Wiener Krankenanstaltenverbund (Vienna Hospital Association) is planning to introduce a new type of municipal hospital in North Vienna. The concept behind this project is based on the model of an integrated health centre, which will bring together the facilities of other Krankenanstaltenverbund hospitals and pursue a concept of co-operation between facilities involved in health promotion.

The new Vienna North Hospital is intended to instigate processes that will engender economic forms of operation based on modern concepts of organisation. Such a facility moves away from conventional hospital structures and adjusts to the systems of a modern communicative society. The focus is no longer merely on individual specialised departments but rather on the hospital as an economic entity. This approach ensures that the patient is seen as a multi-disciplinary client who is taken care of by a number of different departments and centres. This will be achieved by networking, process orientation and a deliberate focus on the provision of efficient care for the individual patient.

The basis of this concept is the definition of a Spatial and Functional Programme predicated on future services and structures. The documents entitled *Explanations of the Spatial and Functional Programme from the Perspective of Hospital Organisation* and the *Spatial and Functional Programme* illustrate the optimal architectural and functional configuration of this new concept.

Dr. Wilhelm Marhold
Director General
Wiener Krankenanstaltenverbund
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2. The site for the new hospital
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   Development of day hospital services
   Initial care, observation, admission
   Care of outpatients
   Stationary care
   Central operating unit
   Centralised diagnostics and treatment
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1. Location within the City

The project area which is the subject of the Competition is located at the address Brünner Straße 68 – 70 in Vienna’s 21st district.

The zone that is site for the hospital is bounded by Brünner Straße (B7; E461) to the west, the Floridsdorf elevated railway and Martha-Steffy-Browne-Gasse (currently a cul-de-sac providing access to the premises) to the north, the adjacent ÖBB premises and railway to the east, and the elevated municipal railway route (S3 and R10 railroad embankments) to the southwest.
2. The Site for the New Hospital

The site on which the new hospital – which is the subject of the Competition - will be located has an area of approximately 122,000 m² and can be regarded as level.

The premises are currently used by Austrian Federal Railways (ÖBB).

As a consequence of the restructuring of ÖBB, the Federal Railways will vacate the site, thus making it available for the purposes of a new hospital development.

For the purpose of the Competition, the site shall be regarded as “cleared” in every respect.

The urban environment of this location is characterised by large-scale industrial facilities.

The respective Brünner Straße area lies between the Floridsdorfer Spitz area to the south and the relatively new “Brünner Straße” residential development, which today marks the city’s northern periphery.
3. Objectives of the Competition

**Competition Stage_1**

The content of Competition Stage_1 encompasses the fundamental architectural concept based on the existing Spatial and Functional Programme as well as all important supplementary Competition documents, and the integration of the new building in the respective area with due consideration of the municipal environment and attention to free areas.

Innovative and functionally substantiated design proposals for the uses described in this Task are expected.

**Competition Stage_2**

The following requirements are indicated by way of example in relation to Competition Stage_2. Following the completion of Competition Stage_1 the content will be defined more precisely, with the Stage_2 participants being accordingly provided with information at the beginning of Stage_2.

Detailed proof as to the feasibility of the project in accordance with specifications, together with a comprehensive demonstration as to the plausibility of the overall concept.

Detailed proof of compliance with the Spatial and Functional Programme.

Proof of construction costs is anticipated in submissions.
Conventional department structures are only capable of meeting the complex requirements of a patient-centred service orientation to a limited extent. The increasing specialisation of medicine leads to ever smaller organisational units (departments), which results in the provision of more medical technology, a larger inventory of equipment, greater spatial requirements and increases in the numbers of staff. At the same time there exists the danger of a fragmentation of processes and structures, which in turn results in increased operational costs. Such a development may be countered by establishing multidisciplinary centres at which related departments and disciplines work together in accordance with clearly defined (organisational) standards.

In view of the highly dynamic nature of the work of such a hospital, as well as to ensure future sustainability, the requirements as to the future flexibility of the structural concept shall, necessarily, be high. These requirements encompass:

- the creation of modular units (primarily in the sphere of care functions such as ICU, IMC, care and low-care units as well as day hospital functions should be interchangeable)
- micro-expandability of structures
- macro-expandability of structures
- good access to large medical technology equipment in order to facilitate future equipment swapping.

Major access routes have proved useful in hospital organisation. If it makes sense from the architectural viewpoint, it would also be advantageous to plan ancillary access routes, e.g. for the transportation of injured people.

**Services and Structures**

**Departments with beds**

The Vienna North Hospital shall comprise 869 beds. It shall be designed for a capacity of approximately 40,000 stationary admissions and 250,000 outpatients per annum (of which 40,000 will be provided with initial care). The number of operative interventions to be carried out annually shall amount to some 16,000. The average stay at the hospital shall be reduced to a reasonable minimum, whereby the hospital seeks to have a high share of day hospital patients on the one hand, while in certain areas longer stays have to be anticipated due to the hospital's specialisation (in particular cardiac surgery, thoracic surgery, pulmology, orthopaedics, psychiatry as well as paediatric and youth psychiatry).

Performance figures are summarised in the following Table.
The following departments will be established at the Vienna North Hospital:

<table>
<thead>
<tr>
<th>Department</th>
<th>Stationary</th>
<th>Day Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>General internal medicine relocated from Floridsdorf Hospital</td>
<td>60 4,700</td>
<td>3,400 73 4,140 2 560 10,000</td>
</tr>
<tr>
<td>Cardiology relocated from Hietzing Hospital</td>
<td>67 4,000</td>
<td>600 65 3,800 1 260 10,000</td>
</tr>
<tr>
<td>Internal Medicine – total</td>
<td>147 6,100</td>
<td>4,000 144 7,940 3 760 20,000</td>
</tr>
<tr>
<td>General surgery relocated from Floridsdorf Hospital</td>
<td>61 4,250</td>
<td>2,300 58 3,610 3 640 12,000</td>
</tr>
<tr>
<td>Cardiovascular surgery relocated from Hietzing Hospital</td>
<td>86 2,900</td>
<td>100 85 2,510 1 230 10,000</td>
</tr>
<tr>
<td>Thoracic surgery relocated from Otto-Wagner Hospital</td>
<td>50 610</td>
<td>610 29 760 1 90 3,500</td>
</tr>
<tr>
<td>Surgery – total</td>
<td>157 6,000</td>
<td>2,400 152 5,980 5 1,020 7,300 25,500</td>
</tr>
<tr>
<td>Accident surgery</td>
<td>50 5,190</td>
<td>700 49 5,190 2 440 2,700 33,500</td>
</tr>
<tr>
<td>Orthopaedics</td>
<td>112 4,100</td>
<td>410 110 3,480 2 620 3,500 18,000</td>
</tr>
<tr>
<td>Gynaecology &amp; obstetrics</td>
<td>50 4,500</td>
<td>400 44 3,220 8 1,380 2,900 40,000</td>
</tr>
<tr>
<td>Paediatrics and medicine f. you</td>
<td>50 1,150</td>
<td>20 950 170 17,000</td>
</tr>
<tr>
<td>Pulmology relocated from Otto-Wagner Hospital</td>
<td>50 3,600</td>
<td>400 50 2,880 3 720 15,000</td>
</tr>
<tr>
<td>Neurology relocated from Otto-Wagner Hospital</td>
<td>79 1,500</td>
<td>400 77 1,170 1 80 5,000</td>
</tr>
<tr>
<td>Psychiatry relocated from Otto-Wagner Hospital</td>
<td>50 6,880</td>
<td>40 1,280 10 2,200 10,000</td>
</tr>
<tr>
<td>Children and youth psychiatry</td>
<td>28 1,900</td>
<td>24 1,000 4 900 7,000</td>
</tr>
<tr>
<td>Anaesthesiology</td>
<td>8,000</td>
<td></td>
</tr>
<tr>
<td>Monitoring (IMC)</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Intensive medicine (IMC)</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Initial care</td>
<td>52</td>
<td>(9,300) 22</td>
</tr>
<tr>
<td>Vienna North Hospital – total</td>
<td>869 38,500</td>
<td>8,300 833 31,510 38 16,100 250,000</td>
</tr>
<tr>
<td>Multidisciplinary single day clinic</td>
<td>20 4,500</td>
<td>2,000</td>
</tr>
</tbody>
</table>

The day clinic delivery (3 places) takes place in the delivery unit, while gynaecological interventions are carried out in the multi-disciplinary sin.

1) The day clinic delivery (3 places) takes place in the delivery unit, while gynaecological interventions are carried out in the multi-disciplinary sin.

2) combined from various locations
The following institutes will be established at the Vienna North Hospital:

- radiology, including diagnostic imaging
- laboratory
- pathology
- physical medicine

It is also planned to operate a pharmacy on the hospital premises.

3.2 Patient Orientation

In structural and organisational terms, patient orientation shall be based on the following measures:

- Doctor visits the patient
- Clear competence and patient control (in particular through control centres)
- Transparency of processes
- High quality service
- Some single rooms but predominantly double rooms
- Clear routing system with clear orientation aids for all patients
- Reduction of waiting periods and idle time
- Administrative processes take a back seat

3.3 Principles of Process Orientation

Process orientation aims to focus on adding value for the patients by placing it at the centre of the organisation. This objective will be achieved by adjusting the functional and/or professional group-related individual tasks to one another along the patient flow and by organising them as standardised processes that optimise both continuity and patient security. Basically, these processes may be divided into three principal groups:

1. Primary processes: These are aimed at improving patient health (e.g. initial care) and as such reflect the direct relationship between doctors and patients.
2. Secondary processes: These provide immediate support to primary processes (e.g. diagnostics/treatment).
3. Tertiary processes: These support the overall function of the organisation by facilitating the successful implementation of primary and secondary process provision (e.g. facility management).

The following process model illustrates the major process groups for the Vienna North Hospital.
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admission process
initial care
observation
admission

provision of services for
outpatients
examination process

stationary care
provision of care process

Operations
centralised provision of operating services

management
Aufnahme-Prozess
Erstversorgung
Beobachtung
Aufnahme

OP Prozess
Zentrale
OP Versorgung

Diagnostik und
Behandlung
Ambulante
Versorgung
Begutachtungs-
prozess

stationary care
provision of care process

Information and Commu-
nikationstechnologie

Information and Communication Technology

Stadt+Wien
Wien ist anders.
3.3.1 Separation of Scheduled and Unscheduled Patients

A key approach in optimising operational flows is the strict separation of scheduled and unscheduled patients. This separation will ensure that scheduled appointments will be kept and services delivered to the patient, while at the same time all staff and infrastructure resources will be used efficiently.

Suitable measures shall ensure that the proportion of scheduled services will be increased. It should also, for example, become possible for doctors to assign patients and set appointments in outpatients’ departments electronically. The condition of unscheduled patients will be clarified in the initial care stage to such an extent that they can be further treated as scheduled patients in the clinical path.

3.3.2 Integration of the Vienna North Hospital in a Care Environment

Within the framework of a process-oriented organisation integration of the Vienna North Hospital into a care environment is another important objective. In this context the interface between patient admission (outpatients’ department and stationary care) and patient discharge shall be organised through the application of appropriate concepts (admission management, triage concept, check-in/check-out process, dismissal management) to ensure quality and efficiency.

A Medical Centre for Outpatients should serve as an external partner and provide extramural care in the immediate vicinity of the hospital. In this way it shall be ensured that the patients receive quality-oriented and efficient care in the appropriate delivery stage.

3.3.3 Development of Day Hospital Services

Over recent years, sophisticated diagnostic and treatment options have resulted in a clear shift of services to the provision of day hospital services. Through establishing optimal structures and processes, the Vienna North Hospital is to be in the vanguard of this development in Austria’s public healthcare facilities. An important prerequisite for this shall be the creation of a central day hospital unit which on account of its special equipment and specific service functions will be extremely convenient to the patient. As a consequence of special processes it will be possible to accelerate the preparation and aftercare of patients in instances of a diagnostic or therapeutic intervention. As a result, patients will experience a high degree of safety and satisfaction.

3.3.4 Initial Care, Observation, Admission

The initial care centre comprises services such as initial care, observation and admission. The concept of an Initial Care Centre is described in Illustration 2:
The Initial Care Centre will comprise the following functions:

- triage (decreasing priority from I to IV) upon admission of the patient; this involves prioritisation on the basis of the severity of their condition
- clarification of the condition of unscheduled patients
- (initial) care
- possibility to observe patients
- observation and admission unit, followed by the dismissal or controlled relocation of the patient to stationary care
- networking with extramural stand-by duty and practice-based doctors
- liaison with the Medical Centre for Outpatients.

The optimisation of the care of unscheduled patients shall be ensured through a swift clarification of their condition as well as target-oriented stationary admissions (assignment by clinical path).

Specialist fields such as obstetrics, paediatrics, medicine for young people, psychiatry and psychiatry for children and young people will not be covered by the initial care centre.

### 3.3.5 Care of Outpatients

The central outpatients’ area comprises all specialised outpatients’ departments (except those for paediatrics and medicine for young persons, psychiatry, psychiatry for children and young persons). The objective is to create a
spatially segmented area that can be used in a flexible manner.

In these special fields outpatient departments will be located in the close proximity of stationary care in order to accommodate the special needs of these patient groups.

At the current stage of planning the following principles apply to specialised outpatients’ departments:

- Outpatients shall have appointments (unscheduled patients are taken care of at the Initial Care Centre)
- Concentration of examination and treatment rooms
- Patient allocation through control centres
- Central capacity and time management

3.3.6 Stationary Care

Within the clinical centres (see Chapter 2.3.13), bed occupancy rates are controlled via a central occupancy and bed management system. Bed capacities shall be established on annual systematised average, which corresponds to the maximum number of such beds for inpatients.

The Progressive Care model, which differentiates between the following stages, ensures that care is offered in accordance with patient need:

- Intensive care unit (ICU)
- Monitoring (IMC) and stroke unit
- Ordinary care units
- Low-care units
- Day hospital

In addition, the following special care units will also be established:

- Obstetrics (maternity wards)
- Paediatrics and medicine for young people
- Neuro-rehabilitation
- Psychiatry
- Psychiatry for children and young people
- Psychic trauma

Inpatient allocation shall be undertaken by control centres.

3.3.7 Central Operating Unit

Save for the operating theatre for caesarean sections, the Operating Centre shall combine all operative functions at one central location (as a consequence of both the technical and legal framework, no intervention rooms are envisaged in the outpatients’ area). The following framework conditions shall be created for this purpose:

- central operating unit management
- multi-disciplinary use of operating theatres
- efficient operating unit logistics with just-in-time provision and minimised storage requirements within the centre itself
- Optimised use of the operating centre
  - opening hours Mon-Fri 8 am to 6 pm for elective interventions
  - optimised relocation times
  - targeted emergency management without the dedicated provision of an operating theatre facility for emergencies
The provision of operating theatre services will be organised by the control bodies in this sector.

3.3.8 Central Diagnostics and Treatment
The diagnostic facilities will be organised as institutes which provide initial care services, care for outpatients, the operating unit and the stationary sector. There exists the possibility that services may also be provided for external clients. The following institutes are envisaged:
- radiology, including diagnostic imaging
- laboratory (centralised laboratory with decentralised laboratory facilities for acute cases in the intensive care and initial treatment areas)
- pathology (histopathology, microbiology and pathology)

With the exception of angiography equipment at the operating centre, endoscopy and (coronary) angiography will be centralised spatially and organisationally (hybrid operating centre) and utilised by the respective disciplines.

A central institute will be established for physical medicine. In addition, decentralised therapy options are also envisaged (bedside or within specific rooms).

3.3.9 Principles of Centre Structure
As regards the centre structure a differentiation is made between functional centres (e.g. the Initial Care Centre and the Operating Centre) and clinical centres (which constitute clusters of subjects, integrating both inpatients and outpatients). The ultimate responsibility of the individual department heads is not affected by this structure.

The objective of centre structuring is to concentrate the organisational structure into process groups in a manner which is both reasonable and supportive of patient orientation. Primary processes are concentrated in such a manner as to ensure the possibility of organising the stay of patients within essential diagnostic and therapy groups (see Figure 3) within one centre. For this reason, bed capacities in specialised outpatients’ departments which accept patients who have appointments as well as at the respective clinical centre are combined.
It is basically assumed that the Vienna North Hospital will feature 4 to 6 clinical centres (the above centre structure constitutes a proposal). The final decision - (in particular as to the number of clinical centres and the allocation of disciplines to them) - will be made at a later date consequent to the integration of future users. As this decision cannot be made at the present time, and centre allocations may also be changed during the operation of the hospital, it is necessary to allow for maximum flexibility in terms of structure.

Process for the major patient groups will be both standardised and concentrated within the clinical centre (see Figure 4). The services offered by other centres (the Operating Centre as well as Diagnostics and Therapy) and/or facility management, administration and ICT processes, may be accessed via standardised interfaces controlled by explicit service agreements.
3.4 Facility Management

Facility Management pursues the following objectives:

- Process and consumption optimisation (optimised inventory, process control, automation, separate routing, etc.)
- Rendering of some services to other hospitals and geriatric centres
- Relieving professional groups working in the provision of core services from the burden of logistical and administrative tasks
- Relieving hospital management from the burden of operative control of logistics processes
- Most facility management functions will be concentrated at a supply and logistics centre (KAV Service Centre).

3.5 Information and Communications Technology (ICT)

In developing a hospital it is necessary to take into account the rapidly evolving ICT applications in medical technology, and accordingly facilitate an appropriate degree of flexibility and adaptability in this area.

The ICT objectives at the Vienna North Hospital include:

- High mobility (primarily as regards the availability of data and the triggering of service requirements)
- Optimal support to a process-oriented multidisciplinary operational organisation
  - illustration of process-oriented responsibilities and workflows
  - support in the patient allocation process
- Electronic communication with doctors who have established their own offices (e-Health), both in the field of medicine (e.g. the exchange of findings) and organisation (e.g. making appointments online)
- Use of telemedicine
- Comprehensive implementation of patient entertainment systems
4. Urbanistic Requirements and Traffic Technology

The Promoter formulates and explains supplementary specifications pertaining to individual technical aspects as follows:

4.1 Urbanistic Requirements

4.1.1. Road Space
For reasons of noise abatement and because of the considerations of urban planning (delimitation of road space) the aim is to create a street frontage that is - in structural terms - predominantly closed parallel to the two railways along Brünnerstraße.

4.1.2. Building Structure
The distance between the buildings and railway lines shall not be less than 25 m (measured from the foot of the embankment).

4.1.3. Building Height
Basically, overall height shall be adjusted to the height of the surrounding buildings, with construction class V being the maximum (building heights of up to 26.0 m). If single elements are higher, Vienna’s 10-point “High-Rise Building” checklist concept shall be complied with.

4.1.4. Public Transport Links
Architects participating in the Competition are expected to facilitate a pedestrian link to a new station on any possible extension of the metro line by sufficiently dimensioning the space required for this task.

4.2 Requirements of Traffic Technology

4.2.1. Emergencies
Emergencies shall be considered to be those unscheduled patients that arrive at the hospital by themselves (approx. 50%) as well as patients taken to the Vienna North Hospital by the emergency doctor, ambulance or other medical transport.

- Direct access to the Initial Care Centre and obstetrics (as direct as possible connection between the hospital and the public transport stop)
- Helicopter pad near the Initial Care Centre and the Operating Centre

4.2.2. Public Transport
- Connection to public transport stops and stations (suburban railway (S-Bahn), bus, tram and future underground) – walking distances for both patients and visitors should be as short as possible
- Taxi parking in the immediate vicinity of the entrance hall (sufficient for 15 taxis)

3. Individual Traffic
- "Kiss & ride": drop off and short-stay parking - <15 minutes – adjacent the entrance hall (access from the west – Brünner Straße) where outpatients, children, physically handicapped persons etc. are afforded access when entering or leaving the hospital (this is separate from the provision for emergencies)
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- 20 parking places for disabled persons near the entrance area and approx. 100 parking places in the garage area
- Parking space for approx. 2,000 cars – separate zones for staff (approx. 1,000) and visitors or patients (about 1,000). The figure of 2,000 parking places is mainly based on the Document 3a entitled Traffic Survey.

4.2.4 Delivery and Collection Logistics
- Supply and disposal logistics shall be via the north access road - Shuttleworthstraße. Public transport, individual traffic or emergencies shall be clearly separated. These traffic routes should not be visible or audible to patients or visitors, nor should they be used by them in ordinary circumstances.
- There should be a single central delivery and collection zone at the Service Centre.
- The pharmacy, materials logistics and sterile goods supply shall be adjacent to one another at the Service Centre.
- Level connection between the storage area and the Logistics Centre via routes suitable for driverless transport
- Undertakers should also use the north access road.

4.2.5. Fire Brigade
- Access routes should be wide enough and with sufficient headroom to permit the access of fire brigade vehicles.
- Compliance with the City of Vienna fire ordinance is mandatory!

4.2.6. Entrance Area
- Access for all visitors to all facilities on the premises shall be provided via the main entrance.
- Information desk and/or control centre, for easier orientation in the building.
- The hospital and the Medical Centre have a common control centre.
- Anonymous access to the Baby Nest
- Initial Hospital Care, the Medical Centre and the Events Hall for events should be arranged in the immediate vicinity of the entrance area.

5. Spatial and Functional Programme

The Competition is based on a Spatial and Functional Programme that corresponds to the innovative process logics described above (cf. Attachment 5a on the Extranet).

The Spatial and Functional Programme encompasses the following functions areas:

<table>
<thead>
<tr>
<th>Area</th>
<th>M²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 Examination and Treatment</td>
<td>14,066 m²</td>
</tr>
<tr>
<td>2.00 Care</td>
<td>25,078 m²</td>
</tr>
<tr>
<td>3.00 Administration</td>
<td>1,641 m²</td>
</tr>
<tr>
<td>4.00 Service Facilities</td>
<td>4,768 m²</td>
</tr>
<tr>
<td>5.00 Delivery and Collection</td>
<td>4,112 m²</td>
</tr>
<tr>
<td>6.00 Training</td>
<td>1,485 m²</td>
</tr>
<tr>
<td>7.00 Other</td>
<td>13,704 m²</td>
</tr>
</tbody>
</table>
Shops

A shopping mall is allocated to sub-group 4.01 “Service Facilities”.

The shop concept expected should provide for good visibility from the main entrance.

The objective is to develop the provision of goods and services required to meet the needs of patients, relatives, visitors, staff as well as the public at large.

Building Services

The following extant parameters shall serve as a basis for the provision of technical services:

- district heating supply - available
- natural gas supply - available
- water supply - available
- mains sewer provision - available
- electrical power - available from two separate supply networks
- communications media provision - available
- district cooling - currently not available
- combined heat and power plant - currently not contemplated

The area figures indicated below shall be seen as values for orientation. However, they will depend on the design and are explained in detail in Document 5f.

# ELECTRICAL ENGINEERING (EE)

## CENTRES

(room height at least 4.0 m)

- 2,550 m²
- POWER UTILITY_transfer station_1 75 m²
- POWER UTILITY_transfer station_2 75 m²
- Mean voltage unit, transformer unit, low-voltage main distribution frame, emergency power supply and communication engineering centres 1,500 m²
- Mean voltage unit, transformer unit, low-voltage main distribution frame, emergency power supply at EDP centre 500 m²
- UPS room for accumulators 200 m²
- Central building control systems – centre 200 m²

## EE_DEZENTRALISED CENTRES

(room height at least 4.0 m)

- 2,270 m²
- 1. Examination and treatment 600 m²
- 2. Care 600 m²
- 3. Administration 100 m²
- 4. Service facilities 100 m²
- 5. Delivery and collection 100 m²
- 6. Training 50 m²
- 7. Other 500 m²
- 8. Emergency power for garage 120 m²
- 9. Parking garage 100 m²
## TECHNICAL SERVICE FACILITIES

### 1,920 m²

- Technical installation centre: steam, transformer station, plumbing (room height: 7.0 m) 500 m²
- Cooling centre – own supply (room height: 5.0 m) 300 m²
- Compressed air provision centre (room height 3.5 m) 60 m²
- Grease separator for kitchen waste water (room height 4.0 m) 120 m²
- Transformer station district heating_2 100 m²
- Potable water_2 20 m²
- IT rooms allocated to cooling system emergency supply (room height 4.0 m) 200 m²
- Extinguishing system (room height 4.0 m) 50 m²
- Pneumatic delivery 70 m²
- Sprinkler system (if specified) 300 m²

## MEDICAL GAS SUPPLY

### 380 m²

- Outdoor oxygen tank fenced off 25 m²
- Outdoor nitrogen tank fenced off 25 m²
- Oxygen supply centre - accumulators 40 m²
- Laughing gas supply centre 40 m²
- CO₂ gas centre 40 m²
- empty bottle stock 40 m²
- reserve bottle stock 40 m²
- vacuum and compressed air provision near surgery department 130 m²

## VENTILATION CENTRES

### 9,060 m²

1. Examination 3,400 m²
2. Care 2,900 m²
3. Administration 150 m²
4. Service facilities 560 m²
5. Delivery and collection 500 m²
6. Training 200 m²
7. Other
   - Computer centre 300 m²
   - Sterile goods supply 550 m²
   - Kindergarten (staff) 150 m²
6. Design Parameters

6.1 Design Guidelines

The following regulations shall, among others, apply:

- Building regulations for the City of Vienna and the respective laws as amended
- Act on the Protection of Federal Employees (including 12 ordinances)
- Ordinance on Workplaces
- All the respective technical standards and norms as amended
- In particular: Building and Universal Access AUSTRIAN STANDARDS 1600 and 1602
- Act on the Equality of Disabled Persons
6.2 Building Regulations

cf. Attachments No. 2b and No. 4e on the Extranet

The currently applicable Design Document 7077 issued by the municipal administration division MA 21B pertains only to the surrounding areas, and accordingly has no relevance as regards the Competition.

It is intended to bring the respective building regulations for the site of the hospital development in line with the result of the Competition.

The municipal administration division MA 21B, in conjunction with divisions 18, 19, 22 and 28, have formulated the urbanistic framework conditions for the development of the hospital premises:

It is assumed that the maximum height of the building will correspond to Building Class V (< 26 m). Taller structures or portions of buildings that are over 26 m in height will be possible, if they comply with the Hochhäuser in Wien concept (High-rise in Vienna) (http://www.wien.at/stadtentwicklung/hochhaus/index.htm)

Sufficient provision should be made for an underground staircase to be built at a later date (in order to connect with a new metro station once the U6 underground line is extended). Note: The creation of any future facility must be possible by way of open construction.

6.3 Geology and Terrain

cf. Attachment No. 3b on the Extranet
The geological conditions to be expected at the site have been described in an expert opinion issued by Prof. Erik WÜRGER.

6.4 Sound, Vibration, Magnetism

cf. Attachment No. 3c on the Extranet

Reference is made to an expert opinion prepared by Arsenal Research.

6.5 Fixtures and Installations

cf. Attachment No 4l on the Extranet

The requisite utilities, such as district heating, water, gas, electricity and sewerage systems, are available in the street systems adjacent to the site.

To ensure the continued supply of the adjacent ÖBB premises provision shall be made for respective utility supply lines from Brünnerstraße to two transfer stations.

6.6 Traffic Organisation

cf. Attachment No. 3a on the Extranet – Traffic Survey by ROSINAK & PARTNER ZT GmbH as of April 2008

Rosinak & Partner Ziviltechniker GmbH was commissioned to identify and analyse a variety of modes of access to the site area.

The respective study

- analyses the existing provision (the quality of public transport services, motorised individual transport, non-motorised transport)
- determines the intensity of traffic in the vicinity of the site
- forms the basis of a proposal regarding transport infrastructure
- estimates traffic flows engendered by the hospital
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- identifies traffic distribution and overall traffic intensities
- analyses the traffic situation at major intersections
- suggests accompanying measures in the adjacent street network.

Public Traffic
The site of the new hospital enjoys above average access to public transport services.

Brünnerstraße features a Schnellbahn (“S-Bahn” suburban railway) station, which in the medium term is to be relocated towards the east. It shall be newly established and benefit from the provision of universal access. The trams (routes 30 and 31) pass along Brünnerstraße, and there is a tram stop immediately next to the S-Bahn station. Floridsdorf centre, a local traffic hub, is located three tram stops further to the south, where the U6 metro line currently terminates. Long-term plans exist to extend the U6 line northwards though at present no designs are available as regards its actual execution. An area along Brünnerstraße should be reserved for underground staircases.

Non-Motorised Traffic
Foot paths and bicycle lanes currently play a subordinate role in the project area. However, they should be anticipated in any new designs.

Motorised Individual Traffic
At present the site area can only be accessed from Brünnerstraße. Nearby Shuttleworthstraße (to the north) and Katsushikastraße (to the south) are ordinate tangential roads in the Vienna main road network, providing connection with the A22 Donauuferautobahn (Danube motorway). The adjustment of the Brünnerstraße intersection to the increased traffic loads, which will be created by the new hospital, calls for a completely new dimensioning of this area. Vehicles entering and exiting the underground garage, the taxis driving up to the hospital, ambulance services and short-time parking will have to be facilitated via this access.

Delivery and service vehicles shall access the hospital from the north via a separate access route along Shuttleworthstraße and Ruthnergasse, and/or immediately via Louis-Häflinger-Gasse / Divischgasse at the site’s southern periphery.

The following facilities
- ca. 2,000 car parking spaces (for visitors and staff)
- a taxi stand for 20 taxis
- 20 short-stay parking spaces near the entrance area
- a loading/unloading area for trucks
shall also be organised on the premises.

6.7 Loading-Unloading Area for Deliveries
cf. Attachment No. 5b on the Extranet
Access to the delivery area shall be possible from the north via either Shuttleworthstraße or Ruthnergasse or the extension of Louis-Häflinger-Gasse.
The dimensions of the delivery area shall be such that several (five to ten) trucks can be loaded and unloaded at the same time.

Basically, the facility shall be 4.80 m high.

The headroom should be 5.80 m in the vicinity of the waste paper compactor and container.

### 6.8 Disposal Area

The individual subdivisions of the Waste Collection Centre are identified in Item 5.0.9 of the Spatial and Functional Programme.

### 6.9 Logistics

cf. Attachment 5d on the Extranet

The logistics master plan provides information on logistical operations pertaining to linen, sterile goods, pharmaceutical products, ancillary materials and food via a supply and disposal hub which shall serve consumers within the building.

Provision shall be made for a driverless transport system and a pneumatic delivery system the workings of which should be illustrated through functional diagrams.

### 6.10 Helicopter Pads

cf. Attachment 5h on the Extranet

The new Vienna North Hospital is to feature two helicopter landing areas (each 15 m by 15 m), suitable for use by Sikorsky S 70 “Black Hawk” (reference helicopter). One landing area shall be located on the roof in the immediate vicinity of the accident surgery unit, while a second landing area at the hospital premises shall serve as a reserve or as supplementary capacity in the event of a catastrophe.

Basically, the landing areas shall be conceived in accordance with Austria’s Aviation Act (LFG).

The surrounding buildings are not anticipated to constitute a restriction or obstacle to approach paths.

### 6.11 Standard Building Installations

cf. Attachment 5e on the Extranet
The areas indicated for building installations constitute the necessary functional areas for said installations and are divided into two main groups: electrical power and HVAC.

6.12 Information and Communication Technology (ICT)

cf. Attachment 5f on the Extranet

The ever-increasing proliferation of ICT infrastructure, together with the rising complexity of such systems, have resulted in KAV’s production of a summarized illustration of the desired standard. Two documents have been prepared for the Competition especially for this purpose:

- ICT – Masterplan
- Communications Distribution Specifications (version 1.6, 041118)

6.13 Building Ecology

cf. Attachment 5k, l on the Extranet

6.14 Access Control and Security

cf. Attachment 6a on the Extranet

Demand for a single (main) entrance
Separation from underground car park

6.15 Disaster Control

cf. Attachment No. 6b on the Extranet

The advent of a disaster means that hospital rooms will be subject to short-term changes in use. In usual circumstances the rooms would be used for different purposes.

- Radiation protection - shall not be taken into account
- Civil protection - shall not be taken into account
- Alternative options for access – shall be taken into account
- Lockable hospital premises with access control – shall be taken into account
- Area for emergency decontamination – shall be taken into account
- Triage area adjacent to (accident) surgery – shall be taken into account
- Emergency storage areas in the triage area (some 300 m²) – shall be taken into account

6.16 Gender Aspects

Gender-specific planning:
Design of access and transport routes (illumination, visibility)
Design of communication and recreation areas for patients, relatives, visitors and staff

7. Drawing Specifications

Colour Scheme

The following colour scheme should be employed when describing the various uses in the drawings:
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1.00 Examination and treatment .......... orange
2.00 Care ......................................................... green
3.00 Administration .................................. violet
4.00 Service facilities ................................... blue
5.00 Delivery and collection ..................... gray
6.00 Training ....................................................... pink
7.00 Other ............................................................ turquoise
XXX Shops ......................................................... brown
XXX Building installations (HVAC and EE)........ gray
Hallway access ............................................. light beige
Lifts ................................................................. red