more traditional approach can be taken, assuming the realisation of a monolith building. For the calculation in the financial module the lifespan of the separate layers can be set (A.11 – A.15). In this subsection the economic useful life of the layers can be adjusted according to the expected intensity of use and initial quality of the building and related initial investments.

### Building & Investment section of the interface

Source: TNO

| BUILDING & INVESTMENT  |                |                |                  |
|--|----------------|----------------|------------------|
| <input checked="" type="checkbox"/> Apply layer approach       | A.07           | Yes            |                  |
| Construction period in months                                  | A.08           | 36             |                  |
| <input type="checkbox"/> Include 20% VAT                       | A.09           | No             |                  |
| <input type="checkbox"/> Include contingencies (2.0, 6.1, 6.2) | A.10           | No             |                  |
| LIFESPAN   |                |                |                  |
| EUL Monolith   | A.11           | 40             |                  |
| EUL Hotfloor   | A.12           | 25             |                  |
| EUL Hotel  | A.13           | 50             |                  |
| EUL Office   | A.14           | 50             |                  |
| EUL Utilities  | A.15           | 25             |                  |
| Building differentiation / Layers (1)                          |                |                |                  |
| Monolith   | GFA            | -              | %GFA 0%          |
| Hotfloor   | GFA            | 40.308         | %GFA 44%         |
| Hotel  | GFA            | 33.317         | %GFA 36%         |
| Office   | GFA            | 12.978         | %GFA 14%         |
| Utilities  | GFA            | 6.024          | %GFA 7%          |
| <b>TOTAL</b>   | <b>GFA</b>     | <b>92.627</b>  | <b>%GFA 100%</b> |
| Cost per m <sup>2</sup> GFA per layer                          |                |                |                  |
| Hotfloor   | Hotel          | Office         | Utilities        |
| 1.745  | 1.229          | 1.147          | 1.639            |
| EQUIPMENT & ICT  |                |                |                  |
| Equipment capex  | € (000)        | 36.137         |                  |
| Equipment lifespan (yr)  |                | 7              |                  |
| ICT capex  | € (000)        | 17.005         |                  |
| ICT lifespan (yr)  |                | 3              |                  |
| MARKET POSITION  |                |                |                  |
| CLB increase -% market   | A.16           | 0%             |                  |
| DCL increase -% market   | A.17           | 0%             |                  |
| outpatient visits increase -% market                           | A.18           | 0%             |                  |
| Surgeries increase -% market                                   | A.19           | 0%             |                  |
| Deliveries increase -% market                                  | A.20           | 0%             |                  |
| Building differentiation / Layers (2)                          |                |                |                  |
| Monolith   | € (000)        | -              | %€ 0%            |
| Hotfloor   | € (000)        | 70.335         | %€ 52%           |
| Hotel  | € (000)        | 40.950         | %€ 30%           |
| Office   | € (000)        | 14.887         | %€ 11%           |
| Utilities  | € (000)        | 9.872          | %€ 7%            |
| <b>TOTAL</b>   | <b>€ (000)</b> | <b>136.043</b> | <b>%€ 100%</b>   |
| Pricing compared to Dutch pricing                              |                |                | A.21 75%         |
| <b>TOTAL CAPEX</b>   |                |                | <b>189.185</b>   |

- For each layer (or monolith) the initial investment and gross floor areas are given by the AFM in the first year of operation or calculation year. These matrices give an indication of flexibility and efficient usage of space projected in a differentiation in archetypes linked to the hospital functions. For each of the layers the average building costs are shown in subsection “Cost per m<sup>2</sup> GFA per layer”.

### Market position

- The market position of the hospital can be adjusted with a high level approach in A.16 – A.20 by increasing or decreasing the current production volumes of clinical admissions, day cases, outpatient visits, surgeries and deliveries. A more detailed adjustment of the production is possible by adjusting the production data on the level 2 datasets in PART I (CLB and DCL) and PART II (Outpatient visits, Surgeries and Deliveries) of the adjustable parameters.

### Market position section on the interface

Source: TNO

|                                      |      |    |
|--------------------------------------|------|----|
| CLB increase -% market               | A.16 | 0% |
| DCL increase -% market               | A.17 | 0% |
| outpatient visits increase -% market | A.18 | 0% |
| Surgeries increase -% market         | A.19 | 0% |
| Deliveries increase -% market        | A.20 | 0% |

## Interface

### Efficiency – performance standards

- The section *Efficiency - performance standard* refers to a level of performance related to the ambition levels of the hospital and is linked to an average performance standard for Western European countries. In this section the operational expenditures and FTE built-up is shown and can be adjusted by changing both speed and ambition levels of operating standards moving toward operating excellence or top benchmark levels. The OpEx performance standard (PS) can be adjusted in time (start and intermediate PS) with A.22 and A.24 or in ambition by toning down or increasing PS at startyear of operation (A.23) or during the operational period of the New hospital (A.25). The FTE performance standard can be adjusted in time (start and intermediate PS) with A.26 and A.28 or in ambition by toning down or increasing PS at start year of operation (A.27) or during the operational period of the New hospital (A.29). The effect of parameters A.22-A.29 is shown in blue. The performance standard can be set in more detail per FTE group or OpEx item in part II of the adjustable parameters.

### Efficiency – performance standards section on the interface

Source: TNO

|               |         |        |
|---------------|---------|--------|
| Selected OPEX | € (000) | 27.618 |
|---------------|---------|--------|

|                                   |      |      |
|-----------------------------------|------|------|
| Startyear for base PS in OPEX     | A.22 | 2020 |
| % (+ or -) change in base PS      | A.23 | 0%   |
| Year of reaching ideal PS in OPEX | A.24 | 2023 |
| % change in ideal PS OPEX         | A.25 | 0%   |

|                        |       |
|------------------------|-------|
| FTE at start operation | 3.792 |
| FTE Physicians         | 595   |
| FTE Nurses             | 1.193 |
| FTE Other staff        | 2.004 |

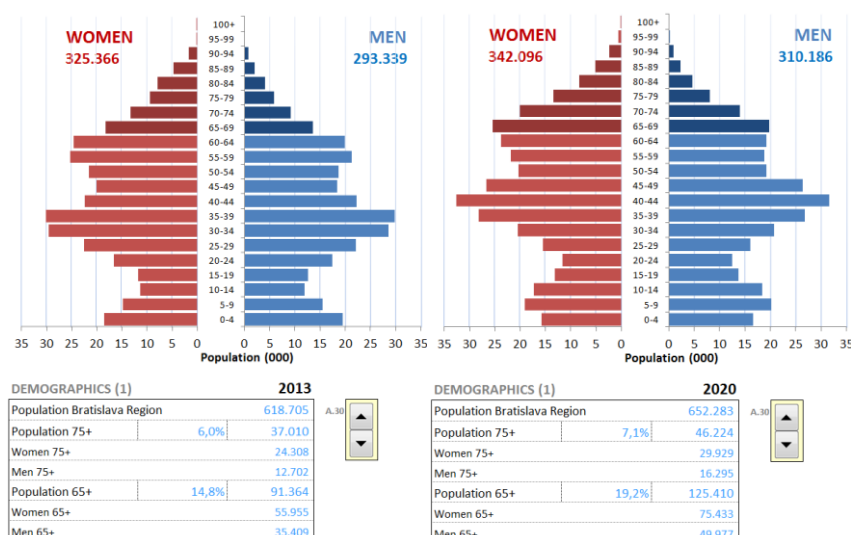
|                               |      |      |
|-------------------------------|------|------|
| Startyear for base PS in FTE  | A.26 | 2020 |
| % (+ or -) change in base FTE | A.27 | 0%   |
| Year of reaching ideal PS FTE | A.28 | 2023 |
| % change in ideal PS FTE      | A.29 | 0%   |

### Demographics

- The demographics section comprises of an overview of the demographic build-up of the catchment area of the hospital split into 5-year categories and male and female. The yearly change can be viewed by toggling A.30. This information can be used for hospital politics on specific age and or gender related specialities. The ageing population is clearly visible when changing the date past 2020.

### Demographics section on the interface, situation for 2013 (left) and 2020 (right)

Source: TNO



## Interface

### Detailed adjustment in the AFM

- Parts I to IV of the AFM interface give the possibility to make adjustments to key performance indicators (KPI's) on a more detailed level, for instance by specialism, department or categories in the hospital. The earlier described level 2 detail.

### (1) PART I

- Part I of the AFM focusses on the clinical (CLB) and day clinical (DCL) beds of the New hospital. This is the main volume of the hospital and representing a big part of the initial investment and gross floor area. Its KPI's have big impact on CapEx and OpEx. The different adjustments that can be made are summed up in the following two paragraphs.

### PART I on the interface

Source: TNO

| CLINIC (CLB)                       |            | CLB.01                             |           |           |           |           |          |           | CLB.02                      |           |           |           |          |           |           | CLB.03     |           |           |          |           |           |           | CLB.04                      |           |          |           |           |           |           | CLB.05                        |          |           |           |           |           |           | CLB.06   |                  | CLB.07                   |  |
|------------------------------------|------------|------------------------------------|-----------|-----------|-----------|-----------|----------|-----------|-----------------------------|-----------|-----------|-----------|----------|-----------|-----------|------------|-----------|-----------|----------|-----------|-----------|-----------|-----------------------------|-----------|----------|-----------|-----------|-----------|-----------|-------------------------------|----------|-----------|-----------|-----------|-----------|-----------|----------|------------------|--------------------------|--|
| Parameters of the model (CLINICAL) |            | Hospital Politics %/market /period |           |           |           |           |          |           | Effect ratio DCL CLB/period |           |           |           |          |           |           | EMPTY SLOT |           |           |          |           |           |           | ALOS % Decrease ALOS/period |           |          |           |           |           |           | OR % Occupancy Rate (OR)/year |          |           |           |           |           |           | Days     |                  | CLB>>DCL/ALOS            |  |
|                                    |            | 2010-2015                          | 2015-2020 | 2020-2025 | 2025-2030 | 2030-2040 | 2040-... | 2010-2015 | 2015-2020                   | 2020-2025 | 2025-2030 | 2030-2040 | 2040-... | 2010-2015 | 2015-2020 | 2020-2025  | 2025-2030 | 2030-2040 | 2040-... | 2010-2015 | 2015-2020 | 2020-2025 | 2025-2030                   | 2030-2040 | 2040-... | 2010-2015 | 2015-2020 | 2020-2025 | 2025-2030 | 2030-2040                     | 2040-... | 2010-2015 | 2015-2020 | 2020-2025 | 2025-2030 | 2030-2040 | 2040-... | Days of business | Effect per 5 year period |  |
| Hospital Total                     |            | 0%                                 | 0%        | 0%        | 0%        | 0%        | 0%       | 4%        | 4.6%                        | 4.6%      | 2.7%      | 0.0%      | 0.0%     | 0%        | 0%        | 0%         | 0%        | 0%        | 0%       | 0%        | 0%        | 0%        | 0%                          | 0%        | 0%       | 15%       | 15%       | 15%       | 0%        | 0%                            | 0%       | 10%       | 10%       | 10%       | 10%       | 10%       | 365      | 0.0%             |                          |  |
| Blood bank                         | Blood bank | 0%                                 | 0%        | 0%        | 0%        | 0%        | 0%       | 4%        | 4.6%                        | 4.6%      | 2.7%      | 0.0%      | 0.0%     | 0%        | 0%        | 0%         | 0%        | 0%        | 0%       | 0%        | 0%        | 0%        | 0%                          | 0%        | 0%       | 0%        | 0%        | 0%        | 0%        | 0%                            | 0%       | 0%        | 0%        | 0%        | 365       | 0.0%      |          |                  |                          |  |
| Child care                         | Pediatrics | 0%                                 | 0%        | 0%        | 0%        | 0%        | 0%       | 4%        | 4.6%                        | 4.6%      | 2.7%      | 0.0%      | 0.0%     | 0%        | 0%        | 0%         | 0%        | 0%        | 0%       | 0%        | 0%        | 0%        | 0%                          | 0%        | 4.0      | 15%       | 15%       | 0%        | 0%        | 0%                            | 0%       | 0%        | 0%        | 0%        | 90%       | 365       | 0.0%     |                  |                          |  |
| Child care                         | Pneumology | 0%                                 | 0%        | 0%        | 0%        | 0%        | 0%       | 4%        | 4.6%                        | 4.6%      | 2.7%      | 0.0%      | 0.0%     | 0%        | 0%        | 0%         | 0%        | 0%        | 0%       | 0%        | 0%        | 0%        | 0%                          | 0%        | 9.3      | 15%       | 15%       | 0%        | 0%        | 0%                            | 0%       | 0%        | 0%        | 68%       | 365       | 0.0%      |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |
|                                    |            |                                    |           |           |           |           |          |           |                             |           |           |           |          |           |           |            |           |           |          |           |           |           |                             |           |          |           |           |           |           |                               |          |           |           |           |           |           |          |                  |                          |  |

#### a. Clinical care (CLB)

- The production parameters for clinical care (CLB) per level 2 combination of functional type and department can be adjusted by model parameters CLB.01 to CLB.07.
  - CLB.01 – Policy of the hospital – The policy of the hospital is aiming to focus on certain functions or procedures, for example by starting with a higher market share. This parameter simulates an increase or decrease in the number of intakes in certain periods.
  - CLB.02 - Effect ratio DCL:CLB – The decision to raise the ratio day care compared to clinical capacity, can be simulated by decreasing the clinical capacity and replacing this decline by day care capacity. Therefore this parameter should be used in combination with other parameters. CLB.02 alone results in a decrease of the clinical capacity.
  - CLB.03 – empty slot CLB.04 - % reduction average length of stay (ALOS) – A decision to actively manage the reduction of the average length of stay in the hospital can be simulated with this parameter. By increasing the percentage, the average length of stay will decrease in the period.
  - CLB.05 - % occupancy rate – The occupancy rate of the hospital can be affected by adjusting the percentage covered by this parameter. It concerns the general occupancy rate.
  - CLB.06 – Days – This parameter gives an indication of the number of working days for the clinical capacity. The value is set at 365 without taking into account the leap years. This value is used to calculate the number of beds.
  - CLB.07 - CLB>>DCL; average length of stay (ALOS) – This parameter is associated with CLB.02 and DCL.04. It is expected that the decrease in clinical capacity has to do with less complex care. This parameter describes the relationship between the reduction of clinical capacity and the increase of day-care. Thus, the average length of stay will increase.

## Interface

### b. Day-care (DCL)

- The production parameters for the day clinical care DCL per specialism can be adjusted by parameters DCL.01 to DCL.05.
  - DCL.01 – Policy of the hospital +/- The policy of the hospital is aimed to stop focusing on certain functions or procedures, this parameter simulates a reduction in the number of day-care intakes in certain periods. This might mean that more functions move to community care facilities and result in less hospital intakes.
  - DCL.02 – Policy of the hospital +/- The policy of the hospital is aimed to focus on certain functions or procedures. This parameter simulates an increase in the number of day-care intakes in certain periods. The commissioning of a New hospital could also result in an increase in the number of intakes. This increase can be simulated with this parameter.
  - DCL.03 - % influencing utilization expressed in client/bed/day. Occupancy rate (OR) of the day care beds can be affected with this parameter. The occupancy rate is a more extensive use of the available beds.
  - DCL.04 - % substitution CLB > DCL - This parameter has a direct relation with CLB.02 and determines the percentage of decrease in clinical capacity (as set in CLB.02) that will be substituted in day care, and thus results in an increase of number of day care activities. The remaining percentage CLB.02 will be transmitted to other forms of care outside of the hospital.
  - DCL.05 – Empty slot.
  - DCL.06 – Workable days. This parameter shows the number of workable days in the day care. The base value is set at 250 days per year, assuming 50 weeks in the year with 5 working days a week.
  - DCL.07 – Occupancy day-care – This is the basic parameter for DCL.03 and it contains the number of clients per bed per day.

### (2) PART II

- Part II of the AFM focusses on the production units surgeries & deliveries, outpatient care and beds of the New hospital. This part also addresses the detailed development of the number of staff per FTE category and the operational expenditure related to the performance standards.

#### PART II on the interface

Source: TNO

| Surgeries & Deliveries (SD) |  | S&D.01                          |  |  |  |  |  | S&D.02                           |  |  |  |  |  | S&D.03  |  |  |  |  |  | S&D.04  |  |  |  |  |  |
|-----------------------------|--|---------------------------------|--|--|--|--|--|----------------------------------|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|
|                             |  | Market share increase surgeries |  |  |  |  |  | Market share increase deliveries |  |  |  |  |  | Empty slot  |  |  |  |  |  | Empty slot  |  |  |  |  |  |
|                             |  | 2014-2060                       |  |  |  |  |  | 2014-2060                        |  |  |  |  |  | 2010-2015<br>2015-2020<br>2020-2025<br>2025-2030<br>2030-2040<br>2040-... |  |  |  |  |  | 2010-2015<br>2015-2020<br>2020-2025<br>2025-2030<br>2030-2040<br>2040-... |  |  |  |  |  |
| Hospital Total              |  | 0%0%0%0%0%0%                    |  |  |  |  |  | 0%0%0%0%0%0%                     |  |  |  |  |  | 0%0%0%0%0%0%  |  |  |  |  |  | 0%0%0%0%0%0%  |  |  |  |  |  |
| TOTAL SURGERIES             |  |                                 |  |  |  |  |  |                                  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |
| Deliveries - Ružinov        |  |                                 |  |  |  |  |  | 0%0%0%0%0%0%                     |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |
| Deliveries - Kramáře        |  |                                 |  |  |  |  |  | 0%0%0%0%0%0%                     |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |
| Deliveries - Petržalka      |  |                                 |  |  |  |  |  | 0%0%0%0%0%0%                     |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |
| TOTAL DELIVERIES            |  |                                 |  |  |  |  |  |                                  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |

| Outpatient care (OC)                     |  | OC.01                              |  |  |  |  |  | OC.02   |  |  |  |  |  | OC.03   |  |  |  |  |  | OC.04   |  |  |  |  |  |
|--|--|------------------------------------|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|
|  |  | Market share increase OC treatment |  |  |  |  |  | Empty slot  |  |  |  |  |  | Empty slot  |  |  |  |  |  | Empty slot  |  |  |  |  |  |
|  |  | 2014-2060                          |  |  |  |  |  | 2010-2015<br>2015-2020<br>2020-2025<br>2025-2030<br>2030-2040<br>2040-... |  |  |  |  |  | 2010-2015<br>2015-2020<br>2020-2025<br>2025-2030<br>2030-2040<br>2040-... |  |  |  |  |  | 2010-2015<br>2015-2020<br>2020-2025<br>2025-2030<br>2030-2040<br>2040-... |  |  |  |  |  |
| Hospital Total                           |  | 0%0%0%0%0%0%                       |  |  |  |  |  | 0%0%0%0%0%0%  |  |  |  |  |  | 0%0%0%0%0%0%  |  |  |  |  |  | 0%0%0%0%0%0%  |  |  |  |  |  |
| Physiotherapy outpatient - Physiotherapy |  | 0%0%0%0%0%0%                       |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |
| Outpatient treatment - Ophthalmology     |  | 0%0%0%0%0%0%                       |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |
| Outpatient treatment - Department        |  | 0%0%0%0%0%0%                       |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |



## Interface

| Efficiency - Performance standards FTE and OPEX |  | PS.01                            |      |      |      |      |      | PS.02                          |      |      |      |      |      | PS.03                             |      |      |      |      |      | PS.04                           |      |      |      |      |  |
|---|--|----------------------------------|------|------|------|------|------|--------------------------------|------|------|------|------|------|-----------------------------------|------|------|------|------|------|---------------------------------|------|------|------|------|--|
|   |  | PS FTE at start operation period |      |      |      |      |      | PS FTE during operating period |      |      |      |      |      | PS OPEX at start operation period |      |      |      |      |      | PS OPEX during operating period |      |      |      |      |  |
|   |  | 2014-2060                        |      |      |      |      |      | 2014-2060                      |      |      |      |      |      | 2014-2060                         |      |      |      |      |      | 2014-2060                       |      |      |      |      |  |
| Hospital Total                                  |  | 0,0%                             | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0%                           | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0%                              | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0%                            | 0,0% | 0,0% | 0,0% | 0,0% |  |
| Physicians                                      |  | 0,0%                             | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0%                           | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0%                              | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0%                            | 0,0% | 0,0% | 0,0% | 0,0% |  |
| Pharmacists                                     |  | 0,0%                             | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0%                           | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0%                              | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0%                            | 0,0% | 0,0% | 0,0% | 0,0% |  |

- ▶ The production parameters for the surgeries & deliveries can be adjusted by changing parameters S&D.01 to S&D.04.
  - S&D.01 – Change of production/market share for surgeries, linked to A.19 in base case (see Market position)
  - S&D.02 – Change of production/market share for deliveries, linked to A.20 in base case (see Market position)
  - S&D.03 and S&D.04 – empty slots
- ▶ The production parameters for the outpatient care can be adjusted by changing parameters OC.01 to OC.04.
  - OC.01 – Change of production/market share for outpatient care
  - OC.02, OC.03 and OC.04 – empty slots
- ▶ The performance standards for staff and OpEx can be adjusted by changing parameters PS.01 to PS.04.
  - PS.01 – Change performance standard at start of operating period of the hospital, increases or decreases ambition level of staff efficiency at start of operating period.
  - PS.02 - Change ideal level of performance standard during operating period of the hospital, increases or decreases ideal ambition level of staff efficiency.
  - PS.03 - Change performance standard at start of operating period of the hospital, increases or decreases ambition level of opex efficiency at start of operating period.
  - PS.04 – Change ideal level of performance standard during operating period of the hospital, increases or decreases ideal ambition level of opex efficiency.

### (3) PART III

- ▶ Part III of the AFM focuses on the base case adjustment scheme of the New hospital. This part represents the ambition level of the hospital compared to Dutch and to some extend Western European building standards, production intensity and cost drivers. By department, specialism and hospital setting adjustments can be made to pre-designed “benchmark” calculations or other new effects can be added to let the AFM calculate with.

#### PART III on the interface

Source: TNO

| Base case adjustment scheme                                   |  | BCA.01 |     |      |   |  |  | BCA.02 |  |  |  |  |  | BCA.03 |      |   |  |  |  | BCA.04 |    |     |   |  |  |
|---|--|--------|-----|------|---|--|--|--------|--|--|--|--|--|--------|------|---|--|--|--|--------|----|-----|---|--|--|
|   |  | 0%     |     |      |   |  |  | 0%     |  |  |  |  |  | 1 of 0 |      |   |  |  |  | 1 of 0 |    |     |   |  |  |
| <b>Patient-related facilities - Nursing (patient present)</b> |  |        |     |      |   |  |  |        |  |  |  |  |  |        |      |   |  |  |  |        |    |     |   |  |  |
| General nursing   |  | 1.01   | 15% | 21,3 | 1 |  |  | 0%     |  |  |  |  |  | 1.03   | 0,02 | 1 |  |  |  | 4.01   | 6% | 90% | 1 |  |  |
| Special care  |  | 1.02   | 10% | 40,5 | 1 |  |  | 0%     |  |  |  |  |  | 1.03   | 0,25 |   |  |  |  | 4.02   | 6% | 85% | 1 |  |  |
| Child care  |  |        | 0%  | 23,0 |   |  |  | 0%     |  |  |  |  |  |        |      |   |  |  |  |        |    |     |   |  |  |

- ▶ The adjustment as used in part III of the model are described in the provided base case adjustment scheme.

## Interface

### (4) PART IV

- Part IV of the AFM focuses on the production mix of the Petržalka hospital site. This part of the AFM gives the possibility to adjust the product mix of Petržalka as a portion of the total New hospital production by department/specialism and/or hospital setting. The interface shows both the percentage of production performed in the Petržalka hospital and the amount of production units performed in the new build hospital. In part I of the interface this product mix can be taken into account or switched off to show the New hospital with or without Petržalka production capacity

#### PART IV on the interface

Source: TNO

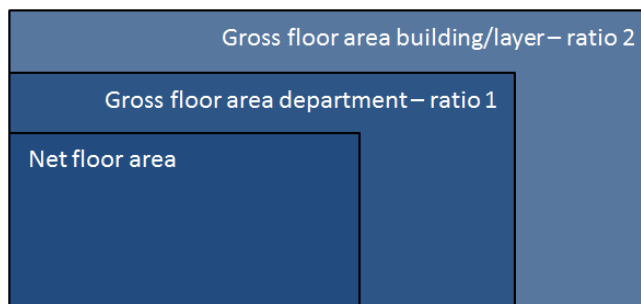
| Petržalka programme         |                       | PP.01               | PP.02                  | PP.03             | PP.04                | PP.05     | PP.06      |
|-----------------------------|-----------------------|---------------------|------------------------|-------------------|----------------------|-----------|------------|
|                             |                       | Clinical admissions | Dayclinical admissions | Outpatient visits | Diagnostic treatment | Surgeries | Deliveries |
|                             |                       | UH                  | OHV                    | SAS               | SVLZ                 | SUR       | DEL        |
| Blood bank                  | Blood bank            | 0                   | 0                      | 0                 | 31.073               | 0         | 0          |
| Central staff accommodation | Support               | 0                   | 0                      | 0                 | 0                    | 0         | 0          |
| Central sterilization       | Central Sterilization | 0                   | 0                      | 0                 | 0                    | 0         | 0          |
| Child care                  | Pediatrics            | 975                 | 50%                    | 0                 | 0                    | 0         | 0          |

### Spatial programming

- Based on the information provided by the hospital about admissions per specialism and the simulated future care production, the size of the main production facilities is calculated. For this, functional spacing/sizing for efficient use is being used from countries such as the Netherlands and the United Kingdom. After determining the useful floor area (net floor area) for each functional type, this area is converted to a gross floor area (GFA) per department by using a net/gross ratio.

#### Relation between net and gross floor area

Source: TNO



- A second ratio, for the net/gross ratio of a hospital as a whole (or one specific layer) is used to determine the gross floor area of the hospital (or layer). By doing so the necessary main circulation areas (that connect the separate units) and general technology areas per building are taken into account. For this second ratio the following assumptions are used:

#### Net/gross ratio of the hospital or layer nemocnice

Source: TNO

| Layer Type | Net/gross ratio |
|------------|-----------------|
| Monolith   | 165 %           |
| Hot Floor  | 155 %           |
| Hotel      | 150 %           |
| Office     | 144 %           |
| Utilities  | 140 %           |

## Interface

- ▶ During the development of the AFM we took the implementation of the program according to the layers approach into account. A distinction is made between Hot floor, Hotel, Office and Utilities. Eventually these estimates lead to a global spatial program and spatial requirements for each main function group.

## Output

- ▶ The output is generated based on the source data of the hospital, Client and benchmark data from TNO and its technical partners. The AFM generates an output depending on detailed input of the parameters in the interface sections. The output consist of investment per layer, differentiated prices, m<sup>2</sup>-costs per layer, gross floor area per unit per layer, number of admissions per specialism, number of clinical beds and day-care beds per specialism, average length of stay per specialism, proportion of admissions and day-care, operational and capital expenditure per year over the period 2013-2060.

## Costs

### OpEx

- ▶ Within the AFM, operational expenditures are calculated for 2020 (start of operation) based on operational expenditures from UNB in 2013 and benchmarks figures.
- ▶ The operational expenditures are built up from several components, namely cost of staff (expressed in FTE), goods & materials, utilities and maintenance. Furthermore, the personnel costs are divided into sub categories based on job categories. The categories are shown in the table below

#### Components OpEx

Source TNO

| Cost                         | Detail  |
|------------------------------|---|
| Staff (in FTE)               | Physicians<br>Pharmacists<br>Nurses<br>Midwives<br>Laborants<br>Technicians<br>Assistants<br>Other medical staff<br>Administrative staff<br>Maintenance workers |
| Goods & Materials (in Euros) |   |
| Utilities (in Euros)         |   |
| Maintenance (in Euros)       |   |

- ▶ In the AFM, there is room for more cost components if needed, for example,
  - goods & materials could be split into drugs, medical tools, blood, food and general material
  - utilities can be subdivided into gas, coal, petroleum, electricity, fuel rolling material and water
  - maintenance can consist of repairs and services.
- ▶ However, these sub categories are left out in the current case.
- ▶ The input for the operational expenditure calculations consists of:
  - The **categories** used for each cost component (in this case, only staff cost are subdivided into categories)
  - The **escalation factors** for 2013 – 2060, comprising the components shown in the table *Escalation factors*. These figures are provided by EY.
  - **Operational cost of the UNB** in the year 2013 divided into the categories as described in „*Cost hospital 2013*“.
- ▶ **Benchmark cost data** from a selection of Western European hospitals and the year that this benchmark should be achieved (table *Benchmark data cost components*). In this case the OpEx benchmarks should be achieved in the year 2023. Furthermore the intermediate level for 2020 is identified and is used as input as well. This intermediate level is calculated by identifying a percentage with which the level at 2020 deviates from the benchmark level at 2023 under the assumption that part of the efficiency gain will take place after the start of operation in 2020. On top of that, on the interface it is possible to change the cost levels with a certain percentage and these changes are directly incorporated in the input.
- ▶ The benchmarks are expressed in two different ways depending on the category. The benchmark data for staff is expressed in FTE per bed for the different subcategories. Important to note that it is assumed that the number of laboratory staff from 2013 to 2023 stays equal to the number in 2013. The benchmark data for the other cost components are expressed as a percentage of the total cost they represent.

## Costs

### Escalation factors

Source EY

Initial CapEx  
 Life-cycle costs  
 Yearly CapEx – building  
 Yearly CapEx – equipment  
 Yearly CapEx – ICT  
 FC: Personnel costs – monetary per unit  
 FC: Cost of services  
 FC: Cost of utilities  
 FC: Other fixed costs  
 VC: Cost of material  
 Consumer price index

### Cost hospital 2013

Source TNO analysis

| Category                                | Sub-category         | Total  | Unit |
|---|----------------------|--------|------|
| <b>Staff</b>                            | Physicians           | 1108   | FTE  |
|   | Pharmacists          | 32     | FTE  |
|   | Nurses               | 2297   | FTE  |
|   | Midwives             | 85     | FTE  |
|   | Laborants            | 133    | FTE  |
|   | Technicians          | 82     | FTE  |
|   | Assistants           | 218    | FTE  |
|   | Other medical staff  | 501    | FTE  |
|   | Administrative staff | 379    | FTE  |
|   | Maintenance workers  | 1179   | FTE  |
| <b>Goods &amp; Materials (in euros)</b> |                      | 41 000 | EURk |
| <b>Utilities (in euros)</b>             |                      | 5 494  | EURk |
| <b>Maintenance (in euros)</b>           |                      | 8 162  | EURk |

### Benchmark data cost components

Source TNO analysis

| Category                                | Sub-category         | Level at 2020 | Level at 2023 | Source  |
|---|----------------------|---------------|---------------|---|
| <b>Staff</b>                            | Physicians           | 0,559         | 0,532         | Based on French , German and to some degree Dutch, benchmark figures. |
|   | Pharmacists          | 0,018         | 0,017         |   |
|   | Nurses               | 1,122         | 1,068         |   |
|   | Midwives             | 0,043         | 0,042         |   |
|   | Laborants            | 128           | 128           |   |
|   | Technicians          | 0,064         | 0,063         |   |
|   | Assistants           | 0,207         | 0,197         |   |
|   | Other medical staff  | 0,369         | 0,351         |   |
|   | Administrative staff | 0,307         | 0,301         |   |
|   | Maintenance workers  | 0,755         | 0,713         |   |
| <b>Goods &amp; Materials (in euros)</b> |                      | 24,0 %        | 21,98 %       | Based on Dutch and to some degree German benchmark figures            |
| <b>Utilities (in euros)</b>             |                      | 1,60 %        | 1,40 %        | Based on Dutch and to some degree German benchmark figures            |
| <b>Maintenance (in euros)</b>           |                      | 4,60 %        | 4,23 %        | Based on Dutch and to some degree German benchmark figures            |

## Costs

- ▶ With the input data as described, the model calculates the expected OpEx in 2020.
- ▶ First the efficiency rates per year are calculated from 2020 to 2023 based on the benchmark data levels at 2020 and 2023 with the assumption that the efficiency changes with the same percentage every year.
- ▶ Secondly, the Opex for 2020 is calculated as a total cost per component and also distributed over the level 2 departments.
  - **FTE:** To calculate the total FTE in 2020, the level of FTE per bed at 2020 for each subcategory is multiplied by the number of beds in 2020. After this the total number of FTE's is distributed over the level 2 departments according to the amount of beds in each department.
  - **Goods & Materials:** To calculate the cost of goods & materials in 2020, first, the cost per nursing day (ALOS x admissions) are calculated for 2013 and with that information also the cost per nursing day for 2020. The total cost for 2020 are derived by multiplying the cost per nursing day with the total number of nursing days. Again, the total cost are distributed over the level 2 departments, this time according to the number of nursing days for each department. The assumption underlying this distribution is that the height of cost of goods & materials can be approximated depending on the total number of nursing days of a department.
  - **Utilities and Services:** For the other cost components (utilities and services), first, the cost per Gross Floor Area is calculated for 2013. With this data and the benchmark information, the cost per Gross Floor Area in 2020 are calculated. The total cost for 2020 are derived by multiplying the cost per GFA with the total GFA in 2020. Finally the total cost for each component are distributed over the level 2 departments, this time according to the GFA for each department. The assumption underlying this distribution is that the height of cost of utilities and services of the individual departments can be best approximated depending on the size of floor area of a department.
- ▶ The output of the Opex are the outcomes of the calculations. Hence,
  - Efficiency rates per year for 2020 until 2023
  - Escalation factors for 2013 until 2060
  - Staff: in FTE per level 2 department
  - Goods & Materials: in cost per nursing day and the number of nursing days per level 2 department
  - Utilities: in cost per Gross Floor Area and the Gross Floor Area per level 2 department
  - Services: in cost per Gross Floor Area and the Gross Floor Area per level 2 department
- ▶ However, one can also directly extract the total cost per component for goods & materials, utilities and services if needed.

## Costs

### Efficiency rates (part of the output)

Source TNO

|                 |                      | Year |      |      |      |      |      |      |       |       |       |      |      |      |      |
|-----------------|----------------------|------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|
| Subject         |                      | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020  | 2021  | 2022  | 2023 | 2024 | 2025 | 2026 |
| Staff           | Physicians           | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -1,6% | -1,6% | -1,6% | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | Pharmacists          | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -1,6% | -1,6% | -1,6% | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | Nurses               | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -1,6% | -1,6% | -1,6% | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | Midwives             | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -1,0% | -1,0% | -1,0% | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | Laborants            | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0%  | 0,0%  | 0,0%  | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | Technicians          | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -0,8% | -0,8% | -0,8% | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | Assistants           | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -1,6% | -1,6% | -1,6% | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | Other medical staff  | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -1,6% | -1,6% | -1,6% | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | Administrative staff | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -0,7% | -0,7% | -0,7% | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | Maintenance workers  | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -1,9% | -1,9% | -1,9% | 0,0% | 0,0% | 0,0% | 0,0% |
| Goods&Materials | Materials            | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -2,9% | -2,9% | -2,9% | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
| Energy          | Energy               | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -4,2% | -4,2% | -4,2% | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
| Maintenance     | Services             | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -2,8% | -2,8% | -2,8% | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | 0                    | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
| Depreciation    | Medical technology   | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
|                 | Other depreciation   | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |       |       |       | 0,0% | 0,0% | 0,0% | 0,0% |
| Other           | Other                | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 3,5%  | 3,5%  | 3,5%  | 0,0% | 0,0% | 0,0% | 0,0% |

### Escalation factors (part of the output)

Source TNO

|   |  | Year |      |      |      |      |      |      |      |      |      |      |      |      |      |
|---|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|   |  | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| Initial CapEx                           |  | 1,2% | 2,6% | 2,8% | 2,4% | 2,8% | 3,0% | 3,0% | 3,0% | 3,0% | 2,8% | 2,6% | 2,5% | 2,3% | 2,2% |
| Life-cycle costs                        |  | 1,2% | 2,6% | 2,8% | 2,4% | 2,8% | 3,0% | 3,0% | 3,0% | 3,0% | 2,8% | 2,6% | 2,5% | 2,3% | 2,2% |
| Yearly CapEx - building                 |  | 1,2% | 2,6% | 2,8% | 2,4% | 2,8% | 3,0% | 3,0% | 3,0% | 3,0% | 2,8% | 2,6% | 2,5% | 2,3% | 2,2% |
| Yearly CapEx - equipment                |  | 1,2% | 2,6% | 2,8% | 2,4% | 2,8% | 3,0% | 3,0% | 3,0% | 3,0% | 2,8% | 2,6% | 2,5% | 2,3% | 2,2% |
| Yearly CapEx - ICT                      |  | 1,2% | 2,6% | 2,8% | 2,4% | 2,8% | 3,0% | 3,0% | 3,0% | 3,0% | 2,8% | 2,6% | 2,5% | 2,3% | 2,2% |
| FC: Personnel costs - monetary per unit |  | 4,0% | 3,4% | 3,1% | 2,8% | 2,4% | 2,8% | 3,0% | 3,0% | 3,0% | 2,8% | 2,6% | 2,5% | 2,3% | 2,2% |
| FC: Cost of services                    |  | 1,2% | 2,6% | 2,8% | 2,4% | 2,8% | 3,0% | 3,0% | 3,0% | 3,0% | 2,8% | 2,6% | 2,5% | 2,3% | 2,2% |
| FC: Cost of utilities                   |  | 1,2% | 2,6% | 2,8% | 2,4% | 2,8% | 3,0% | 3,0% | 3,0% | 3,0% | 2,8% | 2,6% | 2,5% | 2,3% | 2,2% |
| FC: Other fixed costs                   |  | 1,2% | 2,6% | 2,8% | 2,4% | 2,8% | 3,0% | 3,0% | 3,0% | 3,0% | 2,8% | 2,6% | 2,5% | 2,3% | 2,2% |
| VC: Cost of material ???                |  | 1,2% | 2,6% | 2,8% | 2,4% | 2,8% | 3,0% | 3,0% | 3,0% | 3,0% | 2,8% | 2,6% | 2,5% | 2,3% | 2,2% |
| Consumer price index                    |  | 1,2% | 2,6% | 2,8% | 2,4% | 2,8% | 3,0% | 3,0% | 3,0% | 3,0% | 2,8% | 2,6% | 2,5% | 2,3% | 2,2% |

### OpEx (part of the output)

Source TNO

| OpEx   |  |  |  |  |  |  |  |  |  |  | OpEx           |             | OpEx              |         | OpEx             |         | OpEx                    |      |           |               |
|--|--|--|--|--|--|--|--|--|--|--|----------------|-------------|-------------------|---------|------------------|---------|-------------------------|------|-----------|---------------|
| Fixed costs  |  |  |  |  |  |  |  |  |  |  | Variable costs |             | Fixed costs       |         | Fixed costs      |         | Fixed costs             |      |           |               |
| Personnel costs - FTEs (in the first year of operation)  |  |  |  |  |  |  |  |  |  |  | Materials      |             | Cost of utilities |         | Cost of services |         | Depreciation            |      |           |               |
|  |  |  |  |  |  |  |  |  |  |  | price per sqm  |             | price per sqm     |         |                  |         |                         |      |           |               |
| Physicians    Pharmacis    Nurses    Midwives    Laborants    Technician    Assistants    Other med    Administra    Maintenan |  |  |  |  |  |  |  |  |  |  | Area           |             | Area              |         |                  |         |                         |      |           |               |
| Concatenated   |  |  |  |  |  |  |  |  |  |  | EUR/sqm        |             | EUR/sqm           |         |                  |         | Productio EUR/productio |      |           |               |
|  |  |  |  |  |  |  |  |  |  |  | Production     | EUR/product | sqm               | EUR/sqm | sqm              | EUR/sqm |                         |      | Productio | EUR/productio |
| General nursing - Anesthesiology - Hotfloor  |  |  |  |  |  |  |  |  |  |  | 1475           | 73,00       | 154               | 8,31    | 154              | 23,95   | 0                       | 0,00 | 1475      | 12,09         |
| Laboratory clinical pathology - Burns - Utilities  |  |  |  |  |  |  |  |  |  |  | 0              | 0,00        | 166               | 8,31    | 166              | 23,95   | 0                       | 0,00 | 0         | 0,00          |
| Special care - Burns - Hotfloor  |  |  |  |  |  |  |  |  |  |  | 2294           | 73,00       | 437               | 8,31    | 437              | 23,95   | 0                       | 0,00 | 2294      | 12,09         |
| General nursing - Intensive medicine - Hotfloor  |  |  |  |  |  |  |  |  |  |  | 2136           | 73,00       | 222               | 8,31    | 222              | 23,95   | 0                       | 0,00 | 2136      | 12,09         |
| General nursing - Transplantation - Hotfloor   |  |  |  |  |  |  |  |  |  |  | 0              | 0,00        | 0                 | 0,00    | 0                | 0,00    | 0                       | 0,00 | 0         | 0,00          |
| Special care - Surgery - Hotfloor  |  |  |  |  |  |  |  |  |  |  | 3572           | 73,00       | 680               | 8,31    | 680              | 23,95   | 0                       | 0,00 | 3572      | 12,09         |
| General nursing - Surgery - Hotfloor   |  |  |  |  |  |  |  |  |  |  | 20715          | 73,00       | 2019              | 8,31    | 2019             | 23,95   | 0                       | 0,00 | 20715     | 12,09         |
| Child care - Pediatrics - Hotel  |  |  |  |  |  |  |  |  |  |  | 2445           | 73,00       | 250               | 8,31    | 250              | 23,95   | 0                       | 0,00 | 2445      | 12,09         |
| General nursing - Hematology - Hotel   |  |  |  |  |  |  |  |  |  |  | 3199           | 73,00       | 314               | 8,31    | 314              | 23,95   | 0                       | 0,00 | 3199      | 12,09         |

## Costs

### CapEx

- The investments costs are calculated by using price standards for general hospitals in the Netherlands. These price standards are based on benchmark data and can be used for the hospital as a whole (monolith structure, see table *Price standard investment costs (monolith)*). The different functional types and layers use differentiated price levels, expressed as a percentage of the price standard of the monolith structure which is used as a base figure. After all, a hotfloor has a higher price level than an office building. The same applies for the operating theatre in comparison with the outpatient clinic.
- The price standard is also adjusted to Slovak price level and takes into account a number of assumptions (table *Basis for the calculation of the investment costs*) which in some cases are related to the interface (A.08 to A.10).

#### Price standard investment costs (monolith)

Source: TNO

| Costs per m <sup>2</sup> building (gross surface)                            | Excluding VAT (20%) |
|--|---------------------|
| 0.0. PURCHASE COSTS OF THE SITE  | p.m.                |
| 1.1. Structural facilities (concrete, masonry etc.)                          | 990                 |
| 1.2. Mechanical facilities   | 383                 |
| 1.3. Electrical facilities   | 354                 |
| 1.4. Fixed equipment   | 130                 |
| 1.5. Site facilities   | 54                  |
| 1.0. BUILDING COSTS  | 1,911               |
| 2.0. LEGAL CHARGES, INSURANCE  | n/a                 |
| 3.0. INVENTORY   | See below           |
| 4.0. COSTS FOR DESIGN AND CONSTRUCTION MANAGEMENT                            | 286                 |
| 5.0. INTEREST DURING CONSTRUCTION PERIOD                                     | n/a                 |
| 6.1. CONTINGENCIES: costs of changes in briefing and builder's specification | n/a                 |
| 6.2. CONTINGENCIES: wages- and cost increase during building period          | n/a                 |
| 7.0. INITIAL COSTS   | 29                  |
| TOTAL INVESTMENT per m <sup>2</sup> (Dutch price level)                      | 2,207               |
| TOTAL INVESTMENT per m <sup>2</sup> (Slovak price level)                     | 1,655               |

#### Basis for the calculation of the investment costs

Source: TNO

|  |        |
|--|--------|
| Average story height (m)                                 | 3,75   |
| Construction period in months                            | 36     |
| Costs for design and construction management             | 14 %   |
| Interest   | n/a    |
| Legal charges, insurance etc.                            | n/a    |
| Costs of changes in briefing and builder's specification | n/a    |
| Wages- and costincrease during building period           | n/a    |
| Initial costs  | 1,50 % |
| VAT  | 20 %   |
| Slovak price level in relation to Dutch price level      | 75 %   |

- For the different layers the price level is differentiated using the standard as a base. The table below shows the price level for the layers relative to the standard price level as mentioned above.



## Costs

### Price level layers in relation to standard price level

Source: TNO

| Layer     |       |
|-----------|-------|
| Hot floor | 105 % |
| Office    | 70 %  |
| Hotel     | 75 %  |
| Utilities | 100 % |

- ▶ The capital expenditures which are calculated can be divided into three different categories, namely initial capital expenditures (in the first year of operation), life cycle cost and yearly capital expenditures. Both initial and yearly capital expenditures are divided into three categories: building, equipment and ICT.
- ▶ To calculate these CapEx, input for all 4 types of layers and the monolith need to be identified, as these layers have different lifespans, renovation periods, etc. For this input, benchmark data from hospitals in the Netherlands are used. The following two figures show the input for the CapEx calculations giving information about:
  - Initial CapEx: The lifespan (for the building, equipment and ICT) and cost as a percentage of building CapEx (for equipment and ICT).
  - Yearly CapEx: cost as a percentage of initial CapEx and expected lifespan and for medical equipment a percentage yearly add-on and a maximum percentage of initial CapEx the cost can be.
  - Life-cycle cost: The instalments, the cost per instalment and the expected lifespan of it.
- ▶ The cost of equipment and ICT are related to the initial investment costs of the hospital. These costs are based on the assumption that the hospital is fully operational university hospital with state of the art equipment and ICT. Both equipment and ICT pricing is set on Western European standard under the assumption that these will be purchased from known suppliers with Western European pricing.

### Initial CapEx and life-cycle cost input

Source: TNO

| Basis for the calculation of the costs                   |          |          |       |        |           | General          |                             |                               |                  |      |
|--|----------|----------|-------|--------|-----------|------------------|-----------------------------|-------------------------------|------------------|------|
|  | Monolith | Hotfloor | Hotel | Office | Utilities | Community spaces | Central staff accommodation | Workrooms medical specialists | Staff facilities |      |
| Lifespan Building  | 40       |          | 25    | 50     | 50        | 25               | 41                          | 40                            | 37               | 40   |
| 1st installment: number of years from start of operation | 10       |          | 15    | 10     | 10        | 15               | 21                          | 20                            | 18               | 20   |
| 2nd installment: number of years from start of operation | 20       |          |       | 25     | 25        |                  |                             |                               |                  |      |
| 3rd installment: number of years from start of operation | 30       |          |       | 40     | 40        |                  |                             |                               |                  |      |
| 1st installment: EUL                                     | 8        |          | 10    | 10     | 10        | 10               | 10,0                        | 10,0                          | 10,0             | 10,0 |
| 2nd installment: EUL                                     | 16       |          |       | 15     | 15        |                  |                             |                               |                  |      |
| 3rd installment: EUL                                     | 8        |          |       | 10     | 10        |                  |                             |                               |                  |      |
| 1st installment: % of initial building capex             | 10%      |          | 15%   | 10%    | 10%       | 15%              | 35%                         | 35%                           | 35%              | 35%  |
| 2nd installment: % of initial building capex             | 40%      |          |       | 30%    | 20%       |                  |                             |                               |                  |      |
| 3rd installment: % of initial building capex             | 10%      |          |       | 10%    | 10%       |                  |                             |                               |                  |      |

### Yearly CapEx and life-cycle cost input

Source: TNO

|                   |         |  |  |       |
|-------------------|---------|--|--|-------|
| Interest rate     |         |  |  | 2,0%  |
| Maintenance rate  | Yearly  | % of initial CapEx                                   |  | 0,8%  |
|                   |         | EUL as a percentage of EUL of initial Building CapEx |  | 0,0%  |
| Medical equipment | Initial | Lifespan   |  | 7     |
|                   |         | % of investment cost building                        |  | 25,0% |
|                   | Yearly  | % of initial equipment CapEx                         |  | 10%   |
|                   |         | % yearly add-on                                      |  | 1,0%  |
|                   |         | maximum % of initial equipment CapEx                 |  | 15%   |
|                   |         | EUL as a percentage of EUL of initial Equipment Cap  |  | 100%  |
| ICT               | Initial | Lifespan   |  | 3     |
|                   |         | % of investment cost building                        |  | 10%   |
|                   | Yearly  | % of initial ICT CapEx                               |  | 25%   |
|                   |         | EUL as a percentage of EUL of initial ICT CapEx      |  | 100%  |
|                   |         |  |  |       |

## Costs

For the CapEx calculations, the start year of operation is taken as base year. All CapEx figures are calculated separately for all unique combinations of filter 2 (functional type), 3 (department) and 4 (layer type). First, the initial building CapEx are calculated, since these form the bases for all other CapEx.

- The input for the calculation are the benchmark data and the initial building investment cost that are calculated for each level 2 department (cost per m<sup>2</sup> GFA per layer x GFA). With the initial building CapEx for all unique combinations and the benchmark data input, all other CapEx and corresponding parameters are calculated.
- The CapEx output consists of the following components (partly shown in the figures below):
  - Initial CapEx in euros and the economic useful life for building, ICT and equipment
  - Life cycle cost: For all instalments (maximum 3) the cost as a percentage of the initial building CapEx, the year of the instalment and the lifespan as a percentage of the lifespan for the initial building.
  - Yearly CapEx cost as a percentage of initial CapEx and the expected lifespan. Additionally for medical equipment a percentage of yearly add-on and a maximum percentage of initial CapEx the cost can reach is added.

### Initial CapEx output

Source: TNO

| TOTALS  |  | 136.043          |       | 36.137    |       | 17.005  |       |
|---|--|------------------|-------|-----------|-------|---------|-------|
|   |  | CapEx            |       |           |       |         |       |
|   |  | 1. Initial CapEx |       |           |       |         |       |
|   |  | Building         | EUL   | Equipment | EUL   | ICT     | EUL   |
|   |  | EUR 000          | Years | EUR 000   | Years | EUR 000 | Years |
| General nursing - Anesthesiology - Hotfloor       |  | 266              | 25    | 76        | 7     | 36      |       |
| Laboratory clinical pathology - Burns - Utilities |  | 302              | 25    | 80        | 7     | 38      |       |
| Special care - Burns - Hotfloor                   |  | 813              | 25    | 216       | 7     | 102     |       |
| General nursing - Intensive medicine - Hotfloor   |  | 414              | 25    | 110       | 7     | 52      |       |
| General nursing - Transplantation - Hotfloor      |  | 0                | 25    | 0         | 7     | 0       |       |
| Special care - Surgery - Hotfloor                 |  | 1266             | 25    | 336       | 7     | 158     |       |
| General nursing - Surgery - Hotfloor              |  | 3763             | 25    | 999       | 7     | 470     |       |
| Child care - Pediatrics - Hotel                   |  | 296              | 50    | 79        | 7     | 37      |       |
| General nursing - Hematology - Hotel              |  | 372              | 50    | 99        | 7     | 47      |       |
| General nursing - Oncology - Hotel                |  | 138              | 50    | 37        | 7     | 17      |       |

### Life-cycle cost output

Source: TNO

| TOTALS    |   | CapEx                  |                   |                   |                              |                             |                             |                            |                   |                   |  |
|-----------|---|------------------------|-------------------|-------------------|------------------------------|-----------------------------|-----------------------------|----------------------------|-------------------|-------------------|--|
|           |   | 1. Life-cycle costs    |                   |                   |                              |                             |                             |                            |                   |                   |  |
|           |   | Range of initial CapEx |                   |                   | Operation period year number |                             |                             | Range of initial CapEx EUL |                   |                   |  |
|           |   | 1st instalment: %      | 2nd instalment: % | 3rd instalment: % | 1st instalment: year number  | 2nd instalment: year number | 3rd instalment: year number | 1st instalment: %          | 2nd instalment: % | 3rd instalment: % |  |
| Hotfloor  | General nursing - Anesthesiology - Hotfloor       | 95%                    |                   |                   | 2035                         |                             |                             | 40%                        |                   |                   |  |
| Utilities | Laboratory clinical pathology - Burns - Utilities | 95%                    |                   |                   | 2035                         |                             |                             | 40%                        |                   |                   |  |
| Hotfloor  | Special care - Burns - Hotfloor                   | 95%                    |                   |                   | 2035                         |                             |                             | 40%                        |                   |                   |  |
| Hotfloor  | General nursing - Intensive medicine - Hotfloor   | 95%                    |                   |                   | 2035                         |                             |                             | 40%                        |                   |                   |  |
| Hotfloor  | General nursing - Transplantation - Hotfloor      | 95%                    |                   |                   | 2035                         |                             |                             | 40%                        |                   |                   |  |
| Hotfloor  | Special care - Surgery - Hotfloor                 | 95%                    |                   |                   | 2035                         |                             |                             | 40%                        |                   |                   |  |
| Hotfloor  | General nursing - Surgery - Hotfloor              | 95%                    |                   |                   | 2035                         |                             |                             | 40%                        |                   |                   |  |
| Hotel     | Child care - Pediatrics - Hotel                   | 10%                    | 30%               | 10%               | 2030                         | 2045                        | 2060                        | 20%                        | 30%               | 20%               |  |
| Hotel     | General nursing - Hematology - Hotel              | 10%                    | 30%               | 10%               | 2030                         | 2045                        | 2060                        | 20%                        | 30%               | 20%               |  |
| Hotel     | General nursing - Oncology - Hotel                | 10%                    | 30%               | 10%               | 2030                         | 2045                        | 2060                        | 20%                        | 30%               | 20%               |  |

### Yearly CapEx output

Source: TNO

| TOTALS  |  | CapEx              |   |  |   |  |   |                      |   |  |   |                                  |   |                                  |   |
|---|--|--------------------|---|--|---|--|---|----------------------|---|--|---|----------------------------------|---|----------------------------------|---|
|   |  | 3. Yearly CapEx    |   |  |   |  |   |                      |   |  |   |                                  |   |                                  |   |
|   |  | 100% initial CapEx |   |  |   | starting from 2nd year of operation period |   |                      |   | starting from 1st year of operation period |   |                                  |   |                                  |   |
|   |  | Building           |   | EUL as a percentage of EUL of initial Building CapEx |   | Percentage of initial                      |   | Yearly add-on factor |   | Maximum percentage                         |   | Percentage of initial / IC CapEx |   | Percentage of initial / IC CapEx |   |
|   |  | Building           | % | Building   | % | Equipment                                  | % | Equipment            | % | Equipment                                  | % | Equipment                        | % | Equipment                        | % |
| General nursing - Anesthesiology - Hotfloor       |  | 0.8%               |   | 0.0%   |   | 10.0%                                      |   | 1.0%                 |   | 15.0%                                      |   | 100.0%                           |   | 25.0%                            |   |
| Laboratory clinical pathology - Burns - Utilities |  | 0.8%               |   | 0.0%   |   | 10.0%                                      |   | 1.0%                 |   | 15.0%                                      |   | 100.0%                           |   | 25.0%                            |   |
| Special care - Burns - Hotfloor                   |  | 0.8%               |   | 0.0%   |   | 10.0%                                      |   | 1.0%                 |   | 15.0%                                      |   | 100.0%                           |   | 25.0%                            |   |
| General nursing - Intensive medicine - Hotfloor   |  | 0.8%               |   | 0.0%   |   | 10.0%                                      |   | 1.0%                 |   | 15.0%                                      |   | 100.0%                           |   | 25.0%                            |   |
| General nursing - Transplantation - Hotfloor      |  | 0.8%               |   | 0.0%   |   | 10.0%                                      |   | 1.0%                 |   | 15.0%                                      |   | 100.0%                           |   | 25.0%                            |   |
| Special care - Surgery - Hotfloor                 |  | 0.8%               |   | 0.0%   |   | 10.0%                                      |   | 1.0%                 |   | 15.0%                                      |   | 100.0%                           |   | 25.0%                            |   |
| General nursing - Surgery - Hotfloor              |  | 0.8%               |   | 0.0%   |   | 10.0%                                      |   | 1.0%                 |   | 15.0%                                      |   | 100.0%                           |   | 25.0%                            |   |
| Child care - Pediatrics - Hotel                   |  | 0.8%               |   | 0.0%   |   | 10.0%                                      |   | 1.0%                 |   | 15.0%                                      |   | 100.0%                           |   | 25.0%                            |   |
| General nursing - Hematology - Hotel              |  | 0.8%               |   | 0.0%   |   | 10.0%                                      |   | 1.0%                 |   | 15.0%                                      |   | 100.0%                           |   | 25.0%                            |   |
| General nursing - Oncology - Hotel                |  | 0.8%               |   | 0.0%   |   | 10.0%                                      |   | 1.0%                 |   | 15.0%                                      |   | 100.0%                           |   | 25.0%                            |   |

## References

“Algemene Ziekenhuis, Bouwmaatstaven voor nieuwbouw” College bouw ziekenhuisvoorzieningen, oktober 2002

“Voorzieningen voor ziekenhuisverpleging, Bouwmaatstaven voor nieuwbouw” Rapportnummer 0.113, College bouw ziekenhuisvoorzieningen, november 2003

“Centrale sterilisatieafdeling, Bouwmaatstaven voor nieuwbouw” College bouw ziekenhuisvoorzieningen, november 2002

“Bouwmaatstaven ten behoeve van nieuwbouwplannen voor dialyse” College bouw ziekenhuisvoorzieningen, januari 2002

“Operatieafdeling, Bouwmaatstaven voor nieuwbouw” Rapportnummer 0.115, College bouw ziekenhuisvoorzieningen, januari 2004

“Beeldvormende en nucleaire technieken, Bouwmaatstaven voor nieuwbouw” Rapportnummer 0.117, College bouw ziekenhuisvoorzieningen, oktober 2004

“Spoedeisende hulp, Bouwmaatstaven voor nieuwbouw” Rapportnummer 0.119, College bouw ziekenhuisvoorzieningen, juni 2005

“Centrum voor radiotherapie, Bouwmaatstaven voor nieuwbouw” College bouw ziekenhuisvoorzieningen, januari 2003

“Verlosafdeling, Bouwmaatstaven voor nieuwbouw” Rapportnummer 0.118, College bouw ziekenhuisvoorzieningen, oktober 2004

“Spreekuurafdeling, poliklinische behandeling en algemeen orgaanfunctieonderzoek, Bouwmaatstaven voor nieuwbouw” Rapportnummer 0.116, College bouw ziekenhuisvoorzieningen, februari 2004

“Laboratoria en ziekenhuisapotheek, prestatie-eisen voor nieuwbouw” Rapportnummer 0.120, College bouwzorginstellingen, april 2006

“Bouwmaatstaven ten behoeve van nieuwbouwplannen voor een laboratorium voor klinische chemie” College bouw ziekenhuisvoorzieningen, november 2001

“Bouwmaatstaven ten behoeve van nieuwbouwplannen voor een laboratorium voor medische microbiologie” College bouw ziekenhuisvoorzieningen, februari 2002

“Bouwmaatstaven ten behoeve van nieuwbouwplannen voor een laboratorium voor klinische pathologie” College bouw ziekenhuisvoorzieningen, januari 2002

“Bouwmaatstaven ten behoeve van nieuwbouwplannen voor keukenvoorzieningen in de zorgsector” College bouw ziekenhuisvoorzieningen, april 2000

## References

“Onderwijsvoorzieningen algemeen ziekenhuis, signaleringsrapport” College bouw ziekenhuisvoorzieningen, oktober 2003

“Bouwmaatstaven voor werkplaatsen technische dienst in de zorgsector” College bouw ziekenhuisvoorzieningen, februari 2001

“Revalidatiecentrum, Bouwmaatstaven voor nieuwbouw” College bouw ziekenhuisvoorzieningen, oktober 2003

TNO-034-UTC-2010-00171 “Jaarbeeld Bouwkosten Zorgsector 2010,Kostenontwikkelingen van gebouwen in de zorg” TNO, juni 2010

TNO-rapport TNO -UTC-2011-00186 “Bouw in de gezondheidszorg” TNO, oktober 2011

FINANCIELE STATISTIEK 2011 “Algemene ziekenhuizen landelijke tabellen” Dutch Hospital Data, Utrecht, februari 2013

Website of the Statistical office of the Slovak Republic (Štatistický úrad Slovenskej republiky (ŠÚ SR))

“Building Differentiation of Hospitals - layers approach” report number 611, Netherlands Board for Healthcare Institutions, 2007,

Excel-file “Project Hippo\_databook\_master\_16Apr\_1805.xlsx” Databook, version 16 april, provided by Ernst and Young (EY)

“Grunddaten der Krankenhäuser 2010” Statistisches Bundesamt, Wiesbaden, 2012

“Statistique Annuelle des établissements de santé” Direction de la recherche, des études, de l’évaluation et des statistique, Ministère de la santé et des solidarites, 2012

“EUROSTAT, 15-04-2014 (TNO)”

## Executive summary

This appendix has been written by the technical advisers from Imperial College Business School, to provide an overview of potential strategic long-term developments in provision of care in a regional context which may be relevant to the New hospital once it is operational. The IC BS advisers have used their specific knowledge of healthcare delivery and health systems reform in the United Kingdom, to describe possible strategic implications for healthcare delivery in the Bratislava area. While outside the immediate scope of the present Study, these implications should prove relevant in follow-on activity aimed at restructuring healthcare provision in Slovakia.

On the basis of the information we have assembled it is reasonable to indicate that in the UK there is potential to reduce total bed capacity by up to 20%, with a concomitant reduction in outpatient capacity.

The 20% figure is widely referenced in current NHS England policy and is used to provide evidence for strategies designed to reduce the level of hospital attendances. The 20% estimate also draws on experience from other countries (US, Germany, Spain) that have embarked on programmes to reduce hospital admissions.

These conclusions are partly based on data from recent research on the incidence of 'ambulatory care sensitive conditions' (ACSC). These are chronic conditions for which it is possible to prevent acute exacerbations and reduce the need for hospital admission through active management. They are regarded as potentially avoidable hospital admissions; depending on the estimates, around 5 conditions account for between 50% and 75% of all ACSC admissions.

Whilst there is mention that the impact on outpatient attendances could be greater than that on beds we have found no numeric expression of that impact.

To achieve these estimates of reduced demand for hospital beds, it is necessary to establish improved and more integrated healthcare structures, focusing especially on the management and care of patients outside hospitals.

The hypothetical 20% figure is based on UK experience and the 'starting point' for reductions in unplanned admissions is likely to be more advanced than is the case in Bratislava – the UK has been pursuing bed reduction programmes for many years and is therefore further 'up the curve' towards maximum efficiency.

In Bratislava it is likely that the current inefficiencies in the local health system will mean that greater savings are achievable and the 20% target should be seen as a minimum.

A range of evidence-based interventions and new care delivery innovations could be put in place to reduce hospital demand:

- ▶ Efforts around primary prevention are generally low cost but highly effective. However, this would play out over the longer term, once a decision had been to put in place primary prevention activities.
- ▶ Supporting the self-management of ACSC by patients are generally low cost and – depending on the condition – have the potential to have a significant impact.
- ▶ Telehealth systems can reduce demand on the hospital system, although the extent depends in part on the health condition being targeted.
- ▶ The introduction of active patient management for ACSCs would require significant redesign of services and must be seen as a longer-term intervention in the Bratislava context.
- ▶ Integrated care systems are increasingly seen as a model for improving care outcomes and patient-centred services. However, there are different interpretations of what this means in practice and the economic implications are ambiguous. The introduction of integrated care must be seen as a longer-term intervention.
- ▶ Improving the management of elective (planned) hospital activity, especially better management of the referral system into the acute care sector, will depend on the specific mechanisms for referral currently in place in the local health system in Slovakia. It is understood that measures are being taken to achieve this in Slovakia, including the introduction of pilot schemes. Consideration should be given to extending these to the Bratislava region.
- ▶ Managing the unplanned and urgent care system requires multiple interventions across the local health system. There are likely to be potential benefits for reducing hospital demand by improving this system in Bratislava. The extent will depend on the specific local context and system unscheduled care.
- ▶ There should be scope for substantially reducing the number of geriatric beds, but this will be dependent on putting in place suitable support structures for out-of-hospital end-of-life care. This would require significant planning and investment, and would be an option only over the longer term.

## Executive summary

It will be hard – probably impossible – to achieve the levels of improvement across all parts of the system simultaneously, so there needs to be discussion around the balance between the likely impact of particular changes and their ease of implementation. It would be a useful exercise to identify the potential impact and ease of implementation for each of the various areas for performance improvement in the proposed workshop.

### Strategic considerations for the Bratislava project

Implementation of best-practice performance and practice methods should be able to deliver improvements to the cost efficiency of providing hospital services.

Going beyond this requires more fundamental changes. The rationalisation of the group of hospitals should generate significant economies of scale; moving towards a more networked and integrated regional model of care should also reduce hospital demand.

If implemented, the impact of these changes must equate to a reduction in the current total cost of services / gross income to the hospital.

The development of a new university hospital facility should be seen as an essential catalyst for wider transformation in the performance of regional health services. Investment in the currently under-developed community and primary care sectors is therefore as critical as investment in a new hospital if the aim of achieving a fully integrated high quality health service model is to be achieved.

There are two requirements for achieving the objective of delivering a new teaching hospital through some form of private finance arrangement and a more integrated less hospital-centric model of care:

- ▶ A reduction in the size of the income stream going to the new hospital, as funding is diverted to facilitate the development of a model of care focusing on illness prevention and better disease management delivered in community settings.
- ▶ Significant capital investment in infrastructure and resource expenditure in the community/primary care sectors, for which funding also may not be readily available from within public sector funds.

More efficient delivery of hospital services through improved performance and the appropriate transfer of a range of treatments to less expensive community-based care should provide a significant offset to the necessary additional costs of investment.

One way to address the potentially misalignment of incentives between a privately financed hospital and need to reduce demand for that hospital's services could involve the development of a payment mechanism that reflects the opening activity levels at those of best performing hospitals, but which also include incentivised payment arrangements and contractual targets for transfer of services on a progressive basis to less expensive community based care.

The most effective, but perhaps most difficult, way to create a truly integrated model would be to incentivise a competitively selected single organisation through new payment structures to invest in the development and management of integrated hospital, community and primary care facilities in the Bratislava region.

An alternative model which could be considered is the co-location on appropriately located hospital sites, with primary and community services provided by the operator of the hospital to ensure that the income that these services generate stays with that operator.

It would be significantly less complicated and more manageable to create a contract for a more limited inclusion of primary and community care services and the required accommodation on a single site, rather than on a regional basis.

## Introduction

The purpose of this note is to discuss the evidence for new ways of organizing healthcare services at a local / sub-regional level, in response to a need for significant improvements in performance in the effectiveness and quality of services. It draws on lessons from the UK and elsewhere, and concentrates on the areas that are most relevant to the Bratislava situation.

The first part consider potential areas for improving performance – improved health outcomes through service delivery innovations – and second part discusses the implications for the organisation of healthcare infrastructure and a local / sub-regional level.

## Areas for performance improvement

Like some other health systems, the UK's National Health Service (NHS) has undergone a series of initiatives over the last 15 years designed to achieve significant improvements in performance in the effectiveness and efficiency of healthcare. These have made extensive use of available data to identify areas where savings or gains can be made. High-level indicators are being used locally to help inform planning, to inform views on the scale of potential efficiency savings in different aspects of care and to generate ideas on how to achieve these savings. Over the years these indicators have changed, depending on the prevailing priorities or on the sustained achievement of targets. Broadly, however, this effort has focused on some common themes:

- ▶ Delivering process changes to optimise the efficient use of resources at different levels in health systems from departments in hospitals such as accident and emergency through the hospital as a whole to the wider local system within which it is situated.
- ▶ Shifting the location of care to new, supposedly cheaper settings by redesigning services towards community based care.
- ▶ More systematic and proactive management of chronic disease as far as possible out of hospital, to improve health outcomes, reduce inappropriate use of hospitals, and the impact on health inequalities.
- ▶ A population-based approach to planning and delivery services to direct resources to the patients with greatest need, shift the focus from patients that present most frequently to the wider population.
- ▶ Increasing the amount of 'self-care' through the empowerment of patients to encourage the active engagement of patients in their health, as well increasing the role of public health programmes such as smoking cessation.
- ▶ More integrated models of care, ranging from 'virtual' integration through shared protocols to integrated teams, shared budgets across primary and secondary care, and organisational integration, in order to improve the patient experience and optimise the efficient use of care resources

The current programme has identified a range of target areas and estimated the scale of the annual financial gains that could be achieved<sup>165</sup> (Table *Target areas for performance improvement and potential annualised financial gains in the NHS in England*). A number of 'high impact interventions' have been identified which could be put in place to achieve these targets<sup>166</sup> (Table *NHS England, High Impact Interventions, 2014*). These build on an earlier recommended set of interventions, which were accompanied by some estimates of potential savings or benefits<sup>167</sup>

Target areas for performance improvement and potential annualised financial gains in the NHS in England

| Indicator                           | Latest value   | Latest annualised financial opportunity (£ m) |
|-------------------------------------|--|---|
| Outpatient Appointments             | 7900.68 (Outpatient appointments per 100,000 population) | 304.8   |
| Reducing Length of Stay             | 13.52 (Bed day saving %)                                 | 246.9   |
| Managing First Follow Up            | 2.03 (First follow up ratio)                             | 231.9   |
| Emergency Admissions                | 381.24 (Emergency admissions per 100,000 population)     | 196.5   |
| Emergency Readmission (14 day)      | 5.36 (Emergency readmissions (%))                        | 185.5   |
| Outpatient Appointment DNA          | 8.28 (DNA %)   | 64.2  |
| Pre-Procedure Non-Elective Bed Days | 1.66 (Pre-procedure bed day rate)                        | 54.1  |
| Managing Surgical Thresholds        | 88.99 (Operations per 100,000 population)                | 48.0  |
| Increasing Day Surgery Rates        | 79.09 (Daycase Rate (%))                                 | 16.1  |
| Pre-procedure Elective bed days     | 0.26 (Pre-procedure bed day rate)                        | 14.8  |

<sup>165</sup> NHS Better Care, Better Value Indicators. <http://www.productivity.nhs.uk/?percentileId=2&yearQtrId=18&IndicatorTypeId=1>

<sup>166</sup> <http://www.england.nhs.uk/2014/01/24/any-town/>

<sup>167</sup> NHS Modernisation Agency (2004) *10 High Impact Changes for service improvement and delivery: a guide for NHS leaders*.



## Areas for performance improvement

### NHS England, High Impact Interventions, 2014

| High Impact Intervention  | Objectives  |
|---|---|
| 1. Early diagnosis  | Early detection and diagnosis to improve survival rates and lower overall treatment costs   |
| 2. Reducing variability within primary care by optimising medicines use and referring | Reducing unwanted variation in primary care referring and prescribing to improve clinical outcomes and patient experience, whilst delivering financial savings                |
| 3. Self-management: patient-carer communities   | Self-management programme for those suffering with a long-term condition, who educate and support each other  |
| 4. Telehealth/telecare  | Using telecare/telehealth to transform health care through giving patients the confidence to manage their own condition more effectively in conjunction with their clinicians |
| 5. Case management and coordinated care   | Multi-disciplinary case management for the frail elderly and those suffering with a long-term condition   |
| 6. Mental Health  | Psychiatric liaison services provide mental health care to people being treated for physical health conditions in general hospitals   |
| Rapid Assessment Interface and Discharge (RAID)                                       |   |
| 7. Dementia Pathway   | Improve health outcomes and achieve efficiencies in dementia care, by developing a fully integrated network model   |
| 8. Palliative care  | Community based, consultant-led palliative care service   |

### High Impact Interventions, 2004

| High Impact Intervention   | Expected impact (given the NHS context in 2004)   |
|--|---|
| 1. Treating day surgery as the norm for elective surgery   | Could release nearly 500,000 inpatient bed days each year   |
| 2. Improving patient flow across the whole NHS by improving access to key diagnostic tests                               | Could save 25m weeks of unnecessary patient waiting time  |
| 3. Managing variation in patient discharge to reduce length of stay  | Could release 10% of total bed days for other activity  |
| 4. Managing variation in the patient admission process   | Could cut the 70,000 operations cancelled each year for non-clinical reasons by 40%                           |
| 5. Avoiding unnecessary follow-ups for patients and providing necessary follow-ups in the right care setting             | Could save half a million appointments in orthopaedics, ENT, ophthalmology and dermatology                    |
| 6. Increasing the reliability of performing therapeutic interventions through a Care Bundle approach                     | Could release approximately 14,000 bed days by reducing length of stay in critical care alone                 |
| 7. Applying a systematic approach to care for people with long-term conditions   | Could prevent a quarter of a million emergency admissions to hospital   |
| 8. Improving patient access by reducing the number of queues   | Could reduce the number of additional FFCEs required to hit elective access targets by 165,000                |
| 9. Optimising patient flow through service bottlenecks using process templates   | Could free up to 15-20% of current capacity to address waiting times  |
| 10. Redesigning and extending roles in line with efficient patient pathways to attract and retain an effective workforce | Could free up more than 1,500 WTEs of GP/consultant time, creating 80,000 extra patient interactions per week |

Key points in tables *Target areas for performance improvement and potential annualised financial gains in the NHS in England* and *NHS England, High Impact Interventions, 2014* in relation to Project HIPPO

- ▶ In the UK the 'big' target areas now relate to *out-of-hospital* issues around managing the flow of patients into the acute hospital (reducing the number of outpatient appointments and emergency admissions).
- ▶ Reducing the length of hospital stay and the optimisation of the efficient use of resources remains a major priority, but other *in-hospital* issues, notably increasing the rate of day surgery or pre-procedure bed days, are areas where only smaller gains can be achieved.
- ▶ It will be important to consider for the Bratislava context what the relative importance / weighting of these potential performance improvement areas is, and if possible estimate the financial gains.

## Areas for performance improvement

- ▶ The potential interventions to deliver these performance improvements (table *NHS England, High Impact Interventions, 2014*) are described in more detail later in this document. It is clear from a comparison between tables *NHS England, High Impact Interventions, 2014* and *High Impact Interventions, 2004* how the recommended interventions have evolved over time in the UK – a focus on day surgery and ambulatory care, for example, is no longer a target area because the performance is at or approaching ‘world/european’ standards and the attention is now turning to maximising the use of interventional radiology to reduce or prevent inpatient stays and improve outcomes for patients.
- ▶ A list of ‘high impact interventions’ for the Bratislava context would inevitably include a mix of those listed in tables *NHS England, High Impact Interventions, 2014* and *High Impact Interventions, 2004*, but would need to be customised to local needs. The anticipated health system impact (column 2 in table *High Impact Interventions, 2004*) is specific to the NHS context in 2004 – the impact of improvements in the rate of day surgery would be different (less) in the NHS of 2014 and, of course, in the Slovak context.
- ▶ The various performance improvement target areas and interventions have different implications for the type and spatial configuration of healthcare infrastructure, as well as for the design and organisation of services. Much of the effort in the UK, based on these targets, is on *out-of-hospital* services and infrastructure. The timescales for delivering a radical redesign at a sub-regional are longer than those for the procurement of a new hospital.

## Priority areas for intervention

There is broad alignment between the areas for performance improvement which currently the focus of attention in the NHS and priority areas for intervention recently identified by the King's Fund, the leading healthcare thinktank<sup>168</sup>. We have grouped the main areas with potential relevance for the Bratislava case below - NB this is simply a subjective assessment, based on our knowledge of the local needs and context.

### Primary prevention

- ▶ This involves taking action to reduce the incidence of disease and health problems within the population, either through universal measures that reduce lifestyle risks and their causes or by targeting high-risk groups. The WHO has estimated that 80% of cases of heart disease, stroke and type 2 diabetes, and 40% of cases of cancer could be avoided if common lifestyle risk factors were eliminated<sup>169</sup>. Primary prevention is highly cost effective compared with many treatments. Almost half the 250+ studies on prevention published in 2008 showed a cost of under £6,400 per quality-adjusted life year (QALY) and almost 80% cost less than the £30,000 threshold used in the UK for assessing cost effectiveness<sup>170</sup>.

### Secondary prevention

- ▶ This involves systematically detecting the early stages of disease and intervening before full symptoms develop. Secondary prevention is based on a range of interventions that are often highly cost effective and that are expected to rapidly have an impact on life expectancy and local inequalities in health if implemented at scale<sup>171</sup>. Early detection and diagnosis can improve survival rates and lower overall treatment costs<sup>172</sup>.
- ▶ One of the potential tools for secondary prevention is telehealth, where there has been significant effort in the UK over the last decade. The evidence base for its impact is mixed, but two areas where it appears to be having some impact on hospital admissions are chronic obstructive pulmonary disease (COPD) and heart failure. Research has suggested that effects on a range of measures (reduced visits to emergency departments, hospital admissions, and average length of hospital stay) are more consistent in pulmonary and cardiac disorders than in diabetes and hypertension<sup>174</sup>. For diabetes, evaluations have focused on the achievement of outcomes in terms of glycaemic control, with some reported success<sup>175</sup>. Another area has been stroke care, where one study, for example, suggested a potential 20% decline in hospital bed days<sup>176</sup>. For COPD various studies have shown the mean annual number of hospital admissions following a telehealth intervention ranges from no significant change compared to usual care<sup>177</sup> to significant savings. A similar pattern can be observed for heart failure (see table *Some findings from telehealth trials* on the following page).

<sup>168</sup> Naylor C et al (2013) *Transforming our health care system. Ten priorities for commissioners*. King's Fund.

<sup>169</sup> WHO (2005) *Preventing Chronic Diseases: A vital investment*. Geneva: World Health Organization.

[www.who.int/chp/chronic\\_disease\\_report/full\\_report.pdf](http://www.who.int/chp/chronic_disease_report/full_report.pdf)

<sup>170</sup> Van Gils PF, Tariq L, Verschuuren M, van der Berg M (2010) Cost-effectiveness research on preventive interventions: a survey of the publications in 2008. *European Journal of Public Health*, 21(2), 260-4.

<sup>171</sup> Department of Health (2009) *Tackling Health Inequalities: 2006-08 Policy and data update for the 2010 national target*.

[www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_109469](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_109469)

<sup>172</sup> National Audit Office (2010) *Tackling Inequalities in Life Expectancy in Areas with the Worst Health and Deprivation: Executive summary*. [www.nao.org.uk/report/tackling-inequalities-in-life-expectancy-in-areas-with-the-worst-health-and-deprivation/](http://www.nao.org.uk/report/tackling-inequalities-in-life-expectancy-in-areas-with-the-worst-health-and-deprivation/)

<sup>173</sup> Lovibond et al (2011) Cost-effectiveness of options for the diagnosis of high blood pressure in primary care: a modelling study, *The Lancet* 378, 1219-1230.

<sup>174</sup> Paré G, Jaana M, Sicotte C (2007) Systematic review of home telemonitoring for chronic diseases: the evidence base. *J Am Med Inform Assoc*;14:269-77.

<sup>175</sup> Steventon et al. (2012) Effect of telehealth on use of secondary care and mortality: findings from the Whole System Demonstrator cluster randomised trial. *BMJ*, 344: e3874.

<sup>176</sup> Bayer S, Petsoulas C, Cox B, Honeyman A, Barlow J (2010) Facilitating stroke care planning through simulation modelling. *Health Informatics Journal* 16, 129-143.

<sup>177</sup> Pinnock H, McKinstry B, Hanley J, Pagliari C et al (2013) Effectiveness of telemonitoring integrated into existing clinical services on hospital admission for exacerbation of chronic obstructive pulmonary disease: researcher blind, multicentre, randomised controlled trial. *BMJ* 347:f6070

## Priority areas for intervention

### High Impact Interventions, 2004

| COPD  | Heart failure   |
|---|---|
| A reduction in 107 hospital admissions over 30 winter weeks in a group of only 47 patients, translating into the prevention of at least 2¼ hospitalisations per patient per year. | Systematic review of the evidence concluded that telemonitoring (including telephone support) appears to be effective in improving outcomes in patients with CHF <sup>178</sup> . |
| Reduction in A&E attendance (52%), unplanned hospital admissions (57%), GP appointments (67%), GP home visits (85%) <sup>179</sup>  | Expected hospital admissions reduced by 36% <sup>180</sup>  |
| 60% reduction in COPD patient unplanned hospital admissions, with admission rate reducing from 42% to 9% <sup>181</sup>   | Unplanned hospital admissions of CHF patients reduced by 33% <sup>182</sup> .   |
| Several studies showed lower rates of emergency admissions for patients receiving home monitoring plus telephone support <sup>183</sup> .   | 6-14% saving in hospital bed days after 24 months, depending on type of intervention <sup>184</sup>   |
|   | A more recent study of 1653 patients with heart failure found no significant effect on hospital use or mortality <sup>185</sup> .   |

In the UK the Whole System Demonstrators programme, which include the largest randomised control trial conducted so far on telehealth (targeted at COPD, heart failure and diabetes) found that after one year overall (ie for all conditions) there was a:

- 15% reduction in emergency department visits
- 14% reduction in elective care admissions
- 14% reduction in bed days
- 8% reduction in tariff costs (costs fell significantly more in hospitals than in the primary care sector)

In the Whole System Demonstrators programme the difference in hospital costs between COPD and heart failure patients were rather larger than for those with diabetes (although the confidence intervals of the difference were very wide for all three groups)<sup>186</sup>, supporting the findings of other research.

### Self-management and patient-carer communities

- The objective is to introduce self-management programmes for those living with a long-term condition. These patients and others then help to educate and support each other. Self-management support can be viewed as a portfolio of techniques and tools to help patients choose healthy behaviours; and as a fundamental transformation of the patient-caregiver relationship into a collaborative partnership<sup>187 188</sup>. There are well-established self-management programmes that aim to empower patients to improve their health, which highlight the importance of ensuring interventions are tailored to the condition<sup>189</sup>. These programmes have been shown to reduce unplanned hospital admissions for COPD and asthma<sup>190</sup> and to improve adherence to treatment and

<sup>178</sup> Inglis SC, Clark RA, McAlister FA, Ball J, Lewinter C, Cullington D, et al. Structured telephone support or telemonitoring programmes for patients with chronic heart failure. *Cochrane Database Syst Rev* 2010;8:CD007228.

<sup>179</sup> <http://telecareaware.com/telehealth-can-achieve-85-reduction-in-gp-home-visits-uk/#sthash.OQ7IVDC9.dpuf>

<sup>180</sup> <http://telecareaware.com/rmp-henry-ford-reduce-admissions/#sthash.PDDQ96Bh.dpuf>

<sup>181</sup> <http://telecareaware.com/outcome-data-ni-abstract/#sthash.631RoQC7.dpuf>

<sup>182</sup> <http://telecareaware.com/outcome-data-ni-abstract/#sthash.631RoQC7.dpuf>

<sup>183</sup> Steventon et al. op cit.

<sup>184</sup> Bayer & Barlow

<sup>185</sup> Chaudhry SI, Matterna JA, Curtis JP, Spertus JA, Herrin J, Lin Z, et al. Telemonitoring in patients with heart failure. *N Engl J Med* 2010;363:2301-9.

<sup>186</sup> Steventon et al. op cit.

<sup>187</sup> de Sliva D (2011) *Helping People Help Themselves*. London: The Health Foundation.

<sup>188</sup> Richardson et al (2008) Cost Effectiveness of the Expert Patients Programme for patients with chronic conditions. *J Epidemiol Community Health*, 62, 361-367

<sup>189</sup> de Sliva op cit.

<sup>190</sup> Purdy S (2010) *Avoiding Hospital Admissions. What does the research evidence say?* London: The King's Fund.

[www.kingsfund.org.uk/publications/avoiding\\_hospital.html](http://www.kingsfund.org.uk/publications/avoiding_hospital.html)

## Priority areas for intervention

medication<sup>191</sup>. The cost-benefit evidence is more equivocal, although at least one cost analysis performed has indicated that expenditure in other parts of the system can be reduced<sup>192</sup>.

### Managing ambulatory care-sensitive conditions

- ▶ Ambulatory care-sensitive conditions (ACSC) are chronic conditions – such as congestive heart failure, diabetes, asthma, angina, epilepsy and hypertension – for which it is possible to prevent acute exacerbations and reduce the need for hospital admission through active management. Methods include use of risk stratification tools and clinical decision support software within GP practices, disease management and support for self-management, behavioural change programmes, improvements in the quality of primary and secondary care such as increased continuity of care with a GP, better local out-of-hours primary care arrangements, and easy access to urgent care for those with acute aggravated conditions<sup>193</sup>.
- ▶ A significant proportion of all acute hospital activity is related to preventable ACSCs. In the NHS in 2013/13 a fifth (20.1%) emergency of total admissions were recorded as falling within one of the 27 conditions defined as ACSC and five conditions accounted for more than half of admissions<sup>194</sup>. In 2009/10 emergency hospital admissions arising from a core set of 19 ACS conditions cost NHS England £1.42bn for<sup>195</sup> (see table 5). According to the King's Fund, emergency admissions for ACSCs could be reduced by 8% - 18% simply by tackling variations in care and spreading existing good practice, saving £96m - £238m<sup>196</sup>.

Five long-term ACSCs are responsible for 75% of admissions (2012/13)<sup>197</sup>

| Condition                                   | Share of total admissions & incidence       |
|---|---|
| Other chronic obstructive pulmonary disease | 24% (200 admissions per 100,000 population) |
| Atrial fibrillation and flutter             | 12% (100 admissions per 100,000 population) |
| Asthma                                      | 12% (100 admissions per 100,000 population) |
| Heart failure                               | 12% (100 admissions per 100,000 population) |
| Angina pectoris                             | 12% (100 admissions per 100,000 population) |

### Multi-disciplinary case management and integrated / coordinated care

- ▶ Creating patient-centred care that is more coordinated across care settings and over time is increasingly seen as essential, particularly for patients with long-term chronic and medically complex conditions, or the frail elderly who may find it difficult to 'navigate' fragmented health care systems<sup>198</sup>. There is no one model of care co-ordination, but evidence suggests that joint commissioning between health and social care that results in a multi-disciplinary team approach is likely to achieve better results than those that rely on a single or limited set of strategies<sup>199 200</sup>

<sup>191</sup> Challis D, Hughes J, Berzins K, Reilly S, Abell J, Stewart K (2010) *Self-care and Case Management in Long-term Conditions: The effective management of critical interfaces*. London: HMSO. [www.netscc.ac.uk/hsdr/projdetails.php?ref=08-1715-201](http://www.netscc.ac.uk/hsdr/projdetails.php?ref=08-1715-201)

<sup>192</sup> Stearns SC, Bernard SL, Fasick SB, Schwartz R, Konrad TR, Ory MG, DeFries GH (2000) The economic implications of self-care: the effect of lifestyle, functional adaptations, and medical self-care among a national sample of Medicare beneficiaries. *American Journal of Public Health*, 90(10), 1608-12.

<sup>193</sup> Purdy S (2010) *Avoiding Hospital Admissions. What does the research evidence say?* London: The King's Fund.

[www.kingsfund.org.uk/publications/avoiding\\_hospital.html](http://www.kingsfund.org.uk/publications/avoiding_hospital.html)

<sup>194</sup> Blunt I (2013) *Focus on preventable admissions. Trends in emergency admissions for ambulatory care sensitive conditions, 2001 to 2013*. The Health Foundation & Nuffield Trust.

<sup>195</sup> Tian Y, Dixon A, Gao H (2012) *Emergency Hospital Admissions for Ambulatory Care-sensitive Conditions: Identifying the potential for reductions*. London: The King's Fund. [www.kingsfund.org.uk/publications/data-briefing-emergency-hospital-admissions-ambulatory-care-sensitive-conditions](http://www.kingsfund.org.uk/publications/data-briefing-emergency-hospital-admissions-ambulatory-care-sensitive-conditions)

<sup>196</sup> Tian et al (op cit).

<sup>197</sup> NHS England (March 2014) *Emergency admissions for Ambulatory Care Sensitive Conditions – characteristics and trends at national level*.

<sup>198</sup> Ham C, Dixon J, Chantler C (2011) Clinically integrated systems: the future of NHS reform in England? *British Medical Journal*, 342: d905.

<sup>199</sup> Singh D, Ham C (2005) *Transforming Chronic Care: Evidence about improving care for people with long-term conditions*. University of Birmingham, Health Services Management Centre.

<sup>200</sup> Powell Davies G, Williams AM, Larsen K, Perkins D, Roland M, Harris MF (2008) Coordinating primary health care: an analysis of the outcomes of a systematic review. *Medical Journal of Australia*, 188(S8), S65–S68. [www.mja.com.au/public/issues/188\\_08\\_210408/pow11099\\_fm.html](http://www.mja.com.au/public/issues/188_08_210408/pow11099_fm.html)

## Priority areas for intervention

<sup>201</sup>. Increasing the skills and competency of outreach services is an important factor in delivering more coordinated care.

- ▶ Robust evidence on health outcomes is limited, but improved continuity and coordination of care can have a significant effect on the quality of life and experience of these groups of patients<sup>202 203 204 205</sup>. Impact on costs and cost-effectiveness is less easy to predict, but is likely to be low in the short-term given the upfront investments required. However, health systems that employ these coordinated care models tend to be associated with lower costs, as well as better outcomes and higher patient satisfaction<sup>206</sup>.

### Managing elective (planned) activity

- ▶ In the UK referral rates to a particular specialty within a single geographical area vary as much as ten-fold between GPs<sup>207 208</sup>. A wide variety of clinical and non-clinical factors account for this<sup>209</sup>. The available research suggests that a substantial proportion of activity is discretionary and could be avoided or redirected. Better management of elective hospital activity is therefore necessary, by systematically reviewing and auditing referrals with a view to benchmarking against other practices and improving referral quality and by ensuring patients are fully involved in decision-making.

### Managing urgent and emergency (unscheduled) activity

- ▶ In England A&E attendances grew by 30% between 2003/4 and 2011/12<sup>210</sup>, despite the introduction of new forms of urgent care, such as walk-in and urgent care centres. Emergency admissions into hospital have also continued to rise, by 5% between 2008/9 and 2011/12. There are many reasons for these trends, including more demanding patients who are unwilling to wait for GP appointments.
- ▶ Addressing poor practice, improving care continuity and making the urgent and emergency care system easier to navigate<sup>211 212</sup> would make a significant impact and improve patient experience. This requires the development of an integrated approach to urgent and emergency care involving hospital, community, primary and ambulance services through joint service planning and sharing of clinical information. A more integrated model of urgent and emergency care that managed demand more effectively has the potential to be significantly more cost-effective than existing arrangements.
- ▶ Managing the unscheduled and urgent care system requires multiple interventions across the local health system. Some of these are target at patient flows within the hospital itself to speed up assessment, triage and admission or moving on of patients. These can be relatively low cost, mainly involving organisation changes. Simply improving internal hospital processes is, however, insufficient, and can even lead to unintended consequences such as blockages downstream as the out-of-hospital system becomes unable to cope with faster discharge back into the community of elderly patients (much will depend on the local support structures for this population). Another unintended consequence is 'supply induced demand' – as it becomes more efficient, the unscheduled care system fills up with patients who find it more convenient to visit A&E than to wait for an appointment with a family doctor.

<sup>201</sup> Kodner D (2009) All together now: a conceptual exploration of integrated care. *Healthcare Quarterly*, 13, 6-15.

[www.longwoods.com/content/21091](http://www.longwoods.com/content/21091)

<sup>202</sup> Hofmarcher, Oxley H, Rusticelli E (2007) *Improved Health System Performance through Better Care Coordination*. Health Working Paper No.

30. Paris: Organisation for Economic Cooperation and Development.

<sup>203</sup> Starfield B (1998) *Primary Care: Balancing health needs, services and technology*. Oxford: Oxford University Press.

<sup>204</sup> Bodenheimer T (2008) Co-ordinating care – a perilous journey through the health care system. *New England Journal of Medicine*, 358, 1064-70.

<sup>205</sup> RAND Europe (2012) *National Evaluation of the Department of Health's Integrated Care Pilots*.

<sup>206</sup> Singh and Ham, op cit.

<sup>207</sup> Creed F, Gowrisunkur J, Russell E, Kinsey J (1990) General practitioner referral rates to district psychiatry and psychology services. *British Journal of General Practitioners*, 40(340), 450-4.

<sup>208</sup> Ashworth M, Clement S, Sandhu J, Farley N, Ramsay R, Davies T (2002) Psychiatric referral rates and the influence of onsite mental health workers in general practice. *British Journal of General Practice*, 52, 474, 39-41.

<sup>209</sup> Foot C, Naylor C, Imison C (2010) *The Quality of GP Diagnosis and Referral*. London: The King's Fund.

<sup>210</sup> [www.dh.gov.uk/en/Publicationsandstatistics/Statistics/Perfomancedataandstatistics/AccidentandEmergency/DH\\_077485](http://www.dh.gov.uk/en/Publicationsandstatistics/Statistics/Perfomancedataandstatistics/AccidentandEmergency/DH_077485) ;

[www.dh.gov.uk/en/Publicationsandstatistics/Statistics/Perfomancedataandstatistics/AccidentandEmergency/DH\\_087973](http://www.dh.gov.uk/en/Publicationsandstatistics/Statistics/Perfomancedataandstatistics/AccidentandEmergency/DH_087973)

<sup>211</sup> Lattimer V, Burgess A, Knapp F, Dalton S, Brailsford S, Moore M, Baverstock J, Heaney D (2010) *The Impact of Changing Workforce Patterns in Emergency and Urgent Out-of-hours Care on Patient Experience, Staff Practice and Health System Performance*. London: National Institute for Health Research. [www.netscc.ac.uk/hsdr/projdetails.php?ref=08-1519-97](http://www.netscc.ac.uk/hsdr/projdetails.php?ref=08-1519-97)

<sup>212</sup> Gandhi TK (2005) Fumbled handoffs: one dropped ball after another. *Annals of Internal Medicine*, 142, 352-8.

## Priority areas for intervention

### Improving primary care management of end-of-life care

- There is some evidence to suggest that creating a coordinated community based, consultant-led palliative care service can improve quality without incurring any additional costs<sup>213</sup>. This requires improving the systematic identification of patients who are at the end of life, and then providing appropriate support by improving the coordination of care, continuity, quality of communication, and the provision of bereavement care<sup>214</sup>. There may be some scope to make cost savings, particularly through a reduction of unnecessary admissions into the acute setting.

---

<sup>213</sup> Addicott R, Dewar S (2008) *Improving Choice at End of Life. A descriptive analysis of the impact and costs of the Marie Curie Delivering Choice Programme in Lincolnshire*. London: The King's Fund. [www.kingsfund.org.uk/publications/improving-choice-end-life](http://www.kingsfund.org.uk/publications/improving-choice-end-life)

<sup>214</sup> Midhurst MacMillan (2013) *Community Specialist Palliative Care Service, Delivering end-of-life care in the community*. London: The King's Fund.

## Implications for modelling hospital demand

- ▶ Given these findings, we suggest first modelling the theoretical impact on demand for beds of an overall 20% reduction in all unplanned admissions in the Bratislava hospital.
- ▶ We then suggest exploring the impact of a larger reduction (40%) in unplanned admissions for patients with COPD (the most significant ACSC in the UK) and a 30% reduction in unplanned admissions for patients with heart failure.
- ▶ The modelling should be conducted without any assumptions about the time required for any reductions in demand to take effect, but clearly the time dynamics are important. It is not realistic to put in place the necessary out-of-hospital infrastructure at the same time the new hospital opens.
- ▶ The implication of this is that if constructing a smaller new hospital facility (i.e. with 20% fewer beds than 'business as usual') it will be necessary ensure that the 20% gap is met by providing beds elsewhere in the local hospital system.



## Implementing performance improvement and service transformation

- ▶ Implementing these areas for performance improvement will require – and result in – major changes to the way health services are configured in the Bratislava region. This is likely to require supporting policy and legislation changes as well as strong political and clinical leadership to make the case for public support.
- ▶ It will be hard – probably impossible – to achieve the levels of improvement across all parts of the system simultaneously, so there needs to be discussion around the balance between the likely impact of particular changes and their ease of implementation.
- ▶ Typical reasons for failure of transformation programmes include lack of leadership will and capacity, lack of organisational capabilities and knowledge, poor accountability and ownership of performance by relevant staff, and misalignment between organisation-wide aspirations and individual/team goals and targets.
- ▶ It will also be necessary to carefully consider the transition costs (e.g. redeploying or reducing staff, acquiring new technology, running duplicated services through the transition, refurbishing or providing new buildings).
- ▶ The table below, based on work by the King's Fund<sup>215</sup>, represents a subjective assessment of the areas for performance improvement according to their relative impact and ease of implementation for the UK context.

*The assessment is likely to be different in the Slovak context. It would be a useful exercise to identify the potential impact and ease of implementation for each of the various areas for performance improvement in the proposed workshop.*

|                               | Health outcomes | Patient experience | Financial savings | Ease of introduction |
|-------------------------------|-----------------|--------------------|-------------------|----------------------|
| Primary prevention            | H               | M                  | M                 | M                    |
| Secondary prevention          | H               | M                  | M                 | M                    |
| Self-management               | M               | H                  | L                 | L                    |
| Managing ACS                  | H               | M                  | M                 | M                    |
| Coordinated / integrated care | H               | H                  | L                 | L                    |
| Managing elective activity    | M               | M                  | M                 | M                    |
| Managing unscheduled activity | H               | H                  | H                 | L                    |
| Improving end-of-life care    |                 | H                  | M                 | M                    |

|  |
|--|
| Low impact / low ease (high difficulty)  |
| Medium impact / medium ease              |
| High impact / high ease (low difficulty) |

<sup>215</sup> Naylor C et al, op cit.

## Impact on hospital infrastructure

### General principles

When reconfiguring hospital services four interlinked elements need to be optimized: quality and safety, workforce, cost, access. This is challenging due to the complex trade-offs and inter-dependencies that exist between them. Trade-offs include those related to:

- ▶ Quality and access, for example balancing centralization of services – both stripping out straightforward elective work to highly efficient ‘production’ centres and concentration of highly specialist services in leading centres – against the ability of patients to easily access highly trained professionals and diagnostic and other technologies.
- ▶ Trade-offs between quality and financial gains achievable through the concentration of services and the social and possible clinical costs to the patient of reduced access.

An example of inter-dependencies between services would be paediatric and obstetric services, where withdrawal of the former might threaten obstetrics, which rely on paediatricians to provide care for newborn babies.

### Cost

- ▶ There are limits to the operational efficiencies that can be achieved within hospitals<sup>216</sup>. Whilst much can be done within the hospital itself, delivering significant productivity improvements, reductions in hospital capacity and financial savings also requires redesigning the way patients flow into and out of the hospital, as discussed previously in this report.
- ▶ It is unlikely, however, that significant *cost savings* can be achieved from reconfiguration in the short term, partly because of the length of time needed for measures to be designed and implemented, and partly because some measures may require transitional and capital support for new infrastructure and equipment. Reconfiguration could, however, deliver improvements in *quality and safety* in the shorter term.
- ▶ There is little evidence on the ‘optimal’ size of hospital services – ‘hospitals’ contain disparate collections of services, each with their own efficiency drivers, and are situated within a specific local and national context. Changes in medical technology over time will also impact on the optimal size, as they enable services to be delivered in new settings outside hospitals. For example, a study published in 1998, which suggested the economic evidence for closing small hospitals was poor but the merger of some services could improve quality and save money<sup>217</sup>, would probably come to different conclusions if published today. Most current evidence suggests an optimal hospital size of between 200 and 600 beds for general hospitals<sup>218</sup> but this will probably be insufficient for regional secondary and tertiary facilities with teaching responsibilities.

### Access

- ▶ Sustaining or increasing local access to health services, both those needed in an emergency and those needed routinely, are often the subject of strong political and policy pressures. Ensuring a balance between pressures to centralize certain services and provide good access for elderly and poorer people is also a social and quality issue in healthcare. Having to travel long distances is not only inconvenient and costly, but for people with life-threatening conditions delay is linked to poorer outcomes<sup>219</sup>. However, the timing of the start of appropriate treatment is the critical factor, so interventions by paramedics or rapid access to specialists once at the hospital can mitigate this risk<sup>220</sup>.
- ▶ Creating care pathways that support the delivery of as much care as possible in the wider community, with only specialised elements delivered further away has happened in stroke care, with acute care provided in specialist

<sup>216</sup> Palmer K (2011) *Reconfiguring Hospital Services: Lessons from South East London*. London: The King’s Fund. Available at: [www.kingsfund.org/publications/reconfiguring.html](http://www.kingsfund.org/publications/reconfiguring.html)

<sup>217</sup> Normand C (1998) ‘Ten popular health economic fallacies’. *Journal of Public Health*, 20(2), 129-32.

<sup>218</sup> Aletras V (1997) *Concentration and Choice in the Provision of Hospital Services: The relationship between volume and the scope of activity and hospital costs*. CRD Report no. 8, part 2. York: NHS Centre for Reviews and Dissemination, University of York.

<sup>219</sup> Nicholl J, West J, Goodacre S, Turner J (2007) ‘The relationship between distance to hospital and patient mortality in emergencies’. *Emergency Medicine Journal*, 24, 665-68.

<sup>220</sup> Spurgeon P, Cooke M, Fulop N, Walters R, West P, 6 P, Barwell F, Mazelan P (2010) *Evaluating Models of Service Delivery: Reconfiguration principle*. National Institute for Health Research Service Delivery and Organisation programme. London: HMSO.

## Impact on hospital infrastructure

centres and rehabilitation provided locally. There is also increasing community provision of cancer care, with follow-on chemotherapy being delivered in local settings or the home.

### Quality and safety

- ▶ There is good evidence to support centralisation of some services like stroke and trauma and highly specialist surgery such as children's heart surgery<sup>221 222</sup>. Other services that are being centralised include cancer, transplant, renal, adult vascular surgery (aortic aneurism, carotid endarterectomy). But for other conditions there is no clear causal link between volume and outcome and where there is a link, the threshold for quality improvement can be quite low<sup>223</sup>. It can be just as important to look at other factors such as nurse staffing<sup>224</sup>, hospital system resources<sup>225</sup>, compliance with guidelines and knowledge transfer<sup>226</sup>, and the capacity to provide 24/7 junior and senior medical cover.

### Workforce

- ▶ Pressures on the workforce arise from the balance between the number of doctors and nurses in training, and demand. In the UK and elsewhere, the introduction of the European Working Time Directive has had an impact by restricting the number of hours junior doctors can work, making it harder and more expensive for smaller units to provide medical expertise 24/7. Pressures can be mitigated by use of skilled nursing staff as a substitute for junior medical staff and stronger teamworking across disciplines to share knowledge and expertise.

### Acute and general hospitals trends

- ▶ The trends and forces discussed above have been played out in the UK over many years, with a significant impact on the role and character of the acute and general hospital. Over the life of the NHS, hospital services have been subject to continued reorganization and rationalization, reflecting developments in medical practice – advances in medicine and surgery leading to specialization of clinical staff, centralization of services onto fewer, larger sites.
- ▶ Since the inception of the NHS in 1948 the number of acute hospitals in the UK fell by 85% and the number of sites where highly specialist care is delivered has fallen even further. General acute care was delivered in around 200 hospitals in 2011. The average size of a hospital grew from 68 beds to just over 400 beds and the average acute trust has just over 580 beds available<sup>227</sup>.
- ▶ In the NHS in England the total number of general and acute hospital beds for specialties (excluding day beds) fell from 300,000 (1987-88) to 156,000 (2010-11), then further declined to 136,000 (2013-14). The number of day beds grew from 2000 in the late 1980s to almost 12,000 by 2013-14<sup>228</sup>.
- ▶ As well as a decline in bed numbers, there has been decreasing reliance on bed rest as part of treatment. Most routine surgery is now undertaken as day surgery. The mean length of stay in hospital has fallen from 7.9 days (2002/03) to 5.3 days (2011/12) (median LOS has fallen from 2 days to 1 day)<sup>229</sup>.

<sup>221</sup> Spurgeon et al, op cit.

<sup>222</sup> NHS Specialised Services (2011). *Safe and Sustainable: A new vision for children's congenital heart services in England*. Consultation document. Available at: [www.specialisedservices.nhs.uk/safeandsustainable](http://www.specialisedservices.nhs.uk/safeandsustainable)

<sup>223</sup> Glanville J, Duffy S, Mahon J, Cardow T, Brazier H, Album V (2010) *Impact of Hospital Treatment Volumes on Patient Outcomes*. York Health Economics Consortium, Cooperation and Competition Panel Working Paper Series 1. York: University of York.

<sup>224</sup> Friese CR, Lake ET, Aiken LH, Silber JH, Sochalski J (2008) 'Hospital nurse practice environments and outcomes for surgical oncology patients'. *Health Services Research* 43(4), 1145-63.

<sup>225</sup> Bellal J, Morton JM, Hernandez-Boussard T, Rubinfeld I, Faraj C, Velanovich V (2009) 'Relationship between hospital volume, system clinical resources, and mortality in pancreatic resection'. *Journal of the American College of Surgeons*, 208(4), 520-27.

<sup>226</sup> Schell MT, Barcia A, Spitzer AL, Harris HW (2008). 'Pancreaticoduodenectomy: Volume is not associated with outcome within an academic health care system'. *HPB Surgery*, 825940.

<sup>227</sup> Imison, C (2011) *Reconfiguring Hospital Services*. The King's Fund.

<sup>228</sup> <http://www.england.nhs.uk/statistics/statistical-work-areas/bed-availability-and-occupancy/bed-data-overnight/>

<sup>229</sup> <http://www.nuffieldtrust.org.uk/data-and-charts/length-stay-hospital-england>

## UK examples

### Example 1: the assumptions underlying the new Pembury Hospital

The agreed approach to admissions avoidance in the activity modelling to support the outline business case used the following set of assumptions:

- ▶ Patients aged 75+ were occupying around 50% of the acute beds in the Trust. It was assumed that 20% of these bed days would be avoided due to the implementation of an effective admissions avoidance programme.
- ▶ Elderly medicine was the primary target for an admissions avoidance scheme because it was felt that the impact on surgical cases (a large part of the remainder) would be less likely.
- ▶ Chronic rather than acute conditions would be targeted initially, since these were especially prevalent within elderly medicine.
- ▶ The impact of the admissions avoidance scheme was assumed to take effect **two years prior** to the opening of the new hospital.
- ▶ The 20% figure will not remain constant over time since the elderly population is growing more rapidly than the overall catchment area population.

### Example 1: reconfiguring services in Northern Ireland

The overall impact on activity of the new model of care that is being progressively introduced in Northern **Ireland** depends on the settings of care, but broadly:

- ▶ Less hospital capacity will be needed – approximately 350 fewer hospital beds and 30% fewer hospital outpatient appointments than were required in 2008/09. This equates to c1150 fewer hospital beds and c40% fewer hospital outpatient appointments than needed in the 'do nothing' 2014/15 scenario developed for the transformation programme.
- ▶ Greater capacity will be needed in community-based services – approximately 20% more general practice consultations and 15% more community healthcare contacts than were required in 2008/09. This equates to (5% and 1% more, respectively, than needed in the 'do nothing' 2014/15 scenario). The planned increases in community-based service productivity will contribute to these increases in capacity.

## Strategic considerations for Bratislava

### The position in Bratislava region

Currently, even without any change in balance between hospital-based and community-based levels of activity, there is considerable opportunity to improve the cost efficiency of providing hospital services for those patients attending the group of hospitals through a range of improved performance and practice methods.

Going beyond this requires more fundamental changes. The rationalisation of the group of hospitals should generate significant economies of scale in terms of general overheads and reduced necessity for replication of facilities. Moreover, the existing model of care is such that it would appear that many patients currently seeking treatment in hospital could be treated as effectively and at lower cost in community settings if such services were available. If implemented, the impact of these changes must equate to a reduction in the current total cost of services / gross income to the hospital.

The current state of hospital facilities in Bratislava do not support the delivery of effective and efficient modern health care services which require modern infrastructure in terms of buildings, specialist equipment and information technology. The development of a new hospital facility, its size based on the latest thinking in relation to the delivery of healthcare, should be seen as an essential catalyst for wider transformation in the performance of regional health services.

However, an integrated and less hospital-centric health service, which both reduces the number of patients requiring hospitalisation and the cost of treating a significant proportion of patients, will not happen without significant investment in the currently under-developed community and primary care sectors. Investment in this area is therefore as critical as investment in a new hospital if the aim of achieving a fully integrated high quality health service model is to be achieved.

### Financing the potential networked and integrated model

The primary objective of the client is to deliver a new teaching hospital project through some form of private finance arrangement for both the construction and operation of the facility. The second strategic aspiration of the client is for a more integrated less hospital-centric model of care in the Bratislava Region. There are two major requirements for achieving this:

- ▶ A reduction in the size of the income stream going to the new hospital, as funding is diverted to facilitate the development of a model of care focusing on illness prevention and better disease management delivered in community settings.
- ▶ Significant capital investment in infrastructure and resource expenditure in the community/primary care sectors, for which funding also may not be readily available from within public sector funds.

The health infrastructure of the Bratislava region cannot be effectively replaced / updated to full modern day standards without significant cost consequences either in the form of one-off capital expenditure or unitary/revenue payments. More efficient delivery of hospital services through improved performance and the appropriate transfer of a range of treatments to less expensive community-based care should provide a significant offset to the necessary additional costs of investment.

### Aligning incentives in a privately-run integrated care model

There would be little incentive for a privately-run hospital with a payment mechanism solely or primarily based on activity to encourage the adoption of preventative approaches and less expensive out-of-hospital treatments that could in effect reduce its profitability. One way to achieve the required alignment of objectives could involve the development of payment mechanisms which would reflect the opening activity levels at those of best performing hospitals, but which would also include incentivised payment arrangements along with contractual targets for the facilitation and transfer of an agreed range and proportion of managed services on a planned progressive basis to less expensive community based care.

The most effective, but perhaps most difficult, way to create a truly integrated model would be to incentivise a competitively selected single organisation through new payment structures to invest in the development and management of integrated hospital, community and primary care facilities in the Bratislava region.

## Strategic considerations for Bratislava

An alternative model which could be considered, which would reflect the most recent developments in Northern Ireland, is the co-location on appropriately located hospital sites of either adjoining or incorporated primary and community care facilities to serve the surrounding area.

This could have a range of benefits if introduced into the Bratislava model.

- ▶ If the quantum of primary and community services provided from these facilities was also managed by the operator of the hospital then the income that these services generate would stay with that operator rather than being transferred to other providers, thus making the project more attractive financially and in part dealing with the potential reduction in income if the desired transition to primary/ community care happens.
- ▶ It would be significantly less complicated and more manageable to create a contract for this more limited inclusion of primary and community care services and the required accommodation on a single site, rather than on a regional basis. The contract could include incentivised targets for the appropriate transition of care of identified patient groups.
- ▶ The inclusion on a single site of the full continuum of care immediately facilitates the redirection of patients inappropriately attending the hospital to a more appropriate and less expensive level of care.
- ▶ The co-location of staff facilitates the development of the essential integration of services and the development of new and more efficient protocols for the management of patients between the sectors.
- ▶ The co-location of primary, community, intermediate and acute care on a teaching hospital site, allows for the new facilities to be used as both a pilot for the rest of the country and as a central resource of research and teaching to facilitate the dissemination of more appropriate patient pathways across the region. This would be in line with the client's stated objectives for the site.

## Financial assessment appendices

---

1. Selected KPIs details
2. Model outputs

## Outpatient care in Ružinov (incl. Podunajské Biskupice)

### Overview of number of ŠAS points in Ružinov (including Podunajské Biskupice) in FY11A-FY13A

|                                   | FY11A          |                |                | FY12A          |                |                | FY13A          |                |                | % of total<br>FY13A<br>Approved |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------------|
|                                   | Requested      | Approved       | Paid           | Requested      | Approved       | Paid           | Requested      | Approved       | Paid           |                                 |
| <i>Units: points 000, %</i>       |                |                |                |                |                |                |                |                |                |                                 |
| <b>Ružinov (inc. PB)</b>          | <b>183,989</b> | <b>174,808</b> | <b>174,808</b> | <b>176,437</b> | <b>171,690</b> | <b>171,681</b> | <b>175,363</b> | <b>171,170</b> | <b>171,170</b> | <b>36.8</b>                     |
| Central admissions                | 27,225         | 25,627         | 25,627         | 27,954         | 26,662         | 26,662         | 29,313         | 27,803         | 27,803         | 6.0                             |
| Ophthalmology                     | 19,484         | 19,017         | 19,017         | 15,821         | 15,468         | 15,468         | 16,179         | 15,961         | 15,961         | 3.4                             |
| Cardiology                        | 12,705         | 12,286         | 12,286         | 13,907         | 13,598         | 13,598         | 13,605         | 13,329         | 13,329         | 2.9                             |
| Gastroenterology                  | 7,393          | 7,043          | 7,043          | 8,244          | 8,204          | 8,200          | 7,089          | 6,847          | 6,847          | 1.5                             |
| Urology                           | 5,249          | 4,570          | 4,570          | 6,888          | 6,744          | 6,744          | 6,727          | 6,694          | 6,694          | 1.4                             |
| Neurology                         | 4,948          | 4,709          | 4,709          | 6,358          | 6,181          | 6,181          | 6,245          | 6,133          | 6,133          | 1.3                             |
| Internal                          | 6,018          | 5,874          | 5,874          | 6,082          | 6,001          | 6,001          | 6,121          | 6,042          | 6,042          | 1.3                             |
| Hematology                        | 5,839          | 5,692          | 5,692          | 5,688          | 5,605          | 5,605          | 5,774          | 5,713          | 5,713          | 1.2                             |
| Gynecology - admissions           | 5,617          | 5,251          | 5,251          | 5,338          | 5,418          | 5,418          | 5,289          | 5,487          | 5,487          | 1.2                             |
| Dermatology                       | 4,991          | 4,798          | 4,798          | 5,316          | 5,151          | 5,151          | 5,299          | 5,249          | 5,249          | 1.1                             |
| Clinical oncology                 | 5,375          | 5,139          | 5,139          | 4,661          | 4,508          | 4,507          | 5,308          | 5,126          | 5,126          | 1.1                             |
| Rheumatology                      | 4,272          | 4,174          | 4,174          | 4,414          | 4,364          | 4,359          | 4,589          | 4,519          | 4,519          | 1.0                             |
| Orthopedics                       | 4,778          | 4,786          | 4,786          | 4,087          | 4,065          | 4,065          | 3,991          | 3,893          | 3,893          | 0.8                             |
| FRO                               | 4,315          | 4,116          | 4,116          | 3,788          | 3,546          | 3,546          | 4,120          | 3,845          | 3,845          | 0.8                             |
| ORL                               | 5,060          | 4,688          | 4,688          | 4,186          | 4,068          | 4,068          | 3,892          | 3,805          | 3,805          | 0.8                             |
| Orthodontics                      | 3,420          | 3,325          | 3,325          | 3,611          | 3,542          | 3,542          | 3,709          | 3,677          | 3,677          | 0.8                             |
| Endocrinology                     | 2,220          | 2,085          | 2,085          | 2,985          | 2,920          | 2,920          | 3,569          | 3,505          | 3,505          | 0.8                             |
| Clinical psychology               | 6,108          | 5,068          | 5,068          | 4,754          | 4,217          | 4,217          | 4,044          | 3,291          | 3,291          | 0.7                             |
| Hand surgery                      | 2,941          | 2,908          | 2,908          | 2,487          | 2,482          | 2,482          | 2,642          | 3,278          | 3,278          | 0.7                             |
| Plastic surgery                   | 5,713          | 5,559          | 5,559          | 3,263          | 3,210          | 3,210          | 3,137          | 3,104          | 3,104          | 0.7                             |
| Surgery                           | 3,350          | 3,206          | 3,206          | 3,254          | 3,216          | 3,216          | 3,099          | 3,058          | 3,058          | 0.7                             |
| Pneumology, bronchoscopy - kids   | 3,543          | 3,409          | 3,409          | 3,076          | 3,043          | 3,043          | 2,780          | 2,770          | 2,770          | 0.6                             |
| Psychiatry                        | 3,715          | 3,491          | 3,491          | 2,759          | 2,664          | 2,664          | 2,734          | 2,676          | 2,676          | 0.6                             |
| Functional pharmacotherapy        | 2,365          | 2,176          | 2,176          | 2,333          | 2,175          | 2,175          | 2,347          | 2,110          | 2,110          | 0.5                             |
| Pneumology                        | 2,395          | 2,355          | 2,355          | 2,156          | 2,085          | 2,085          | 2,101          | 2,058          | 2,058          | 0.4                             |
| Immuno-alergology                 | 1,980          | 2,464          | 2,464          | 1,514          | 1,487          | 1,487          | 1,820          | 1,801          | 1,801          | 0.4                             |
| Burns and reconstructive surgery  | 1,724          | 1,668          | 1,668          | 1,938          | 1,925          | 1,925          | 1,576          | 1,563          | 1,563          | 0.3                             |
| Diabetology                       | 1,457          | 1,428          | 1,428          | 1,373          | 1,368          | 1,368          | 1,456          | 1,450          | 1,450          | 0.3                             |
| Immuno-alergology children        | 1,528          | 757            | 757            | 1,447          | 1,433          | 1,433          | 1,478          | 1,448          | 1,448          | 0.3                             |
| Logopedy                          | 1,281          | 1,260          | 1,260          | 1,189          | 1,183          | 1,183          | 1,105          | 1,096          | 1,096          | 0.2                             |
| Internal - nephrology             | 697            | 688            | 688            | 802            | 796            | 796            | 1,077          | 1,061          | 1,061          | 0.2                             |
| Center for chronic skin illnesses | 1,742          | 1,736          | 1,736          | 1,426          | 1,510          | 1,510          | 1,014          | 1,012          | 1,012          | 0.2                             |
| Other                             | 14,542         | 13,456         | 13,456         | 13,339         | 12,853         | 12,852         | 12,135         | 11,767         | 11,767         | 2.5                             |

Source: HICs statements



## Outpatient care in Kramáre

### Overview of number of ŠAS points in Kramáre in FY11A-FY13A

| Units: points 000, %           | FY11A         |               |               | FY12A         |               |               | FY13A         |               |               | % of total<br>FY13A<br>Approved |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------------------|
|                                | Requested     | Approved      | Paid          | Requested     | Approved      | Paid          | Requested     | Approved      | Paid          |                                 |
| <b>Kramáre</b>                 | <b>82,817</b> | <b>80,582</b> | <b>80,549</b> | <b>81,114</b> | <b>79,679</b> | <b>79,678</b> | <b>81,059</b> | <b>80,324</b> | <b>80,324</b> | <b>17.3</b>                     |
| Central admissions             | 18,143        | 17,969        | 17,969        | 18,939        | 18,879        | 18,879        | 18,143        | 18,110        | 18,110        | 3.9                             |
| Endoscopy                      | 5,610         | 5,214         | 5,214         | 3,451         | 2,899         | 2,899         | 5,574         | 5,531         | 5,531         | 1.2                             |
| Urology                        | 5,205         | 5,177         | 5,177         | 5,218         | 5,205         | 5,205         | 5,327         | 5,306         | 5,306         | 1.1                             |
| Clinical gynecology            | 5,311         | 5,441         | 5,441         | 5,587         | 5,474         | 5,474         | 4,734         | 4,395         | 4,395         | 0.9                             |
| Geriatrics                     | 3,846         | 3,797         | 3,797         | 3,933         | 4,060         | 4,060         | 4,160         | 4,146         | 4,146         | 0.9                             |
| Neurology                      | 2,915         | 2,884         | 2,884         | 3,206         | 3,174         | 3,174         | 3,232         | 3,219         | 3,219         | 0.7                             |
| Traumatology surgery           | 2,185         | 2,149         | 2,149         | 2,499         | 2,476         | 2,476         | 2,957         | 2,944         | 2,944         | 0.6                             |
| Infectology - adults           | 3,243         | 3,031         | 3,031         | 2,885         | 2,856         | 2,856         | 2,933         | 2,912         | 2,912         | 0.6                             |
| Hematology                     | 2,929         | 2,852         | 2,852         | 2,562         | 2,551         | 2,551         | 2,598         | 2,584         | 2,584         | 0.6                             |
| Internal medicine              | 2,438         | 2,379         | 2,379         | 2,504         | 2,429         | 2,429         | 2,269         | 2,268         | 2,268         | 0.5                             |
| Clinical surgery               | 2,662         | 2,571         | 2,571         | 2,566         | 2,485         | 2,485         | 2,273         | 2,252         | 2,252         | 0.5                             |
| Allergology                    | 1,951         | 1,888         | 1,854         | 1,977         | 1,968         | 1,968         | 2,250         | 2,243         | 2,243         | 0.5                             |
| Hepatology                     | 1,937         | 1,835         | 1,835         | 1,950         | 1,947         | 1,947         | 2,033         | 2,028         | 2,028         | 0.4                             |
| Clinical neurophysiology       | 1,459         | 1,352         | 1,352         | 1,569         | 1,544         | 1,544         | 1,803         | 1,798         | 1,798         | 0.4                             |
| Logopedy                       | 1,408         | 1,238         | 1,238         | 1,794         | 1,678         | 1,678         | 1,802         | 1,762         | 1,762         | 0.4                             |
| Diabetology                    | 2,027         | 1,951         | 1,951         | 1,722         | 1,716         | 1,716         | 1,730         | 1,728         | 1,728         | 0.4                             |
| Cardiology                     | 1,703         | 1,653         | 1,653         | 1,775         | 1,782         | 1,782         | 1,716         | 1,716         | 1,716         | 0.4                             |
| FRO                            | 1,625         | 1,602         | 1,602         | 1,648         | 1,624         | 1,624         | 1,718         | 1,703         | 1,703         | 0.4                             |
| Pneumophthiseology             | 1,570         | 1,564         | 1,564         | 1,552         | 1,544         | 1,544         | 1,625         | 1,621         | 1,621         | 0.3                             |
| ORL                            | 1,524         | 1,364         | 1,364         | 1,428         | 1,372         | 1,372         | 1,540         | 1,508         | 1,508         | 0.3                             |
| Psychiatry                     | 1,942         | 1,804         | 1,804         | 1,545         | 1,477         | 1,477         | 1,422         | 1,397         | 1,397         | 0.3                             |
| Orthopedics                    | 1,840         | 1,800         | 1,800         | 1,792         | 1,672         | 1,672         | 1,366         | 1,365         | 1,365         | 0.3                             |
| Dermatology                    | 1,506         | 1,475         | 1,475         | 1,423         | 1,414         | 1,414         | 1,215         | 1,212         | 1,212         | 0.3                             |
| Endocrinology                  | 1,211         | 1,197         | 1,197         | 1,317         | 1,310         | 1,310         | 1,196         | 1,192         | 1,192         | 0.3                             |
| Infectology and ICU - children | 1,287         | 1,230         | 1,230         | 1,145         | 1,077         | 1,077         | 1,031         | 1,012         | 1,012         | 0.2                             |
| Neurosurgery                   | 926           | 902           | 902           | 1,065         | 1,049         | 1,049         | 988           | 960           | 960           | 0.2                             |
| CAIM                           | 607           | 616           | 616           | 625           | 624           | 624           | 641           | 641           | 641           | 0.1                             |
| AIDS                           | 717           | 696           | 696           | 726           | 725           | 725           | 633           | 634           | 634           | 0.1                             |
| Occupational medicine          | 554           | 500           | 500           | 501           | 482           | 482           | 475           | 474           | 474           | 0.1                             |
| Angiology                      | 587           | 577           | 577           | 540           | 539           | 539           | 469           | 469           | 469           | 0.1                             |
| Neonatology                    | 1,036         | 1,001         | 1,001         | 551           | 520           | 520           | 375           | 358           | 358           | 0.1                             |
| Nephrology                     | 273           | 265           | 265           | 312           | 311           | 311           | 324           | 322           | 322           | 0.1                             |
| Oncology                       | 163           | 155           | 155           | 204           | 201           | 201           | 180           | 179           | 179           | 0.0                             |
| Gastroenterology               | 94            | 86            | 86            | 403           | 420           | 420           | 167           | 168           | 168           | 0.0                             |
| Rheumatology                   | 63            | 58            | 58            | 45            | 45            | 45            | 50            | 50            | 50            | 0.0                             |
| Algesiology                    | -             | -             | -             | 28            | 25            | 25            | 45            | 45            | 45            | 0.0                             |
| Immunology and alergology      | 284           | 273           | 273           | 103           | 102           | 102           | 44            | 44            | 44            | 0.0                             |
| General practitioner           | 3             | 11            | 11            | 15            | 8             | 8             | 6             | 13            | 13            | 0.0                             |
| Stomatology                    | 13            | 12            | 12            | 9             | 13            | 13            | 11            | 12            | 12            | 0.0                             |
| Osteology                      | 16            | 9             | 9             | 0             | -             | -             | 6             | 6             | 6             | 0.0                             |
| National materno-fetal center  | -             | 3             | 3             | -             | -             | -             | -             | -             | -             | -                               |

Source: HICs statements

## Outpatient care in Petržalka

### Overview of number of ŠAS points in Petržalka in FY11A-FY13A

| Units: points 000, %               | FY11A          |                |                | FY12A          |                |                | FY13A          |                |                | % of total<br>FY13A<br>Approved |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------------|
|                                    | Requested      | Approved       | Paid           | Requested      | Approved       | Paid           | Requested      | Approved       | Paid           |                                 |
| <b>Petržalka</b>                   | <b>144,348</b> | <b>136,800</b> | <b>136,800</b> | <b>143,919</b> | <b>135,912</b> | <b>135,912</b> | <b>145,233</b> | <b>139,592</b> | <b>139,592</b> | <b>30.0</b>                     |
| Central admissions                 | 19,663         | 18,956         | 18,956         | 19,765         | 19,195         | 19,195         | 18,418         | 17,790         | 17,790         | 3.8                             |
| Onco-hematology                    | 14,868         | 13,621         | 13,621         | 12,081         | 11,820         | 11,820         | 12,745         | 12,076         | 12,076         | 2.6                             |
| Gastroenterology                   | 10,269         | 9,743          | 9,743          | 10,769         | 10,198         | 10,198         | 11,245         | 10,830         | 10,830         | 2.3                             |
| Vascular, vitreoretinal, corneal   | 9,767          | 9,477          | 9,477          | 9,769          | 8,039          | 8,039          | 9,629          | 9,696          | 9,696          | 2.1                             |
| ORL                                | 8,353          | 8,007          | 8,007          | 8,003          | 7,646          | 7,646          | 8,264          | 7,930          | 7,930          | 1.7                             |
| Audiology, neurotology             | 6,462          | 6,204          | 6,204          | 6,486          | 6,180          | 6,180          | 7,636          | 7,282          | 7,282          | 1.6                             |
| Gynecology                         | 5,872          | 5,486          | 5,486          | 5,755          | 5,499          | 5,499          | 7,124          | 6,800          | 6,800          | 1.5                             |
| Anesthesiology                     | 4,745          | 4,531          | 4,531          | 5,220          | 4,968          | 4,968          | 5,311          | 5,242          | 5,242          | 1.1                             |
| FRO                                | 3,624          | 3,411          | 3,411          | 3,668          | 3,530          | 3,530          | 5,162          | 4,819          | 4,819          | 1.0                             |
| Clinical logopedy                  | 4,250          | 3,971          | 3,971          | 4,420          | 4,066          | 4,066          | 4,328          | 4,019          | 4,019          | 0.9                             |
| Hemo-chemotherapy                  | 6,351          | 6,199          | 6,199          | 4,979          | 4,913          | 4,913          | 3,868          | 3,804          | 3,804          | 0.8                             |
| Neurology                          | 3,808          | 3,651          | 3,651          | 3,985          | 3,774          | 3,774          | 3,917          | 3,723          | 3,723          | 0.8                             |
| Reproductive medicine              | 1,662          | 1,662          | 1,662          | 2,917          | 2,806          | 2,806          | 3,253          | 3,204          | 3,204          | 0.7                             |
| Otology, rhinology, sleep disorder | 3,918          | 3,677          | 3,677          | 3,564          | 3,297          | 3,297          | 3,185          | 3,077          | 3,077          | 0.7                             |
| Orthopedics                        | 2,674          | 2,605          | 2,605          | 2,699          | 2,641          | 2,641          | 2,780          | 2,676          | 2,676          | 0.6                             |
| Urology                            | 3,063          | 2,943          | 2,943          | 3,560          | 2,996          | 2,996          | 2,750          | 2,658          | 2,658          | 0.6                             |
| Trauma surgery                     | 2,566          | 2,506          | 2,506          | 3,005          | 2,941          | 2,941          | 2,689          | 2,624          | 2,624          | 0.6                             |
| Phoniatrics and tinnitus           | 2,513          | 2,439          | 2,439          | 2,509          | 2,455          | 2,455          | 2,619          | 2,582          | 2,582          | 0.6                             |
| Hematology                         | 4,296          | 4,088          | 4,088          | 4,006          | 3,907          | 3,907          | 2,562          | 2,531          | 2,531          | 0.5                             |
| Cardiology                         | 2,643          | 2,267          | 2,267          | 2,971          | 2,663          | 2,663          | 2,668          | 2,409          | 2,409          | 0.5                             |
| Internal medicine                  | 2,643          | 2,317          | 2,317          | 2,662          | 2,431          | 2,431          | 2,577          | 2,353          | 2,353          | 0.5                             |
| Glaucoma                           | 2,733          | 2,613          | 2,613          | 2,532          | 2,428          | 2,428          | 2,239          | 2,249          | 2,249          | 0.5                             |
| Diabetology                        | 1,990          | 1,918          | 1,918          | 2,171          | 2,097          | 2,097          | 2,235          | 2,191          | 2,191          | 0.5                             |
| Hemostasis disorders               | 2,116          | 2,008          | 2,008          | 2,215          | 2,030          | 2,030          | 2,228          | 2,166          | 2,166          | 0.5                             |
| Surgery                            | 1,549          | 1,511          | 1,511          | 1,638          | 1,619          | 1,619          | 1,654          | 1,622          | 1,622          | 0.3                             |
| Clinical psychology                | 1,908          | 1,801          | 1,801          | 2,036          | 1,941          | 1,941          | 1,704          | 1,616          | 1,616          | 0.3                             |
| Angio-surgery                      | 1,295          | 1,242          | 1,242          | 1,287          | 1,228          | 1,228          | 1,446          | 1,390          | 1,390          | 0.3                             |
| Dermatology for adults             | -              | -              | -              | -              | -              | -              | 1,429          | 1,386          | 1,386          | 0.3                             |
| Rheumatology                       | 1,063          | 1,012          | 1,012          | 1,146          | 1,114          | 1,114          | 1,156          | 1,092          | 1,092          | 0.2                             |
| Children's endocrinology           | 1,063          | 1,023          | 1,023          | 1,127          | 1,095          | 1,095          | 1,065          | 1,008          | 1,008          | 0.2                             |
| Patients after transplantations    | 872            | 840            | 840            | 922            | 914            | 914            | 999            | 986            | 986            | 0.2                             |
| Hepatology                         | 433            | 404            | 404            | 543            | 523            | 523            | 736            | 707            | 707            | 0.2                             |
| Endocrinology                      | 843            | 766            | 766            | 827            | 742            | 742            | 786            | 693            | 693            | 0.1                             |
| Children's nephrology              | 714            | 640            | 640            | 741            | 711            | 711            | 685            | 645            | 645            | 0.1                             |
| Perinatal pathology and risk       | 609            | 454            | 454            | 667            | 572            | 572            | 712            | 602            | 602            | 0.1                             |
| Children's gastroenterology        | 370            | 329            | 329            | 453            | 422            | 422            | 432            | 408            | 408            | 0.1                             |
| Immunology                         | 495            | 434            | 434            | 464            | 450            | 450            | 417            | 406            | 406            | 0.1                             |
| Children's neurology               | 244            | 177            | 177            | 339            | 229            | 229            | 496            | 401            | 401            | 0.1                             |
| Pediatric clinical                 | 527            | 482            | 482            | 453            | 396            | 396            | 413            | 359            | 359            | 0.1                             |
| Children's rheumatology            | 288            | 269            | 269            | 340            | 325            | 325            | 355            | 339            | 339            | 0.1                             |
| Angiology                          | 133            | 89             | 89             | 306            | 269            | 269            | 309            | 272            | 272            | 0.1                             |
| Neurosurgery                       | 180            | 177            | 177            | 203            | 197            | 197            | 245            | 239            | 239            | 0.1                             |
| Children's immunology              | 322            | 304            | 304            | 245            | 228            | 228            | 245            | 235            | 235            | 0.1                             |
| Children's emergency               | 221            | 190            | 190            | 262            | 216            | 216            | 289            | 230            | 230            | 0.0                             |
| Nephrology                         | 247            | 241            | 241            | 204            | 201            | 201            | 227            | 224            | 224            | 0.0                             |
| Ophthalmology - clinical           | 121            | 116            | 116            | -              | -              | -              | -              | -              | -              | -                               |

Source: HICs statements

## Outpatient care in Staré Mesto

### Overview of number of ŠAS points in Staré mesto in FY11A-FY13A

|                               | FY11A          |                |                | FY12A          |                |                | FY13A          |                |                | % of total<br>FY13A<br>Approved |
|-------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------------|
|                               | Requested      | Approved       | Paid           | Requested      | Approved       | Paid           | Requested      | Approved       | Paid           |                                 |
| <i>Units: points 000, %</i>   |                |                |                |                |                |                |                |                |                |                                 |
| <b>Staré Mesto</b>            | <b>73,051</b>  | <b>65,620</b>  | <b>65,620</b>  | <b>72,580</b>  | <b>70,647</b>  | <b>70,647</b>  | <b>76,260</b>  | <b>73,847</b>  | <b>73,847</b>  | <b>15.9</b>                     |
| Central admissions            | 4,710          | 4,343          | 4,343          | 5,865          | 5,764          | 5,764          | 6,371          | 6,275          | 6,275          | 1.3                             |
| Internal medicine             | 5,893          | 5,234          | 5,234          | 5,608          | 5,375          | 5,375          | 6,265          | 6,010          | 6,010          | 1.3                             |
| Neurology and ICU             | 5,298          | 4,852          | 4,852          | 5,376          | 5,298          | 5,298          | 5,102          | 5,015          | 5,015          | 1.1                             |
| Surgery and ICU               | 4,829          | 4,455          | 4,455          | 4,595          | 4,495          | 4,495          | 4,659          | 4,554          | 4,554          | 1.0                             |
| Clinical genetics             | 4,275          | 4,049          | 4,049          | 4,344          | 4,313          | 4,313          | 4,562          | 4,445          | 4,445          | 1.0                             |
| FRO                           | 3,465          | 3,119          | 3,119          | 3,962          | 3,722          | 3,722          | 4,558          | 4,396          | 4,396          | 0.9                             |
| Int. medicine admissions, ICU | 3,038          | 2,716          | 2,716          | 3,156          | 3,058          | 3,058          | 4,247          | 4,131          | 4,131          | 0.9                             |
| Physical therapy              | 4,398          | 3,525          | 3,525          | 3,750          | 3,043          | 3,043          | 4,418          | 3,725          | 3,725          | 0.8                             |
| Pneumology                    | 3,043          | 3,116          | 3,116          | 3,270          | 3,246          | 3,246          | 3,610          | 3,574          | 3,574          | 0.8                             |
| Urology                       | 3,234          | 3,182          | 3,182          | 3,606          | 3,820          | 3,820          | 3,501          | 3,489          | 3,489          | 0.8                             |
| Psychiatry and ICU            | 4,097          | 3,672          | 3,672          | 3,254          | 3,220          | 3,220          | 3,351          | 3,306          | 3,306          | 0.7                             |
| Cardiology                    | 1,942          | 1,799          | 1,799          | 1,952          | 1,936          | 1,936          | 2,381          | 2,338          | 2,338          | 0.5                             |
| Angiology                     | 2,988          | 2,171          | 2,171          | 2,348          | 1,915          | 1,915          | 1,901          | 1,768          | 1,768          | 0.4                             |
| Diabetology                   | 1,481          | 1,308          | 1,308          | 1,508          | 1,461          | 1,461          | 1,626          | 1,554          | 1,554          | 0.3                             |
| ORL                           | 1,529          | 1,428          | 1,428          | 1,481          | 1,475          | 1,475          | 1,514          | 1,508          | 1,508          | 0.3                             |
| Endocrinology                 | 974            | 948            | 948            | 1,276          | 1,249          | 1,249          | 1,409          | 1,383          | 1,383          | 0.3                             |
| Permanent cardio stimulation  | 1,388          | 1,279          | 1,279          | 1,424          | 1,422          | 1,422          | 1,333          | 1,328          | 1,328          | 0.3                             |
| Clinical psychologists        | 1,249          | 1,128          | 1,128          | 1,363          | 1,346          | 1,346          | 1,312          | 1,309          | 1,309          | 0.3                             |
| Allergy - "Americké" square   | 948            | 887            | 887            | 765            | 755            | 755            | 1,297          | 1,272          | 1,272          | 0.3                             |
| Ophthalmology                 | 1,122          | 969            | 969            | 1,054          | 1,041          | 1,041          | 1,237          | 1,232          | 1,232          | 0.3                             |
| Andrology                     | 1,351          | 1,235          | 1,235          | 1,331          | 1,328          | 1,328          | 1,190          | 1,176          | 1,176          | 0.3                             |
| Clinical immunology           | 1,623          | 1,274          | 1,274          | 1,177          | 1,163          | 1,163          | 1,189          | 1,055          | 1,055          | 0.2                             |
| Immuno-allergy                | 1,267          | 1,063          | 1,063          | 1,431          | 1,315          | 1,315          | 1,166          | 1,034          | 1,034          | 0.2                             |
| Neurophysiology and ICU       | 692            | 625            | 625            | 934            | 1,350          | 1,350          | 1,022          | 996            | 996            | 0.2                             |
| Rheumatology                  | 909            | 810            | 810            | 937            | 914            | 914            | 1,017          | 993            | 993            | 0.2                             |
| Hematology                    | 1,316          | 915            | 915            | 1,113          | 1,094          | 1,094          | 995            | 966            | 966            | 0.2                             |
| Cardiology                    | 845            | 778            | 778            | 855            | 836            | 836            | 889            | 871            | 871            | 0.2                             |
| Gastroenterology              | 954            | 875            | 875            | 908            | 893            | 893            | 869            | 857            | 857            | 0.2                             |
| Neurophysiology lab           | 470            | 495            | 495            | 803            | 776            | 776            | 784            | 779            | 779            | 0.2                             |
| Psychology of FRO             | 623            | 580            | 580            | 742            | 721            | 721            | 666            | 636            | 636            | 0.1                             |
| Sports Medicine               | 886            | 803            | 803            | 761            | 720            | 720            | 544            | 536            | 536            | 0.1                             |
| Nephrology                    | 376            | 309            | 309            | 362            | 354            | 354            | 322            | 310            | 310            | 0.1                             |
| Uro-oncology                  | 98             | 90             | 90             | 156            | 143            | 143            | 233            | 232            | 232            | 0.0                             |
| Vascular                      | 145            | 125            | 125            | 129            | 126            | 126            | 137            | 229            | 229            | 0.0                             |
| Traumatology                  | 268            | 250            | 250            | 187            | 185            | 185            | 226            | 225            | 225            | 0.0                             |
| Nuclear medicine              | 227            | 198            | 198            | 230            | 214            | 214            | 192            | 183            | 183            | 0.0                             |
| Hepatology                    | 2              | 2              | 2              | 5              | 5              | 5              | 163            | 157            | 157            | 0.0                             |
| Clinical psychology           | 1,098          | 1,010          | 1,010          | 561            | 558            | 558            | -              | -              | -              | -                               |
| <b>Total</b>                  | <b>484,205</b> | <b>457,810</b> | <b>457,776</b> | <b>474,050</b> | <b>457,928</b> | <b>457,918</b> | <b>477,915</b> | <b>464,932</b> | <b>464,932</b> | <b>100.0</b>                    |

Source: HICs statements

## Number of beds, occupancy rate and ALOS in UNB

### Overview of KPIs in FY11A-FY13A by hospitals and departments

| Units: %, days, pcs                      | FY11A              |            |              | FY12A              |            |              | FY13A              |            |              |
|--|--------------------|------------|--------------|--------------------|------------|--------------|--------------------|------------|--------------|
|  | Occupancy rate (%) | ALOS       | No. of beds  | Occupancy rate (%) | ALOS       | No. of beds  | Occupancy rate (%) | ALOS       | No. of beds  |
| <b>Total UNB</b>                         | <b>70.8</b>        | <b>6.8</b> | <b>2,638</b> | <b>74.9</b>        | <b>6.8</b> | <b>2,638</b> | <b>71.2</b>        | <b>6.7</b> | <b>2,626</b> |
| <b>Ružinov</b>                           | <b>69.2</b>        | <b>9.3</b> | <b>905</b>   | <b>70.9</b>        | <b>9.3</b> | <b>905</b>   | <b>72.9</b>        | <b>9.0</b> | <b>893</b>   |
| Orthopedics                              | 74.3               | 7.9        | 101          | 74.9               | 7.7        | 101          | 81.8               | 7.8        | 101          |
| Gynecology and obstetrics                | 76.2               | 4.7        | 96           | 76.1               | 4.7        | 96           | 79.5               | 4.8        | 96           |
| Internal medicine                        | 79.0               | 6.3        | 86           | 78.8               | 6.0        | 86           | 78.8               | 5.9        | 86           |
| Surgery                                  | 65.0               | 5.8        | 60           | 65.5               | 6.0        | 60           | 67.5               | 5.9        | 60           |
| Neurology                                | 73.2               | 9.0        | 56           | 76.2               | 9.1        | 56           | 76.7               | 8.9        | 56           |
| Pneumology                               | 56.4               | 10.5       | 45           | 60.8               | 11.3       | 45           | 64.3               | 11.3       | 55           |
| Neonatology                              | 83.0               | 5.0        | 40           | 75.8               | 4.9        | 40           | 76.8               | 4.8        | 40           |
| Psychiatry                               | 76.5               | 26.5       | 34           | 81.2               | 25.9       | 34           | 75.5               | 22.1       | 34           |
| Chest surgery                            | 63.6               | 6.7        | 32           | 67.2               | 6.8        | 32           | 69.0               | 6.2        | 32           |
| Long-term ill                            | 73.6               | 22.2       | 31           | 76.2               | 22.0       | 31           | 78.1               | 20.9       | 31           |
| FRO                                      | 80.4               | 10.5       | 31           | 85.1               | 10.4       | 31           | 83.4               | 9.4        | 31           |
| Burns                                    | 47.4               | 13.9       | 30           | 57.1               | 12.5       | 30           | 49.8               | 13.7       | 30           |
| Gerontopsychiatry                        | 76.6               | 19.8       | 27           | 75.9               | 20.1       | 27           | 68.4               | 18.3       | 27           |
| Urology                                  | 66.0               | 5.6        | 26           | 72.4               | 5.7        | 26           | 74.2               | 5.5        | 26           |
| Plastic surgery                          | 55.5               | 5.0        | 37           | 52.2               | 4.8        | 37           | 75.7               | 5.8        | 25           |
| Pneumology and phthisiology clinic       | 65.1               | 10.2       | 23           | 76.1               | 10.4       | 23           | 70.4               | 9.8        | 23           |
| Children's pneumology clinic             | 67.0               | 5.1        | 22           | 73.2               | 5.5        | 22           | 64.6               | 6.0        | 22           |
| Ophthalmology                            | 55.1               | 3.5        | 20           | 58.8               | 3.7        | 20           | 59.0               | 3.7        | 20           |
| Maxillofacial surgery                    | 58.3               | 5.0        | 19           | 59.4               | 5.3        | 19           | 63.0               | 5.3        | 19           |
| Hand surgery                             | 51.7               | 3.2        | 19           | 55.6               | 3.0        | 19           | 56.5               | 3.1        | 19           |
| Clinical oncology                        | 51.6               | 4.3        | 17           | 56.8               | 4.3        | 17           | 60.3               | 4.1        | 17           |
| Psychiatry - daily stationary            | 51.8               | 48.1       | 12           | 40.6               | 51.8       | 12           | 61.4               | 47.8       | 12           |
| Anesthesiology and intensive medicine I  | 73.2               | 13.9       | 12           | 65.9               | 12.7       | 12           | 75.8               | 15.2       | 12           |
| ORL                                      | 65.8               | 3.3        | 10           | 62.9               | 3.6        | 10           | 56.8               | 4.1        | 10           |
| Pneumology – phthisiology dept.          | 61.7               | 13.4       | 15           | 70.9               | 13.0       | 15           | 73.1               | 12.0       | 5            |
| Anesthesiology and intensive medicine II | 99.3               | 11.0       | 4            | 99.8               | 13.7       | 4            | 100.0              | 13.2       | 4            |
| <b>Kramáre</b>                           | <b>75.7</b>        | <b>6.9</b> | <b>627</b>   | <b>80.0</b>        | <b>7.0</b> | <b>627</b>   | <b>79.8</b>        | <b>7.0</b> | <b>627</b>   |
| Gynecology and obstetrics                | 66.2               | 4.9        | 99           | 73.2               | 5.2        | 99           | 67.0               | 5.0        | 99           |
| Neurosurgery                             | 83.2               | 10.7       | 52           | 89.5               | 10.2       | 52           | 89.7               | 10.3       | 52           |
| I. Internal medicine                     | 87.2               | 8.4        | 49           | 88.0               | 8.7        | 49           | 87.8               | 8.8        | 49           |
| Neurology                                | 85.1               | 12.4       | 48           | 88.8               | 13.3       | 48           | 84.0               | 11.8       | 48           |
| Infectology - adults                     | 79.9               | 7.3        | 48           | 86.2               | 7.5        | 48           | 84.1               | 7.8        | 48           |
| Traumatology                             | 69.2               | 5.4        | 48           | 78.8               | 5.8        | 48           | 78.0               | 5.5        | 48           |
| Geriatrics                               | 84.0               | 9.0        | 45           | 86.7               | 8.7        | 45           | 89.8               | 8.5        | 45           |
| Urology                                  | 67.5               | 7.7        | 45           | 72.4               | 7.1        | 45           | 74.9               | 6.4        | 45           |
| Surgery                                  | 64.1               | 6.0        | 42           | 71.8               | 6.1        | 42           | 78.3               | 6.3        | 42           |
| III. Internal medicine                   | 73.4               | 10.1       | 40           | 73.9               | 10.6       | 40           | 75.3               | 10.2       | 40           |
| Neonatology                              | 90.0               | 5.0        | 37           | 93.5               | 4.9        | 37           | 86.8               | 4.8        | 37           |
| Infectology - infants                    | 87.6               | 3.8        | 28           | 73.3               | 3.3        | 28           | 80.8               | 4.3        | 28           |
| Long-term ill                            | 67.1               | 20.6       | 20           | 75.6               | 21.6       | 20           | 85.7               | 22.0       | 20           |
| Occupational medicine and toxicology     | 61.0               | 7.0        | 17           | 67.8               | 7.3        | 17           | 71.4               | 7.5        | 17           |
| Anesthesiology and intensive medicine    | 49.1               | 8.4        | 9            | 52.8               | 11.1       | 9            | 54.1               | 10.9       | 9            |

## Number of beds, occupancy rate and ALOS in UNB

### Overview of KPIs in FY11A-FY13A by hospitals and departments

| Units: %, days, count (000)           | FY11A              |             |             | FY12A              |             |             | FY13A              |             |             |
|---------------------------------------|--------------------|-------------|-------------|--------------------|-------------|-------------|--------------------|-------------|-------------|
|                                       | Occupancy rate (%) | ALOS        | No. of beds | Occupancy rate (%) | ALOS        | No. of beds | Occupancy rate (%) | ALOS        | No. of beds |
| <b>Petržalka</b>                      | <b>70.2</b>        | <b>6.9</b>  | <b>649</b>  | <b>76.7</b>        | <b>7.0</b>  | <b>649</b>  | <b>77.2</b>        | <b>6.8</b>  | <b>649</b>  |
| Gynecology and obstetrics             | 70.7               | 5.5         | 100         | 80.1               | 5.3         | 100         | 78.3               | 5.1         | 100         |
| Internal medicine                     | 77.1               | 9.3         | 53          | 83.9               | 9.3         | 53          | 80.5               | 8.9         | 53          |
| Surgery                               | 47.8               | 6.0         | 52          | 60.5               | 5.9         | 52          | 65.7               | 6.4         | 52          |
| Psychiatry                            | 79.8               | 16.9        | 44          | 86.0               | 18.1        | 44          | 80.2               | 17.0        | 44          |
| Neonatology                           | 84.2               | 4.7         | 40          | 85.7               | 4.4         | 40          | 88.5               | 4.3         | 40          |
| ORL                                   | 65.7               | 5.7         | 32          | 75.3               | 6.5         | 32          | 71.6               | 6.5         | 32          |
| Traumatology                          | 76.6               | 4.9         | 32          | 79.1               | 4.5         | 32          | 79.6               | 4.6         | 32          |
| Orthopedics                           | 78.3               | 8.0         | 31          | 77.0               | 6.8         | 31          | 76.2               | 6.7         | 31          |
| FRO                                   | 76.3               | 14.3        | 30          | 81.4               | 14.9        | 30          | 81.2               | 13.3        | 30          |
| Urology                               | 68.7               | 6.3         | 30          | 66.9               | 6.2         | 30          | 65.7               | 6.6         | 30          |
| Gastroenterology clinic               | 68.5               | 8.0         | 29          | 75.8               | 8.6         | 29          | 70.5               | 7.3         | 29          |
| Pathological newborns                 | 79.2               | 18.0        | 26          | 95.8               | 14.7        | 26          | 89.8               | 15.2        | 26          |
| Neurology                             | 77.4               | 8.7         | 26          | 79.4               | 8.2         | 26          | 74.4               | 8.0         | 26          |
| Pediatrics                            | 68.2               | 4.0         | 25          | 82.8               | 4.0         | 25          | 95.9               | 4.0         | 25          |
| Long-term ill                         | 75.9               | 25.9        | 24          | 75.4               | 25.8        | 24          | 72.9               | 25.0        | 24          |
| Hematology                            | 72.8               | 15.7        | 24          | 66.4               | 13.5        | 24          | 73.8               | 14.1        | 24          |
| Vascular surgery                      | 44.9               | 5.6         | 24          | 61.2               | 6.7         | 24          | 82.8               | 8.7         | 24          |
| Phoniatrics                           | 52.6               | 3.9         | 10          | 57.7               | 4.1         | 10          | 60.9               | 4.1         | 10          |
| Ophthalmology                         | 51.3               | 2.7         | 10          | 52.2               | 3.6         | 10          | 58.8               | 4.0         | 10          |
| Anesthesiology and intensive medicine | 35.8               | 6.0         | 7           | 58.6               | 8.8         | 7           | 69.1               | 9.8         | 7           |
| <b>Staré Mesto</b>                    | <b>65.6</b>        | <b>8.4</b>  | <b>344</b>  | <b>70.1</b>        | <b>8.7</b>  | <b>344</b>  | <b>36.4</b>        | <b>8.4</b>  | <b>344</b>  |
| Psychiatry                            | 64.0               | 16.6        | 70          | 75.2               | 17.8        | 70          | 39.7               | 17.5        | 70          |
| Neurology                             | 67.8               | 6.5         | 64          | 72.2               | 6.2         | 64          | 36.6               | 6.1         | 64          |
| I. Internal medicine                  | 63.0               | 7.6         | 58          | 71.0               | 7.8         | 58          | 34.9               | 7.4         | 61          |
| Surgery                               | 71.7               | 6.5         | 46          | 71.2               | 7.4         | 46          | 35.3               | 6.9         | 46          |
| II. Internal medicine                 | 72.7               | 10.2        | 42          | 72.7               | 9.3         | 42          | 37.4               | 9.2         | 42          |
| Dermatovenerology                     | 67.1               | 9.7         | 40          | 71.4               | 10.1        | 40          | 35.8               | 10.1        | 40          |
| Psychiatry - daily stationary         | 33.0               | 22.7        | 15          | 30.9               | 15.9        | 15          | 26.5               | 28.4        | 15          |
| Coronary unit and arrhythmia          | 57.9               | 2.6         | 4           | 77.8               | 2.8         | 4           | 41.5               | 2.5         | 4           |
| Nuclear medicine                      | 98.9               | 11.0        | 2           | 85.5               | 9.5         | 2           | 41.2               | 8.8         | 2           |
| Diabetology                           | 45.1               | 7.2         | 3           | -                  | -           | 3           | -                  | -           | -           |
| <b>Podunajské Biskupice</b>           | <b>76.5</b>        | <b>14.7</b> | <b>113</b>  | <b>82.0</b>        | <b>14.9</b> | <b>113</b>  | <b>82.0</b>        | <b>14.0</b> | <b>113</b>  |
| Geriatrics                            | 76.5               | 12.9        | 46          | 83.2               | 13.5        | 46          | 78.6               | 12.5        | 46          |
| Long-term ill                         | 78.6               | 20.2        | 43          | 82.1               | 19.5        | 43          | 88.5               | 19.3        | 43          |
| Healing department                    | 72.0               | 12.4        | 20          | 80.1               | 13.5        | 20          | 77.4               | 11.7        | 20          |
| Geriatrics - intensive medicine       | 77.3               | 9.1         | 4           | 77.8               | 8.1         | 4           | 72.9               | 6.9         | 4           |

## PPP variant (60% leverage, 15.5% IRR)

### PPP variant (60% leverage, 15.5% IRR) - development phase

| <i>Currency: EUR 000</i>                  | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
|---|-----------------------|-----------------|-----------------|------------------|
| EBITDA                                    |                       | (78)            | (194)           | (385)            |
| Cash taxes (income tax)                   |                       | -               | -               | -                |
| Cash flow from change in working capital  |                       | -               | -               | -                |
| Adjustment for: Non-cash items            |                       | -               | -               | -                |
| <b>Cash flow from operations</b>          | <b>(656)</b>          | <b>(78)</b>     | <b>(194)</b>    | <b>(385)</b>     |
| Initial investment                        | (248 016)             | (57 598)        | (59 023)        | (131 396)        |
| MRA creation                              | -                     | -               | -               | -                |
| Life-cycle investments                    | -                     | -               | -               | -                |
| MRA release                               | -                     | -               | -               | -                |
| Total yearly capital expenditures         | -                     | -               | -               | -                |
| Contingency                               | (6 200)               | (1 440)         | (1 476)         | (3 285)          |
| <b>Cash flow from investing</b>           | <b>(254 217)</b>      | <b>(59 037)</b> | <b>(60 499)</b> | <b>(134 681)</b> |
| Bank fees: total upfront fees             | (1 834)               | (1 808)         | -               | (26)             |
| Bank fees: total commitment fees          | (1 251)               | (625)           | (400)           | (227)            |
| Bank fees: maintenance/prolongation fee   | (50)                  | -               | (25)            | (25)             |
| Construction period: pre-funded DSRA      | (18 905)              | -               | -               | (18 905)         |
| Interest during construction Facility (1) | (7 221)               | -               | (2 382)         | (4 839)          |
| Interest during construction Facility (2) | -                     | -               | -               | -                |
| Interest during construction Facility (3) | -                     | -               | -               | -                |
| Interest expense Facility (1)             | -                     | -               | -               | -                |
| Interest expense Facility (2)             | -                     | -               | -               | -                |
| Interest expense Facility (3)             | -                     | -               | -               | -                |
| Interest expense Facility (RCF)           | -                     | -               | -               | -                |
| Interest expense (Overdraft)              | -                     | -               | -               | -                |
| Interest income on MRA                    | -                     | -               | -               | -                |
| Interest income on DSRA                   | -                     | -               | -               | -                |
| Principal repayment Facility (1)          | -                     | -               | -               | -                |
| Principal repayment Facility (2)          | -                     | -               | -               | -                |
| Principal repayment Facility (3)          | -                     | -               | -               | -                |
| Principal repayment Facility (RCF)        | -                     | -               | -               | -                |
| <b>Cash flow from financing</b>           | <b>(29 262)</b>       | <b>(2 433)</b>  | <b>(2 807)</b>  | <b>(24 022)</b>  |
| <b>Uses of funds</b>                      | <b>(284 135)</b>      | <b>(61 548)</b> | <b>(63 500)</b> | <b>(159 087)</b> |
| <i>Currency: EUR 000</i>                  | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
| Facility (1)                              | 122 593               | 36 929          | 38 100          | 47 564           |
| Facility (2)                              | 32 564                | -               | -               | 32 564           |
| Facility (3)                              | 15 324                | -               | -               | 15 324           |
| <b>Debt</b>                               | <b>170 481</b>        | <b>36 929</b>   | <b>38 100</b>   | <b>95 452</b>    |
| Equity                                    | 113 654               | 24 619          | 25 400          | 63 635           |
| <b>Sources of funds</b>                   | <b>284 135</b>        | <b>61 548</b>   | <b>63 500</b>   | <b>159 087</b>   |

Source: EY

## PPP variant (60% leverage, 15.5% IRR)

### PPP variant (60% leverage, 15.5% IRR) - operations phase, part 1/2

| Currency: EUR 000                              | Sum for FY20F -<br>FY49F | FY20F          | FY21F           | FY22F           | FY23F           | FY24F           | FY25F           | FY26F           | FY27F           | FY28F           | FY29F           | FY30F           | FY31F           | FY32F           | FY33F           |
|--|--------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total revenue from health insurance companies  | 5 305 828                | 113 450        | 116 163         | 118 968         | 121 866         | 124 950         | 129 406         | 134 101         | 138 943         | 143 978         | 149 236         | 154 721         | 160 459         | 166 381         | 172 359         |
| Adjustment to revenues (payment for UH/OHV)    | 766 901                  | 12 165         | 13 614          | 15 121          | 16 687          | 18 329          | 18 983          | 19 672          | 20 382          | 21 120          | 21 892          | 22 696          | 23 538          | 24 407          | 25 284          |
| Total revenue from other streams               | 293 789                  | 6 705          | 6 876           | 7 051           | 7 230           | 7 419           | 7 619           | 7 827           | 8 041           | 8 262           | 8 491           | 8 727           | 8 973           | 9 227           | 9 480           |
| Availability payment/Additional cash injection | 252 000                  | 26 500         | 14 500          | 13 000          | 11 000          | 11 000          | 11 000          | 11 000          | 11 000          | 11 000          | 11 000          | 11 000          | 11 000          | 11 000          | 11 000          |
| <b>Revenues</b>                                | <b>6 618 518</b>         | <b>158 820</b> | <b>151 153</b>  | <b>154 140</b>  | <b>156 783</b>  | <b>161 698</b>  | <b>167 008</b>  | <b>172 600</b>  | <b>178 366</b>  | <b>184 360</b>  | <b>190 619</b>  | <b>197 145</b>  | <b>203 970</b>  | <b>211 015</b>  | <b>218 123</b>  |
| Y-o-y growth in revenues                       |                          | 0%             | -5%             | 2%              | 2%              | 3%              | 3%              | 3%              | 3%              | 3%              | 3%              | 3%              | 3%              | 3%              | 3%              |
| Total personnel costs                          | (3 092 476)              | (74 784)       | (77 060)        | (79 341)        | (81 563)        | (83 721)        | (85 775)        | (87 750)        | (89 706)        | (91 666)        | (93 646)        | (94 219)        | (94 789)        | (95 363)        | (97 401)        |
| Total energy costs                             | (31 151)                 | (829)          | (846)           | (864)           | (881)           | (900)           | (919)           | (939)           | (959)           | (980)           | (1 002)         | (980)           | (960)           | (940)           | (960)           |
| Total costs of services                        | (92 605)                 | (2 389)        | (2 440)         | (2 490)         | (2 541)         | (2 595)         | (2 651)         | (2 708)         | (2 767)         | (2 827)         | (2 888)         | (2 869)         | (2 851)         | (2 833)         | (2 894)         |
| Total material costs                           | (1 349 399)              | (25 195)       | (25 879)        | (26 595)        | (27 331)        | (28 114)        | (29 545)        | (31 110)        | (32 746)        | (34 452)        | (36 255)        | (37 050)        | (39 020)        | (41 077)        | (44 450)        |
| Total taxes and fees                           | (24 280)                 | (591)          | (603)           | (616)           | (628)           | (641)           | (655)           | (669)           | (684)           | (699)           | (714)           | (730)           | (746)           | (762)           | (779)           |
| Other costs                                    | (73 658)                 | (1 421)        | (1 458)         | (1 497)         | (1 538)         | (1 580)         | (1 656)         | (1 738)         | (1 824)         | (1 913)         | (2 007)         | (2 045)         | (2 142)         | (2 243)         | (2 415)         |
| Other finance costs                            | -                        | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Total insurance costs                          | (12 790)                 | (599)          | (564)           | (534)           | (509)           | (492)           | (474)           | (455)           | (442)           | (435)           | (435)           | (435)           | (427)           | (420)           | (413)           |
| <b>EBITDA</b>                                  | <b>1 942 161</b>         | <b>53 012</b>  | <b>42 303</b>   | <b>42 204</b>   | <b>41 791</b>   | <b>43 655</b>   | <b>45 333</b>   | <b>47 230</b>   | <b>49 238</b>   | <b>51 387</b>   | <b>53 670</b>   | <b>58 816</b>   | <b>63 036</b>   | <b>67 377</b>   | <b>68 813</b>   |
| Y-o-y growth in EBITDA                         |                          | 0%             | -20%            | 0%              | -1%             | 4%              | 4%              | 4%              | 4%              | 4%              | 4%              | 10%             | 7%              | 7%              | 2%              |
| EBITDA margin                                  |                          | 33%            | 28%             | 27%             | 27%             | 27%             | 27%             | 27%             | 28%             | 28%             | 28%             | 30%             | 31%             | 32%             | 32%             |
| EBITDA margin (excl. availability pmt)         |                          | 20%            | 20%             | 21%             | 21%             | 22%             | 22%             | 22%             | 23%             | 23%             | 24%             | 26%             | 27%             | 28%             | 28%             |
| Cash taxes (income tax)                        | (243 689)                | (4 387)        | (1 539)         | (1 082)         | (2 567)         | (2 847)         | (3 083)         | (3 363)         | (5 182)         | (5 624)         | (5 943)         | (7 054)         | (7 974)         | (8 937)         | (9 279)         |
| Cash flow from change in working capital       | (36 910)                 | (13 046)       | (649)           | (629)           | (663)           | (662)           | (888)           | (896)           | (932)           | (911)           | (1 091)         | (1 194)         | (1 316)         | (1 281)         | (1 347)         |
| Adjustment for non-cash items                  | -                        | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from operations</b>               | <b>1 661 561</b>         | <b>35 580</b>  | <b>40 116</b>   | <b>40 493</b>   | <b>38 561</b>   | <b>40 145</b>   | <b>41 361</b>   | <b>42 971</b>   | <b>43 124</b>   | <b>44 852</b>   | <b>46 636</b>   | <b>50 569</b>   | <b>53 745</b>   | <b>57 159</b>   | <b>58 186</b>   |
| Y-o-y growth in CFO                            |                          | 0%             | 13%             | 1%              | -5%             | 4%              | 3%              | 4%              | 0%              | 4%              | 4%              | 8%              | 6%              | 6%              | 2%              |
| Initial investment                             | -                        | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| MRA creation                                   | (71 509)                 | (725)          | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (3 416)         | (3 416)         | (3 416)         | (3 416)         |
| Life-cycle investments                         | (71 509)                 | -              | -               | -               | -               | -               | -               | -               | -               | -               | (7 248)         | -               | -               | -               | -               |
| MRA release                                    | 71 509                   | -              | -               | -               | -               | -               | -               | -               | -               | -               | 7 248           | -               | -               | -               | -               |
| Total yearly capital expenditures              | (434 534)                | (6 086)        | (10 419)        | (10 678)        | (10 941)        | (11 216)        | (11 503)        | (11 799)        | (12 102)        | (12 415)        | (12 735)        | (13 064)        | (13 404)        | (13 757)        | (14 104)        |
| Contingency                                    | -                        | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from investing)</b>               | <b>(506 043)</b>         | <b>(6 811)</b> | <b>(11 144)</b> | <b>(11 403)</b> | <b>(11 666)</b> | <b>(11 941)</b> | <b>(12 228)</b> | <b>(12 524)</b> | <b>(12 827)</b> | <b>(13 139)</b> | <b>(13 460)</b> | <b>(16 479)</b> | <b>(16 819)</b> | <b>(17 172)</b> | <b>(17 520)</b> |
| Bank fees: total upfront fees                  | -                        | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: total commitment fees               | -                        | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: maintenance/prolongation fee        | (1 531)                  | (82)           | (88)            | (89)            | (65)            | (65)            | (66)            | (67)            | (43)            | (44)            | (45)            | (46)            | (47)            | (49)            | (50)            |
| Construction period: pre-funded DSRA           | -                        | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (1)      | -                        | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (2)      | -                        | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (3)      | -                        | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |

## PPP variant (60% leverage, 15.5% IRR)

|   |                  |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|---|------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Interest expense Facility (1)                         | (129 368)        | (7 907)        | (7 907)         | (7 907)         | (7 907)         | (7 907)         | (7 907)         | (7 907)         | (7 907)         | (7 735)         | (7 521)         | (7 260)         | (6 962)         | (6 580)         | (6 104)         |
| Interest expense Facility (2)                         | (6 327)          | (1 513)        | (1 325)         | (1 129)         | (923)           | (708)           | (482)           | (247)           | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (3)                         | (1 000)          | (495)          | (335)           | (170)           | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (RCF)                       | (17 079)         | -              | (302)           | (317)           | (332)           | (347)           | (363)           | (383)           | (404)           | (426)           | (447)           | (472)           | (500)           | (530)           | (560)           |
| Interest expense (Overdraft)                          | -                | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest income on MRA                                | 432              | -              | 3               | 5               | 8               | 10              | 13              | 16              | 18              | 21              | 23              | -               | 12              | 25              | 37              |
| Interest income on DSRA                               | 1 106            | 68             | 68              | 68              | 48              | 48              | 48              | 48              | 38              | 40              | 42              | 43              | 46              | 50              | 51              |
| Principal repayment Facility (1)                      | (122 593)        | -              | -               | -               | -               | -               | -               | -               | (2 663)         | (3 327)         | (4 052)         | (4 619)         | (5 919)         | (7 382)         | (8 075)         |
| Principal repayment Facility (2)                      | (32 564)         | (4 043)        | (4 231)         | (4 427)         | (4 633)         | (4 848)         | (5 073)         | (5 309)         | -               | -               | -               | -               | -               | -               | -               |
| Principal repayment Facility (3)                      | (15 324)         | (4 947)        | (5 106)         | (5 271)         | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Principal drawdown Facility (RCF)                     | 36 910           | 13 046         | 649             | 629             | 663             | 662             | 888             | 896             | 932             | 911             | 1 091           | 1 194           | 1 316           | 1 281           | 1 347           |
| Principal repayment Facility (RCF)                    | (36 910)         | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from financing</b>                       | <b>(324 248)</b> | <b>(5 873)</b> | <b>(18 576)</b> | <b>(18 608)</b> | <b>(13 141)</b> | <b>(13 154)</b> | <b>(12 942)</b> | <b>(12 953)</b> | <b>(10 028)</b> | <b>(10 560)</b> | <b>(10 908)</b> | <b>(11 160)</b> | <b>(12 053)</b> | <b>(13 184)</b> | <b>(13 353)</b> |
| <b>Cash flow after debt service</b>                   | <b>831 270</b>   | <b>22 897</b>  | <b>10 396</b>   | <b>10 482</b>   | <b>13 755</b>   | <b>15 050</b>   | <b>16 191</b>   | <b>17 494</b>   | <b>20 268</b>   | <b>21 153</b>   | <b>22 268</b>   | <b>22 930</b>   | <b>24 873</b>   | <b>26 802</b>   | <b>27 314</b>   |
| Transfer from/to DSRA                                 | 18 905           | -              | (0)             | 5 442           | -               | (0)             | 0               | 2 893           | (493)           | (510)           | (306)           | (1 003)         | (1 081)         | (216)           | (775)           |
| Cash after debt service and DSRA                      | 850 175          | 22 897         | 10 396          | 15 923          | 13 755          | 15 050          | 16 191          | 20 387          | 19 776          | 20 643          | 21 963          | 21 927          | 23 792          | 26 586          | 26 538          |
| Overdraft disbursement                                | -                | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Overdraft repayment                                   | -                | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Cash after debt service, DSRA and overdraft repayment | 850 175          | 22 897         | 10 396          | 15 923          | 13 755          | 15 050          | 16 191          | 20 387          | 19 776          | 20 643          | 21 963          | 21 927          | 23 792          | 26 586          | 26 538          |
| <b>Dividends</b>                                      | <b>850 175</b>   | <b>22 897</b>  | <b>10 396</b>   | <b>15 923</b>   | <b>13 755</b>   | <b>15 050</b>   | <b>16 191</b>   | <b>20 387</b>   | <b>19 776</b>   | <b>20 643</b>   | <b>21 963</b>   | <b>21 927</b>   | <b>23 792</b>   | <b>26 586</b>   | <b>26 538</b>   |

Source: EY



## PPP variant (60% leverage, 15.5% IRR)

### PPP variant (60% leverage, 15.5% IRR) - operations phase, part 2/2

| Currency: EUR 000                              | FY34F          | FY35F          | FY36F          | FY37F          | FY38F          | FY39F          | FY40F          | FY41F          | FY42F          | FY43F          | FY44F          | FY45F          | FY46F          | FY47F          | FY48F          | FY49F          |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Total revenue from health insurance companies  | 178 412        | 184 694        | 188 435        | 192 238        | 196 108        | 199 897        | 203 731        | 207 622        | 211 573        | 215 599        | 219 702        | 223 883        | 228 143        | 232 485        | 236 909        | 241 418        |
| Adjustment to revenues (payment for UH/OHV)    | 26 172         | 27 093         | 27 642         | 28 200         | 28 768         | 29 323         | 29 886         | 30 457         | 31 036         | 31 627         | 32 229         | 32 842         | 33 467         | 34 104         | 34 753         | 35 414         |
| Total revenue from other streams               | 9 731          | 9 990          | 10 192         | 10 398         | 10 607         | 10 812         | 11 019         | 11 230         | 11 443         | 11 661         | 11 883         | 12 109         | 12 340         | 12 574         | 12 814         | 13 058         |
| Availability payment/Additional cash injection | 11 000         | 11 000         | 11 000         | 11 000         | 11 000         | 11 000         | 11 000         | -              | -              | -              | -              | -              | -              | -              | -              | -              |
| <b>Revenues</b>                                | <b>225 315</b> | <b>232 776</b> | <b>237 269</b> | <b>241 835</b> | <b>246 482</b> | <b>251 032</b> | <b>255 636</b> | <b>249 308</b> | <b>254 052</b> | <b>258 887</b> | <b>263 814</b> | <b>268 834</b> | <b>273 950</b> | <b>279 163</b> | <b>284 476</b> | <b>289 889</b> |
| Y-o-y growth in revenues                       | 3%             | 3%             | 2%             | 2%             | 2%             | 2%             | 2%             | -2%            | 2%             | 2%             | 2%             | 2%             | 2%             | 2%             | 2%             | 2%             |
| Total personnel costs                          | (99 481)       | (101 606)      | (103 773)      | (105 991)      | (108 256)      | (110 569)      | (112 932)      | (115 346)      | (117 814)      | (120 056)      | (122 341)      | (124 669)      | (127 041)      | (129 459)      | (131 923)      | (134 433)      |
| Total energy costs                             | (979)          | (999)          | (1 019)        | (1 040)        | (1 061)        | (1 081)        | (1 102)        | (1 123)        | (1 144)        | (1 166)        | (1 188)        | (1 211)        | (1 234)        | (1 257)        | (1 281)        | (1 306)        |
| Total costs of services                        | (2 953)        | (3 013)        | (3 074)        | (3 136)        | (3 199)        | (3 261)        | (3 323)        | (3 387)        | (3 451)        | (3 517)        | (3 584)        | (3 652)        | (3 721)        | (3 792)        | (3 864)        | (3 938)        |
| Total material costs                           | (46 667)       | (48 977)       | (49 969)       | (50 977)       | (52 004)       | (53 008)       | (54 025)       | (55 057)       | (56 105)       | (57 172)       | (58 260)       | (59 369)       | (60 499)       | (61 650)       | (62 823)       | (64 019)       |
| Total taxes and fees                           | (794)          | (811)          | (827)          | (844)          | (861)          | (877)          | (894)          | (911)          | (929)          | (946)          | (964)          | (983)          | (1 001)        | (1 020)        | (1 040)        | (1 060)        |
| Other costs                                    | (2 530)        | (2 649)        | (2 703)        | (2 758)        | (2 813)        | (2 867)        | (2 922)        | (2 978)        | (3 035)        | (3 093)        | (3 152)        | (3 212)        | (3 273)        | (3 335)        | (3 398)        | (3 463)        |
| Other finance costs                            | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              |
| Total insurance costs                          | (421)          | (427)          | (415)          | (412)          | (408)          | (403)          | (399)          | (381)          | (366)          | (351)          | (362)          | (377)          | (368)          | (361)          | (355)          | (350)          |
| <b>EBITDA</b>                                  | <b>71 490</b>  | <b>74 295</b>  | <b>75 489</b>  | <b>76 679</b>  | <b>77 882</b>  | <b>78 965</b>  | <b>80 037</b>  | <b>70 125</b>  | <b>71 209</b>  | <b>72 586</b>  | <b>73 963</b>  | <b>75 363</b>  | <b>76 812</b>  | <b>78 288</b>  | <b>79 791</b>  | <b>81 322</b>  |
| Y-o-y growth in EBITDA                         | 4%             | 4%             | 2%             | 2%             | 2%             | 1%             | 1%             | -12%           | 2%             | 2%             | 2%             | 2%             | 2%             | 2%             | 2%             | 2%             |
| EBITDA margin                                  | 32%            | 32%            | 32%            | 32%            | 32%            | 31%            | 31%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            |
| EBITDA margin (excl. availability pmt)         | 28%            | 29%            | 29%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            | 28%            |
| Cash taxes (income tax)                        | (9 529)        | (10 188)       | (10 620)       | (10 756)       | (11 115)       | (11 426)       | (11 734)       | (9 683)        | (9 852)        | (10 087)       | (10 315)       | (11 242)       | (11 484)       | (11 946)       | (12 197)       | (12 654)       |
| Cash flow from change in working capital       | (1 213)        | (1 262)        | (558)          | (748)          | (669)          | (647)          | (556)          | (759)          | (671)          | (705)          | (613)          | (837)          | (746)          | (760)          | (661)          | -              |
| Adjustment for non-cash items                  | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              |
| <b>Cash flow from operations</b>               | <b>60 749</b>  | <b>62 845</b>  | <b>64 311</b>  | <b>65 175</b>  | <b>66 098</b>  | <b>66 893</b>  | <b>67 748</b>  | <b>59 683</b>  | <b>60 686</b>  | <b>61 794</b>  | <b>63 034</b>  | <b>63 284</b>  | <b>64 583</b>  | <b>65 582</b>  | <b>66 933</b>  | <b>68 667</b>  |
| Y-o-y growth in CFO                            | 4%             | 3%             | 2%             | 1%             | 1%             | 1%             | 1%             | -12%           | 2%             | 2%             | 2%             | 0%             | 2%             | 2%             | 2%             | 3%             |
| MRA creation                                   | (3 416)        | (3 276)        | (3 276)        | (3 276)        | (4 570)        | (4 570)        | (2 242)        | (6 494)        | (6 494)        | (6 494)        | (6 494)        | -              | -              | -              | -              | -              |
| Life-cycle investments                         | (17 078)       | -              | -              | (9 827)        | -              | (9 140)        | (2 242)        | -              | -              | -              | (25 974)       | -              | -              | -              | -              | -              |
| MRA release                                    | 17 078         | -              | -              | 9 827          | -              | 9 140          | 2 242          | -              | -              | -              | 25 974         | -              | -              | -              | -              | -              |
| Total yearly capital expenditures              | (14 445)       | (14 796)       | (15 153)       | (15 459)       | (15 770)       | (16 075)       | (16 383)       | (16 696)       | (17 014)       | (17 338)       | (17 668)       | (18 004)       | (18 347)       | (18 696)       | (19 052)       | (19 414)       |
| Contingency                                    | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              |

## PPP variant (60% leverage, 15.5% IRR)

| Cash flow from investing                              | (17 861)        | (18 072)        | (18 429)        | (18 735)        | (20 341)        | (20 645)        | (18 625)        | (23 190)      | (23 508)      | (23 831)      | (24 161)      | (18 004)      | (18 347)      | (18 696)      | (19 052)      | (19 414)        |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| Bank fees: total upfront fees                         | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Bank fees: total commitment fees                      | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Bank fees: maintenance/prolongation fee               | (51)            | (52)            | (53)            | (54)            | (55)            | (55)            | (56)            | (32)          | (32)          | (33)          | (34)          | (34)          | (35)          | (36)          | (37)          | (37)            |
| Construction period: pre-funded DSRA                  | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest during construction Facility (1)             | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest during construction Facility (2)             | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest during construction Facility (3)             | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (1)                         | (5 583)         | (4 979)         | (4 293)         | (3 539)         | (2 724)         | (1 874)         | (958)           | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (2)                         | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (3)                         | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (RCF)                       | (591)           | (619)           | (648)           | (661)           | (679)           | (694)           | (709)           | (722)         | (740)         | (755)         | (771)         | (786)         | (805)         | (822)         | (840)         | (855)           |
| Interest expense (Overdraft)                          | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest income on MRA                                | 49              | -               | 12              | 24              | -               | 16              | -               | -             | 23            | 47            | 70            | -             | -             | -             | -             | -               |
| Interest income on DSRA                               | 54              | 56              | 58              | 58              | 57              | 58              | 57              | -             | -             | -             | -             | -             | -             | -             | -             | -               |
|   | (9 370)         | (10 631)        | (11 690)        | (12 633)        | (13 182)        | (14 194)        | (14 856)        | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (1)                      | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (2)                      | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (3)                      | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal drawdown Facility (RCF)                     | 1 213           | 1 262           | 558             | 748             | 669             | 647             | 556             | 759           | 671           | 705           | 613           | 837           | 746           | 760           | 661           | -               |
| Principal repayment Facility (RCF)                    | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | (36 910)        |
| <b>Cash flow from financing</b>                       | <b>(14 280)</b> | <b>(14 963)</b> | <b>(16 057)</b> | <b>(16 057)</b> | <b>(15 913)</b> | <b>(16 096)</b> | <b>(15 967)</b> | <b>6</b>      | <b>(78)</b>   | <b>(37)</b>   | <b>(122)</b>  | <b>17</b>     | <b>(94)</b>   | <b>(98)</b>   | <b>(215)</b>  | <b>(37 802)</b> |
| <b>Cash flow after debt service</b>                   | <b>28 608</b>   | <b>29 810</b>   | <b>29 825</b>   | <b>30 383</b>   | <b>29 844</b>   | <b>30 152</b>   | <b>33 156</b>   | <b>36 499</b> | <b>37 101</b> | <b>37 926</b> | <b>38 751</b> | <b>45 297</b> | <b>46 142</b> | <b>46 788</b> | <b>47 666</b> | <b>11 451</b>   |
| Transfer from/to DSRA                                 | (656)           | (373)           | (189)           | 266             | (162)           | 253             | 15 814          | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Cash after debt service and DSRA                      | 27 951          | 29 437          | 29 636          | 30 649          | 29 683          | 30 405          | 48 970          | 36 499        | 37 101        | 37 926        | 38 751        | 45 297        | 46 142        | 46 788        | 47 666        | 11 451          |
| Overdraft disbursement                                | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Overdraft repayment                                   | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Cash after debt service, DSRA and overdraft repayment | 27 951          | 29 437          | 29 636          | 30 649          | 29 683          | 30 405          | 48 970          | 36 499        | 37 101        | 37 926        | 38 751        | 45 297        | 46 142        | 46 788        | 47 666        | 11 451          |
| <b>Dividends</b>                                      | <b>27 951</b>   | <b>29 437</b>   | <b>29 636</b>   | <b>30 649</b>   | <b>29 683</b>   | <b>30 405</b>   | <b>48 970</b>   | <b>36 499</b> | <b>37 101</b> | <b>37 926</b> | <b>38 751</b> | <b>45 297</b> | <b>46 142</b> | <b>46 788</b> | <b>47 666</b> | <b>11 451</b>   |

Source: EY:

## PPP variant (60% leverage, 13.5% IRR)

### PPP variant (60% leverage, 13.5% IRR) - development phase

| Currency: EUR 000                         | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
|---|-----------------------|-----------------|-----------------|------------------|
| EBITDA                                    |                       | (78)            | (194)           | (385)            |
| Cash taxes (income tax)                   |                       | -               | -               | -                |
| Cash flow from change in working capital  |                       | -               | -               | -                |
| Adjustment for: Non-cash items            |                       | -               | -               | -                |
| <b>Cash flow from operations</b>          | <b>(656)</b>          | <b>(78)</b>     | <b>(194)</b>    | <b>(385)</b>     |
| Initial investment                        | (248 016)             | (57 598)        | (59 023)        | (131 396)        |
| MRA creation                              | -                     | -               | -               | -                |
| Life-cycle investments                    | -                     | -               | -               | -                |
| MRA release                               | -                     | -               | -               | -                |
| Total yearly capital expenditures         | -                     | -               | -               | -                |
| Contingency                               | (6 200)               | (1 440)         | (1 476)         | (3 285)          |
| <b>Cash flow from investing</b>           | <b>(254 217)</b>      | <b>(59 037)</b> | <b>(60 499)</b> | <b>(134 681)</b> |
| Bank fees: total upfront fees             | (1 834)               | (1 808)         | -               | (26)             |
| Bank fees: total commitment fees          | (1 251)               | (625)           | (400)           | (227)            |
| Bank fees: maintenance/prolongation fee   | (50)                  | -               | (25)            | (25)             |
| Construction period: pre-funded DSRA      | (18 905)              | -               | -               | (18 905)         |
| Interest during construction Facility (1) | (7 221)               | -               | (2 382)         | (4 839)          |
| Interest during construction Facility (2) | -                     | -               | -               | -                |
| Interest during construction Facility (3) | -                     | -               | -               | -                |
| Interest expense Facility (1)             | -                     | -               | -               | -                |
| Interest expense Facility (2)             | -                     | -               | -               | -                |
| Interest expense Facility (3)             | -                     | -               | -               | -                |
| Interest expense Facility (RCF)           | -                     | -               | -               | -                |
| Interest expense (Overdraft)              | -                     | -               | -               | -                |
| Interest income on MRA                    | -                     | -               | -               | -                |
| Interest income on DSRA                   | -                     | -               | -               | -                |
| Principal repayment Facility (1)          | -                     | -               | -               | -                |
| Principal repayment Facility (2)          | -                     | -               | -               | -                |
| Principal repayment Facility (3)          | -                     | -               | -               | -                |
| Principal repayment Facility (RCF)        | -                     | -               | -               | -                |
| <b>Cash flow from financing</b>           | <b>(29 262)</b>       | <b>(2 433)</b>  | <b>(2 807)</b>  | <b>(24 022)</b>  |
| <b>Uses of funds</b>                      | <b>(284 135)</b>      | <b>(61 548)</b> | <b>(63 500)</b> | <b>(159 087)</b> |
| Currency: EUR 000                         | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
| Facility (1)                              | 122 593               | 36 929          | 38 100          | 47 564           |
| Facility (2)                              | 32 564                | -               | -               | 32 564           |
| Facility (3)                              | 15 324                | -               | -               | 15 324           |
| <b>Debt</b>                               | <b>170 481</b>        | <b>36 929</b>   | <b>38 100</b>   | <b>95 452</b>    |
| Equity                                    | 113 654               | 24 619          | 25 400          | 63 635           |
| <b>Sources of funds</b>                   | <b>284 135</b>        | <b>61 548</b>   | <b>63 500</b>   | <b>159 087</b>   |

Source: EY

## PPP variant (60% leverage, 13.5% IRR)

### PPP variant (60% leverage, 13.5% IRR) - operations phase, part 1/2

| Currency: EUR 000                              | Sum for FY20F - FY49F | FY20F          | FY21F           | FY22F           | FY23F           | FY24F           | FY25F           | FY26F           | FY27F           | FY28F           | FY29F           | FY30F           | FY31F           | FY32F           | FY33F           |
|--|-----------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total revenue from health insurance companies  | 5 305 828             | 113 450        | 116 163         | 118 968         | 121 866         | 124 950         | 129 406         | 134 101         | 138 943         | 143 978         | 149 236         | 154 721         | 160 459         | 166 381         | 172 359         |
| Adjustment to revenues (payment for UH/OHV)    | 766 901               | 12 165         | 13 614          | 15 121          | 16 687          | 18 329          | 18 983          | 19 672          | 20 382          | 21 120          | 21 892          | 22 696          | 23 538          | 24 407          | 25 284          |
| Total revenue from other streams               | 293 789               | 6 705          | 6 876           | 7 051           | 7 230           | 7 419           | 7 619           | 7 827           | 8 041           | 8 262           | 8 491           | 8 727           | 8 973           | 9 227           | 9 480           |
| Availability payment/Additional cash injection | 127 500               | 26 500         | 14 500          | 13 000          | 5 000           | 4 500           | 4 000           | 4 000           | 4 000           | 4 000           | 4 000           | 4 000           | 4 000           | 4 000           | 4 000           |
| <b>Revenues</b>                                | <b>6 494 018</b>      | <b>158 820</b> | <b>151 153</b>  | <b>154 140</b>  | <b>150 783</b>  | <b>155 198</b>  | <b>160 008</b>  | <b>165 600</b>  | <b>171 366</b>  | <b>177 360</b>  | <b>183 619</b>  | <b>190 145</b>  | <b>196 970</b>  | <b>204 015</b>  | <b>211 123</b>  |
| Y-o-y growth in revenues                       |                       | 0%             | -5%             | 2%              | -2%             | 3%              | 3%              | 3%              | 3%              | 3%              | 4%              | 4%              | 4%              | 4%              | 3%              |
| Total personnel costs                          | (3 092 476)           | (74 784)       | (77 060)        | (79 341)        | (81 563)        | (83 721)        | (85 775)        | (87 750)        | (89 706)        | (91 666)        | (93 646)        | (94 219)        | (94 789)        | (95 363)        | (97 401)        |
| Total energy costs                             | (31 151)              | (829)          | (846)           | (864)           | (881)           | (900)           | (919)           | (939)           | (959)           | (980)           | (1 002)         | (980)           | (960)           | (940)           | (960)           |
| Total costs of services                        | (92 605)              | (2 389)        | (2 440)         | (2 490)         | (2 541)         | (2 595)         | (2 651)         | (2 708)         | (2 767)         | (2 827)         | (2 888)         | (2 869)         | (2 851)         | (2 833)         | (2 894)         |
| Total material costs                           | (1 349 399)           | (25 195)       | (25 879)        | (26 595)        | (27 331)        | (28 114)        | (29 545)        | (31 110)        | (32 746)        | (34 452)        | (36 255)        | (37 050)        | (39 020)        | (41 077)        | (44 450)        |
| Total taxes and fees                           | (24 280)              | (591)          | (603)           | (616)           | (628)           | (641)           | (655)           | (669)           | (684)           | (699)           | (714)           | (730)           | (746)           | (762)           | (779)           |
| Other costs                                    | (73 658)              | (1 421)        | (1 458)         | (1 497)         | (1 538)         | (1 580)         | (1 656)         | (1 738)         | (1 824)         | (1 913)         | (2 007)         | (2 045)         | (2 142)         | (2 243)         | (2 415)         |
| Other finance costs                            | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Total insurance costs                          | (12 727)              | (599)          | (564)           | (534)           | (506)           | (489)           | (471)           | (452)           | (439)           | (432)           | (432)           | (431)           | (424)           | (416)           | (409)           |
| <b>EBITDA</b>                                  | <b>1 817 723</b>      | <b>53 012</b>  | <b>42 303</b>   | <b>42 204</b>   | <b>35 794</b>   | <b>37 158</b>   | <b>38 336</b>   | <b>40 234</b>   | <b>42 241</b>   | <b>44 391</b>   | <b>46 674</b>   | <b>51 820</b>   | <b>56 039</b>   | <b>60 380</b>   | <b>61 816</b>   |
| Y-o-y growth in EBITDA                         |                       | 0%             | -20%            | 0%              | -15%            | 4%              | 3%              | 5%              | 5%              | 5%              | 5%              | 11%             | 8%              | 8%              | 2%              |
| EBITDA margin                                  |                       | 33%            | 28%             | 27%             | 24%             | 24%             | 24%             | 24%             | 25%             | 25%             | 25%             | 27%             | 28%             | 30%             | 29%             |
| EBITDA margin (excl. availability pmt)         |                       | 20%            | 20%             | 21%             | 21%             | 22%             | 22%             | 22%             | 23%             | 23%             | 24%             | 26%             | 27%             | 28%             | 28%             |
| Cash taxes (income tax)                        | (216 200)             | (4 387)        | (1 539)         | (1 082)         | (1 247)         | (1 418)         | (1 544)         | (1 824)         | (3 642)         | (4 078)         | (4 392)         | (5 498)         | (6 415)         | (7 376)         | (7 719)         |
| Cash flow from change in working capital       | (36 910)              | (13 046)       | (649)           | (629)           | (663)           | (662)           | (888)           | (896)           | (932)           | (911)           | (1 091)         | (1 194)         | (1 316)         | (1 281)         | (1 347)         |
| Adjustment for non-cash items                  | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from operations</b>               | <b>1 564 613</b>      | <b>35 580</b>  | <b>40 116</b>   | <b>40 493</b>   | <b>33 884</b>   | <b>35 078</b>   | <b>35 904</b>   | <b>37 513</b>   | <b>37 667</b>   | <b>39 402</b>   | <b>41 191</b>   | <b>45 128</b>   | <b>48 308</b>   | <b>51 723</b>   | <b>52 750</b>   |
| Y-o-y growth in CFO                            |                       | 0%             | 13%             | 1%              | -16%            | 4%              | 2%              | 4%              | 0%              | 5%              | 5%              | 10%             | 7%              | 7%              | 2%              |
| Initial investment                             | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| MRA creation                                   | (71 509)              | (725)          | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (3 416)         | (3 416)         | (3 416)         | (3 416)         |
| Life-cycle investments                         | (71 509)              | -              | -               | -               | -               | -               | -               | -               | -               | -               | (7 248)         | -               | -               | -               | -               |
| MRA release                                    | 71 509                | -              | -               | -               | -               | -               | -               | -               | -               | -               | 7 248           | -               | -               | -               | -               |
| Total yearly capital expenditures              | (434 534)             | (6 086)        | (10 419)        | (10 678)        | (10 941)        | (11 216)        | (11 503)        | (11 799)        | (12 102)        | (12 415)        | (12 735)        | (13 064)        | (13 404)        | (13 757)        | (14 104)        |
| Contingency                                    | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from investing</b>                | <b>(506 043)</b>      | <b>(6 811)</b> | <b>(11 144)</b> | <b>(11 403)</b> | <b>(11 666)</b> | <b>(11 941)</b> | <b>(12 228)</b> | <b>(12 524)</b> | <b>(12 827)</b> | <b>(13 139)</b> | <b>(13 460)</b> | <b>(16 479)</b> | <b>(16 819)</b> | <b>(17 172)</b> | <b>(17 520)</b> |
| Bank fees: total upfront fees                  | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: total commitment fees               | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: maintenance/prolongation fee        | (1 531)               | (82)           | (88)            | (89)            | (65)            | (65)            | (66)            | (67)            | (43)            | (44)            | (45)            | (46)            | (47)            | (49)            | (50)            |
| Construction period: pre-funded DSRA           | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (1)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (2)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (3)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (1)                  | (129 883)             | (7 907)        | (7 907)         | (7 907)         | (7 907)         | (7 907)         | (7 907)         | (7 907)         | (7 907)         | (7 764)         | (7 575)         | (7 334)         | (7 054)         | (6 680)         | (6 200)         |

## PPP variant (60% leverage, 13.5% IRR)

|   |                  |                |                 |                 |                 |                 |                 |                 |                |                 |                 |                 |                 |                 |                 |
|---|------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Interest expense Facility (2)                         | (6 327)          | (1 513)        | (1 325)         | (1 129)         | (923)           | (708)           | (482)           | (247)           | -              | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (3)                         | (1 000)          | (495)          | (335)           | (170)           | -               | -               | -               | -               | -              | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (RCF)                       | (17 079)         | -              | (302)           | (317)           | (332)           | (347)           | (363)           | (383)           | (404)          | (426)           | (447)           | (472)           | (500)           | (530)           | (560)           |
| Interest expense (Overdraft)                          | -                | -              | -               | -               | -               | -               | -               | -               | -              | -               | -               | -               | -               | -               | -               |
| Interest income on MRA                                | 432              | -              | 3               | 5               | 8               | 10              | 13              | 16              | 18             | 21              | 23              | -               | 12              | 25              | 37              |
| Interest income on DSRA                               | 1 108            | 68             | 68              | 68              | 48              | 48              | 48              | 48              | 36             | 39              | 41              | 42              | 46              | 51              | 52              |
| Principal repayment Facility (1)                      | (122 593)        | -              | -               | -               | -               | -               | -               | -               | (2 216)        | (2 942)         | (3 734)         | (4 339)         | (5 799)         | (7 444)         | (8 182)         |
| Principal repayment Facility (2)                      | (32 564)         | (4 043)        | (4 231)         | (4 427)         | (4 633)         | (4 848)         | (5 073)         | (5 309)         | -              | -               | -               | -               | -               | -               | -               |
| Principal repayment Facility (3)                      | (15 324)         | (4 947)        | (5 106)         | (5 271)         | -               | -               | -               | -               | -              | -               | -               | -               | -               | -               | -               |
| Principal drawdown Facility (RCF)                     | 36 910           | 13 046         | 649             | 629             | 663             | 662             | 888             | 896             | 932            | 911             | 1 091           | 1 194           | 1 316           | 1 281           | 1 347           |
| Principal repayment Facility (RCF)                    | (36 910)         | -              | -               | -               | -               | -               | -               | -               | -              | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from financing</b>                       | <b>(324 762)</b> | <b>(5 873)</b> | <b>(18 576)</b> | <b>(18 608)</b> | <b>(13 141)</b> | <b>(13 154)</b> | <b>(12 942)</b> | <b>(12 953)</b> | <b>(9 583)</b> | <b>(10 205)</b> | <b>(10 645)</b> | <b>(10 955)</b> | <b>(12 025)</b> | <b>(13 346)</b> | <b>(13 556)</b> |
| <b>Cash flow after debt service</b>                   | <b>733 809</b>   | <b>22 897</b>  | <b>10 396</b>   | <b>10 482</b>   | <b>9 078</b>    | <b>9 983</b>    | <b>10 734</b>   | <b>12 037</b>   | <b>15 257</b>  | <b>16 057</b>   | <b>17 086</b>   | <b>17 693</b>   | <b>19 464</b>   | <b>21 205</b>   | <b>21 674</b>   |
| Transfer from/to DSRA                                 | 18 905           | -              | (0)             | 5 442           | -               | (0)             | 0               | 3 340           | (583)          | (603)           | (364)           | (1 180)         | (1 271)         | (258)           | (912)           |
| Cash after debt service and DSRA                      | 752 713          | 22 897         | 10 396          | 15 923          | 9 078           | 9 983           | 10 734          | 15 377          | 14 674         | 15 455          | 16 722          | 16 514          | 18 193          | 20 947          | 20 762          |
| Overdraft disbursement                                | -                | -              | -               | -               | -               | -               | -               | -               | -              | -               | -               | -               | -               | -               | -               |
| Overdraft repayment                                   | -                | -              | -               | -               | -               | -               | -               | -               | -              | -               | -               | -               | -               | -               | -               |
| Cash after debt service, DSRA and overdraft repayment | 752 713          | 22 897         | 10 396          | 15 923          | 9 078           | 9 983           | 10 734          | 15 377          | 14 674         | 15 455          | 16 722          | 16 514          | 18 193          | 20 947          | 20 762          |
| <b>Dividends</b>                                      | <b>752 713</b>   | <b>22 897</b>  | <b>10 396</b>   | <b>15 923</b>   | <b>9 078</b>    | <b>9 983</b>    | <b>10 734</b>   | <b>15 377</b>   | <b>14 674</b>  | <b>15 455</b>   | <b>16 722</b>   | <b>16 514</b>   | <b>18 193</b>   | <b>20 947</b>   | <b>20 762</b>   |

Source: EY

## PPP variant (60% leverage, 13.5% IRR)

### PPP variant (60% leverage, 13.5% IRR) - operations phase, part 2/2

| Currency: EUR 000                              | FY34F           | FY35F           | FY36F           | FY37F           | FY38F           | FY39F           | FY40F           | FY41F           | FY42F           | FY43F           | FY44F           | FY45F           | FY46F           | FY47F           | FY48F           | FY49F           |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total revenue from health insurance companies  | 178 412         | 184 694         | 188 435         | 192 238         | 196 108         | 199 897         | 203 731         | 207 622         | 211 573         | 215 599         | 219 702         | 223 883         | 228 143         | 232 485         | 236 909         | 241 418         |
| Adjustment to revenues (payment for UH/OHV)    | 26 172          | 27 093          | 27 642          | 28 200          | 28 768          | 29 323          | 29 886          | 30 457          | 31 036          | 31 627          | 32 229          | 32 842          | 33 467          | 34 104          | 34 753          | 35 414          |
| Total revenue from other streams               | 9 731           | 9 990           | 10 192          | 10 398          | 10 607          | 10 812          | 11 019          | 11 230          | 11 443          | 11 661          | 11 883          | 12 109          | 12 340          | 12 574          | 12 814          | 13 058          |
| Availability payment/Additional cash injection | 4 000           | 4 000           | 4 000           | 4 000           | 4 000           | 4 000           | 4 000           | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Revenues</b>                                | <b>218 315</b>  | <b>225 776</b>  | <b>230 269</b>  | <b>234 835</b>  | <b>239 482</b>  | <b>244 032</b>  | <b>248 636</b>  | <b>249 308</b>  | <b>254 052</b>  | <b>258 887</b>  | <b>263 814</b>  | <b>268 834</b>  | <b>273 950</b>  | <b>279 163</b>  | <b>284 476</b>  | <b>289 889</b>  |
| Y-o-y growth in revenues                       | 3%              | 3%              | 2%              | 2%              | 2%              | 2%              | 2%              | 0%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              |
| Total personnel costs                          | (99 481)        | (101 606)       | (103 773)       | (105 991)       | (108 256)       | (110 569)       | (112 932)       | (115 346)       | (117 814)       | (120 056)       | (122 341)       | (124 669)       | (127 041)       | (129 459)       | (131 923)       | (134 433)       |
| Total energy costs                             | (979)           | (999)           | (1 019)         | (1 040)         | (1 061)         | (1 081)         | (1 102)         | (1 123)         | (1 144)         | (1 166)         | (1 188)         | (1 211)         | (1 234)         | (1 257)         | (1 281)         | (1 306)         |
| Total costs of services                        | (2 953)         | (3 013)         | (3 074)         | (3 136)         | (3 199)         | (3 261)         | (3 323)         | (3 387)         | (3 451)         | (3 517)         | (3 584)         | (3 652)         | (3 721)         | (3 792)         | (3 864)         | (3 938)         |
| Total material costs                           | (46 667)        | (48 977)        | (49 969)        | (50 977)        | (52 004)        | (53 008)        | (54 025)        | (55 057)        | (56 105)        | (57 172)        | (58 260)        | (59 369)        | (60 499)        | (61 650)        | (62 823)        | (64 019)        |
| Total taxes and fees                           | (794)           | (811)           | (827)           | (844)           | (861)           | (877)           | (894)           | (911)           | (929)           | (946)           | (964)           | (983)           | (1 001)         | (1 020)         | (1 040)         | (1 060)         |
| Other costs                                    | (2 530)         | (2 649)         | (2 703)         | (2 758)         | (2 813)         | (2 867)         | (2 922)         | (2 978)         | (3 035)         | (3 093)         | (3 152)         | (3 212)         | (3 273)         | (3 335)         | (3 398)         | (3 463)         |
| Other finance costs                            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Total insurance costs                          | (417)           | (424)           | (412)           | (408)           | (404)           | (399)           | (396)           | (381)           | (366)           | (351)           | (362)           | (377)           | (368)           | (361)           | (355)           | (350)           |
| <b>EBITDA</b>                                  | <b>64 494</b>   | <b>67 299</b>   | <b>68 493</b>   | <b>69 682</b>   | <b>70 886</b>   | <b>71 969</b>   | <b>73 041</b>   | <b>70 125</b>   | <b>71 209</b>   | <b>72 586</b>   | <b>73 963</b>   | <b>75 363</b>   | <b>76 812</b>   | <b>78 288</b>   | <b>79 791</b>   | <b>81 322</b>   |
| Y-o-y growth in EBITDA                         | 4%              | 4%              | 2%              | 2%              | 2%              | 2%              | 1%              | -4%             | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              |
| EBITDA margin                                  | 30%             | 30%             | 30%             | 30%             | 30%             | 29%             | 29%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             |
| EBITDA margin (excl. availability pmt)         | 28%             | 29%             | 29%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             |
| Cash taxes (income tax)                        | (7 971)         | (8 633)         | (9 071)         | (9 213)         | (9 580)         | (9 898)         | (10 213)        | (9 683)         | (9 852)         | (10 087)        | (10 315)        | (11 242)        | (11 484)        | (11 946)        | (12 197)        | (12 654)        |
| Cash flow from change in working capital       | (1 213)         | (1 262)         | (558)           | (748)           | (669)           | (647)           | (556)           | (759)           | (671)           | (705)           | (613)           | (837)           | (746)           | (760)           | (661)           | -               |
| Adjustment for non-cash items                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from operations</b>               | <b>55 311</b>   | <b>57 403</b>   | <b>58 864</b>   | <b>59 721</b>   | <b>60 637</b>   | <b>61 424</b>   | <b>62 272</b>   | <b>59 683</b>   | <b>60 686</b>   | <b>61 794</b>   | <b>63 034</b>   | <b>63 284</b>   | <b>64 583</b>   | <b>65 582</b>   | <b>66 933</b>   | <b>68 667</b>   |
| Y-o-y growth in CFO                            | 5%              | 4%              | 3%              | 1%              | 2%              | 1%              | 1%              | -4%             | 2%              | 2%              | 2%              | 0%              | 2%              | 2%              | 2%              | 3%              |
| MRA creation                                   | (3 416)         | (3 276)         | (3 276)         | (3 276)         | (4 570)         | (4 570)         | (2 242)         | (6 494)         | (6 494)         | (6 494)         | (6 494)         | -               | -               | -               | -               | -               |
| Life-cycle investments                         | (17 078)        | -               | -               | (9 827)         | -               | (9 140)         | (2 242)         | -               | -               | -               | (25 974)        | -               | -               | -               | -               | -               |
| MRA release                                    | 17 078          | -               | -               | 9 827           | -               | 9 140           | 2 242           | -               | -               | -               | 25 974          | -               | -               | -               | -               | -               |
| Total yearly capital expenditures              | (14 445)        | (14 796)        | (15 153)        | (15 459)        | (15 770)        | (16 075)        | (16 383)        | (16 696)        | (17 014)        | (17 338)        | (17 668)        | (18 004)        | (18 347)        | (18 696)        | (19 052)        | (19 414)        |
| Contingency                                    | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from investing</b>                | <b>(17 861)</b> | <b>(18 072)</b> | <b>(18 429)</b> | <b>(18 735)</b> | <b>(20 341)</b> | <b>(20 645)</b> | <b>(18 625)</b> | <b>(23 190)</b> | <b>(23 508)</b> | <b>(23 831)</b> | <b>(24 161)</b> | <b>(18 004)</b> | <b>(18 347)</b> | <b>(18 696)</b> | <b>(19 052)</b> | <b>(19 414)</b> |
| Bank fees: total upfront fees                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: total commitment fees               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: maintenance/prolongation fee        | (51)            | (52)            | (53)            | (54)            | (55)            | (55)            | (56)            | (32)            | (32)            | (33)            | (34)            | (34)            | (35)            | (36)            | (37)            | (37)            |
| Construction period: pre-funded DSRA           | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (1)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (2)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (3)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (1)                  | (5 672)         | (5 051)         | (4 341)         | (3 556)         | (2 707)         | (1 823)         | (869)           | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (2)                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |

## PPP variant (60% leverage, 13.5% IRR)

|   |                 |                 |                 |                 |                 |                 |                 |               |               |               |               |               |               |               |               |                 |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| Interest expense Facility (3)                         | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (RCF)                       | (591)           | (619)           | (648)           | (661)           | (679)           | (694)           | (709)           | (722)         | (740)         | (755)         | (771)         | (786)         | (805)         | (822)         | (840)         | (855)           |
| Interest expense (Overdraft)                          | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest income on MRA                                | 49              | -               | 12              | 24              | -               | 16              | -               | -             | 23            | 47            | 70            | -             | -             | -             | -             | -               |
| Interest income on DSRA                               | 55              | 58              | 59              | 60              | 59              | 60              | 52              | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (1)                      | (9 622)         | (11 014)        | (12 164)        | (13 169)        | (13 707)        | (14 780)        | (13 479)        | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (2)                      | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (3)                      | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal drawdown Facility (RCF)                     | 1 213           | 1 262           | 558             | 748             | 669             | 647             | 556             | 759           | 671           | 705           | 613           | 837           | 746           | 760           | 661           | -               |
| Principal repayment Facility (RCF)                    | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | (36 910)        |
| <b>Cash flow from financing</b>                       | <b>(14 619)</b> | <b>(15 417)</b> | <b>(16 577)</b> | <b>(16 609)</b> | <b>(16 419)</b> | <b>(16 629)</b> | <b>(14 506)</b> | <b>6</b>      | <b>(78)</b>   | <b>(37)</b>   | <b>(122)</b>  | <b>17</b>     | <b>(94)</b>   | <b>(98)</b>   | <b>(215)</b>  | <b>(37 802)</b> |
| <b>Cash flow after debt service</b>                   | <b>22 831</b>   | <b>23 915</b>   | <b>23 858</b>   | <b>24 377</b>   | <b>23 877</b>   | <b>24 149</b>   | <b>29 141</b>   | <b>36 499</b> | <b>37 101</b> | <b>37 926</b> | <b>38 751</b> | <b>45 297</b> | <b>46 142</b> | <b>46 788</b> | <b>47 666</b> | <b>11 451</b>   |
| Transfer from/to DSRA                                 | (772)           | (439)           | (221)           | 312             | (189)           | 2 254           | 14 349          | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Cash after debt service and DSRA                      | 22 059          | 23 475          | 23 637          | 24 689          | 23 688          | 26 404          | 43 490          | 36 499        | 37 101        | 37 926        | 38 751        | 45 297        | 46 142        | 46 788        | 47 666        | 11 451          |
| Overdraft disbursement                                | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Overdraft repayment                                   | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Cash after debt service, DSRA and overdraft repayment | 22 059          | 23 475          | 23 637          | 24 689          | 23 688          | 26 404          | 43 490          | 36 499        | 37 101        | 37 926        | 38 751        | 45 297        | 46 142        | 46 788        | 47 666        | 11 451          |
| <b>Dividends</b>                                      | <b>22 059</b>   | <b>23 475</b>   | <b>23 637</b>   | <b>24 689</b>   | <b>23 688</b>   | <b>26 404</b>   | <b>43 490</b>   | <b>36 499</b> | <b>37 101</b> | <b>37 926</b> | <b>38 751</b> | <b>45 297</b> | <b>46 142</b> | <b>46 788</b> | <b>47 666</b> | <b>11 451</b>   |

Source: EY

## PPP variant (70% leverage, 15.5% IRR)

### PPP variant (70% leverage, 15.5% IRR) - development phase

| Currency: EUR 000                         | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
|---|-----------------------|-----------------|-----------------|------------------|
| EBITDA                                    |                       | (78)            | (194)           | (385)            |
| Cash taxes (income tax)                   |                       | -               | -               | -                |
| Cash flow from change in working capital  |                       | -               | -               | -                |
| Adjustment for: Non-cash items            |                       | -               | -               | -                |
| <b>Cash flow from operations</b>          | <b>(656)</b>          | <b>(78)</b>     | <b>(194)</b>    | <b>(385)</b>     |
| Initial investment                        | (248 016)             | (57 598)        | (59 023)        | (131 396)        |
| MRA creation                              | -                     | -               | -               | -                |
| Life-cycle investments                    | -                     | -               | -               | -                |
| MRA release                               | -                     | -               | -               | -                |
| Total yearly capital expenditures         | -                     | -               | -               | -                |
| Contingency                               | (6 200)               | (1 440)         | (1 476)         | (3 285)          |
| <b>Cash flow from investing</b>           | <b>(254 217)</b>      | <b>(59 037)</b> | <b>(60 499)</b> | <b>(134 681)</b> |
| Bank fees: total upfront fees             | (2 176)               | (2 150)         | -               | (26)             |
| Bank fees: total commitment fees          | (1 497)               | (744)           | (480)           | (273)            |
| Bank fees: maintenance/prolongation fee   | (50)                  | -               | (25)            | (25)             |
| Construction period: pre-funded DSRA      | (22 477)              | -               | -               | (22 477)         |
| Interest during construction Facility (1) | (8 489)               | -               | (2 800)         | (5 689)          |
| Interest during construction Facility (2) | -                     | -               | -               | -                |
| Interest during construction Facility (3) | -                     | -               | -               | -                |
| Interest expense Facility (1)             | -                     | -               | -               | -                |
| Interest expense Facility (2)             | -                     | -               | -               | -                |
| Interest expense Facility (3)             | -                     | -               | -               | -                |
| Interest expense Facility (RCF)           | -                     | -               | -               | -                |
| Interest expense (Overdraft)              | -                     | -               | -               | -                |
| Interest income on MRA                    | -                     | -               | -               | -                |
| Interest income on DSRA                   | -                     | -               | -               | -                |
| Principal repayment Facility (1)          | -                     | -               | -               | -                |
| Principal repayment Facility (2)          | -                     | -               | -               | -                |
| Principal repayment Facility (3)          | -                     | -               | -               | -                |
| Principal repayment Facility (RCF)        | -                     | -               | -               | -                |
| <b>Cash flow from financing</b>           | <b>(34 688)</b>       | <b>(2 894)</b>  | <b>(3 304)</b>  | <b>(28 490)</b>  |
| <b>Uses of funds</b>                      | <b>(289 562)</b>      | <b>(62 009)</b> | <b>(63 997)</b> | <b>(163 555)</b> |
| Currency: EUR 000                         | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
| Facility (1)                              | 145 757               | 43 407          | 44 798          | 57 552           |
| Facility (2)                              | 38 717                | -               | -               | 38 717           |
| Facility (3)                              | 18 220                | -               | -               | 18 220           |
| <b>Debt</b>                               | <b>202 693</b>        | <b>43 407</b>   | <b>44 798</b>   | <b>114 489</b>   |
| Equity                                    | 86 869                | 18 603          | 19 199          | 49 067           |
| <b>Sources of funds</b>                   | <b>289 562</b>        | <b>62 009</b>   | <b>63 997</b>   | <b>163 555</b>   |

Source: EY



## PPP variant (70% leverage, 15.5% IRR)

### PPP variant (70% leverage, 15.5% IRR) - operations phase, part 1/2

| Currency: EUR 000                              | Sum for FY20F - FY49F | FY20F          | FY21F           | FY22F           | FY23F           | FY24F           | FY25F           | FY26F           | FY27F           | FY28F           | FY29F           | FY30F           | FY31F           | FY32F           | FY33F           |
|--|-----------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total revenue from health insurance companies  | 5 305 828             | 113 450        | 116 163         | 118 968         | 121 866         | 124 950         | 129 406         | 134 101         | 138 943         | 143 978         | 149 236         | 154 721         | 160 459         | 166 381         | 172 359         |
| Adjustment to revenues (payment for UH/OHV)    | 766 901               | 12 165         | 13 614          | 15 121          | 16 687          | 18 329          | 18 983          | 19 672          | 20 382          | 21 120          | 21 892          | 22 696          | 23 538          | 24 407          | 25 284          |
| Total revenue from other streams               | 293 789               | 6 705          | 6 876           | 7 051           | 7 230           | 7 419           | 7 619           | 7 827           | 8 041           | 8 262           | 8 491           | 8 727           | 8 973           | 9 227           | 9 480           |
| Availability payment/Additional cash injection | 95 000                | 32 500         | 21 000          | 19 500          | 7 500           | 6 000           | 5 000           | 3 500           | -               | -               | -               | -               | -               | -               | -               |
| <b>Revenues</b>                                | <b>6 461 518</b>      | <b>164 820</b> | <b>157 653</b>  | <b>160 640</b>  | <b>153 283</b>  | <b>156 698</b>  | <b>161 008</b>  | <b>165 100</b>  | <b>167 366</b>  | <b>173 360</b>  | <b>179 619</b>  | <b>186 145</b>  | <b>192 970</b>  | <b>200 015</b>  | <b>207 123</b>  |
| Y-o-y growth in revenues                       |                       | 0%             | -4%             | 2%              | -5%             | 2%              | 3%              | 3%              | 1%              | 4%              | 4%              | 4%              | 4%              | 4%              | 4%              |
| Total personnel costs                          | (3 092 476)           | (74 784)       | (77 060)        | (79 341)        | (81 563)        | (83 721)        | (85 775)        | (87 750)        | (89 706)        | (91 666)        | (93 646)        | (94 219)        | (94 789)        | (95 363)        | (97 401)        |
| Total energy costs                             | (31 151)              | (829)          | (846)           | (864)           | (881)           | (900)           | (919)           | (939)           | (959)           | (980)           | (1 002)         | (980)           | (960)           | (940)           | (960)           |
| Total costs of services                        | (92 605)              | (2 389)        | (2 440)         | (2 490)         | (2 541)         | (2 595)         | (2 651)         | (2 708)         | (2 767)         | (2 827)         | (2 888)         | (2 869)         | (2 851)         | (2 833)         | (2 894)         |
| Total material costs                           | (1 349 399)           | (25 195)       | (25 879)        | (26 595)        | (27 331)        | (28 114)        | (29 545)        | (31 110)        | (32 746)        | (34 452)        | (36 255)        | (37 050)        | (39 020)        | (41 077)        | (44 450)        |
| Total taxes and fees                           | (24 280)              | (591)          | (603)           | (616)           | (628)           | (641)           | (655)           | (669)           | (684)           | (699)           | (714)           | (730)           | (746)           | (762)           | (779)           |
| Other costs                                    | (73 658)              | (1 421)        | (1 458)         | (1 497)         | (1 538)         | (1 580)         | (1 656)         | (1 738)         | (1 824)         | (1 913)         | (2 007)         | (2 045)         | (2 142)         | (2 243)         | (2 415)         |
| Other finance costs                            | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Total insurance costs                          | (12 711)              | (602)          | (567)           | (537)           | (508)           | (490)           | (471)           | (451)           | (437)           | (430)           | (430)           | (429)           | (422)           | (414)           | (407)           |
| <b>EBITDA</b>                                  | <b>1 785 239</b>      | <b>59 009</b>  | <b>48 800</b>   | <b>48 700</b>   | <b>38 293</b>   | <b>38 657</b>   | <b>39 336</b>   | <b>39 734</b>   | <b>38 243</b>   | <b>40 393</b>   | <b>42 676</b>   | <b>47 822</b>   | <b>52 041</b>   | <b>56 382</b>   | <b>57 818</b>   |
| Y-o-y growth in EBITDA                         |                       | 0%             | -17%            | 0%              | -21%            | 1%              | 2%              | 1%              | -4%             | 6%              | 6%              | 12%             | 9%              | 8%              | 3%              |
| EBITDA margin                                  |                       | 36%            | 31%             | 30%             | 25%             | 25%             | 24%             | 24%             | 23%             | 23%             | 24%             | 26%             | 27%             | 28%             | 28%             |
| EBITDA margin (excl. availability pmt)         |                       | 20%            | 20%             | 21%             | 21%             | 22%             | 22%             | 22%             | 23%             | 23%             | 24%             | 26%             | 27%             | 28%             | 28%             |
| Cash taxes (income tax)                        | (203 234)             | (5 279)        | (2 556)         | (2 113)         | (1 415)         | (1 374)         | (1 400)         | (1 360)         | (2 418)         | (2 857)         | (3 176)         | (4 291)         | (5 218)         | (6 197)         | (6 563)         |
| Cash flow from change in working capital       | (36 910)              | (13 046)       | (649)           | (629)           | (663)           | (662)           | (888)           | (896)           | (932)           | (911)           | (1 091)         | (1 194)         | (1 316)         | (1 281)         | (1 347)         |
| Adjustment for non-cash items                  | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from operations</b>               | <b>1 545 095</b>      | <b>40 684</b>  | <b>45 595</b>   | <b>45 957</b>   | <b>36 215</b>   | <b>36 621</b>   | <b>37 048</b>   | <b>37 478</b>   | <b>34 893</b>   | <b>36 625</b>   | <b>38 408</b>   | <b>42 337</b>   | <b>45 506</b>   | <b>48 905</b>   | <b>49 908</b>   |
| Y-o-y growth in CFO                            |                       | 0%             | 12%             | 1%              | -21%            | 1%              | 1%              | 1%              | -7%             | 5%              | 5%              | 10%             | 7%              | 7%              | 2%              |
| Initial investment                             | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| MRA creation                                   | (71 509)              | (725)          | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (3 416)         | (3 416)         | (3 416)         | (3 416)         |
| Life-cycle investments                         | (71 509)              | -              | -               | -               | -               | -               | -               | -               | -               | -               | (7 248)         | -               | -               | -               | -               |
| MRA release                                    | 71 509                | -              | -               | -               | -               | -               | -               | -               | -               | -               | 7 248           | -               | -               | -               | -               |
| Total yearly capital expenditures              | (434 534)             | (6 086)        | (10 419)        | (10 678)        | (10 941)        | (11 216)        | (11 503)        | (11 799)        | (12 102)        | (12 415)        | (12 735)        | (13 064)        | (13 404)        | (13 757)        | (14 104)        |
| Contingency                                    | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from investing</b>                | <b>(506 043)</b>      | <b>(6 811)</b> | <b>(11 144)</b> | <b>(11 403)</b> | <b>(11 666)</b> | <b>(11 941)</b> | <b>(12 228)</b> | <b>(12 524)</b> | <b>(12 827)</b> | <b>(13 139)</b> | <b>(13 460)</b> | <b>(16 479)</b> | <b>(16 819)</b> | <b>(17 172)</b> | <b>(17 520)</b> |
| Bank fees: total upfront fees                  | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: total commitment fees               | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: maintenance/prolongation fee        | (1 531)               | (82)           | (88)            | (89)            | (65)            | (65)            | (66)            | (67)            | (43)            | (44)            | (45)            | (46)            | (47)            | (49)            | (50)            |
| Construction period: pre-funded DSRA           | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (1)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (2)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (3)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (1)                  | (153 889)             | (9 401)        | (9 401)         | (9 401)         | (9 401)         | (9 401)         | (9 401)         | (9 401)         | (9 401)         | (9 246)         | (9 031)         | (8 751)         | (8 422)         | (7 973)         | (7 387)         |

## PPP variant (70% leverage, 15.5% IRR)

|   |                  |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|---|------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Interest expense Facility (2)                         | (7 523)          | (1 799)        | (1 576)         | (1 342)         | (1 097)         | (842)           | (574)           | (293)           | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (3)                         | (1 189)          | (588)          | (399)           | (202)           | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (RCF)                       | (17 079)         | -              | (302)           | (317)           | (332)           | (347)           | (363)           | (383)           | (404)           | (426)           | (447)           | (472)           | (500)           | (530)           | (560)           |
| Interest expense (Overdraft)                          | -                | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest income on MRA                                | 432              | -              | 3               | 5               | 8               | 10              | 13              | 16              | 18              | 21              | 23              | -               | 12              | 25              | 37              |
| Interest income on DSRA                               | 1 315            | 81             | 81              | 81              | 58              | 58              | 58              | 58              | 43              | 45              | 48              | 50              | 55              | 61              | 63              |
| Principal repayment Facility (1)                      | (145 757)        | -              | -               | -               | -               | -               | -               | -               | (2 411)         | (3 332)         | (4 338)         | (5 096)         | (6 968)         | (9 078)         | (9 996)         |
| Principal repayment Facility (2)                      | (38 717)         | (4 807)        | (5 030)         | (5 264)         | (5 508)         | (5 764)         | (6 032)         | (6 312)         | -               | -               | -               | -               | -               | -               | -               |
| Principal repayment Facility (3)                      | (18 220)         | (5 881)        | (6 071)         | (6 267)         | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Principal drawdown Facility (RCF)                     | 36 910           | 13 046         | 649             | 629             | 663             | 662             | 888             | 896             | 932             | 911             | 1 091           | 1 194           | 1 316           | 1 281           | 1 347           |
| Principal repayment Facility (RCF)                    | (36 910)         | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from financing</b>                       | <b>(382 157)</b> | <b>(9 432)</b> | <b>(22 135)</b> | <b>(22 167)</b> | <b>(15 675)</b> | <b>(15 689)</b> | <b>(15 477)</b> | <b>(15 487)</b> | <b>(11 266)</b> | <b>(12 071)</b> | <b>(12 697)</b> | <b>(13 122)</b> | <b>(14 553)</b> | <b>(16 262)</b> | <b>(16 547)</b> |
| <b>Cash flow after debt service</b>                   | <b>656 895</b>   | <b>24 442</b>  | <b>12 316</b>   | <b>12 387</b>   | <b>8 874</b>    | <b>8 991</b>    | <b>9 343</b>    | <b>9 467</b>    | <b>10 800</b>   | <b>11 415</b>   | <b>12 251</b>   | <b>12 736</b>   | <b>14 134</b>   | <b>15 470</b>   | <b>15 841</b>   |
| Transfer from/to DSRA                                 | 22 477           | -              | -               | 6 470           | -               | -               | -               | 4 195           | (766)           | (790)           | (479)           | (1 543)         | (1 660)         | (333)           | (1 186)         |
| Cash after debt service and DSRA                      | 679 372          | 24 442         | 12 316          | 18 857          | 8 874           | 8 991           | 9 343           | 13 662          | 10 034          | 10 625          | 11 772          | 11 193          | 12 474          | 15 137          | 14 655          |
| Overdraft disbursement                                | -                | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Overdraft repayment                                   | -                | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Cash after debt service, DSRA and overdraft repayment | 679 372          | 24 442         | 12 316          | 18 857          | 8 874           | 8 991           | 9 343           | 13 662          | 10 034          | 10 625          | 11 772          | 11 193          | 12 474          | 15 137          | 14 655          |
| <b>Dividends</b>                                      | <b>679 372</b>   | <b>24 442</b>  | <b>12 316</b>   | <b>18 857</b>   | <b>8 874</b>    | <b>8 991</b>    | <b>9 343</b>    | <b>13 662</b>   | <b>10 034</b>   | <b>10 625</b>   | <b>11 772</b>   | <b>11 193</b>   | <b>12 474</b>   | <b>15 137</b>   | <b>14 655</b>   |

Source: EY

## PPP variant (70% leverage, 15.5% IRR)

### PPP variant (70% leverage, 15.5% IRR) - operations phase, part 2/2

| Currency: EUR 000                              | FY34F           | FY35F           | FY36F           | FY37F           | FY38F           | FY39F           | FY40F           | FY41F           | FY42F           | FY43F           | FY44F           | FY45F           | FY46F           | FY47F           | FY48F           | FY49F           |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total revenue from health insurance companies  | 178 412         | 184 694         | 188 435         | 192 238         | 196 108         | 199 897         | 203 731         | 207 622         | 211 573         | 215 599         | 219 702         | 223 883         | 228 143         | 232 485         | 236 909         | 241 418         |
| Adjustment to revenues (payment for UH/OHV)    | 26 172          | 27 093          | 27 642          | 28 200          | 28 768          | 29 323          | 29 886          | 30 457          | 31 036          | 31 627          | 32 229          | 32 842          | 33 467          | 34 104          | 34 753          | 35 414          |
| Total revenue from other streams               | 9 731           | 9 990           | 10 192          | 10 398          | 10 607          | 10 812          | 11 019          | 11 230          | 11 443          | 11 661          | 11 883          | 12 109          | 12 340          | 12 574          | 12 814          | 13 058          |
| Availability payment/Additional cash injection | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Revenues</b>                                | <b>214 315</b>  | <b>221 776</b>  | <b>226 269</b>  | <b>230 835</b>  | <b>235 482</b>  | <b>240 032</b>  | <b>244 636</b>  | <b>249 308</b>  | <b>254 052</b>  | <b>258 887</b>  | <b>263 814</b>  | <b>268 834</b>  | <b>273 950</b>  | <b>279 163</b>  | <b>284 476</b>  | <b>289 889</b>  |
| Y-o-y growth in revenues                       | 3%              | 3%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              |
| Total personnel costs                          | (99 481)        | (101 606)       | (103 773)       | (105 991)       | (108 256)       | (110 569)       | (112 932)       | (115 346)       | (117 814)       | (120 056)       | (122 341)       | (124 669)       | (127 041)       | (129 459)       | (131 923)       | (134 433)       |
| Total energy costs                             | (979)           | (999)           | (1 019)         | (1 040)         | (1 061)         | (1 081)         | (1 102)         | (1 123)         | (1 144)         | (1 166)         | (1 188)         | (1 211)         | (1 234)         | (1 257)         | (1 281)         | (1 306)         |
| Total costs of services                        | (2 953)         | (3 013)         | (3 074)         | (3 136)         | (3 199)         | (3 261)         | (3 323)         | (3 387)         | (3 451)         | (3 517)         | (3 584)         | (3 652)         | (3 721)         | (3 792)         | (3 864)         | (3 938)         |
| Total material costs                           | (46 667)        | (48 977)        | (49 969)        | (50 977)        | (52 004)        | (53 008)        | (54 025)        | (55 057)        | (56 105)        | (57 172)        | (58 260)        | (59 369)        | (60 499)        | (61 650)        | (62 823)        | (64 019)        |
| Total taxes and fees                           | (794)           | (811)           | (827)           | (844)           | (861)           | (877)           | (894)           | (911)           | (929)           | (946)           | (964)           | (983)           | (1 001)         | (1 020)         | (1 040)         | (1 060)         |
| Other costs                                    | (2 530)         | (2 649)         | (2 703)         | (2 758)         | (2 813)         | (2 867)         | (2 922)         | (2 978)         | (3 035)         | (3 093)         | (3 152)         | (3 212)         | (3 273)         | (3 335)         | (3 398)         | (3 463)         |
| Other finance costs                            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Total insurance costs                          | (415)           | (422)           | (410)           | (406)           | (402)           | (397)           | (394)           | (381)           | (366)           | (351)           | (362)           | (377)           | (368)           | (361)           | (355)           | (350)           |
| <b>EBITDA</b>                                  | <b>60 496</b>   | <b>63 301</b>   | <b>64 495</b>   | <b>65 684</b>   | <b>66 888</b>   | <b>67 971</b>   | <b>69 043</b>   | <b>70 125</b>   | <b>71 209</b>   | <b>72 586</b>   | <b>73 963</b>   | <b>75 363</b>   | <b>76 812</b>   | <b>78 288</b>   | <b>79 791</b>   | <b>81 322</b>   |
| Y-o-y growth in EBITDA                         | 5%              | 5%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              |
| EBITDA margin                                  | 28%             | 29%             | 29%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             |
| EBITDA margin (excl. availability pmt)         | 28%             | 29%             | 29%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             |
| Cash taxes (income tax)                        | (6 841)         | (7 535)         | (8 026)         | (8 209)         | (8 620)         | (8 983)         | (9 343)         | (9 683)         | (9 852)         | (10 087)        | (10 315)        | (11 242)        | (11 484)        | (11 946)        | (12 197)        | (12 654)        |
| Cash flow from change in working capital       | (1 213)         | (1 262)         | (558)           | (748)           | (669)           | (647)           | (556)           | (759)           | (671)           | (705)           | (613)           | (837)           | (746)           | (760)           | (661)           | -               |
| Adjustment for non-cash items                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from operations</b>               | <b>52 443</b>   | <b>54 503</b>   | <b>55 910</b>   | <b>56 727</b>   | <b>57 599</b>   | <b>58 341</b>   | <b>59 144</b>   | <b>59 683</b>   | <b>60 686</b>   | <b>61 794</b>   | <b>63 034</b>   | <b>63 284</b>   | <b>64 583</b>   | <b>65 582</b>   | <b>66 933</b>   | <b>68 667</b>   |
| Y-o-y growth in CFO                            | 5%              | 4%              | 3%              | 1%              | 2%              | 1%              | 1%              | 1%              | 2%              | 2%              | 2%              | 0%              | 2%              | 2%              | 2%              | 3%              |
| MRA creation                                   | (3 416)         | (3 276)         | (3 276)         | (3 276)         | (4 570)         | (4 570)         | (2 242)         | (6 494)         | (6 494)         | (6 494)         | (6 494)         | -               | -               | -               | -               | -               |
| Life-cycle investments                         | (17 078)        | -               | -               | (9 827)         | -               | (9 140)         | (2 242)         | -               | -               | -               | (25 974)        | -               | -               | -               | -               | -               |
| MRA release                                    | 17 078          | -               | -               | 9 827           | -               | 9 140           | 2 242           | -               | -               | -               | 25 974          | -               | -               | -               | -               | -               |
| Total yearly capital expenditures              | (14 445)        | (14 796)        | (15 153)        | (15 459)        | (15 770)        | (16 075)        | (16 383)        | (16 696)        | (17 014)        | (17 338)        | (17 668)        | (18 004)        | (18 347)        | (18 696)        | (19 052)        | (19 414)        |
| Contingency                                    | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from investing</b>                | <b>(17 861)</b> | <b>(18 072)</b> | <b>(18 429)</b> | <b>(18 735)</b> | <b>(20 341)</b> | <b>(20 645)</b> | <b>(18 625)</b> | <b>(23 190)</b> | <b>(23 508)</b> | <b>(23 831)</b> | <b>(24 161)</b> | <b>(18 004)</b> | <b>(18 347)</b> | <b>(18 696)</b> | <b>(19 052)</b> | <b>(19 414)</b> |
| Bank fees: total upfront fees                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: total commitment fees               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: maintenance/prolongation fee        | (51)            | (52)            | (53)            | (54)            | (55)            | (55)            | (56)            | (32)            | (32)            | (33)            | (34)            | (34)            | (35)            | (36)            | (37)            | (37)            |
| Construction period: pre-funded DSRA           | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (1)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (2)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (3)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (1)                  | (6 743)         | (5 980)         | (5 103)         | (4 135)         | (3 086)         | (1 997)         | (824)           | -               | -               | -               | -               | -               | -               | -               | -               | -               |

## PPP variant (70% leverage, 15.5% IRR)

|   |                 |                 |                 |                 |                 |                 |                 |               |               |               |               |               |               |               |               |                 |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| Interest expense Facility (2)                         | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (3)                         | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (RCF)                       | (591)           | (619)           | (648)           | (661)           | (679)           | (694)           | (709)           | (722)         | (740)         | (755)         | (771)         | (786)         | (805)         | (822)         | (840)         | (855)           |
| Interest expense (Overdraft)                          | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest income on MRA                                | 49              | -               | 12              | 24              | -               | 16              | -               | -             | 23            | 47            | 70            | -             | -             | -             | -             | -               |
| Interest income on DSRA                               | 67              | 70              | 72              | 73              | 72              | 73              | 49              | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (1)                      | (11 827)        | (13 589)        | (15 018)        | (16 257)        | (16 880)        | (18 195)        | (12 772)        | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (2)                      | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (3)                      | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal drawdown Facility (RCF)                     | 1 213           | 1 262           | 558             | 748             | 669             | 647             | 556             | 759           | 671           | 705           | 613           | 837           | 746           | 760           | 661           | -               |
| Principal repayment Facility (RCF)                    | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | (36 910)        |
| <b>Cash flow from financing</b>                       | <b>(17 883)</b> | <b>(18 907)</b> | <b>(20 181)</b> | <b>(20 262)</b> | <b>(19 958)</b> | <b>(20 206)</b> | <b>(13 756)</b> | <b>6</b>      | <b>(78)</b>   | <b>(37)</b>   | <b>(122)</b>  | <b>17</b>     | <b>(94)</b>   | <b>(98)</b>   | <b>(215)</b>  | <b>(37 802)</b> |
| <b>Cash flow after debt service</b>                   | <b>16 698</b>   | <b>17 525</b>   | <b>17 301</b>   | <b>17 730</b>   | <b>17 300</b>   | <b>17 490</b>   | <b>26 763</b>   | <b>36 499</b> | <b>37 101</b> | <b>37 926</b> | <b>38 751</b> | <b>45 297</b> | <b>46 142</b> | <b>46 788</b> | <b>47 666</b> | <b>11 451</b>   |
| Transfer from/to DSRA                                 | (999)           | (553)           | (270)           | 426             | (227)           | 6 597           | 13 596          | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Cash after debt service and DSRA                      | 15 700          | 16 972          | 17 030          | 18 156          | 17 073          | 24 087          | 40 359          | 36 499        | 37 101        | 37 926        | 38 751        | 45 297        | 46 142        | 46 788        | 47 666        | 11 451          |
| Overdraft disbursement                                | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Overdraft repayment                                   | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Cash after debt service, DSRA and overdraft repayment | 15 700          | 16 972          | 17 030          | 18 156          | 17 073          | 24 087          | 40 359          | 36 499        | 37 101        | 37 926        | 38 751        | 45 297        | 46 142        | 46 788        | 47 666        | 11 451          |
| <b>Dividends</b>                                      | <b>15 700</b>   | <b>16 972</b>   | <b>17 030</b>   | <b>18 156</b>   | <b>17 073</b>   | <b>24 087</b>   | <b>40 359</b>   | <b>36 499</b> | <b>37 101</b> | <b>37 926</b> | <b>38 751</b> | <b>45 297</b> | <b>46 142</b> | <b>46 788</b> | <b>47 666</b> | <b>11 451</b>   |

Source: EY

## PPP variant (70% leverage, 13.5% IRR)

### PPP variant (70% leverage, 13.5% IRR) - development phase

| Currency: EUR 000                         | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
|---|-----------------------|-----------------|-----------------|------------------|
| EBITDA                                    |                       | (78)            | (194)           | (385)            |
| Cash taxes (income tax)                   |                       | -               | -               | -                |
| Cash flow from change in working capital  |                       | -               | -               | -                |
| Adjustment for: Non-cash items            |                       | -               | -               | -                |
| <b>Cash flow from operations</b>          | <b>(656)</b>          | <b>(78)</b>     | <b>(194)</b>    | <b>(385)</b>     |
| Initial investment                        | (248 016)             | (57 598)        | (59 023)        | (131 396)        |
| MRA creation                              | -                     | -               | -               | -                |
| Life-cycle investments                    | -                     | -               | -               | -                |
| MRA release                               | -                     | -               | -               | -                |
| Total yearly capital expenditures         | -                     | -               | -               | -                |
| Contingency                               | (6 200)               | (1 440)         | (1 476)         | (3 285)          |
| <b>Cash flow from investing</b>           | <b>(254 217)</b>      | <b>(59 037)</b> | <b>(60 499)</b> | <b>(134 681)</b> |
| Bank fees: total upfront fees             | (2 176)               | (2 150)         | -               | (26)             |
| Bank fees: total commitment fees          | (1 497)               | (744)           | (480)           | (273)            |
| Bank fees: maintenance/prolongation fee   | (50)                  | -               | (25)            | (25)             |
| Construction period: pre-funded DSRA      | (22 477)              | -               | -               | (22 477)         |
| Interest during construction Facility (1) | (8 489)               | -               | (2 800)         | (5 689)          |
| Interest during construction Facility (2) | -                     | -               | -               | -                |
| Interest during construction Facility (3) | -                     | -               | -               | -                |
| Interest expense Facility (1)             | -                     | -               | -               | -                |
| Interest expense Facility (2)             | -                     | -               | -               | -                |
| Interest expense Facility (3)             | -                     | -               | -               | -                |
| Interest expense Facility (RCF)           | -                     | -               | -               | -                |
| Interest expense (Overdraft)              | -                     | -               | -               | -                |
| Interest income on MRA                    | -                     | -               | -               | -                |
| Interest income on DSRA                   | -                     | -               | -               | -                |
| Principal repayment Facility (1)          | -                     | -               | -               | -                |
| Principal repayment Facility (2)          | -                     | -               | -               | -                |
| Principal repayment Facility (3)          | -                     | -               | -               | -                |
| Principal repayment Facility (RCF)        | -                     | -               | -               | -                |
| <b>Cash flow from financing</b>           | <b>(34 688)</b>       | <b>(2 894)</b>  | <b>(3 304)</b>  | <b>(28 490)</b>  |
| <b>Uses of funds</b>                      | <b>(289 562)</b>      | <b>(62 009)</b> | <b>(63 997)</b> | <b>(163 555)</b> |
| Currency: EUR 000                         | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
| Facility (1)                              | 145 757               | 43 407          | 44 798          | 57 552           |
| Facility (2)                              | 38 717                | -               | -               | 38 717           |
| Facility (3)                              | 18 220                | -               | -               | 18 220           |
| <b>Debt</b>                               | <b>202 693</b>        | <b>43 407</b>   | <b>44 798</b>   | <b>114 489</b>   |
| Equity                                    | 86 869                | 18 603          | 19 199          | 49 067           |
| <b>Sources of funds</b>                   | <b>289 562</b>        | <b>62 009</b>   | <b>63 997</b>   | <b>163 555</b>   |

Source: EY

## PPP variant (70% leverage, 13.5% IRR)

### PPP variant (70% leverage, 13.5% IRR) - operations phase, part 1/2

| Currency: EUR 000                              | Sum for FY20F - FY49F | FY20F          | FY21F           | FY22F           | FY23F           | FY24F           | FY25F           | FY26F           | FY27F           | FY28F           | FY29F           | FY30F           | FY31F           | FY32F           | FY33F           |
|--|-----------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total revenue from health insurance companies  | 5 305 828             | 113 450        | 116 163         | 118 968         | 121 866         | 124 950         | 129 406         | 134 101         | 138 943         | 143 978         | 149 236         | 154 721         | 160 459         | 166 381         | 172 359         |
| Adjustment to revenues (payment for UH/OHV)    | 766 901               | 12 165         | 13 614          | 15 121          | 16 687          | 18 329          | 18 983          | 19 672          | 20 382          | 21 120          | 21 892          | 22 696          | 23 538          | 24 407          | 25 284          |
| Total revenue from other streams               | 293 789               | 6 705          | 6 876           | 7 051           | 7 230           | 7 419           | 7 619           | 7 827           | 8 041           | 8 262           | 8 491           | 8 727           | 8 973           | 9 227           | 9 480           |
| Availability payment/Additional cash injection | 95 000                | 32 500         | 21 000          | 19 500          | 7 500           | 6 000           | 5 000           | 3 500           | -               | -               | -               | -               | -               | -               | -               |
| <b>Revenues</b>                                | <b>6 461 518</b>      | <b>164 820</b> | <b>157 653</b>  | <b>160 640</b>  | <b>153 283</b>  | <b>156 698</b>  | <b>161 008</b>  | <b>165 100</b>  | <b>167 366</b>  | <b>173 360</b>  | <b>179 619</b>  | <b>186 145</b>  | <b>192 970</b>  | <b>200 015</b>  | <b>207 123</b>  |
| Y-o-y growth in revenues                       |                       | 0%             | -4%             | 2%              | -5%             | 2%              | 3%              | 3%              | 1%              | 4%              | 4%              | 4%              | 4%              | 4%              | 4%              |
| Total personnel costs                          | (3 092 476)           | (74 784)       | (77 060)        | (79 341)        | (81 563)        | (83 721)        | (85 775)        | (87 750)        | (89 706)        | (91 666)        | (93 646)        | (94 219)        | (94 789)        | (95 363)        | (97 401)        |
| Total energy costs                             | (31 151)              | (829)          | (846)           | (864)           | (881)           | (900)           | (919)           | (939)           | (959)           | (980)           | (1 002)         | (980)           | (960)           | (940)           | (960)           |
| Total costs of services                        | (92 605)              | (2 389)        | (2 440)         | (2 490)         | (2 541)         | (2 595)         | (2 651)         | (2 708)         | (2 767)         | (2 827)         | (2 888)         | (2 869)         | (2 851)         | (2 833)         | (2 894)         |
| Total material costs                           | (1 349 399)           | (25 195)       | (25 879)        | (26 595)        | (27 331)        | (28 114)        | (29 545)        | (31 110)        | (32 746)        | (34 452)        | (36 255)        | (37 050)        | (39 020)        | (41 077)        | (44 450)        |
| Total taxes and fees                           | (24 280)              | (591)          | (603)           | (616)           | (628)           | (641)           | (655)           | (669)           | (684)           | (699)           | (714)           | (730)           | (746)           | (762)           | (779)           |
| Other costs                                    | (73 658)              | (1 421)        | (1 458)         | (1 497)         | (1 538)         | (1 580)         | (1 656)         | (1 738)         | (1 824)         | (1 913)         | (2 007)         | (2 045)         | (2 142)         | (2 243)         | (2 415)         |
| Other finance costs                            | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Total insurance costs                          | (12 711)              | (602)          | (567)           | (537)           | (508)           | (490)           | (471)           | (451)           | (437)           | (430)           | (430)           | (429)           | (422)           | (414)           | (407)           |
| <b>EBITDA</b>                                  | <b>1 785 239</b>      | <b>59 009</b>  | <b>48 800</b>   | <b>48 700</b>   | <b>38 293</b>   | <b>38 657</b>   | <b>39 336</b>   | <b>39 734</b>   | <b>38 243</b>   | <b>40 393</b>   | <b>42 676</b>   | <b>47 822</b>   | <b>52 041</b>   | <b>56 382</b>   | <b>57 818</b>   |
| Y-o-y growth in EBITDA                         |                       | 0%             | -17%            | 0%              | -21%            | 1%              | 2%              | 1%              | -4%             | 6%              | 6%              | 12%             | 9%              | 8%              | 3%              |
| EBITDA margin                                  |                       | 36%            | 31%             | 30%             | 25%             | 25%             | 24%             | 24%             | 23%             | 23%             | 24%             | 26%             | 27%             | 28%             | 28%             |
| EBITDA margin (excl. availability pmt)         |                       | 20%            | 20%             | 21%             | 21%             | 22%             | 22%             | 22%             | 23%             | 23%             | 24%             | 26%             | 27%             | 28%             | 28%             |
| Cash taxes (income tax)                        | (203 234)             | (5 279)        | (2 556)         | (2 113)         | (1 415)         | (1 374)         | (1 400)         | (1 360)         | (2 418)         | (2 857)         | (3 176)         | (4 291)         | (5 218)         | (6 197)         | (6 563)         |
| Cash flow from change in working capital       | (36 910)              | (13 046)       | (649)           | (629)           | (663)           | (662)           | (888)           | (896)           | (932)           | (911)           | (1 091)         | (1 194)         | (1 316)         | (1 281)         | (1 347)         |
| Adjustment for non-cash items                  | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from operations</b>               | <b>1 545 095</b>      | <b>40 684</b>  | <b>45 595</b>   | <b>45 957</b>   | <b>36 215</b>   | <b>36 621</b>   | <b>37 048</b>   | <b>37 478</b>   | <b>34 893</b>   | <b>36 625</b>   | <b>38 408</b>   | <b>42 337</b>   | <b>45 506</b>   | <b>48 905</b>   | <b>49 908</b>   |
| Y-o-y growth in CFO                            |                       | 0%             | 12%             | 1%              | -21%            | 1%              | 1%              | 1%              | -7%             | 5%              | 5%              | 10%             | 7%              | 7%              | 2%              |
| Initial investment                             | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| MRA creation                                   | (71 509)              | (725)          | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (3 416)         | (3 416)         | (3 416)         | (3 416)         |
| Life-cycle investments                         | (71 509)              | -              | -               | -               | -               | -               | -               | -               | -               | -               | (7 248)         | -               | -               | -               | -               |
| MRA release                                    | 71 509                | -              | -               | -               | -               | -               | -               | -               | -               | -               | 7 248           | -               | -               | -               | -               |
| Total yearly capital expenditures              | (434 534)             | (6 086)        | (10 419)        | (10 678)        | (10 941)        | (11 216)        | (11 503)        | (11 799)        | (12 102)        | (12 415)        | (12 735)        | (13 064)        | (13 404)        | (13 757)        | (14 104)        |
| Contingency                                    | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from investing</b>                | <b>(506 043)</b>      | <b>(6 811)</b> | <b>(11 144)</b> | <b>(11 403)</b> | <b>(11 666)</b> | <b>(11 941)</b> | <b>(12 228)</b> | <b>(12 524)</b> | <b>(12 827)</b> | <b>(13 139)</b> | <b>(13 460)</b> | <b>(16 479)</b> | <b>(16 819)</b> | <b>(17 172)</b> | <b>(17 520)</b> |
| Bank fees: total upfront fees                  | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: total commitment fees               | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: maintenance/prolongation fee        | (1 531)               | (82)           | (88)            | (89)            | (65)            | (65)            | (66)            | (67)            | (43)            | (44)            | (45)            | (46)            | (47)            | (49)            | (50)            |
| Construction period: pre-funded DSRA           | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (1)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (2)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (3)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (1)                  | (153 889)             | (9 401)        | (9 401)         | (9 401)         | (9 401)         | (9 401)         | (9 401)         | (9 401)         | (9 401)         | (9 246)         | (9 031)         | (8 751)         | (8 422)         | (7 973)         | (7 387)         |

## PPP variant (70% leverage, 13.5% IRR)

|   |                  |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|---|------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Interest expense Facility (2)                         | (7 523)          | (1 799)        | (1 576)         | (1 342)         | (1 097)         | (842)           | (574)           | (293)           | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (3)                         | (1 189)          | (588)          | (399)           | (202)           | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (RCF)                       | (17 079)         | -              | (302)           | (317)           | (332)           | (347)           | (363)           | (383)           | (404)           | (426)           | (447)           | (472)           | (500)           | (530)           | (560)           |
| Interest expense (Overdraft)                          | -                | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest income on MRA                                | 432              | -              | 3               | 5               | 8               | 10              | 13              | 16              | 18              | 21              | 23              | -               | 12              | 25              | 37              |
| Interest income on DSRA                               | 1 315            | 81             | 81              | 81              | 58              | 58              | 58              | 58              | 43              | 45              | 48              | 50              | 55              | 61              | 63              |
| Principal repayment Facility (1)                      | (145 757)        | -              | -               | -               | -               | -               | -               | -               | (2 411)         | (3 332)         | (4 338)         | (5 096)         | (6 968)         | (9 078)         | (9 996)         |
| Principal repayment Facility (2)                      | (38 717)         | (4 807)        | (5 030)         | (5 264)         | (5 508)         | (5 764)         | (6 032)         | (6 312)         | -               | -               | -               | -               | -               | -               | -               |
| Principal repayment Facility (3)                      | (18 220)         | (5 881)        | (6 071)         | (6 267)         | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Principal drawdown Facility (RCF)                     | 36 910           | 13 046         | 649             | 629             | 663             | 662             | 888             | 896             | 932             | 911             | 1 091           | 1 194           | 1 316           | 1 281           | 1 347           |
| Principal repayment Facility (RCF)                    | (36 910)         | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from financing</b>                       | <b>(382 157)</b> | <b>(9 432)</b> | <b>(22 135)</b> | <b>(22 167)</b> | <b>(15 675)</b> | <b>(15 689)</b> | <b>(15 477)</b> | <b>(15 487)</b> | <b>(11 266)</b> | <b>(12 071)</b> | <b>(12 697)</b> | <b>(13 122)</b> | <b>(14 553)</b> | <b>(16 262)</b> | <b>(16 547)</b> |
| <b>Cash flow after debt service</b>                   | <b>656 895</b>   | <b>24 442</b>  | <b>12 316</b>   | <b>12 387</b>   | <b>8 874</b>    | <b>8 991</b>    | <b>9 343</b>    | <b>9 467</b>    | <b>10 800</b>   | <b>11 415</b>   | <b>12 251</b>   | <b>12 736</b>   | <b>14 134</b>   | <b>15 470</b>   | <b>15 841</b>   |
| Transfer from/to DSRA                                 | 22 477           | -              | -               | 6 470           | -               | -               | -               | 4 195           | (766)           | (790)           | (479)           | (1 543)         | (1 660)         | (333)           | (1 186)         |
| Cash after debt service and DSRA                      | 679 372          | 24 442         | 12 316          | 18 857          | 8 874           | 8 991           | 9 343           | 13 662          | 10 034          | 10 625          | 11 772          | 11 193          | 12 474          | 15 137          | 14 655          |
| Overdraft disbursement                                | -                | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Overdraft repayment                                   | -                | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Cash after debt service, DSRA and overdraft repayment | 679 372          | 24 442         | 12 316          | 18 857          | 8 874           | 8 991           | 9 343           | 13 662          | 10 034          | 10 625          | 11 772          | 11 193          | 12 474          | 15 137          | 14 655          |
| <b>Dividends</b>                                      | <b>679 372</b>   | <b>24 442</b>  | <b>12 316</b>   | <b>18 857</b>   | <b>8 874</b>    | <b>8 991</b>    | <b>9 343</b>    | <b>13 662</b>   | <b>10 034</b>   | <b>10 625</b>   | <b>11 772</b>   | <b>11 193</b>   | <b>12 474</b>   | <b>15 137</b>   | <b>14 655</b>   |

Source: EY

## PPP variant (70% leverage, 13.5% IRR)

### PPP variant (70% leverage, 13.5% IRR) - operations phase, part 2/2

| Currency: EUR 000                              | FY34F           | FY35F           | FY36F           | FY37F           | FY38F           | FY39F           | FY40F           | FY41F           | FY42F           | FY43F           | FY44F           | FY45F           | FY46F           | FY47F           | FY48F           | FY49F           |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total revenue from health insurance companies  | 178 412         | 184 694         | 188 435         | 192 238         | 196 108         | 199 897         | 203 731         | 207 622         | 211 573         | 215 599         | 219 702         | 223 883         | 228 143         | 232 485         | 236 909         | 241 418         |
| Adjustment to revenues (payment for UH/OHV)    | 26 172          | 27 093          | 27 642          | 28 200          | 28 768          | 29 323          | 29 886          | 30 457          | 31 036          | 31 627          | 32 229          | 32 842          | 33 467          | 34 104          | 34 753          | 35 414          |
| Total revenue from other streams               | 9 731           | 9 990           | 10 192          | 10 398          | 10 607          | 10 812          | 11 019          | 11 230          | 11 443          | 11 661          | 11 883          | 12 109          | 12 340          | 12 574          | 12 814          | 13 058          |
| Availability payment/Additional cash injection | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Revenues</b>                                | <b>214 315</b>  | <b>221 776</b>  | <b>226 269</b>  | <b>230 835</b>  | <b>235 482</b>  | <b>240 032</b>  | <b>244 636</b>  | <b>249 308</b>  | <b>254 052</b>  | <b>258 887</b>  | <b>263 814</b>  | <b>268 834</b>  | <b>273 950</b>  | <b>279 163</b>  | <b>284 476</b>  | <b>289 889</b>  |
| Y-o-y growth in revenues                       | 3%              | 3%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              |
| Total personnel costs                          | (99 481)        | (101 606)       | (103 773)       | (105 991)       | (108 256)       | (110 569)       | (112 932)       | (115 346)       | (117 814)       | (120 056)       | (122 341)       | (124 669)       | (127 041)       | (129 459)       | (131 923)       | (134 433)       |
| Total energy costs                             | (979)           | (999)           | (1 019)         | (1 040)         | (1 061)         | (1 081)         | (1 102)         | (1 123)         | (1 144)         | (1 166)         | (1 188)         | (1 211)         | (1 234)         | (1 257)         | (1 281)         | (1 306)         |
| Total costs of services                        | (2 953)         | (3 013)         | (3 074)         | (3 136)         | (3 199)         | (3 261)         | (3 323)         | (3 387)         | (3 451)         | (3 517)         | (3 584)         | (3 652)         | (3 721)         | (3 792)         | (3 864)         | (3 938)         |
| Total material costs                           | (46 667)        | (48 977)        | (49 969)        | (50 977)        | (52 004)        | (53 008)        | (54 025)        | (55 057)        | (56 105)        | (57 172)        | (58 260)        | (59 369)        | (60 499)        | (61 650)        | (62 823)        | (64 019)        |
| Total taxes and fees                           | (794)           | (811)           | (827)           | (844)           | (861)           | (877)           | (894)           | (911)           | (929)           | (946)           | (964)           | (983)           | (1 001)         | (1 020)         | (1 040)         | (1 060)         |
| Other costs                                    | (2 530)         | (2 649)         | (2 703)         | (2 758)         | (2 813)         | (2 867)         | (2 922)         | (2 978)         | (3 035)         | (3 093)         | (3 152)         | (3 212)         | (3 273)         | (3 335)         | (3 398)         | (3 463)         |
| Other finance costs                            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Total insurance costs                          | (415)           | (422)           | (410)           | (406)           | (402)           | (397)           | (394)           | (381)           | (366)           | (351)           | (362)           | (377)           | (368)           | (361)           | (355)           | (350)           |
| <b>EBITDA</b>                                  | <b>60 496</b>   | <b>63 301</b>   | <b>64 495</b>   | <b>65 684</b>   | <b>66 888</b>   | <b>67 971</b>   | <b>69 043</b>   | <b>70 125</b>   | <b>71 209</b>   | <b>72 586</b>   | <b>73 963</b>   | <b>75 363</b>   | <b>76 812</b>   | <b>78 288</b>   | <b>79 791</b>   | <b>81 322</b>   |
| Y-o-y growth in EBITDA                         | 5%              | 5%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              |
| EBITDA margin                                  | 28%             | 29%             | 29%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             |
| EBITDA margin (excl. availability pmt)         | 28%             | 29%             | 29%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             | 28%             |
| Cash taxes (income tax)                        | (6 841)         | (7 535)         | (8 026)         | (8 209)         | (8 620)         | (8 983)         | (9 343)         | (9 683)         | (9 852)         | (10 087)        | (10 315)        | (11 242)        | (11 484)        | (11 946)        | (12 197)        | (12 654)        |
| Cash flow from change in working capital       | (1 213)         | (1 262)         | (558)           | (748)           | (669)           | (647)           | (556)           | (759)           | (671)           | (705)           | (613)           | (837)           | (746)           | (760)           | (661)           | -               |
| Adjustment for non-cash items                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from operations</b>               | <b>52 443</b>   | <b>54 503</b>   | <b>55 910</b>   | <b>56 727</b>   | <b>57 599</b>   | <b>58 341</b>   | <b>59 144</b>   | <b>59 683</b>   | <b>60 686</b>   | <b>61 794</b>   | <b>63 034</b>   | <b>63 284</b>   | <b>64 583</b>   | <b>65 582</b>   | <b>66 933</b>   | <b>68 667</b>   |
| Y-o-y growth in CFO                            | 5%              | 4%              | 3%              | 1%              | 2%              | 1%              | 1%              | 1%              | 2%              | 2%              | 2%              | 0%              | 2%              | 2%              | 2%              | 3%              |
| MRA creation                                   | (3 416)         | (3 276)         | (3 276)         | (3 276)         | (4 570)         | (4 570)         | (2 242)         | (6 494)         | (6 494)         | (6 494)         | (6 494)         | -               | -               | -               | -               | -               |
| Life-cycle investments                         | (17 078)        | -               | -               | (9 827)         | -               | (9 140)         | (2 242)         | -               | -               | -               | (25 974)        | -               | -               | -               | -               | -               |
| MRA release                                    | 17 078          | -               | -               | 9 827           | -               | 9 140           | 2 242           | -               | -               | -               | 25 974          | -               | -               | -               | -               | -               |
| Total yearly capital expenditures              | (14 445)        | (14 796)        | (15 153)        | (15 459)        | (15 770)        | (16 075)        | (16 383)        | (16 696)        | (17 014)        | (17 338)        | (17 668)        | (18 004)        | (18 347)        | (18 696)        | (19 052)        | (19 414)        |
| Contingency                                    | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from investing</b>                | <b>(17 861)</b> | <b>(18 072)</b> | <b>(18 429)</b> | <b>(18 735)</b> | <b>(20 341)</b> | <b>(20 645)</b> | <b>(18 625)</b> | <b>(23 190)</b> | <b>(23 508)</b> | <b>(23 831)</b> | <b>(24 161)</b> | <b>(18 004)</b> | <b>(18 347)</b> | <b>(18 696)</b> | <b>(19 052)</b> | <b>(19 414)</b> |
| Bank fees: total upfront fees                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: total commitment fees               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: maintenance/prolongation fee        | (51)            | (52)            | (53)            | (54)            | (55)            | (55)            | (56)            | (32)            | (32)            | (33)            | (34)            | (34)            | (35)            | (36)            | (37)            | (37)            |
| Construction period: pre-funded DSRA           | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (1)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (2)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (3)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (1)                  | (6 743)         | (5 980)         | (5 103)         | (4 135)         | (3 086)         | (1 997)         | (824)           | -               | -               | -               | -               | -               | -               | -               | -               | -               |



## PPP variant (70% leverage, 13.5% IRR)

|   |                 |                 |                 |                 |                 |                 |                 |               |               |               |               |               |               |               |               |                 |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| Interest expense Facility (2)                         | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (3)                         | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (RCF)                       | (591)           | (619)           | (648)           | (661)           | (679)           | (694)           | (709)           | (722)         | (740)         | (755)         | (771)         | (786)         | (805)         | (822)         | (840)         | (855)           |
| Interest expense (Overdraft)                          | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest income on MRA                                | 49              | -               | 12              | 24              | -               | 16              | -               | -             | 23            | 47            | 70            | -             | -             | -             | -             | -               |
| Interest income on DSRA                               | 67              | 70              | 72              | 73              | 72              | 73              | 49              | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (1)                      | (11 827)        | (13 589)        | (15 018)        | (16 257)        | (16 880)        | (18 195)        | (12 772)        | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (2)                      | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (3)                      | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal drawdown Facility (RCF)                     | 1 213           | 1 262           | 558             | 748             | 669             | 647             | 556             | 759           | 671           | 705           | 613           | 837           | 746           | 760           | 661           | -               |
| Principal repayment Facility (RCF)                    | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | (36 910)        |
| <b>Cash flow from financing</b>                       | <b>(17 883)</b> | <b>(18 907)</b> | <b>(20 181)</b> | <b>(20 262)</b> | <b>(19 958)</b> | <b>(20 206)</b> | <b>(13 756)</b> | <b>6</b>      | <b>(78)</b>   | <b>(37)</b>   | <b>(122)</b>  | <b>17</b>     | <b>(94)</b>   | <b>(98)</b>   | <b>(215)</b>  | <b>(37 802)</b> |
| <b>Cash flow after debt service</b>                   | <b>16 698</b>   | <b>17 525</b>   | <b>17 301</b>   | <b>17 730</b>   | <b>17 300</b>   | <b>17 490</b>   | <b>26 763</b>   | <b>36 499</b> | <b>37 101</b> | <b>37 926</b> | <b>38 751</b> | <b>45 297</b> | <b>46 142</b> | <b>46 788</b> | <b>47 666</b> | <b>11 451</b>   |
| Transfer from/to DSRA                                 | (999)           | (553)           | (270)           | 426             | (227)           | 6 597           | 13 596          | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Cash after debt service and DSRA                      | 15 700          | 16 972          | 17 030          | 18 156          | 17 073          | 24 087          | 40 359          | 36 499        | 37 101        | 37 926        | 38 751        | 45 297        | 46 142        | 46 788        | 47 666        | 11 451          |
| Overdraft disbursement                                | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Overdraft repayment                                   | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Cash after debt service, DSRA and overdraft repayment | 15 700          | 16 972          | 17 030          | 18 156          | 17 073          | 24 087          | 40 359          | 36 499        | 37 101        | 37 926        | 38 751        | 45 297        | 46 142        | 46 788        | 47 666        | 11 451          |
| <b>Dividends</b>                                      | <b>15 700</b>   | <b>16 972</b>   | <b>17 030</b>   | <b>18 156</b>   | <b>17 073</b>   | <b>24 087</b>   | <b>40 359</b>   | <b>36 499</b> | <b>37 101</b> | <b>37 926</b> | <b>38 751</b> | <b>45 297</b> | <b>46 142</b> | <b>46 788</b> | <b>47 666</b> | <b>11 451</b>   |

Source: EY

## PSC variant

### PSC variant –development period

| <i>Currency: EUR 000</i>                  | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
|---|-----------------------|-----------------|-----------------|------------------|
| EBITDA                                    |                       | (99)            | (260)           | (522)            |
| Cash taxes (income tax)                   |                       | -               | -               | -                |
| Cash flow from change in working capital  |                       | -               | -               | -                |
| Adjustment for: Non-cash items            |                       | -               | -               | -                |
| <b>Cash flow from operations</b>          | <b>(882)</b>          | <b>(99)</b>     | <b>(260)</b>    | <b>(522)</b>     |
| Initial investment                        | (341 692)             | (79 352)        | (81 316)        | (181 024)        |
| MRA creation                              | -                     | -               | -               | -                |
| Life-cycle investments                    | -                     | -               | -               | -                |
| MRA release                               | -                     | -               | -               | -                |
| Total yearly capital expenditures         | -                     | -               | -               | -                |
| Contingency                               | (8 542)               | (1 984)         | (2 033)         | (4 526)          |
| <b>Cash flow from investing</b>           | <b>(350 234)</b>      | <b>(81 336)</b> | <b>(83 349)</b> | <b>(185 549)</b> |
| Bank fees: total upfront fees             | (1 955)               | (1 942)         | -               | (13)             |
| Bank fees: total commitment fees          | (1 298)               | (664)           | (406)           | (228)            |
| Bank fees: maintenance/prolongation fee   | (50)                  | -               | (25)            | (25)             |
| Construction period: pre-funded DSRA      | -                     | -               | -               | -                |
| Interest during construction Facility (1) | (11 819)              | -               | (3 880)         | (7 939)          |
| Interest during construction Facility (2) | -                     | -               | -               | -                |
| Interest during construction Facility (3) | -                     | -               | -               | -                |
| Interest expense Facility (1)             | -                     | -               | -               | -                |
| Interest expense Facility (2)             | -                     | -               | -               | -                |
| Interest expense Facility (3)             | -                     | -               | -               | -                |
| Interest expense Facility (RCF)           | -                     | -               | -               | -                |
| Interest expense (Overdraft)              | -                     | -               | -               | -                |
| Interest income on MRA                    | -                     | -               | -               | -                |
| Interest income on DSRA                   | -                     | -               | -               | -                |
| Principal repayment Facility (1)          | -                     | -               | -               | -                |
| Principal repayment Facility (2)          | -                     | -               | -               | -                |
| Principal repayment Facility (3)          | -                     | -               | -               | -                |
| Principal repayment Facility (RCF)        | -                     | -               | -               | -                |
| <b>Cash flow from financing</b>           | <b>(15 122)</b>       | <b>(2 606)</b>  | <b>(4 311)</b>  | <b>(8 205)</b>   |
| <b>Uses of funds</b>                      | <b>(366 238)</b>      | <b>(84 042)</b> | <b>(87 920)</b> | <b>(194 276)</b> |
| <i>Currency: EUR 000</i>                  | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
| Facility (1)                              | 263 362               | 84 042          | 87 920          | 91 400           |
| Facility (2)                              | 69 956                | -               | -               | 69 956           |
| Facility (3)                              | 32 920                | -               | -               | 32 920           |
| <b>Debt</b>                               | <b>366 238</b>        | <b>84 042</b>   | <b>87 920</b>   | <b>194 276</b>   |
| Equity                                    | -                     | -               | -               | -                |
| <b>Sources of funds</b>                   | <b>366 238</b>        | <b>84 042</b>   | <b>87 920</b>   | <b>194 276</b>   |

Source: EY

## PSC variant

## PSC variant –operations period, part 1/2

| <i>Currency: EUR 000</i>                       | Sum for FY20F - FY49F | FY20F          | FY21F           | FY22F           | FY23F           | FY24F           | FY25F           | FY26F           | FY27F           | FY28F           | FY29F           | FY30F           | FY31F           | FY32F           | FY33F           |
|--|-----------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total revenue from health insurance companies  | 5 305 828             | 113 450        | 116 163         | 118 968         | 121 866         | 124 950         | 129 406         | 134 101         | 138 943         | 143 978         | 149 236         | 154 721         | 160 459         | 166 381         | 172 359         |
| Adjustment to revenues (payment for UH/OHV)    | 766 901               | 12 165         | 13 614          | 15 121          | 16 687          | 18 329          | 18 983          | 19 672          | 20 382          | 21 120          | 21 892          | 22 696          | 23 538          | 24 407          | 25 284          |
| Total revenue from other streams               | 293 789               | 6 705          | 6 876           | 7 051           | 7 230           | 7 419           | 7 619           | 7 827           | 8 041           | 8 262           | 8 491           | 8 727           | 8 973           | 9 227           | 9 480           |
| Availability payment/Additional cash injection | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Revenues</b>                                | <b>6 366 518</b>      | <b>132 320</b> | <b>136 653</b>  | <b>141 140</b>  | <b>145 783</b>  | <b>150 698</b>  | <b>156 008</b>  | <b>161 600</b>  | <b>167 366</b>  | <b>173 360</b>  | <b>179 619</b>  | <b>186 145</b>  | <b>192 970</b>  | <b>200 015</b>  | <b>207 123</b>  |
| <i>Y-o-y growth in revenues</i>                |                       | 0%             | 3%              | 3%              | 3%              | 3%              | 4%              | 4%              | 4%              | 4%              | 4%              | 4%              | 4%              | 4%              | 4%              |
| <b>EBITDA</b>                                  | <b>1 279 910</b>      | <b>13 110</b>  | <b>14 311</b>   | <b>15 634</b>   | <b>17 150</b>   | <b>18 939</b>   | <b>20 533</b>   | <b>22 349</b>   | <b>24 287</b>   | <b>26 375</b>   | <b>28 606</b>   | <b>33 711</b>   | <b>37 900</b>   | <b>42 230</b>   | <b>43 686</b>   |
| <i>Y-o-y growth in EBITDA</i>                  |                       | 0%             | 9%              | 9%              | 10%             | 10%             | 8%              | 9%              | 9%              | 9%              | 8%              | 18%             | 12%             | 11%             | 3%              |
| <i>EBITDA margin</i>                           |                       | 10%            | 10%             | 11%             | 12%             | 13%             | 13%             | 14%             | 15%             | 15%             | 16%             | 18%             | 20%             | 21%             | 21%             |
| <i>EBITDA margin (excl. availability pmt)</i>  |                       | 10%            | 10%             | 11%             | 12%             | 13%             | 13%             | 14%             | 15%             | 15%             | 16%             | 18%             | 20%             | 21%             | 21%             |
| Cash taxes (income tax)                        | (93 877)              | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | (1 995)         | (3 062)         |
| Cash flow from change in working capital       | (36 910)              | (13 046)       | (649)           | (629)           | (663)           | (662)           | (888)           | (896)           | (932)           | (911)           | (1 091)         | (1 194)         | (1 316)         | (1 281)         | (1 347)         |
| Adjustment for non-cash items                  | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from operations</b>               | <b>1 149 123</b>      | <b>65</b>      | <b>13 663</b>   | <b>15 005</b>   | <b>16 487</b>   | <b>18 277</b>   | <b>19 645</b>   | <b>21 452</b>   | <b>23 355</b>   | <b>25 464</b>   | <b>27 515</b>   | <b>32 517</b>   | <b>36 584</b>   | <b>38 954</b>   | <b>39 277</b>   |
| <i>Y-o-y growth in CFO</i>                     |                       | 0%             | 20971%          | 10%             | 10%             | 11%             | 7%              | 9%              | 9%              | 9%              | 8%              | 18%             | 13%             | 6%              | 1%              |
| MRA creation                                   | (95 780)              | (725)          | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (4 706)         | (4 706)         | (4 706)         | (4 706)         |
| Life-cycle investments                         | (95 780)              | -              | -               | -               | -               | -               | -               | -               | -               | -               | (7 248)         | -               | -               | -               | -               |
| MRA release                                    | 95 780                | -              | -               | -               | -               | -               | -               | -               | -               | -               | 7 248           | -               | -               | -               | -               |
| Total yearly capital expenditures              | (598 657)             | (8 385)        | (14 354)        | (14 711)        | (15 073)        | (15 452)        | (15 848)        | (16 256)        | (16 673)        | (17 104)        | (17 545)        | (17 998)        | (18 466)        | (18 953)        | (19 431)        |
| Contingency                                    | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from investing</b>                | <b>(694 438)</b>      | <b>(9 109)</b> | <b>(15 079)</b> | <b>(15 436)</b> | <b>(15 798)</b> | <b>(16 177)</b> | <b>(16 573)</b> | <b>(16 980)</b> | <b>(17 398)</b> | <b>(17 828)</b> | <b>(18 270)</b> | <b>(22 704)</b> | <b>(23 172)</b> | <b>(23 658)</b> | <b>(24 137)</b> |

## PSC variant

|   |                  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|---|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Bank fees: total upfront fees             | -                | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: total commitment fees          | -                | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: maintenance/prolongation fee   | (1 506)          | (82)            | (88)            | (89)            | (65)            | (65)            | (66)            | (67)            | (43)            | (44)            | (45)            | (46)            | (47)            | (49)            | (50)            |
| Construction period: pre-funded DSRA      | -                | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (1) | -                | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (2) | -                | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (3) | -                | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (1)             | (127 665)        | (12 159)        | (11 551)        | (10 943)        | (10 335)        | (9 727)         | (9 119)         | (8 511)         | (7 903)         | (7 295)         | (6 687)         | (6 079)         | (5 471)         | (4 863)         | (4 255)         |
| Interest expense Facility (2)             | (7 873)          | (1 968)         | (1 687)         | (1 406)         | (1 125)         | (844)           | (562)           | (281)           | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (3)             | (920)            | (460)           | (307)           | (153)           | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (RCF)           | (4 275)          | -               | (76)            | (79)            | (83)            | (87)            | (91)            | (96)            | (101)           | (107)           | (112)           | (118)           | (125)           | (133)           | (140)           |
| Interest expense (Overdraft)              | -                | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest income on MRA                    | 551              | -               | 3               | 5               | 8               | 10              | 13              | 16              | 18              | 21              | 23              | -               | 17              | 34              | 51              |
| Interest income on DSRA                   | -                | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Principal repayment Facility (1)          | (263 362)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        |
| Principal repayment Facility (2)          | (69 956)         | (9 994)         | (9 994)         | (9 994)         | (9 994)         | (9 994)         | (9 994)         | (9 994)         | -               | -               | -               | -               | -               | -               | -               |
| Principal repayment Facility (3)          | (32 920)         | (10 973)        | (10 973)        | (10 973)        | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Principal drawdown Facility (RCF)         | 36 910           | 13 046          | 649             | 629             | 663             | 662             | 888             | 896             | 932             | 911             | 1 091           | 1 194           | 1 316           | 1 281           | 1 347           |
| Principal repayment Facility (RCF)        | (36 910)         | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from financing</b>           | <b>(507 925)</b> | <b>(35 758)</b> | <b>(47 192)</b> | <b>(46 171)</b> | <b>(34 098)</b> | <b>(33 212)</b> | <b>(32 099)</b> | <b>(31 205)</b> | <b>(20 265)</b> | <b>(19 682)</b> | <b>(18 897)</b> | <b>(18 218)</b> | <b>(17 478)</b> | <b>(16 898)</b> | <b>(16 216)</b> |
| <b>Cash flow after debt service</b>       | <b>(53 239)</b>  | <b>(44 802)</b> | <b>(48 609)</b> | <b>(46 602)</b> | <b>(33 410)</b> | <b>(31 112)</b> | <b>(29 027)</b> | <b>(26 733)</b> | <b>(14 308)</b> | <b>(12 046)</b> | <b>(9 652)</b>  | <b>(8 404)</b>  | <b>(4 067)</b>  | <b>(1 602)</b>  | <b>(1 076)</b>  |

Source: EY:

## PSC variant

## PSC variant –operations period, part 2/2

| <i>Currency: EUR 000</i>                       | FY34F           | FY35F           | FY36F           | FY37F           | FY38F           | FY39F           | FY40F           | FY41F           | FY42F           | FY43F           | FY44F           | FY45F           | FY46F           | FY47F           | FY48F           | FY49F           |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total revenue from health insurance companies  | 178 412         | 184 694         | 188 435         | 192 238         | 196 108         | 199 897         | 203 731         | 207 622         | 211 573         | 215 599         | 219 702         | 223 883         | 228 143         | 232 485         | 236 909         | 241 418         |
| Adjustment to revenues (payment for UH/OHV)    | 26 172          | 27 093          | 27 642          | 28 200          | 28 768          | 29 323          | 29 886          | 30 457          | 31 036          | 31 627          | 32 229          | 32 842          | 33 467          | 34 104          | 34 753          | 35 414          |
| Total revenue from other streams               | 9 731           | 9 990           | 10 192          | 10 398          | 10 607          | 10 812          | 11 019          | 11 230          | 11 443          | 11 661          | 11 883          | 12 109          | 12 340          | 12 574          | 12 814          | 13 058          |
| Availability payment/Additional cash injection | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Revenues</b>                                | <b>214 315</b>  | <b>221 776</b>  | <b>226 269</b>  | <b>230 835</b>  | <b>235 482</b>  | <b>240 032</b>  | <b>244 636</b>  | <b>249 308</b>  | <b>254 052</b>  | <b>258 887</b>  | <b>263 814</b>  | <b>268 834</b>  | <b>273 950</b>  | <b>279 163</b>  | <b>284 476</b>  | <b>289 889</b>  |
| <i>Y-o-y growth in revenues</i>                | 3%              | 3%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              |
| <b>EBITDA</b>                                  | <b>46 408</b>   | <b>49 276</b>   | <b>50 756</b>   | <b>52 246</b>   | <b>53 769</b>   | <b>55 200</b>   | <b>56 640</b>   | <b>57 491</b>   | <b>58 339</b>   | <b>59 477</b>   | <b>60 600</b>   | <b>61 742</b>   | <b>62 938</b>   | <b>64 156</b>   | <b>65 395</b>   | <b>66 656</b>   |
| <i>Y-o-y growth in EBITDA</i>                  | 6%              | 6%              | 3%              | 3%              | 3%              | 3%              | 3%              | 2%              | 1%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              |
| <i>EBITDA margin</i>                           | 22%             | 22%             | 22%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             |
| <i>EBITDA margin (excl. availability pmt)</i>  | 22%             | 22%             | 22%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             | 23%             |
| Cash taxes (income tax)                        | (3 176)         | (3 822)         | (4 339)         | (4 401)         | (4 758)         | (4 992)         | (5 275)         | (5 363)         | (5 458)         | (5 619)         | (5 768)         | (6 607)         | (6 768)         | (7 230)         | (7 398)         | (7 845)         |
| Cash flow from change in working capital       | (1 213)         | (1 262)         | (558)           | (748)           | (669)           | (647)           | (556)           | (759)           | (671)           | (705)           | (613)           | (837)           | (746)           | (760)           | (661)           | -               |
| Adjustment for non-cash items                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from operations</b>               | <b>42 019</b>   | <b>44 192</b>   | <b>45 859</b>   | <b>47 096</b>   | <b>48 342</b>   | <b>49 561</b>   | <b>50 810</b>   | <b>51 369</b>   | <b>52 210</b>   | <b>53 153</b>   | <b>54 220</b>   | <b>54 298</b>   | <b>55 424</b>   | <b>56 165</b>   | <b>57 336</b>   | <b>58 811</b>   |
| <i>Y-o-y growth in CFO</i>                     | 7%              | 5%              | 4%              | 3%              | 3%              | 3%              | 3%              | 1%              | 2%              | 2%              | 2%              | 0%              | 2%              | 1%              | 2%              | 3%              |
| MRA creation                                   | (4 706)         | (4 513)         | (4 513)         | (4 513)         | (6 296)         | (6 296)         | (3 088)         | (8 946)         | (8 946)         | (8 946)         | (8 946)         | -               | -               | -               | -               | -               |
| Life-cycle investments                         | (23 529)        | -               | -               | (13 538)        | -               | (12 593)        | (3 088)         | -               | -               | -               | (35 785)        | -               | -               | -               | -               | -               |
| MRA release                                    | 23 529          | -               | -               | 13 538          | -               | 12 593          | 3 088           | -               | -               | -               | 35 785          | -               | -               | -               | -               | -               |
| Total yearly capital expenditures              | (19 902)        | (20 384)        | (20 877)        | (21 298)        | (21 727)        | (22 147)        | (22 571)        | (23 003)        | (23 440)        | (23 886)        | (24 341)        | (24 804)        | (25 276)        | (25 757)        | (26 247)        | (26 747)        |
| Contingency                                    | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from investing</b>                | <b>(24 607)</b> | <b>(24 897)</b> | <b>(25 390)</b> | <b>(25 811)</b> | <b>(28 023)</b> | <b>(28 443)</b> | <b>(25 660)</b> | <b>(31 949)</b> | <b>(32 387)</b> | <b>(32 833)</b> | <b>(33 287)</b> | <b>(24 804)</b> | <b>(25 276)</b> | <b>(25 757)</b> | <b>(26 247)</b> | <b>(26 747)</b> |

## PSC variant

|   |                 |                 |                 |                 |                 |                 |               |               |               |               |               |               |               |               |               |                 |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| Bank fees: total upfront fees             | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Bank fees: total commitment fees          | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Bank fees: maintenance/prolongation fee   | (51)            | (52)            | (53)            | (54)            | (55)            | (55)            | (31)          | (32)          | (32)          | (33)          | (34)          | (34)          | (35)          | (36)          | (37)          | (37)            |
| Construction period: pre-funded DSRA      | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest during construction Facility (1) | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest during construction Facility (2) | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest during construction Facility (3) | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (1)             | (3 648)         | (3 040)         | (2 432)         | (1 824)         | (1 216)         | (608)           | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (2)             | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (3)             | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest expense Facility (RCF)           | (148)           | (155)           | (162)           | (166)           | (170)           | (174)           | (177)         | (181)         | (185)         | (189)         | (193)         | (197)         | (202)         | (206)         | (210)         | (214)           |
| Interest expense (Overdraft)              | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Interest income on MRA                    | 68              | -               | 16              | 32              | -               | 23              | -             | -             | 32            | 64            | 97            | -             | -             | -             | -             | -               |
| Interest income on DSRA                   | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (1)          | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | (13 168)        | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (2)          | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal repayment Facility (3)          | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal drawdown Facility (RCF)         | 1 213           | 1 262           | 558             | 748             | 669             | 647             | 556           | 759           | 671           | 705           | 613           | 837           | 746           | 760           | 661           | -               |
| Principal repayment Facility (RCF)        | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -             | (36 910)        |
| <b>Cash flow from financing</b>           | <b>(15 734)</b> | <b>(15 153)</b> | <b>(15 241)</b> | <b>(14 431)</b> | <b>(13 940)</b> | <b>(13 335)</b> | <b>347</b>    | <b>547</b>    | <b>485</b>    | <b>547</b>    | <b>483</b>    | <b>606</b>    | <b>509</b>    | <b>518</b>    | <b>414</b>    | <b>(37 161)</b> |
| <b>Cash flow after debt service</b>       | <b>1 678</b>    | <b>4 142</b>    | <b>5 228</b>    | <b>6 855</b>    | <b>6 379</b>    | <b>7 783</b>    | <b>25 498</b> | <b>19 967</b> | <b>20 309</b> | <b>20 868</b> | <b>21 415</b> | <b>30 100</b> | <b>30 657</b> | <b>30 926</b> | <b>31 503</b> | <b>(5 097)</b>  |

Source: EY

## Specific variant

### Specific variant – development period

| <i>Currency: EUR 000</i>                  | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
|---|-----------------------|-----------------|-----------------|------------------|
| EBITDA                                    |                       | (99)            | (260)           | (522)            |
| Cash taxes (income tax)                   |                       | -               | -               | -                |
| Cash flow from change in working capital  |                       | -               | -               | -                |
| Adjustment for: Non-cash items            |                       | -               | -               | -                |
| <b>Cash flow from operations</b>          | <b>(882)</b>          | <b>(99)</b>     | <b>(260)</b>    | <b>(522)</b>     |
| Initial investment                        | (341 692)             | (79 352)        | (81 316)        | (181 024)        |
| MRA creation                              | -                     | -               | -               | -                |
| Life-cycle investments                    | -                     | -               | -               | -                |
| MRA release                               | -                     | -               | -               | -                |
| Total yearly capital expenditures         | -                     | -               | -               | -                |
| Contingency                               | (8 542)               | (1 984)         | (2 033)         | (4 526)          |
| <b>Cash flow from investing</b>           | <b>(350 234)</b>      | <b>(81 336)</b> | <b>(83 349)</b> | <b>(185 549)</b> |
| Bank fees: total upfront fees             | (1 847)               | (1 821)         | -               | (26)             |
| Bank fees: total commitment fees          | (1 270)               | (631)           | (407)           | (232)            |
| Bank fees: maintenance/prolongation fee   | (50)                  | -               | (25)            | (25)             |
| Construction period: pre-funded DSRA      | (30 571)              | -               | -               | (30 571)         |
| Interest during construction Facility (1) | (8 885)               | -               | (2 926)         | (5 959)          |
| Interest during construction Facility (2) | -                     | -               | -               | -                |
| Interest during construction Facility (3) | -                     | -               | -               | -                |
| Interest expense Facility (1)             | -                     | -               | -               | -                |
| Interest expense Facility (2)             | -                     | -               | -               | -                |
| Interest expense Facility (3)             | -                     | -               | -               | -                |
| Interest expense Facility (RCF)           | -                     | -               | -               | -                |
| Interest expense (Overdraft)              | -                     | -               | -               | -                |
| Interest income on MRA                    | -                     | -               | -               | -                |
| Interest income on DSRA                   | -                     | -               | -               | -                |
| Principal repayment Facility (1)          | -                     | -               | -               | -                |
| Principal repayment Facility (2)          | -                     | -               | -               | -                |
| Principal repayment Facility (3)          | -                     | -               | -               | -                |
| Principal repayment Facility (RCF)        | -                     | -               | -               | -                |
| <b>Cash flow from financing</b>           | <b>(42 623)</b>       | <b>(2 452)</b>  | <b>(3 358)</b>  | <b>(36 813)</b>  |
| <b>Uses of funds</b>                      | <b>(393 740)</b>      | <b>(83 887)</b> | <b>(86 968)</b> | <b>(222 885)</b> |
| <i>Mena: EUR 000</i>                      | Sum for FY17F - FY19F | FY17F           | FY18F           | FY19F            |
| Facility (1)                              | 246 897               | 73 150          | 75 836          | 97 912           |
| Facility (2)                              | 65 582                | -               | -               | 65 582           |
| Facility (3)                              | 30 862                | -               | -               | 30 862           |
| <b>Debt</b>                               | <b>343 341</b>        | <b>73 150</b>   | <b>75 836</b>   | <b>194 356</b>   |
| Equity                                    | 50 399                | 10 738          | 11 132          | 28 529           |
| <b>Sources of funds</b>                   | <b>393 740</b>        | <b>83 887</b>   | <b>86 968</b>   | <b>222 885</b>   |

Source: EY

## Specific variant

### Specific variant – operations period, part 1/2

| <i>Currency: EUR 000</i>                       | Sum for FY20F - FY49F | FY20F          | FY21F           | FY22F           | FY23F           | FY24F           | FY25F           | FY26F           | FY27F           | FY28F           | FY29F           | FY30F           | FY31F           | FY32F           | FY33F           |
|--|-----------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total revenue from health insurance companies  | 5 305 828             | 113 450        | 116 163         | 118 968         | 121 866         | 124 950         | 129 406         | 134 101         | 138 943         | 143 978         | 149 236         | 154 721         | 160 459         | 166 381         | 172 359         |
| Adjustment to revenues (payment for UH/OHV)    | 766 901               | 12 165         | 13 614          | 15 121          | 16 687          | 18 329          | 18 983          | 19 672          | 20 382          | 21 120          | 21 892          | 22 696          | 23 538          | 24 407          | 25 284          |
| Total revenue from other streams               | 293 789               | 6 705          | 6 876           | 7 051           | 7 230           | 7 419           | 7 619           | 7 827           | 8 041           | 8 262           | 8 491           | 8 727           | 8 973           | 9 227           | 9 480           |
| Availability payment/Additional cash injection | 515 500               | 56 000         | 46 000          | 44 500          | 26 000          | 24 500          | 23 500          | 22 000          | 19 500          | 19 500          | 19 500          | 19 500          | 19 500          | 19 500          | 19 500          |
| <b>Revenues</b>                                | <b>6 882 018</b>      | <b>188 320</b> | <b>182 653</b>  | <b>185 640</b>  | <b>171 783</b>  | <b>175 198</b>  | <b>179 508</b>  | <b>183 600</b>  | <b>186 866</b>  | <b>192 860</b>  | <b>199 119</b>  | <b>205 645</b>  | <b>212 470</b>  | <b>219 515</b>  | <b>226 623</b>  |
| <i>Y-o-y growth in revenues</i>                |                       | 0%             | -3%             | 2%              | -7%             | 2%              | 2%              | 2%              | 2%              | 3%              | 3%              | 3%              | 3%              | 3%              | 3%              |
| <b>EBITDA</b>                                  | <b>1 997 889</b>      | <b>75 698</b>  | <b>66 950</b>   | <b>66 816</b>   | <b>49 879</b>   | <b>50 208</b>   | <b>50 846</b>   | <b>51 206</b>   | <b>50 681</b>   | <b>52 799</b>   | <b>55 056</b>   | <b>60 182</b>   | <b>64 386</b>   | <b>68 721</b>   | <b>70 167</b>   |
| <i>Y-o-y growth in EBITDA</i>                  |                       | 0%             | -12%            | 0%              | -25%            | 1%              | 1%              | 1%              | -1%             | 4%              | 4%              | 9%              | 7%              | 7%              | 2%              |
| <i>EBITDA margin</i>                           |                       | 40%            | 37%             | 36%             | 29%             | 29%             | 28%             | 28%             | 27%             | 27%             | 28%             | 29%             | 30%             | 31%             | 31%             |
| <i>EBITDA margin (excl. availability pmt)</i>  |                       | 15%            | 15%             | 16%             | 16%             | 17%             | 18%             | 18%             | 19%             | 19%             | 20%             | 22%             | 23%             | 25%             | 24%             |
| Cash taxes (income tax)                        | (206 722)             | (7 565)        | (4 943)         | (4 266)         | (2 656)         | (2 531)         | (2 468)         | (2 336)         | (4 094)         | (4 542)         | (4 869)         | (5 987)         | (6 910)         | (7 878)         | (8 228)         |
| Cash flow from change in working capital       | (36 910)              | (13 046)       | (649)           | (629)           | (663)           | (662)           | (888)           | (896)           | (932)           | (911)           | (1 091)         | (1 194)         | (1 316)         | (1 281)         | (1 347)         |
| Adjustment for non-cash items                  | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from operations</b>               | <b>1 754 257</b>      | <b>55 088</b>  | <b>61 358</b>   | <b>61 921</b>   | <b>46 560</b>   | <b>47 014</b>   | <b>47 490</b>   | <b>47 973</b>   | <b>45 655</b>   | <b>47 346</b>   | <b>49 096</b>   | <b>53 001</b>   | <b>56 159</b>   | <b>59 562</b>   | <b>60 591</b>   |
| <i>Y-o-y growth in CFO</i>                     |                       | 0%             | 11%             | 1%              | -25%            | 1%              | 1%              | 1%              | -5%             | 4%              | 4%              | 8%              | 6%              | 6%              | 2%              |
| Initial investment                             | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| MRA creation                                   | (95 780)              | (725)          | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (725)           | (4 706)         | (4 706)         | (4 706)         | (4 706)         |
| Life-cycle investments                         | (95 780)              | -              | -               | -               | -               | -               | -               | -               | -               | -               | (7 248)         | -               | -               | -               | -               |
| MRA release                                    | 95 780                | -              | -               | -               | -               | -               | -               | -               | -               | -               | 7 248           | -               | -               | -               | -               |
| Total yearly capital expenditures              | (598 657)             | (8 385)        | (14 354)        | (14 711)        | (15 073)        | (15 452)        | (15 848)        | (16 256)        | (16 673)        | (17 104)        | (17 545)        | (17 998)        | (18 466)        | (18 953)        | (19 431)        |
| Contingency                                    | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from investing</b>                | <b>(694 438)</b>      | <b>(9 109)</b> | <b>(15 079)</b> | <b>(15 436)</b> | <b>(15 798)</b> | <b>(16 177)</b> | <b>(16 573)</b> | <b>(16 980)</b> | <b>(17 398)</b> | <b>(17 828)</b> | <b>(18 270)</b> | <b>(22 704)</b> | <b>(23 172)</b> | <b>(23 658)</b> | <b>(24 137)</b> |
| Bank fees: total upfront fees                  | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: total commitment fees               | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: maintenance/prolongation fee        | (1 531)               | (82)           | (88)            | (89)            | (65)            | (65)            | (66)            | (67)            | (43)            | (44)            | (45)            | (46)            | (47)            | (49)            | (50)            |
| Construction period: pre-funded DSRA           | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (1)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (2)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (3)      | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (1)                  | (156 567)             | (9 876)        | (9 874)         | (9 874)         | (9 872)         | (9 871)         | (9 869)         | (9 864)         | (9 859)         | (9 518)         | (9 130)         | (8 693)         | (8 253)         | (7 726)         | (7 100)         |
| Interest expense Facility (2)                  | (5 889)               | (1 441)        | (1 248)         | (1 051)         | (850)           | (644)           | (434)           | (219)           | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (3)                  | (483)                 | (241)          | (161)           | (81)            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (RCF)                | (17 079)              | -              | (302)           | (317)           | (332)           | (347)           | (363)           | (383)           | (404)           | (426)           | (447)           | (472)           | (500)           | (530)           | (560)           |
| Interest expense (Overdraft)                   | -                     | -              | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest income on MRA                         | 551                   | -              | 3               | 5               | 8               | 10              | 13              | 16              | 18              | 21              | 23              | -               | 17              | 34              | 51              |
| Interest income on DSRA                        | 1 823                 | 110            | 110             | 110             | 72              | 73              | 73              | 73              | 66              | 69              | 72              | 71              | 77              | 84              | 85              |
| Principal repayment Facility (1)               | (246 897)             | (37)           | -               | (51)            | (29)            | (64)            | (104)           | (137)           | (8 532)         | (9 692)         | (10 929)        | (10 987)        | (13 191)        | (15 631)        | (16 593)        |
| Principal repayment Facility (2)               | (65 582)              | (8 769)        | (8 962)         | (9 159)         | (9 360)         | (9 566)         | (9 776)         | (9 991)         | -               | -               | -               | -               | -               | -               | -               |



## Specific variant

|   |                  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|---|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Principal repayment Facility (3)                      | (30 862)         | (10 208)        | (10 287)        | (10 367)        | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Principal drawdown Facility (RCF)                     | 36 910           | 13 046          | 649             | 629             | 663             | 662             | 888             | 896             | 932             | 911             | 1 091           | 1 194           | 1 316           | 1 281           |
| Principal repayment Facility (RCF)                    | (36 910)         | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from financing</b>                       | <b>(522 515)</b> | <b>(17 497)</b> | <b>(30 162)</b> | <b>(30 245)</b> | <b>(19 765)</b> | <b>(19 813)</b> | <b>(19 638)</b> | <b>(19 677)</b> | <b>(17 821)</b> | <b>(18 678)</b> | <b>(19 364)</b> | <b>(18 933)</b> | <b>(20 581)</b> | <b>(22 537)</b> |
| <b>Cash flow after debt service</b>                   | <b>537 305</b>   | <b>28 482</b>   | <b>16 117</b>   | <b>16 240</b>   | <b>10 997</b>   | <b>11 024</b>   | <b>11 279</b>   | <b>11 316</b>   | <b>10 436</b>   | <b>10 840</b>   | <b>11 462</b>   | <b>11 364</b>   | <b>12 406</b>   | <b>13 367</b>   |
| Transfer from/to DSRA                                 | 30 571           | 38              | (51)            | 10 472          | (34)            | (37)            | (29)            | 1 821           | (818)           | (850)           | 379             | (1 764)         | (1 913)         | (336)           |
| Cash after debt service and DSRA                      | 567 875          | 28 520          | 16 066          | 26 712          | 10 963          | 10 987          | 11 250          | 13 137          | 9 617           | 9 990           | 11 842          | 9 599           | 10 494          | 13 031          |
| Overdraft disbursement                                | -                | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Overdraft repayment                                   | -                | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Cash after debt service, DSRA and overdraft repayment | 567 875          | 28 520          | 16 066          | 26 712          | 10 963          | 10 987          | 11 250          | 13 137          | 9 617           | 9 990           | 11 842          | 9 599           | 10 494          | 13 031          |
| <b>Dividends</b>                                      | <b>567 875</b>   | <b>28 520</b>   | <b>16 066</b>   | <b>26 712</b>   | <b>10 963</b>   | <b>10 987</b>   | <b>11 250</b>   | <b>13 137</b>   | <b>9 617</b>    | <b>9 990</b>    | <b>11 842</b>   | <b>9 599</b>    | <b>10 494</b>   | <b>13 031</b>   |

Source: EY

## Specific variant

### Specific variant – operations period, part 2/2

| <i>Currency: EUR 000</i>                       | FY34F           | FY35F           | FY36F           | FY37F           | FY38F           | FY39F           | FY40F           | FY41F           | FY42F           | FY43F           | FY44F           | FY45F           | FY46F           | FY47F           | FY48F           | FY49F           |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total revenue from health insurance companies  | 178 412         | 184 694         | 188 435         | 192 238         | 196 108         | 199 897         | 203 731         | 207 622         | 211 573         | 215 599         | 219 702         | 223 883         | 228 143         | 232 485         | 236 909         | 241 418         |
| Adjustment to revenues (payment for UH/OHV)    | 26 172          | 27 093          | 27 642          | 28 200          | 28 768          | 29 323          | 29 886          | 30 457          | 31 036          | 31 627          | 32 229          | 32 842          | 33 467          | 34 104          | 34 753          | 35 414          |
| Total revenue from other streams               | 9 731           | 9 990           | 10 192          | 10 398          | 10 607          | 10 812          | 11 019          | 11 230          | 11 443          | 11 661          | 11 883          | 12 109          | 12 340          | 12 574          | 12 814          | 13 058          |
| Availability payment/Additional cash injection | 19 500          | 19 500          | 19 500          | 19 500          | 19 500          | 19 500          | 19 500          | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Revenues</b>                                | <b>233 815</b>  | <b>241 276</b>  | <b>245 769</b>  | <b>250 335</b>  | <b>254 982</b>  | <b>259 532</b>  | <b>264 136</b>  | <b>249 308</b>  | <b>254 052</b>  | <b>258 887</b>  | <b>263 814</b>  | <b>268 834</b>  | <b>273 950</b>  | <b>279 163</b>  | <b>284 476</b>  | <b>289 889</b>  |
| Y-o-y growth in revenues                       | 3%              | 3%              | 2%              | 2%              | 2%              | 2%              | 2%              | -6%             | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              |
| <b>EBITDA</b>                                  | <b>72 863</b>   | <b>75 697</b>   | <b>77 034</b>   | <b>78 373</b>   | <b>79 735</b>   | <b>80 991</b>   | <b>82 246</b>   | <b>63 723</b>   | <b>64 691</b>   | <b>65 949</b>   | <b>67 196</b>   | <b>68 463</b>   | <b>69 787</b>   | <b>71 135</b>   | <b>72 507</b>   | <b>73 903</b>   |
| Y-o-y growth in EBITDA                         | 4%              | 4%              | 2%              | 2%              | 2%              | 2%              | 2%              | -23%            | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              | 2%              |
| EBITDA margin                                  | 31%             | 31%             | 31%             | 31%             | 31%             | 31%             | 31%             | 26%             | 25%             | 25%             | 25%             | 25%             | 25%             | 25%             | 25%             | 25%             |
| EBITDA margin (excl. availability pmt)         | 25%             | 25%             | 25%             | 26%             | 26%             | 26%             | 26%             | 26%             | 25%             | 25%             | 25%             | 25%             | 25%             | 25%             | 25%             | 25%             |
| Cash taxes (income tax)                        | (8 345)         | (9 011)         | (9 500)         | (9 589)         | (9 979)         | (10 246)        | (10 567)        | (6 615)         | (6 734)         | (6 918)         | (7 091)         | (7 956)         | (8 142)         | (8 630)         | (8 824)         | (9 298)         |
| Cash flow from change in working capital       | (1 213)         | (1 262)         | (558)           | (748)           | (669)           | (647)           | (556)           | (759)           | (671)           | (705)           | (613)           | (837)           | (746)           | (760)           | (661)           | -               |
| Adjustment for non-cash items                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from operations</b>               | <b>63 305</b>   | <b>65 424</b>   | <b>66 976</b>   | <b>68 036</b>   | <b>69 086</b>   | <b>70 098</b>   | <b>71 124</b>   | <b>56 349</b>   | <b>57 286</b>   | <b>58 326</b>   | <b>59 491</b>   | <b>59 670</b>   | <b>60 899</b>   | <b>61 745</b>   | <b>63 022</b>   | <b>64 605</b>   |
| Y-o-y growth in CFO                            | 4%              | 3%              | 2%              | 2%              | 2%              | 1%              | 1%              | -21%            | 2%              | 2%              | 2%              | 0%              | 2%              | 1%              | 2%              | 3%              |
| MRA creation                                   | (4 706)         | (4 513)         | (4 513)         | (4 513)         | (6 296)         | (6 296)         | (3 088)         | (8 946)         | (8 946)         | (8 946)         | (8 946)         | -               | -               | -               | -               | -               |
| Life-cycle investments                         | (23 529)        | -               | -               | (13 538)        | -               | (12 593)        | (3 088)         | -               | -               | -               | (35 785)        | -               | -               | -               | -               | -               |
| MRA release                                    | 23 529          | -               | -               | 13 538          | -               | 12 593          | 3 088           | -               | -               | -               | 35 785          | -               | -               | -               | -               | -               |
| Total yearly capital expenditures              | (19 902)        | (20 384)        | (20 877)        | (21 298)        | (21 727)        | (22 147)        | (22 571)        | (23 003)        | (23 440)        | (23 886)        | (24 341)        | (24 804)        | (25 276)        | (25 757)        | (26 247)        | (26 747)        |
| Contingency                                    | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| <b>Cash flow from investing</b>                | <b>(24 607)</b> | <b>(24 897)</b> | <b>(25 390)</b> | <b>(25 811)</b> | <b>(28 023)</b> | <b>(28 443)</b> | <b>(25 660)</b> | <b>(31 949)</b> | <b>(32 387)</b> | <b>(32 833)</b> | <b>(33 287)</b> | <b>(24 804)</b> | <b>(25 276)</b> | <b>(25 757)</b> | <b>(26 247)</b> | <b>(26 747)</b> |
| Bank fees: total upfront fees                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: total commitment fees               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Bank fees: maintenance/prolongation fee        | (51)            | (52)            | (53)            | (54)            | (55)            | (55)            | (56)            | (32)            | (32)            | (33)            | (34)            | (34)            | (35)            | (36)            | (37)            | (37)            |
| Construction period: pre-funded DSRA           | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (1)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (2)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest during construction Facility (3)      | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (1)                  | (6 437)         | (5 688)         | (4 862)         | (3 975)         | (3 037)         | (2 093)         | (1 095)         | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (2)                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (3)                  | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest expense Facility (RCF)                | (591)           | (619)           | (648)           | (661)           | (679)           | (694)           | (709)           | (722)           | (740)           | (755)           | (771)           | (786)           | (805)           | (822)           | (840)           | (855)           |
| Interest expense (Overdraft)                   | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Interest income on MRA                         | 68              | -               | 16              | 32              | -               | 23              | -               | -               | 32              | 64              | 97              | -               | -               | -               | -               | -               |
| Interest income on DSRA                        | 91              | 95              | 97              | 99              | 96              | 97              | 103             | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Principal repayment Facility (1)               | (18 720)        | (20 658)        | (22 161)        | (23 460)        | (23 606)        | (24 928)        | (27 387)        | -               | -               | -               | -               | -               | -               | -               | -               | -               |
| Principal repayment Facility (2)               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               |

## Specific variant

|   |                 |                 |                 |                 |                 |                 |                 |               |               |               |               |               |               |               |               |                 |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| Principal repayment Facility (3)                      | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Principal drawdown Facility (RCF)                     | 1 213           | 1 262           | 558             | 748             | 669             | 647             | 556             | 759           | 671           | 705           | 613           | 837           | 746           | 760           | 661           | -               |
| Principal repayment Facility (RCF)                    | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | (36 910)        |
| <b>Cash flow from financing</b>                       | <b>(24 427)</b> | <b>(25 661)</b> | <b>(27 052)</b> | <b>(27 271)</b> | <b>(26 611)</b> | <b>(27 003)</b> | <b>(28 589)</b> | <b>6</b>      | <b>(69)</b>   | <b>(19)</b>   | <b>(95)</b>   | <b>17</b>     | <b>(94)</b>   | <b>(98)</b>   | <b>(215)</b>  | <b>(37 802)</b> |
| <b>Cash flow after debt service</b>                   | <b>14 270</b>   | <b>14 866</b>   | <b>14 534</b>   | <b>14 954</b>   | <b>14 452</b>   | <b>14 652</b>   | <b>16 875</b>   | <b>24 406</b> | <b>24 831</b> | <b>25 475</b> | <b>26 109</b> | <b>34 883</b> | <b>35 528</b> | <b>35 889</b> | <b>36 559</b> | <b>56</b>       |
| Transfer from/to DSRA                                 | (1 190)         | (676)           | (412)           | 792             | (378)           | (1 462)         | 28 482          | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Cash after debt service and DSRA                      | 13 080          | 14 190          | 14 121          | 15 747          | 14 074          | 13 190          | 45 357          | 24 406        | 24 831        | 25 475        | 26 109        | 34 883        | 35 528        | 35 889        | 36 559        | 56              |
| Overdraft disbursement                                | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Overdraft repayment                                   | -               | -               | -               | -               | -               | -               | -               | -             | -             | -             | -             | -             | -             | -             | -             | -               |
| Cash after debt service, DSRA and overdraft repayment | 13 080          | 14 190          | 14 121          | 15 747          | 14 074          | 13 190          | 45 357          | 24 406        | 24 831        | 25 475        | 26 109        | 34 883        | 35 528        | 35 889        | 36 559        | 56              |
| <b>Dividends</b>                                      | <b>13 080</b>   | <b>14 190</b>   | <b>14 121</b>   | <b>15 747</b>   | <b>14 074</b>   | <b>13 190</b>   | <b>45 357</b>   | <b>24 406</b> | <b>24 831</b> | <b>25 475</b> | <b>26 109</b> | <b>34 883</b> | <b>35 528</b> | <b>35 889</b> | <b>36 559</b> | <b>56</b>       |

Source: EY

## Abbreviations

---

### 1. Abbreviations

## Abbreviations

|  |   |
|--|---|
| £  | Pound sterling  |
| 1QxxA  | First quarter in year 20xx, Actual  |
| Aalto  | Aalto University  |
| ACSC   | Ambulatory care sensitive conditions  |
| Act on Budgetary Rules of Public Government                | Act No. 523/2004 on the budgetary rules of the public government and on amending and supplementing certain other acts   |
| Act on Budgetary Rules of Territorial Self-Government      | Act No. 583/2004 Coll. on budgetary rules of territorial self-government and on amending and supplementing certain other acts   |
| Act on Colleges  | Act No. 131/2002 Coll. on colleges and on amending and supplementing other acts, as amended   |
| Act on Competition Protection                              | Act No. 136/2001 Coll. on the protection of competition and on amending and supplementing Slovak National Council Act No. 347/1990 Coll. on the organisation of ministries and other central state agencies of the Slovak Republic as amended |
| Act on Economic Mobilisation                               | Act No. 174/2011 Coll. on economic mobilisation and on amending and supplementing Act No. 387/2002 Coll. on the governance of state in times of crisis outside of war or warfare, as amended  |
| Act on Health Care   | Act No. 576/2004 Coll. on health care and on amending and supplementing other acts, as amended  |
| Act on Health Care Providers                               | Act No. 578/2004 Coll. on the providers of health care, medical staff, professional organisations in the health sector and on amending and supplementing other acts   |
| Act on Health Insurance                                    | Act No. 580/2004 Coll. on the providers of health care, medical staff, professional organisations in the health sector and on amending and supplementing other acts   |
| Act on Health Insurance Companies                          | Act No. 581/2004 Coll. on health insurance companies, health care supervision and on amending and supplementing other acts, as amended  |
| Act on State Property Administration                       | Act No. 278/1993 Coll. on the administration of state property as amended   |
| Act on State Security at Times of War                      | Act No. 227/2002 Coll. on state security at times of war, warfare, crisis and emergency state, as amended   |
| Act on the Provision of Subsidies in the Competence of MoH | Act No. 525/2010 Coll. on the provision of subsidies in the competence of the Ministry of Health of the Slovak Republic as amended  |
| Advisers   | Ernst & Young Financial Advisory, s.r.o., Ružička Csekes, s.r.o., Netherlands Organisation for Applied Scientific Research TNO, Aalto University, Imperial College Business School, CMS Cameron McKenna LLP                                   |
| AFM  | Abstract functional model   |
| Agreement on Practical Training                            | Any agreement entered into pursuant to Section 35 (1) of Act on Colleges and Section 16 of MOH Regulation No. 770/2004 Coll. providing for specific elements of particular health care facilities   |
| ALOS   | Average length of stay  |
| Availability payment                                       | Payment to Private partner from Public sector   |
| Bankruptcy Act   | Act No. 7/2005 Coll. on bankruptcy and restructuring and on amending and supplementing other acts, as amended   |

## Abbreviations

|   |   |
|---|---|
| <b>BioMedPark</b>                                       | The Biomedical, education and research park as defined in the document styled “Report on the Investment into urgent care provided in inpatient health care facilities in Slovakia and the plan to build a new hospital in Bratislava” approved by the Slovak government on 3 July 2013. |
| <b>Botzen case</b>                                      | Arie Botzen and others v Rotterdamsche Droogdok Maatschappij BV. - Case 186/83, judgment of the Court of Justice of the European Union of 7 February 1985   |
| <b>BSK</b>  | Bratislava self-governing region  |
| <b>Building Act</b>                                     | Act No. 50/1976 Coll. on zoning and planning and the building code (Building Act) as amended  |
| <b>c.</b>   | Circa   |
| <b>CAGR</b>   | Compound Annual Growth Rate   |
| <b>CAIM</b>   | Clinic of Anaesthesiology and Intensive Care  |
| <b>CapEx</b>  | Capital expenditure   |
| <b>CBA</b>  | Cost benefit analysis   |
| <b>CC</b>   | Constitutional Court of the Slovak Republic   |
| <b>CEB</b>  | Council of Europe Development Bank  |
| <b>CFF</b>  | Cash flows from financial activities  |
| <b>CFI</b>  | Cash flows from investment activities   |
| <b>CFO</b>  | Cash flows from operation   |
| <b>Civil Code</b>                                       | Act No. 40/1964 Coll. Civil Code as amended   |
| <b>Client / MOH SR</b>                                  | Ministry of Health of the Slovak Republic   |
| <b>CMS</b>  | CMS Cameron McKenna LLP   |
| <b>Commercial Code</b>                                  | Act No. 513/1991 Coll. Commercial Code as amended   |
| <b>Commission</b>                                       | The European Commission   |
| <b>Consortium</b>                                       | The consortium of Ernst & Young Financial Advisory, s.r.o. and Ružička Csekes, s.r.o.   |
| <b>Constitutional Act on Budgetary Responsibilities</b> | Constitutional Act No. 493/2011 Coll. on budgetary responsibilities   |
| <b>CPPP</b>   | Contractual public-private partnership  |
| <b>CT</b>   | Computed tomography   |
| <b>DecxxA / Dec 20xx</b>                                | December xx Actual / December 20xx  |
| <b>Directive 2004/17/EC</b>                             | Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors   |
| <b>Directive 2004/18/EC</b>                             | Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts   |
| <b>Directive 2014/23/EU</b>                             | Directive no. 2014/23/EU of the European Parliament and of the Council of 26 February 2014 on the award of concession contracts   |
| <b>Directive 2014/24/EU</b>                             | Directive of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC  |

## Abbreviations

|   |   |
|---|---|
| <b>Do minimum</b>                               | Variant of modification of the current UNB based on the minimum investment in CapEx in UNB  |
| <b>Do nothing</b>                               | Variant considered as the current state of UNB (status quo)   |
| <b>DRG</b>                                      | Diagnoses Related Groups  |
| <b>DSCR</b>                                     | Debt service cover ratio  |
| <b>DSRA</b>                                     | Debt Service Reserve Account  |
| <b>EBITDA</b>                                   | Earnings before Interest, Tax, Depreciation and Amortization  |
| <b>ECJ</b>                                      | The Court of Justice of the European Union  |
| <b>EIA</b>                                      | Environmental Impact Assessment   |
| <b>EIA Act</b>                                  | Act No. 24/2006 Coll. on the environmental impact assessment and on amending and supplementing other acts, as amended   |
| <b>EIB</b>                                      | European Investment Bank  |
| <b>EK / Komisia</b>                             | European Commission   |
| <b>Enforcement Code</b>                         | Act No. 233/1995 on bailiffs and enforcement proceedings ("Enforcement Code") and on amending and supplementing other acts, as amended  |
| <b>EPBD</b>                                     | Energy Performance Buildings Directive  |
| <b>ESA 10</b>                                   | The European System of National and Regional Accounts (ESA 2010) introduced by way of Regulation (EU) 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts in the European Union, introducing the ESA 2010 European System of National and Regional Accounts system |
| <b>EÚ</b>                                       | European Union  |
| <b>EUL</b>                                      | Economic useful life  |
| <b>EUR</b>                                      | EURO  |
| <b>EY</b>                                       | Ernst & Young Financial Advisory, s.r.o.  |
| <b>FCFF</b>                                     | Total cash flow of nUNB   |
| <b>FRO</b>                                      | Department of Physiotherapy and Rehabilitation  |
| <b>FTE</b>                                      | Full-time employee  |
| <b>FYxxA / F</b>                                | Financial year xx, Actual / Forecast  |
| <b>GDP</b>                                      | Gross domestic product  |
| <b>Government Regulation on Minimal Network</b> | Government regulation No. 640/2008 Coll. on minimal network of public health care providers   |
| <b>Government SR</b>                            | Government of the Slovak Republic   |
| <b>GPA</b>                                      | The Agreement on Government Procurement of the World Trade Organization   |
| <b>HCSA</b>                                     | Health Care Surveillance Authority  |
| <b>HIC</b>                                      | Health Insurance Company  |
| <b>HM</b>                                       | Fixed assets  |
| <b>IC BS</b>                                    | Imperial College Business School  |
| <b>ICR</b>                                      | Intensive care unit   |

## Abbreviations

|   |  |
|---|--|
| ICRU  | Intensive care and resuscitation unit  |
| ICT   | Information and Communication Technologies   |
| Investment loan 1   | Loans on buildings   |
| Investment loan 2   | Loans on equipment   |
| Investment loan 3   | Loan granted to cover expenses and ICT   |
| IPPP  | Institutional public-private partnership   |
| IPPP Interpretative Communication   | Commission interpretative communication on the application of Community law on Public Procurement and Concessions to institutionalised PPP (IPPP) No. 2008/C 91/02 |
| IRS   | Interest rate swap   |
| JV  | Joint venture  |
| JZS /DCL  | One-day care   |
| k   | thousand   |
| KPI   | Key performance indicator  |
| Kr  | Kramáre  |
| L   | Leverage   |
| LOZ   | Medical industry association   |
| m / mil.  | million  |
| Management  | Management of UNB  |
| MCA   | Multi-criteria analysis  |
| MoF   | Ministry of Finance of the Slovak Republic   |
| MoH regulation providing for specific elements of particular health care facilities | Regulation of Ministry of Health No. 770/2004 Coll. on specific elements of particular health care facilities  |
| Mol   | Ministry of Interior of the Slovak Republic  |
| MR  | Magnetic resonance   |
| MRA   | Maintenance reserved account   |
| MV SR   | Ministry of Interior of the Slovak Republic  |
| n/a   | Not applicable   |
| n/d   | Not delivered  |
| NBTS  | National Blood Transfusion Service   |
| NC / NR SR  | National Council of the Slovak Republic  |
| NCZI / NCHI   | National Health Information Center   |
| ND  | Net Debt   |
| NDS   | National Motorway Company  |
| New hospital  | Variant of modification of the current UNB based on construction of new hospital and replacement of the current health infrastructure                              |
| NPV   | Net Present Value  |
| NSM   | Nemocnica svätého Michala, a.s.  |
| nUNB  | New UNB  |



## Abbreviations

|                               |  |
|-------------------------------|--|
| <b>OHV</b>                    | Separately reimbursed performance  |
| <b>OpEx</b>                   | Operating Expense  |
| <b>OPP</b>                    | Office for Public Procurement  |
| <b>ORL</b>                    | Otorhinolaryngology  |
| <b>OZSaPA</b>                 | Trade association of nurses and midwives   |
| <b>p.l.</b>                   | Price level  |
| <b>p.p.</b>                   | Percentage point   |
| <b>PB</b>                     | Podunajské Biskupice   |
| <b>Pe</b>                     | Petržalka  |
| <b>PFI</b>                    | Private finance initiative (PPP)   |
| <b>PHA</b>                    | Public Health authority of the Slovak Republic   |
| <b>PP</b>                     | Private partner  |
| <b>PPP</b>                    | Public-private partnership   |
| <b>Private operator</b>       | Private operating operator   |
| <b>Project</b>                | MoH's intent consisting in the construction, operation and maintenance of nUNB with ties to related education and research facilities  |
| <b>PS</b>                     | Public sector  |
| <b>PSC</b>                    | Public procurement   |
| <b>PSDR</b>                   | Public sector discount rate  |
| <b>Public Procurement Act</b> | Act No. 25/2006 Coll. on public procurement and on amending and supplementing other acts, as amended   |
| <b>RC CMS</b>                 | Ružička Csekes, s.r.o.   |
| <b>RCF</b>                    | Revolving credit facility  |
| <b>Real Estate</b>            | Land and Buildings owned by NSM as per the specification in "Assessment of legal consequences of Project implementation in terms of building regulations (in particular planning, permits and approvals of competent authorities, EIA, and conservation of historical buildings) |
| <b>Refurbishment</b>          | Variant of modification of the current UNB based on significant investment in upgrading of existing hospitals  |
| <b>Retained risks</b>         | Risks that should be retained in the public sector   |
| <b>RKZ</b>                    | Negotiated procedure with publication  |
| <b>RTG</b>                    | Röntgen  |
| <b>Ru</b>                     | Ružinov  |
| <b>SAS</b>                    | Slovak Academy of Sciences   |
| <b>ŠAS</b>                    | Specialized outpatient care  |
| <b>ŠGN</b>                    | Specialized geriatric hospital   |
| <b>SIDC</b>                   | The State Institute for Drug Control   |
| <b>Slovak Constitution</b>    | The constitution of the Slovak Republic No. 460/1992 Coll. as amended  |
| <b>Slovak Government</b>      | The government of the Slovak Republic  |
| <b>SM</b>                     | Staré Mesto  |

## Abbreviations

|  |   |
|--|---|
| <b>SOZZaSS</b>                         | Slovak Trade Union of Health and Social Services  |
| <b>Specific variant</b>                | Model of the public contracts series awarded by a company with 100% state participation in the partial use of state-owned financial assets  |
| <b>Spijkers case</b>                   | Jozef Marian Antonius Spijkers v Gebroeders Benedik Abbatoir CV et Alfred Benedik en Zonen BV. – case 24/85, judgement of the Court of Justice of the European Union (Fifth chamber) of 18 March 1986 |
| <b>SPP</b>                             | Slovenský plynárenský priemysel   |
| <b>SPV</b>                             | Special purpose vehicle   |
| <b>ŠR / SB</b>                         | State budget  |
| <b>SROI</b>                            | Social return on investment   |
| <b>SSHI</b>                            | Social security and health insurance  |
| <b>STU</b>                             | Slovak University of Technology   |
| <b>Study</b>                           | Feasibility Study   |
| <b>SVLZ</b>                            | Diagnostic examinations   |
| <b>ŠZM</b>                             | Special medical material  |
| <b>SZU</b>                             | Slovak Medical University in Bratislava   |
| <b>TFEU</b>                            | Treaty on the Functioning of the European Union   |
| <b>TNO</b>                             | Nederlandse Organisatie voor toegepast-natuurwetenschappelijk onderzoek TNO   |
| <b>Transferred risks</b>               | Risks that should be transferred to the private partner   |
| <b>u/q</b>                             | Unquantified  |
| <b>UH</b>                              | Inpatient care  |
| <b>UK</b>                              | Comenius University in Bratislava   |
| <b>UNB</b>                             | University Hospital Bratislava  |
| <b>UNB3</b>                            | Hospitals Staré Mesto, Kramáre and Ružinov  |
| <b>Variant A / Current profile</b>     | Maintaining the current production profile in Petržalka   |
| <b>Variant B / The revised profile</b> | Review of functional profile in Petržalka in order to resemble a regional hospital  |
| <b>VAT</b>                             | Value added tax   |
| <b>VšZP</b>                            | Všeobecná zdravotná poisťovňa   |
| <b>VÚC</b>                             | Higher Territorial Unit   |
| <b>WTO</b>                             | World Trade Organization  |
| <b>ŽSR</b>                             | Railways of the Slovak Republic   |
| <b>ŽSSK</b>                            | Železničná spoločnosť, a.s.   |

**EY** | Assurance | Tax | Transactions | Advisory

**About EY**

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. For more information about our organization, please visit [ey.com](http://ey.com).

© 2014 EYGM Limited.  
All Rights Reserved.