Golden Medical City

Business Plan for an integrated healthcare facility for the Republic of South Africa

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Prepared by

medicus international GmbH & Co. Kg
Matterhornstraße 12, 14163 Berlin, Germany

Phone: +49 30 3265402
Fax: +49 30 3255972
Mail: info@medicus.international

Registered at registration court Charlottenburg
HR-Nr.: HRA 50466 B
UST-Id-Nr.: DE298389834



Our mission is to disrupt the healthcare sector of the Republic of South Africa by introducing the most modern, reliable, and sustainable medical complex nation-wide.
Our approach is holistic: We design and commission the construction, while we also provide capacity building, training, and operational management.

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Executive Summary

This business plan proposes the construction of Golden Medical City (GMC), a bold and powerful vision of the future for the Republic of South Africa´s healthcare sector. It offers prospective investors a compact catalogue with details on the project, its execution, and feasibility.

GMC will be a large, high-end, inclusive healthcare compound that provides world-class medical services in the Republic of South Africa. Three central propositions guide the nationwide-unique concept and its prospective success:

- A holistic medical city with hospital, hotels, restaurants, shopping centres, residential buildings, vocational schools, and conference venues
- A broad range of specialisations that presents GMC as a key national medical hotspot with synergy between the departments
- Equipment, services, and management are designed based on European medical standards

The project foresees an 800-bed hospital, separated into a 600-bed general wing and a 200-bed paediatric wing. Both wings will provide the entire range of medical services to brand GMC as an all-inclusive medical healthcare provider. Commercial facilities fulfil several needs and goals, including medical support infrastructure, additional revenue generation, and an increased attractiveness of GMC to visitors, staff, and patients. The entire compound is inspired by the ideas of tranquil holiday resorts and smart university campuses: GMC is a self-sufficient town of individual, small units whose scenery invites to stay. Self-sufficiency refers both to utilities and everyday life: Enclosed within walls, GMC supplies its own (green) electricity, possesses its own security services, and it includes a mall, hotels, two vocational schools, and housing for some of the staff.

The entire facility is designed based on European standards: Equipment will be supplied by most-renown European producers, (vocational) training is conducted in accordance with German curricula, and rigorous quality management ensures that the facility will be known to offer medical services at highest standards. A significant part of physicians, managers, engineers, and nurses will be expatriate European experts.

The project is very timely, as the Republic of South Africa remains a promising emerging market whose healthcare sector persists underdeveloped and underfunded. The increasing demand for healthcare services resulting from economic development and population growth is set to drive future demand for (superior) healthcare. Moreover, GMC is set to attract patients from neighbouring countries and all social classes within the Republic of South Africa. Current healthcare facilities are mostly outdated and offer only small subsections of medical specialisations. The Republic of South Africa´s medical authorities have already expressed their profound concern about the limited availability of specialists, resulting in many treatments not being available. GMC will provide various treatments to-date that are rare or unavailable in the Republic of South Africa.

The total required capital amounts to 1.1 billion USD, excluding reserve funds. Based on projected earnings, the project's payback period is seven years of operation. The ROI for 20 years of operation equals 202.1%. A sensitivity analysis has shown that the project's

strong profitability is robust and can weather estimation errors in income and expenses of up to 50%,

Project implementation projection suggests that the GMC would be operational by the 39th month and that the complex would be fully completed in 48 months. However, to use the construction time most efficiently, operations will start sequentially: First departments will already open after 30 months into the project and last departments of the hospital will be open at month 36 after project initiation. Construction works for non-medical facilities will be concluded after 39 months. Observing this ambitious plan requires a rigorous project and quality management, which will be offered by Medicus International, a German healthcare-development specialist with an extensive track record in African hospital development projects. As GMC needs to meet the highest requirements, Medicus International's holistic management will draw from its rich experience and large networks at all stages of the process. Contractors will be hand-chosen in limited tenders for companies that are part of the Medicus International network and have explicit experience in delivering precision and high standards in hospital development.

Maintenance of the GMC is guaranteed with several measures: The warranty program includes a complimentary first year maintenance schedule, contractors will guarantee to supply spear parts for a period of ten years at least, and the trained medical technicians at GMC in addition to the European experts present in the city are able to handle most cases locally. Medicus International will offer a complimentary service for two years and commit itself to be available as a maintenance contractor for another eight years.

Besides the financial viability, GMC also bears substantial benefits for the Republic of South Africa´s economy and public health. The project will create 20,000 direct and indirect jobs, and it will contribute to regional and national development. Financial resources otherwise spend for treatment abroad will remain in the domestic economy, and medical tourism from neighbouring countries will stimulate foreign currency inflow. The provision of medical services that were previously unavailable or rare will contribute to enhanced life expectancy, and the knowledge transfer from European specialists will facilitate the amelioration of the Republic of South Africa´s medicine.

Based on the feasibility study detailed in this document, the execution of the project is forthwith recommended.

I. Project description

I.A. Overview

I.A.1. Golden Medical City (GMC) envisions a world-class hospital as part of a commercial compound. This section outlines the design of GMC, the set-up of medical departments, the commercial facilities, and utilities.

I.A.2. The project considers the following buildings:

- Hospital complex containing:
  - 600-bed general wing (sqm 50,000) (A)
  - 200-bed paediatric wing (sqm 25,000) (B)
- Central service building (sqm 12,000) with two floors (C)
- 100-bed economy hotel (sqm 2,500) with five floors (D)
- 100-bed five-star hotel (sqm 2,000) with five floors (D)
- Church (sqm 800) (F)
- Mosque (sqm 800) (F)
- Nurses' residence (sqm 2,000) for approx. 100 nurses (H)
- 57-apartment upscale staff housing (sqm 4,200) (G)
- Shopping centre with auditorium (sqm 12,500) (I)
- Storage place (for ten containers) (J)
- Helipad (P12)
- Nurse school (sqm 3,000) with four floors (L)
- School for technicians (sqm 1,500) with two floors (M)
- Outdoor facilities (sqm 150,000 – 200,000) (P)



The characters refer to the respective letters on the schematic map above.

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Appendix A contains a detailed list of all buildings and their elements, as well as a larger version of the schematic map.

I.A.3. The main entrance to the facility will cross the shopping centre and take place at the service building, from which paths will take patients to the general hospital or the paediatric wing. Furthermore, there will be two additional front entrances to the respective wings. All other objects of interest for visitors (e.g. housing, hotels, schools) will also be placed at the compound's front, while utilities and logistic buildings will be at the rear of GMC. The plan already identifies vast zones for potential future expansions in this area. The central parking lot will be located in front of the shopping centre, while service ways (mainly for logistics) will be positioned at the two opposite sides of the campus and connect again at its rear. The central delivery zone will be on the right-hand service way at the paediatric wing.

I.B. Architecture

I.B.1. The proposed design of GMC fulfils economic considerations while also setting the highest standards for aesthetic design. The latter is of equal importance since an aesthetic design increases the attractiveness for patients and can even contribute to a better healing process.

I.B.2. The vision of open, clear, and modern spaces guides the architecture of GMC. Patients are invited by inspiring scenery: a contemporary blend of classical Moorish elements, simple forms, and vibrant shapes. Openness dominates the design and puts the light in its true light: Positioning of fronts, large openings, and glass surfaces, as well as iconic, imperial hallways with elevated ceilings flood wide spaces with daylight. An impression of transparency, accessibility, and contemporariness arises.

Buildings in GMC are low-rise structures and vary between single-floor buildings and four-floor buildings. In combination with numerous garden courts, the setting resembles modern hotel resorts and smart, innovative university campuses. The horizontal tilting of patient-room windows allows for breath-taking views of the garden, while the patients' privacy remains intact. Patients and visitors sense medical excellence without feeling the constricting and overly functional atmosphere from which most hospitals suffer.

I.B.3. The hospital's design is not only a marvellous piece of art that will attract patients and expert staff, but it is also smart. Central routes for guests (patients and visitors) will be located on the ground floor, while the main paths for staff and logistics will be on the first floor. Sublime constructions for glass bridges will connect personnel in both hospital wings with the service centre (I.E.2), while guests on the ground floor will remain unaffected by the operational hassle.

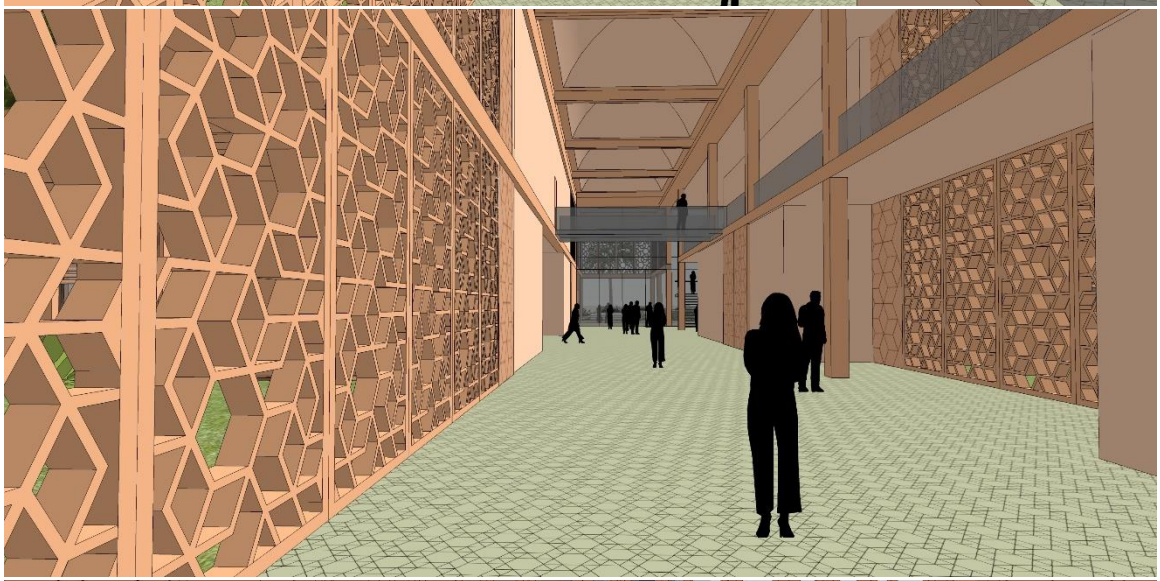
Furthermore, the reliance on individual buildings provides a central advantage: Expansions and maintenance work can take place without affecting other GMC units. Generally, all non-medical facilities, including utilities, are located in separate buildings whenever possible. Therefore, support facilities (e.g. warehouses, maintenance) can be extended easily.

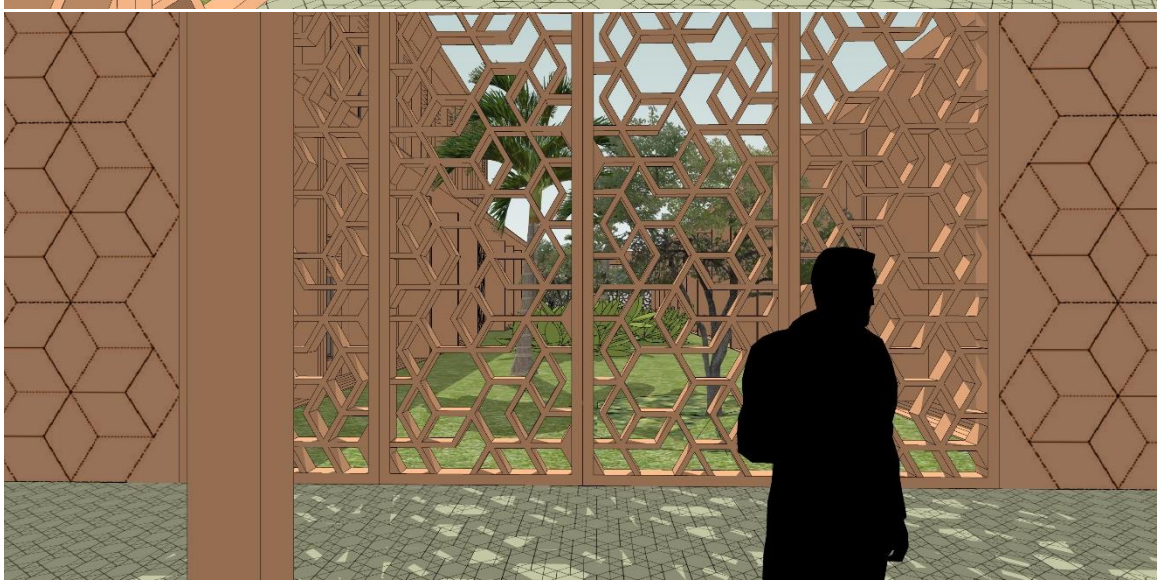




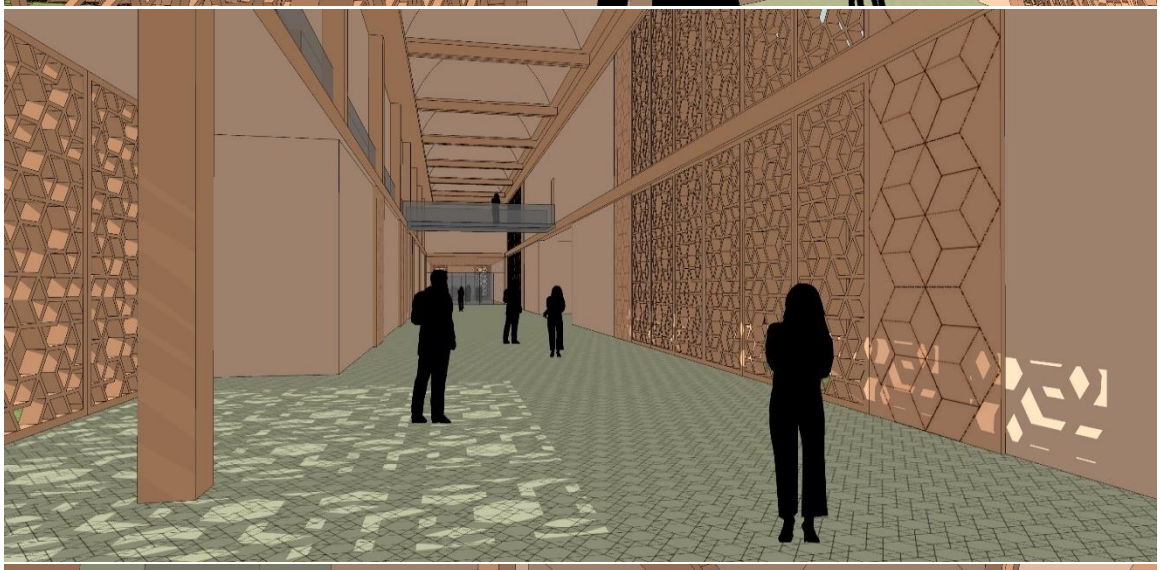












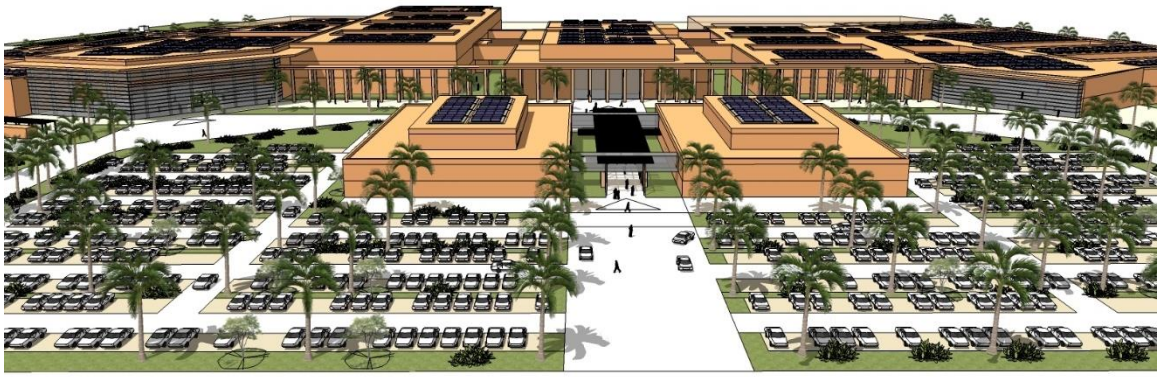


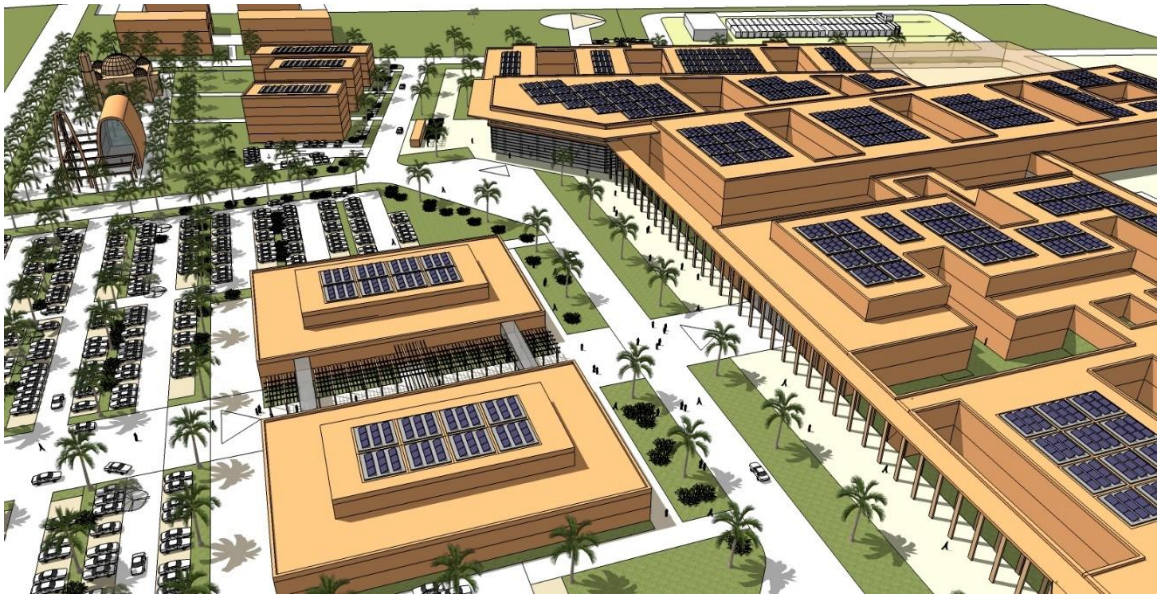


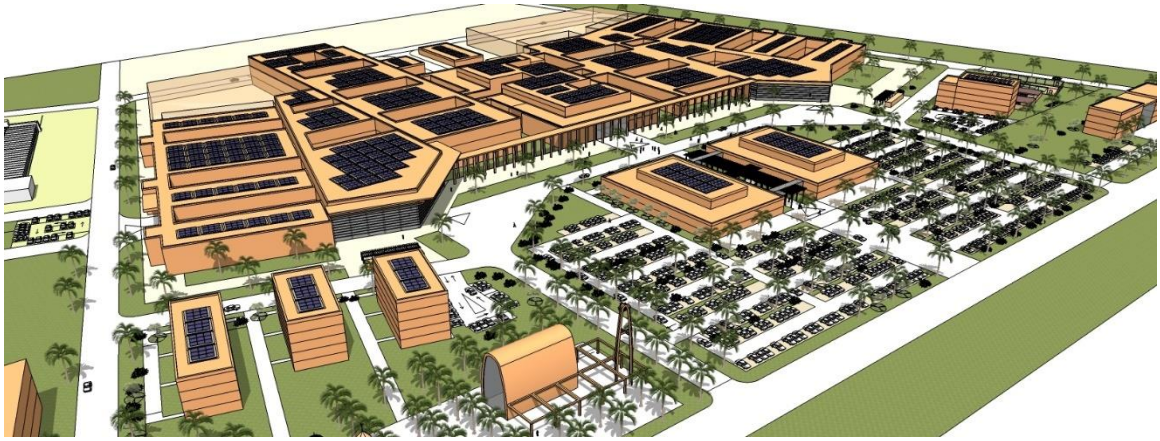












I.C. Medical departments

I.C.1. GMC will contain 800 beds in total, of which 600 will be in the general wing and 200 in the paediatric part. Beds will be distributed into 5-bed, 2-bed, and 1-bed rooms. Furthermore, several outpatient clinics and emergency units are included in the plan. A total of 20 major operation theatres in addition to 13 minor or specialised ones will be available. Beds would be provided in tranches during phases 1,2, and 3 (see table 4, pg 29) of the project respectively.

I.C.2. The general hospital will combine medical excellence in all relevant areas of medicine. Therefore, a multitude of medical departments will be present:

- Oncology (2 x linac, brachy therapy, gamma camera, chemotherapy and cryosurgery)
- Gastroenterology
- Renal dysfunction treatment (including a lithotripsy dialysis section)
- Internal medicine
- Gynaecology & obstetrics
- Urology
- Nutrition & diet
- Cardiology & pulmonology
- Center for wound healing & burn injury
- General surgery
- Traumatology
- Neurosurgery
- Plastic surgery
- Ear, nose, and throat diseases
- Psychiatry
- Neurology & neurosurgery
- Ophthalmology
- Dentistry
- Dermatology & cosmetology
- Physio- & hydrotherapy
- ICU / CCU
- In-Vitro-Fertilisation (IVF)
- Endoscopy department

I.C.3. The medical departments are supported by a comprehensive state-of-the-art diagnostics department, which includes (but is not limited to):

- Computed tomography
- Magnetic resonance imaging
- Angiography
- Fluoroscopy
- Ultrasound
- General laboratory
- Pathology
- Cathertisation labs

I.C.4. Patients of the general hospital will be distributed into 21 wards in total, of which there will be one specialised psychiatric ward, four isolation wards, one mother-and-child ward, one VIP ward, one VVIP ward, and 13 general wards. Most general wards as well as the VIP and the VVIP wards will be located on the upper floors, whereas other wards will be on the lower floors. The room design is aesthetically pleasing and contains state-of-the-art equipment for patients and medical professionals.

The hospital's administrative and patient service sections are planned for the ground floor in addition to most diagnostic departments, laboratories, and several outpatient clinics. The emergency department, which is planned to contain consulting rooms, treatment rooms and four most modern operation theatres.

Appendix A contains a detailed overview.

I.C.5. Quarantine sections are planned to be suitable for the treatment of high-risk infectious diseases, including Ebola.

I.C.6. Telemedicine will be a key component of medical support infrastructure. Telemedicine uses specialised telecommunication and IT-infrastructure to enable the remote delivery of medical consultation services. GMC medical professionals will be able to use the equipment to discuss (challenging) cases live with colleagues abroad on a, e.g. the Medicus International partners Charité Berlin and Boston University.

The system comprises video chat and can be used in two ways: First, there will be a 24hr-operated telemedicine room on the ground floor of the general wing. Doctors will be able to visit the office at any time to have urgent video conferences. Furthermore, the system will be interlinked with cameras inside operating theatres (placed inside the lighting), such that immediate consultation during surgery is possible. Moreover, two other prospective uses for the telemedicine service are teaching purposes and offering consultations for other facilities.

I.C.7. All medical equipment used at the hospital will be purchased exclusively from renowned European suppliers to comply with the concept of GMC as Republic of South Africa´s medical top facility.

I.D. Commercial facilities

I.D.1. Several commercial facilities complement GMCs medical services and will be located inside the compound. The commercial facilities are an integral part of GMC's concept and economics: GMC is a self-sufficient healthcare city, in which patients and staff can live, and acquire all their daily needs. It also invites outside visitors to its facilities and will become a natural part of the national landscape. In summary, commercial facilities contribute to three main goals:

- Additional revenue generation
  - e.g. rent or usage fees
- Healthcare support infrastructure
  - e.g. vocational training, research
- Increasing the attractiveness for patients
  - e.g. providing other attractions

The commercial facilities, oriented towards European standards, are of further importance when considering the goal that GMC shall attract international visitors (e.g. patients from neighbouring countries, researchers for scientific events). They are a unique selling point for the facility, as no other healthcare facility in the country possesses this kind of environment, and they predetermine GMC's leading role in the future of the Republic of South Africa´s medicine.

I.D.2. The following commercial facilities are planned for GMC:

Table 1: Overview of commercial facilities

Facility	Main purpose(s)
Shopping centre	• Revenue generation • Attractivity • Support infrastructure
Auditorium	• Support infrastructure • Revenue generation
Economy hotel	• Revenue generation • Attractivity
Five-star hotel	• Revenue generation • Attractivity
Church/Mosque	• Attractivity • Support infrastructure
Nurses' residence	• Support infrastructure
Upscale staff housing	• Revenue generation • Support infrastructure
Nursing School	• Support infrastructure
Technician school	• Support infrastructure
Additional outdoor facilities	• Attractivity
Parking lot	• Revenue generation • Support infrastructure

I.D.1. A multi-floor shopping centre will provide space for commercial activity. The shopping centre will contain stores (a 2,000 m² supermarket and 45 shops with

sizes between 20 m² and 130 m²), cafés and restaurants (500 m² in total), and private medical practices and offices (1,000 m² in total).

The shopping centre will provide supplies and recreation to visitors, patients, and staff. For resident staff and patients, the centre will be the prime supplier of groceries and everyday products. Visitors will perceive the shopping centre as an attractive destination even regardless of the medical facility nearby. Moreover, private practices and offices will enable the provision of treatments and services that are complementary to GMC services.

GMC will manage the centre and provide the individual spaces to private businesses for rent. Alternatively, commission fees in the form of an GMC participation in sales are conceivable.

I.D.2. An auditorium with space for 500 participants will be attached to the shopping centre. The auditorium is designed to offer a most-modern venue for lectures, conferences, and various events. It will contain state-of-the-art equipment, including live video conferences, and provide a vivid and prestigious venue for GMC events. Furthermore, the hall can be rented for events (e.g. scientific conferences). The auditorium, therefore, will contribute to GMC's earnings (e.g. from conference fees and rent), and it will improve the standing of GMC by strengthening the (international) perception of GMC as the Republic of South Africa´s top medical facility.

I.D.3. A three-star economy hotel will offer 50 rooms for visitors, four suites, a breakfast room, and complementary facilities such as access to fitness rooms and a roof garden. The hotel targets middle-class visitors who need to reside close to the hospital, e.g. due to hospitalised relatives, in addition to visitors of events and medical conferences. Although no own restaurant will available on the premises, room-orders are possible from the five-star hotel restaurant.

I.D.4. An exclusive five-star hotel will offer 50 luxurious rooms (of them 30 standard rooms and 20 suites). The hotel will comprise a pool, a spa, a restaurant, a cafeteria, and a fitness room. The building is planned to include a presidential suite, which satisfies the highest demands and is suitable for VVIP. Five-star hotel staff will be multilingual and specially trained by German hospitality senior experts to offer premium service.

I.D.5. A Church and a Mosque will be available in GMC and offer praying and meditation spaces for religious guests and staff.

I.D.6. A residential building for nurses will offer accommodation for 90 nurses, mostly in shared rooms of three. The building's primary purpose is to provide housing for nurses not originally from the area and in need of on-site accommodation. The pricing aims at covering costs not to create an excessive burden for the nurses.

I.D.7. Another residential building with 57 upscale apartments will provide housing for wealthier employees, especially expatriates. Pricing is above the local average and is designed to generate additional profits.

I.D.8. GMC will contain a nursing school, designed for 200 trainees. The nursing school will be a private institution that operates with European teachers and based on German curricula. The program is designed to reflect the institution's excellence in

medicine, and graduates will complete the program within three years. The practical part of their education will materialise inside the hospital, where they work as trainee nurses, and the best graduates will be offered subsequent employment at GMC.

Since the trainee nurses provide an integral part of GMC healthcare, and since school expenditures are manageable, this proposal considers a tuition-free school. However, alternative regimes with tuition fees or government subsidies are possible.

I.D.9. Similar to the nursing school, a technician school will provide training on German standards for 100 students. Experienced teachers and engineers from Europe will equip the trainees with up-to-date knowledge and skills, suitable for the operation of GMC. Technicians will also work as trainees at GMC and graduate after three years.

Since the trainees provide an integral part of GMC's logistics, and since school expenditures are manageable, this proposal considers a tuition-free school. However, alternative regimes with tuition fees or government subsidies are possible.

I.D.10. Further outdoor facilities increase GMC's attractive. The project considers two tennis courts, a swimming pool, volleyball and football places, playgrounds, and sitting areas.

I.E. Utilities

I.E.1. Utilities in GMC are designed to offer the highest reliability while being economical.

I.E.2. The central service complex is a multi-building structure that will control the city's utilities. Administration and central control (including the blood bank, security, housekeeping) are placed within the main part of the service centre, which is a two-floor building and marks the main entrance to the hospital (see I.A.3). Also, the central cafeteria and restaurant are placed inside the central service centre.

Further buildings, at the rear of the complex, will contain most of the utility equipment and machinery, including electricity generation and storage, waste handling, etc.

I.E.3. GMC will supply its own electricity to be independent of the national power grid. A rear building of the service complex will be equipped with a small power station of solar panels, batteries, and diesel generators. Moreover, available areas on rooftops all over GMC will be used for further solar panels. Furthermore the GMC will use water-turbines, if possible. A grid will combine the different power sources and choose the most economical source of electricity in real time. Capacity dimensioning is determined by the most efficient combination that allows full reliability despite volatile solar irradiation. Such a system supplies power at both lower cost and a smaller ecologic footprint than only using fossil-fuel generators. Hence, the majority of electricity supply in GMC will originate from solar power.

I.E.4. GMC's planned oxygen generating system is specialised for off-grid usage and provides self-sufficient and highly reliable oxygen (concentration 93%) from the air. The system works free from oil to prevent contamination, does not require any storage of oxygen, and is fully automated. The system offers most-modern oxygen supply in compliance with German hospital standards and is designed to be independent of electricity and maintenance needs.

I.E.5. The provision of security is integral to GMC. The city will be guarded by an own private security force trained in counterterrorism, risk assessment, but also hospitality. The initial training will be overseen by experienced German security experts to guarantee security personnel that is prepared for every eventuality but provides a calm and appropriate atmosphere for the patients and visitors of GMC.

Multiple layers of security will be present at GMC: First, an outer wall will surround GMC, and entering the city will require to pass a guarded gate with a brief check. All buildings at GMC will have security personnel available and present at any time. Moreover, areas inside the hospital will be segregated into security areas with different levels and require a certain security level to enter. Employees will receive NFC-cards that interact with smart locks at the respective doors which open only if the employee has sufficient security clearance.

I.E.6. The primary source of water will be (if possible) boreholes that will supply water to a central filtration and purification system. All water supplied to the different operating units within the GMC will be piped out of this water treatment unit to guarantee non-contamination of the water used for all medical and residential purposes.

I.E.7. All buildings will be air-conditioned with particular emphasis on sensitive operation theatres. To maximise reliability and minimise costs, the air conditioning system will be partially decentralised, i.e. there will be separate air conditioning for different parts of the hospital.

Moreover, air conditioning will make usage of newest smart sensors, which monitor the occupation of different rooms in the hospital and develop an energy-efficient cooling control. The sensor-driven automatic control of ACs offers three advantages: Energy savings generate (a) cost savings and (b) lessen the environmental impact of GMC, while (c) rooms are always

II. Financial feasibility & viability

II.A. Overview

II.A.1. This section provides an overview of key financial indicators that reflect the feasibility and viability of GMC.

II.A.2. The following Financial Annexes complement this section:

- Annex B: Financial Annex I - Projected fin. statements
- Annex C: Financial Annex II - Extended profit calculation
- Annex D: Financial Annex III - Income per department
- Annex E: Financial Annex IV - Offer

II.A.3. The project requires USD 1.1 billion in addition to USD 75 million for reserve funds.

II.A.4. When fully in operation, the facility has a projected annual income of 268 million US-Dollars and projected operational expenditures of 76 million US-Dollars (see Figure 1). After consideration of various management expenses and reinvestments for sustaining and upgrading the assets, this amounts to an **annual profit of USD 192 million**.

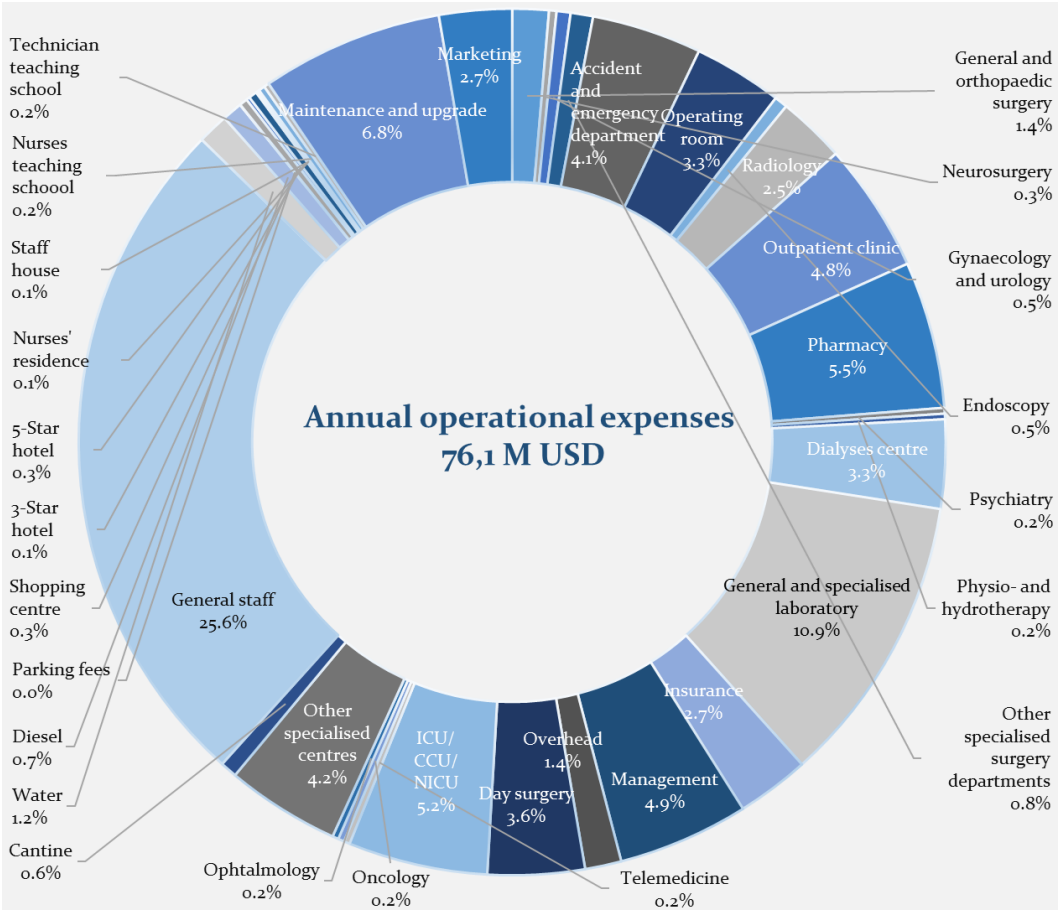
II.A.5. Given these figures, the **payback period** of the investment is **eight years** in addition to three years of prior design and construction work.

II.A.6. The project's projected **return on investment** over 20 years in addition to the construction time equals 202.1%**.** Figure 2 furthermore illustrates the returns over the duration of 20 years.

II.B. Sensitivity and assumptions

II.B.1. The following assumptions were made for this analysis:

- The project is planned for a lifetime of 20 years.
- All capital is considered equity.
- As the organisational setup is still subject to discussions, the analysis does not consider taxation, concession fees, or similar issues that dependent on it.
- Profit calculations and income per department (Annexes C and D) consider the facility's average utilisation after the start-up period.
- The projections consider the following timeline: The facility will not run on standard capacity before its sixth year. Before that, operational expenses will also be below their standard extent. However, during the start-up phase, the pace of expenditure increases may be higher than that of income, primarily due to the extensive need for European staff (see III.C.2). Table 2 depicts the detailed assumptions.
- Insurance, marketing, and overhead are set at 1% of gross profit, management at 1.8%, and reinvestment in maintenance and upgrading at 2.5%.



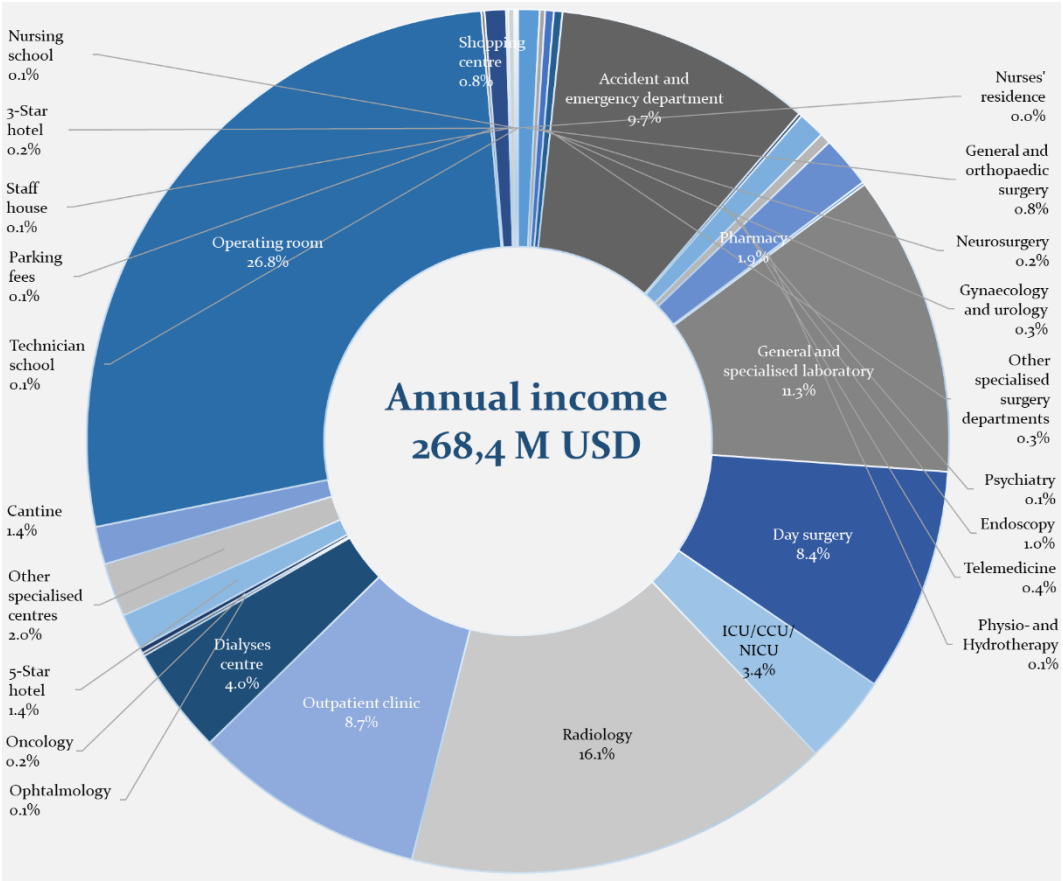


Figure 1: Annual expenses and incomes

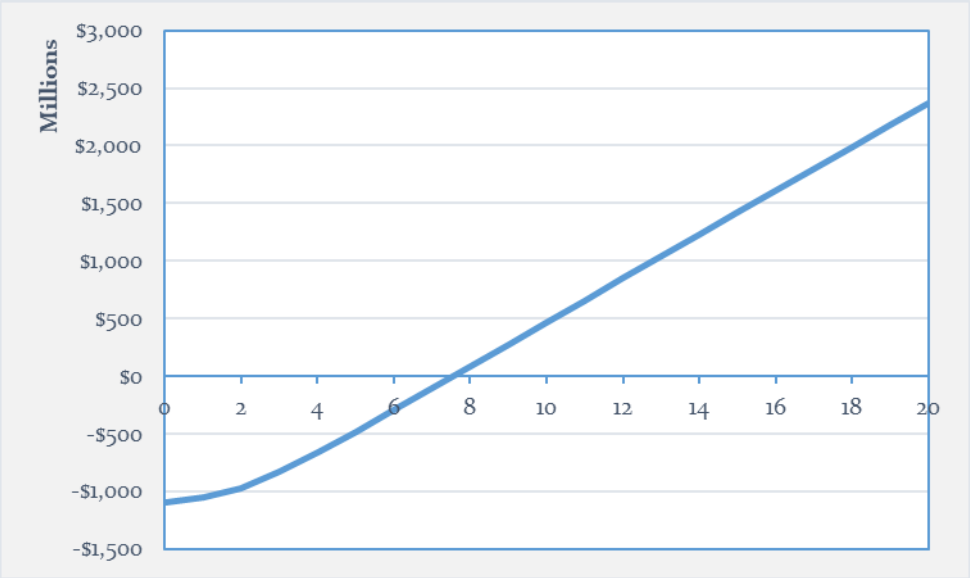


Figure 2: Trajectory of returns over 20 years

Table 2: Assumptions for income and expenses during start-up

Year	1	2	3	4	5	6
Income as share of standard-operation income	30%	50%	75%	90%	95%	100%
Expenses as share of standard-operation expenses	50%	70%	80%	100%	100%	100%

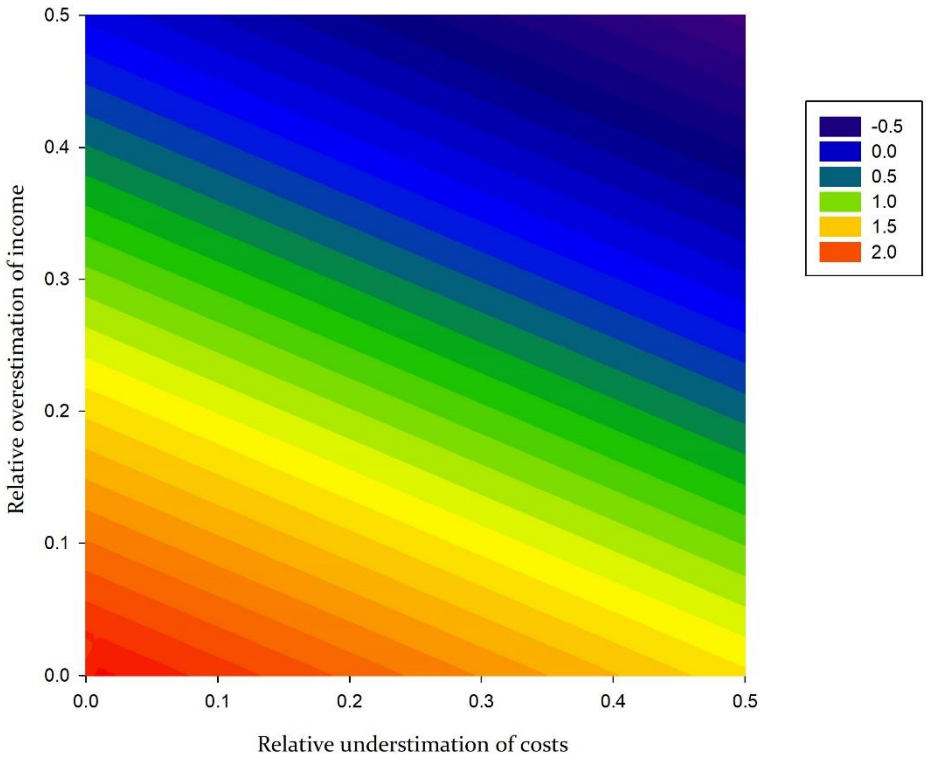


Figure 3: Sensitivity analysis of ROI

II.B.2. A sensitivity analysis of income and expenditures has been performed to assess the robustness of the returns to investment. Figure 3 visualises the results.[1]

II.B.3. The results of the sensitivity analysis show that the project's profitability is robust with respect to estimation errors in income and expenditures. The project stays profitable for income overestimations of up to 45% and for cost underestimations far above 50%. Within typical margins for estimation errors (15% for both income and expenditure), the ROI would still equal 112%. The financial risk associated with a wrong estimation of earnings is, hence, low.

II.C. Concluding remarks

II.C.1. Given sufficient funds to finance the substantial investment, GMC is financially both feasible and viable.

II.C.2. The financial risk associated with a wrong estimation of earnings is low, and the project's profitability is robust.

II.C.3. The enormous profits are partially a result of the significant synergies created by GMC's concept. Through the combination of various medical specialisations, resources (including general staff, which pose the largest share of expenses) can be used efficiently, and revenues from consultations with other departments stay within the facility. Moreover, as GMC contains housing, recreation and shopping, which will also be used by employees, a share of personnel expenses is retained inside GMC.

[1] The axes show the potential relative error in the estimation of revenues and expenses, and the colours inside the diagram illustrate the ROI (from high / red to low / blue). The bottom-left corner shows the ROI at projected earnings, while the top-right corner shows the ROI if projected income and expenditures were inaccurate by 50%. The project is profitable for all combinations with colours other than dark blue or purple.

III. Organisational feasiblity

III.A. Organisational structure

- To be discussed with shareholder and stakeholders -

III.B. Project development

III.B.1. Construction and full operation of GMC are to be implemented over 48 months. Construction work for all hospital departments will be completed within 36 months from initiation, while the last non-medical facility will be finished by month 39. Annex F (pgs 82 and 83) contains provides the timeline of planned activities. *In presenting this timeline, it has been assumed that all discussions, establishment of a memorandum of understanding and necessary approvals for construction and operation of the GMC will be timely and with minimal or no delay from authorities.*

III.B.2. **STEP I**: After signing the contract, the initial preparatory stage will take approximately six months. Within these months, and after consultation with all shareholder and stakeholders, Medicus International will prepare a first draft of the design. For this step, other German contractors (especially architects) with whom Medicus International has collaborated extensively before in similar projects will be involved.

III.B.3. **STEP II**: The draft design will be discussed extensively with stake- and shareholders and updated accordingly, following which a final design for subsequent implementation would be produced. In incessant coordination with the shareholders, decisions will be finalised, and a bill of quantity and working drawings would be prepared. Meanwhile, preparations of the construction site will already have started.

III.B.4. **STEP III**: After approximately ten months, the construction work will begin involving indigenous and international contractors. Staff housing and utilities are prepared first to ease further construction work. After approximately 16 months into the project, the plan expects the interior work to start. First purchases of medical equipment are scheduled for month 20, while furnishing will start in month 18 and be concluded in month 35. Medicus International would prepare monthly status reports for the shareholders; these reports would offer a transparent monitoring of the progress of the project, thus providing the opportunity to anticipate unforeseen events immediately and react in a timely manner.

III.B.5. **STEP IV** starts in month 19 and focusses on the organisational set-up. A particular emphasis lies on the future monitoring mechanisms to assure that GMC's operations always comply with European standards. While construction and equipment are being finalised, Medicus International, shareholders, and stakeholders design and kickstart the organisational set-up of GMC, including management and personnel questions. First start-up staff arrive at the facility, and Medicus International commences training of management and other staff. Also, based on the shareholder discussions, Medicus International starts recruiting German (and European) staff for the hospital's start-up phase. *The first phase of hospital operations is scheduled to start in month 30* ***(i.e., 24 months after the initial approvals stage)****, and the last departments will open in month 36* ***(i.e., 30 months after the initial approvals stage)****, when operations are handed over to the management.*

III.B.6. **STEP V** is the crucial start-up phase in which all services are kick-started, while the last remains of the construction phase are finalised (e.g. removing the site installations). Strict quality assurance and capacity building are essential, as the future (organisational) structures and procedures, which become tacit knowledge later, are consolidated.

Hospital Operations

III.B.7. GMC's medical operations will be divided into three (3) phases as presented in Table 3. As mentioned earlier, the first facilities and medical activities will be fully established by the 30th month of the project. They will incorporate a large range of facilities, including the emergency department, radiology, and cardiology. In the second phase, after 33 months into the project, further specialised departments will be ready, including the central OR department. Last departments will join in the third phase, after 36 months into the project and after the entire construction work is finished. This includes further sophisticated departments, such as transplantation and telemedicine. This sequential initiation of operations fulfils two targets: First, GMC will use capacities as soon as available and maximise earnings. Second, the limited opening allows management, coordination, and general staff to establish working structures and practise in a controlled environment, before expanding to the full scale. In this way, opportunities will be harvested, and the project time will be used most efficiently.

III.B.8. Quality management and adequate project management are essential to ensure that the project is finished according to the plan and in a timely manner. The anticipated time of 48 months until the facility is fully operational, including a start-up phase, is highly ambitious and can only be observed if all project activities are coordinated meticulously. Moreover, the facility will need to meet the highest requirements as defined by the concept. A violation of the quality standards during construction, design, or start-up could endanger the entire mission and concept of GMC. Its competitive edge and unique selling point are the provision of the whole range of medical specialisations at highest standards, which – of course – requires a high quality of buildings and equipment.

Table 3: Overview of the operational starting phases

Operational phase I	**Operational phase II**	**Operational phase III**
Month 30	*Month 33*	*Month 36*
Cardiology	Gastroenterology	Transplantation
Emergency	Endocrinology	Endoscopy
Obstetrics & gynaecology	Neurosurgery	Physio- and hydrotherapy
Urology	Traumatology	Telemedicine (advanced)
Dialysis	Nutrition and diet	Specialised radiology
Pathology	OR department	Research centre
ICU/CCU/NICU	Orthopaedic Surgery	Radiation therapy
Haematology	General & specialised labs	Psychiatry
Mother & child	Telemedicine (initial)	Oncology
ENT		
General & specialised radiology		

In summary, Medicus International is, therefore, committed to holistic project management and quality assurance during the project phases (and beyond). The project will draw from the company's extensive experience and large networks at all stages of the project. The design process will only involve contractors with whom Medicus International has previously collaborated and that have experience from similar projects. For the construction process, contractors will be selected based on limited tenders for companies that are part of the Medicus International network and have explicit experience in delivering the precision and high standard necessary for the project. Regarding equipment, material, and furniture, Medicus International will examine the Republic of South Africa´s market carefully. Whenever available in sufficient quality inside the Republic of South Africa, the local Medicus team will organise limited tenders. Else, Medicus International will hold international tenders (predominantly for well-known and established German suppliers) and ship the respective equipment using maritime freight to Port of Matadi.

III.C. Knowledge transfer & Start-up Programme

III.C.1. GMC promises to provide medical services that comply fully with European standards. Besides the material requirement, to establish this, GMC requires

- Foreign staff that facilitate knowledge transfer
- Rigorous quality management at all times and stages
- Teaching based on highest standards

III.C.2. During the start-up period, GMC builds on expatriate healthcare professionals (physicians, managers, engineers, technicians, nurses) that contribute their tacit knowledge and accustomed healthcare experience and working culture. In everyday hospital life but also in dedicated training sessions, the experts transfer their knowledge to the local staff and contribute to human resource development.

III.C.3. After GMC has become fully operational (i.e. approximately four years after the beginning of operations), the number of expatriate personnel can be gradually reduced to decrease costs but also to facilitate human capital building inside the Republic of South Africa. However, as part of the hospital's brand, key personnel (some members of the executive board, the heads of most medical departments) will remain internationally acclaimed expatriate professionals.

III.C.4. Teachers in the two schools will remain majority-expatriate personnel to prevent a deterioration of the knowledge transfer. School curricula will be continuously updated to new requirements for German vocational training for nurses and technicians.

III.C.5. Relevant accreditation of the two schools will be sought during the organisational set-up (Phase IV).

III.C.6. The Medicus International Start-up Programme combines these requirements in addition to operational management and general capacity building in a five-year window. As part of Start-up Programme, Medicus International takes oversight over GMC's operations and provides rigorous quality management, designs and streamlines the organisational management, and takes care of international recruitment. At the core, the programme aims at building and consolidating the structures that are neces-

sary to conduct operations with the highest standards. It contributes to capacity building for the hospital and its staff, and it guides and trains them in providing efficient, high-quality services as part of a well-organised team. For international recruitment, Medicus International uses its extensive networks of high-ranking German (and European) healthcare professionals and experts.

III.D. Maintenance

III.D.1. Maintenance of facilities and equipment will always be ensured.

III.D.2. The commissioning agreement will entail complimentary warranty for the entire city for a duration of five years on all buildings as well as two years on all interior fittings, and all medical equipment. During this warranty period, potentially faulty parts will be replaced at no cost.

III.D.3. As a prerequisite for the tenders, all contractors will need to commit to supplying spare parts for a period of ten years at least.

III.D.4. During the first two years of operation, Medicus International bears the responsibility organise all maintenance. For another subsequent eight years, as part of the commissioning agreement, Medicus International will commit itself to be available as maintenance contractor at all times.

III.D.5. The technician school and available European experts are a cornerstone to maintenance at GMC. The knowledge transfer ensures that the maintenance knowhow is available locally and that the involvement of external parties (or even international ones) do only need to be involved in maintenance in the most challenging cases.

III.E. Profile: Medicus International

III.E.1. Medicus International is a German service provider specialised in planning, building and equipping modern hospitals, clinics, and other healthcare suppliers. The brand stands for quality, reliability and dedication.

III.E.2. Medicus International's services range from small-scale measures, such as the procurement of medical supply or health clinic updates, to large-scale ventures, such as the construction of entire hospitals. Precisely, Medicus International is specialised in planning, building, and equipping healthcare units of all sizes and in providing various kinds of supplementary services. The latter includes capacity and organisation building, the operational management of healthcare units, headhunting, and human resource development. The company tailors services specifically to each project and client. Crucial to their philosophy, all services are offered in compliance with German quality standards.

III.E.3. For more than 30 years, Medicus International has been implementing state-of-the-art healthcare projects. Our regional specialisation is the support of healthcare on the African continent. We support local partners and cooperate with various clients, partners, and stakeholders from both the public and private sector. The table below offers a selected overview of our past projects:

Table 4: Selected project record of Medicus International

Germany	Charité University Hospital, Berlin Clinic Meerbusch, Düsseldorf Clinic Bosse, Wittenberg
Russia	Russia Korotkow Medical Center, Moskow
Angola	Hospital Josina Machel / Maria Pia, Luanda Clinica Girassol, Luanda
Malawi	Bottom Hospital, Lilongwe Lilongwe Central Hospital, Lilongwe
Liberia	Elwa Hospital, Monrowia
Nigeria	Divine Medical Centre Ikoyl, Nigeria
Turkey	City Hospital, Kayseri
Sudan	Sudan Heart Center, Khartoum Nora Children Center for Kidney Transplantation, Khartoum Doctor´s Clinic 1 & 2, Khartoum Merowe Medical City, Merowe Merowe Oncologic Hospital, Merowe
South Sudan	Dr. John Garang Medical Diagnostic and Treatment Center, Juba Juba Teaching Hospital, Juba Quacuk Hospital, Warab State

I. Non-financial benefits

I.A. Overview

I.A.1. Besides GMC's financial viability, the project will add substantially to the Republic of South Africa´s economy and improve public health. It provides numerous contributions to the Sustainable Development Goals.

I.A.2. The Sustainable Development Goals (SDGs) are a set of 17 goals adopted by all United Nations member states in 2015 designed to bring substantial improvements to long-term well-being worldwide. They shall serve as patterns to establish a "better and more sustainable future for all" (UN, 2019) and provide concrete fields of activities for developed and developing nations.



Figure 4: The Sustainable Development Goals (SDGs) of the United Nations

I.A.3. GMC contributes to the SDGs 3 (good health and wellbeing), 4 (quality education), 5 (gender equality), 6 (clean water and sanitation), 7 (affordable and clean energy), 8 (decent work and economic growth), 9 (industry, innovation, and infrastructure), 11 (sustainable cities and communities), 12 (responsible consumption and production), and 17 (partnership for the goals).

I.B. Public health (SDG 3)

I.B.1. GMC will combine all medical specialisations under one roof and offer various treatments current not present or insufficiently present in the Republic of South Africa. Therefore, GMC will contribute to better overall healthcare in the Republic of South Africa and an increase in life expectancy. Hence, GMC implies significant improvements towards SDG 3.

I.B.2. Furthermore, the hospital's spill over effects to the remainder of the Republic of South Africa´s healthcare sector (e.g. via attracting better healthcare professionals, training nurses and medical technicians inside the country, and offer assistance to other physicians in person or via the telemedicine system) imply significant progress towards achieving SDG 3. GMC is a highly attractive place for international scientific

conferences. Hosting such conferences allows for further knowledge transfer and a continuous human capital formation inside the Republic of South Africa.

I.B.3. The large paediatric wing of the hospital will provide excellent healthcare for minors and mothers, who are often neglected in the present healthcare system. Thus, GMC will provide particularly high benefits to health improvements for women and children.

I.C. Education, advancement of women and youth (SDGs 4,5)

I.C.1. An integral part of GMC is devoted to raising a new generation of medical healthcare professionals, contributing towards SDG 4. Moreover, the training and work environment in GMC will profit from European standards for the advancement of women, working towards SDG 5.

I.C.2. The nursing and technician training schools will be cutting-edge facilities in the Republic of South Africa and enable the youth to receive excellent training.

I.C.3. Young domestic physicians at the hospital will be enrolled in knowledge transfer tracks, which are programs designed to transfer knowledge from experienced (foreign) senior physicians to the juniors. They will involve mentoring, advanced trainings, and rotations.

I.C.4. Furthermore, the education of medical students will profit from the opportunities of GMC in the form of e.g. high-level conferences, (guest) lecturers, and training sessions.

I.C.5. GMC seeks to advance the role of women in healthcare. Therefore, GMC commits to advancing towards recruiting, training, and employing women on all career stages and ranks within the complex. The strategic objective is to have GMC as the nationwide example for equal opportunities and harassment-free environments.

I.C.6. In accordance with European standards, GMC will have an equal opportunities office. The office will have independent oversight and report directly to the GMC board. It will ensure that admission and recruitment committees provide adequate opportunities for women.

I.C.7. The entire city will be a “no tolerance”-zone regarding (sexual) harassment. The equal opportunities office will have a permanent counsellor to whom victims can turn for advice and initiating further steps.

I.C.8. All staff at GMC will receive compulsory training on gender biases, (sexual) harassment, and equal opportunities to create a friendly work environment and prevent contrary action.

I.D. Sustainable and self-reliant utilities (SDGs 6, 7, 11, 12)

I.D.1. The utilities of GMC create a resilient, self-sufficient, and sustainable environment in line with the SDGs.

I.D.2. The water supply in GMC contains an own, highly efficient water filtration system that will ensure the removal of biological or chemical contaminations, advancing towards SDG 6.

I.D.3. The electricity supply will be independent of the national power grid and run on a smart grid. Power generation will be based on water-turbines (if possible), solar panels and batteries, aided by a smaller number of diesel generators. The smart grid will make use of cutting-edge controllers and algorithms to optimise power generation and rely to the largest possible extent on clean and free power. Therefore, and in line with SDG 7, GMC's power supply provides access to clean and affordable electricity while being self-reliant and secured against central failures.

I.D.4. In accordance with SDGs 11 and 12, GMC's utilities are designed to be most efficient in their consumption and waste management. The building design features modern heat insulation to decrease energy consumption by air conditioning. All devices will have to suffice high energy and water efficiency standards. The ventilation system recycles the used air. Waste sorting will enable recyclable material to be separated from waste intended for incineration. GMC will provide enough space to realise further projects in this area, such as recycling plants and factories or local wastewater treatment.

I.E. Economy and regional development (SDGs 8, 9)

I.E.1. The project bears numerous benefits to the regional and national economy, and its usage of cutting-edge technology will spur further investments and development. Thus, GMC makes considerable contributions towards achieving SDGs 8 and 9.

I.E.2. GMC will push labour demand by providing 3,000 jobs inside the facility. They will include managers, doctors, nurses, technicians, security staff, housekeeping and cleaning staff, as further assistance.

I.E.3. In addition to that well, we expect 15,000 indirect jobs as a result of economy-wide multipliers. The creation of these indirect jobs will happen in the context of further regional development of the area around GMC: The employees, which will seek housing close to the city, further stimulate demand for residential areas in the region, thus driving the creation and improvement of living areas. Besides these multiplying effects, domestic supply for the hospital (e.g. food, material) will further contribute to the national economy. We estimate the overall impact to equal another 20,000 jobs.

I.E.4. At the moment, approx. 70 million USD is spent annually by the Republic of South Africa for treatment abroad, predominantly in India, South-Africa, and Europe. GMC targets these medical tourists and will motivate a significant share of them to consider treatment at GMC instead. Treatment at GMC will outrank the services of Indian hospitals by far, and GMC offers a lower cost than equal treatment in Europe.

I.E.5. As GMC is an innovative project with a high demand for labour, it can be expected that the project will attract employees nationwide, which is why the design contains housing for approximately 200 residents. Gaining personal from all around the nation has the further benefit that some of the employees can be expected to transfer part of their salary to relatives from less developed regions of the country. Thus, the

workers' remittances and, hence, GMC will have a positive impact on economic development in low-income areas across the nation.

I.E.6. GMC's leading role in medicine will also attract patients from neighbouring countries. This will provide a further inflow of foreign currency and contribute to the economy.

I.E.7. On the intersection of economic and health benefits, GMC contributes substantially to human capital formation in the Republic of South Africa. Foreign expert staff (from Europe) transfer their knowledge to the local team at GMC as part of everyday work, organised training sessions, and of course via the nursing school and the technician school. This will allow local staff to acquire world-class skills, which they will apply in their daily work but also transfer as multipliers: When employees leave GMC to pursue positions elsewhere in the country, they will be able to transfer their skills to their new colleagues nationwide. To promote this effect, only a share of the nurses and technicians graduating at GMC will be employed by GMC subsequently. Graduates will, hence, spread around the country and spread their knowledge nationwide.

I.F. International cooperation (SDG 17)

Advancing European-South-Africa cooperation is an integral part of the project. This cooperation (SDG 17) does not only bring benefits in the present, but closer ties between the Republic of South Africa´s healthcare sector and their European counterparts will eventually contribute to stable long-term relationships. The resulting network provides opportunities to face both domestic and global health challenges as a single community. GMC will be growing and developing together with other world-class institutions with common interests in placement, recruitment, and knowledge exchange. Medical conferences and the telemedicine system will be further instruments of permanent international cooperation towards achieving the SDGs.

II. Benefits to economy and public heath

II.A.1. Besides GMC's financial viability, the project will add substantially to the Republic of South Africa´s economy and improve public health.

II.A.2. GMC will push labour demand by providing 3,000 jobs inside the facility. They will include managers, doctors, nurses, technicians, security staff, housekeeping and cleaning staff, as well as further assistance.

II.A.3. In addition to that, we expect 17,000 indirect jobs as a result of economy-wide multipliers. The creation of these indirect jobs will happen in the context of further regional development of the area around GMC: The employees, which will seek housing close to the city, further stimulate demand for residential areas in the region, thus driving the creation and improvement of living areas. Besides these multiplying effects, domestic supply for the hospital (e.g. food, material) will further contribute to the national economy. We estimate the overall impact to equal another 20,000 jobs.

II.A.4. As GMC is an innovative project with a high demand for labour, it can be expected that the project will attract employees nationwide, which is why the design contains housing for approximately 200 residents. Gaining personal from all around the nation has the further benefit that some of the employees can be expected to transfer part of their salary to relatives from less developed regions of the country. Thus, the workers' remittances and, hence, GMC will have a positive impact on economic development in low-income areas across the nation.

II.A.5. GMC's leading role in medicine will also attract patients from neighbouring countries. This will provide a further inflow of foreign currency and contribute to the economy of the Republic of South Africa.

II.A.6. On the intersection of economic and health benefits, GMC contributes substantially to human capital formation in the Republic of South Africa. Foreign expert staff (from Europe) transfer their knowledge to the local team at GMC as part of everyday work, organised training sessions, and of course via the nursing school and the technician school. This will allow local staff to acquire world-class skills, which they will apply in their daily work but also transfer as multipliers: When employees leave GMC to pursue positions elsewhere in the country, they will be able to transfer their skills to their new colleagues nationwide. To promote this effect, only a share of the nurses and technicians graduating at GMC will be employed by GMC subsequently. Graduates will, hence, spread around the country and spread their knowledge nationwide.

II.A.7. Furthermore, GMC is a highly attractive place for international scientific conferences. Hosting such conferences allows for further knowledge transfer and a continuous human capital formation inside the Republic of South Africa.

II.A.8. GMC will combine all medical specialisations under one roof and offer various treatments current not present or insufficiently present in the Republic of South Africa. Therefore, GMC will contribute to better overall healthcare in the Republic of South Africa and an increase in life expectancy.

Annex A: Project overivew and map

Golden Medical City 800 Bed Specialised Program

A. 600 bed specialised General Hospital/Department

sqm 50,000.-

Ground Floor

1.1.01 Entrance, reception area, information counter, admittance, discharge, waiting area, children play area, cafeteria, shops, representatives for healthcare insurance, pharmacy
1.1.02 Administrative service area (hospital director, poly clinic director)
1.1.03 Emergency with 10 places, crash area, observation area with 20 beds, 4 treatment rooms, resuscitation room, gypsum room, 2 emergency O.R.
1.1.04 Day surgery: 4 minor O.R., recovery 8 beds, 4 procedure rooms
1.1.05 Endoscopy: 6 procedure rooms
1.1.06 Diagnostic imaging, 4 x-ray, CT, 4 ultra sound, bone densitometer, 2 EKG EEG, tread mill, MRI, Angiography, Fluoroscopy, Mammography, PET
1.1.07 Oncology: linear accelerator, brachy therapy, chemo therapy, gamma camera
1.1.08 Renal dialyses department: 40 places, 10 paediatric, 4 isolation rooms
1.1.09 Technical Control Centre, Electrical rooms, IT-rooms, Security, Telemedicine
1.1.10 **Ward I:** psychiatric day care, 30-bed psychiatric ward
1.1.11 **Ward II:** isolation ward, 30 beds with additional entrance from the outside
1.1.12 Laboratory with blood bank
1.1.13 Physiotherapy and hydrotherapy
1.1.14 Research and education area
1.1.15 **Outpatient Clinics**

- VIP clinics
- Outpatient surgery
- Orthopedics
- Obst. - Gyn
- Pediatric
- Internal medicine, psychiatry and neurology
- Cardiology, pulmonary
- Urology, lithotripsy
- Dermatology/Cosmetics
- Ophthalmology
- ENT
- Dentistry/Lab
- Nutrition and Diet Consultation
- Natural Medicine
- Acupuncture

First Floor (for each floor: general waiting area, children play area)

1.2.01 ICU: 22 beds, 2 dialyses places, 2 isolation beds, burn injuries ICU 8 beds, 1 O.R.
1.2.02 CCU: 22 beds, 2 dialyses places, 2 isolation beds.
1.2.03 Intermediate emergency care: 20 beds, 4 isolation beds
1.2.04 **O.R. Department:** 14 O.R., 1 Trauma O.R (laminar flow box), 1 double O.R.
1.2.05 CSSD
1.2.06 Catheter lab
1.2.07 IVF
1.2.08 Delivery: 8 rooms, 5x 2-bed lab. rooms, 2 x 1-bed lab. room, 2 caesarian O.R.
1.2.09 **Ward III:** 20 mother-and-child beds (2x 5-bed, 2 x 2-bed, 2 x 1-bed)

1.2.10 Ward IV – VI: 3 separate isolation wards, 2 x 10 beds, 2 x 5 beds.
1.2.11 Ward VII: General ward 30 beds (3 x 5-bed, 4x 2-bed, 5 x 1-bed, 2 isolation beds
1.2.12 Ward VIII: General ward 30 bed
1.2.13 Ward IX: General ward 30 beds

Second Floor (for each floor : general waiting area, children play area)
1.3.01 Ward X General ward 30 beds
1.3.02 Ward XI General ward 30 beds
1.3.03 Ward XII General ward 30 beds
1.3.04 Ward XIII General ward 30 beds
1.3.05 Ward XIV General ward 30 beds
1.3.06 Ward XV General ward 30 beds
1.3.07 Ward XVI General ward 30 beds
1.3.08 Ward XVII VIP Ward 20 beds

Third Floor (for each floor general waiting area, children play area)
1.4.01 Ward XVIII General ward 30 beds
1.4.02 Ward XIX General Ward 30 beds
1.4.03 Ward XX General ward 30 beds
1.4.04 Ward XX General ward 30 beds
1.4.05 Ward XXI VVIP ward 10 beds

B. 200 Bed Children Hospital/Department sqm 25,000.-

Ground Floor

2.1.01 Entrance, registration area, counter for information, admittance, discharge, waiting area,cChildren playground area, cafeteria
2.1.02 Administration area, patient affairs (hospital director, policlinic director)
2.1.03 Emergency 5 places, crash area, observation area with 10 beds, 2 treatment rooms
2.1.04 Day surgery, 4 minor O.R. , 4 procedure rooms, recovery 8 places
2.1.05 Endoscopy 4 procedure rooms pediatric
2.1.06 Digital imaging in building part A but EEG, EKG, 2 x ultrasound
2.1.07 Oncology in building A, but chemotherapy
2.1.08 Outpatient clinics
- Paediatric
- Surgical
- Internal medicine
- Urology
- Ophthalmology
- ENT
- Dental dermatology
- Neurology / neurosurgery
- Orthopaedic, trauma surgery
- Psycho-social care and social services
- Natural medicine
- Acupuncture
- Prenatal

2.1.09 Class rooms 6 children education

First Floor

2.2.01 O.R. department (6 O.R.) recovery 12 beds
2.2.02 CSSD
2.2.03 PICU 16 beds, 2 isolation rooms, one dialyses place
2.2.04 NICU 14 beds, 2 isolation rooms

2.2.05 Isolation ward 24 places
2.2.06 Intermediate care 10 places, 2 isolation beds
2.2.07 Neonatal ward 12 beds
2.2.08 Prenatal 8 places
2.2.09 **Ward A** inpatient 20 beds, 2 x 5-bed room, 6 x 2-bed room (with bed in) 2 x 1-bed rooms, 2x isolation-bed rooms
2.2.10 **Ward B** inpatient 20 beds
2.2.11 **Ward C** inpatient 20 beds
2.2.12 **Ward D** inpatient 20 beds
2.2.13 **Ward E** inpatient 20 beds
2.2.14 **Ward F** inpatient 30 beds
2.2.15 **Ward G** inpatient 30 beds
2.2.16 **Ward H** private ward 20 beds
2.2.17 **Ward J** private ward 16 beds

C. Central Services, Building Services sqm 12,000.-

Ground Floor

3.1.01 Central Pharmacy
3.1.02 Medical storage
3.1.03 Visitors' cafeteria (with shaded places outside)
3.1.04 Restaurant (also for hotel guests
3.1.05 Shops, kiosk
3.1.06 Rehabilitation
3.1.07 Housekeeping
3.1.08 Security
3.1.09 Technical rooms, electric, photovoltaic, low voltage, generators, batteries
3.1.10 Medical gases, compressed air, oxygen generating system
3.1.11 Mortuary, pathology
3.1.12 Laundry
3.1.13 Kitchen with staff dining
3.1.14 Maintenance work shops
3.1.15 Bio engineering
3.1.16 Waste handling
3.1.17 Outside maintenance
3.1.18 Laboratory with blood bank
3.1.19 Technical rooms, steam production, water treatment, ventilation

First floor

3.2.01 Administration
3.2.02 Training, education services, teaching, research, library, conference hall
3.2.01 Technical rooms, air condition, ventilation
3.2.01 Cooling Towers, air handling units

D. Hotel Building (100 beds) 3 star category sqm 2,500.-

5 floors , floor plate 36.5 x 14.5 m

4.1.01 Lobby with sitting area/counter, back office
4.1.02 100 beds (50 rooms)
4.1.03 Suites 2x 2 rooms, 2 x 3 rooms
4.1.04 Breakfast room
4.1.05 Children play area
4.1.06 Computer Room/Internet
4.1.07 Fitness rooms
4.1.08 Roof garden

D. Hotel Building (100 beds) 5 Star Category **sqm 4,500.-**

5 floors, floor plate 50 x 18 m

4.2.01 Lobby with sitting area
4.2.02 Living room, conference room, computer room /internet
4.2.03 30 Rooms, 20 suites
4.2.04 Breakfast room
4.2.05 Cafeteria, restaurant with shaded places outside
4.2.06 Children play ground
4.2.07 Fitness room
4.2.08 Roof garden
4.2.09 Swimming pool

F. Church **sqm 800.-**
F. Mosque **sqm 800.-**

H. Nurses' residence **sqm 2,000.-**

5.1.01 90 places 30 x 3-bed rooms, WC/shower
5.1.02 9 x 1-bed apartments
5.1.03 3 x general rooms
5.1.04 Laundry
5.1.05 Waste Room
5.1.06 Room for empty Luggage

G. Staff housing (57 Apartments) **sqm 4,200.-**

6.1.01 20 x 1-room apartment
6.1.02 20 x 2-room apartment
6.1.03 10 x 3-room apartment
6.1.04 5 x 4-room apartment
6.1.05 2 x general rooms
6.1.06 Laundry
6.1.07 Waste room
6.1.08 Storage for each apartment 6 sqm

I. Shopping Centre with Auditorium **sqm 12,500.**

7.1.01 Supermarket, sqm 2.000.-
7.1.02 15 x shops, each sqm 130
7.1.03 15 x shops, each sqm 50.-
7.1.04 15 x shops, each sqm 20.-
7.1.05 Food Court sqm 500.-
7.2.01 Medical practice for private doctors, consultants, (size flexible) total area sqm 1,000.-
7.3.01 Auditorium 500 seats

J . Storage Place for 40 feet Container for e.g. mobile Hospitals (10 container)

7.3.01 Storage place and loading area
7.3.02 Maintenance, workshop with storage and rest room

P12. Helicopter landing area

7.4.01 In accordance with European Regulations

L. Nurse school for 200 Students sqm 3,000.-

7.5.01 4 Floors, Floor Plate 15.- x 50.- m

M School for Medical and Technical Assistants sqm 1,500.-

7.6.01 2 Floors, floor Plate 15.- x 50.- m

P Outdoor Facilities Site (sqm 150,000. - sqm 200,000,-)

8.1.01 2 x Tennis Court
8.1.02 1 x swimming pool (M/FM with change cabins, toilets and showers)
8.1.03 Volleyball Place
8.104. Football Place
8.1.05 Children Play Ground (shaded)
8.1.06 Shaded Sitting Areas (3 with toilets)
8.1.07 Fence, barriers, flagpoles, paper basket, benches, signage, security gate house.
8.1.08 Waste handling area, cool boxes for medical and kitchen waste, converter plant, shaded parking (different areas)
8.1.09 Landscaping soft and hard
8.1.10 Water tanks (if necessary)
8.1.11 Sewage tanks (if necessary)
8.1.12 Grey water tank with treatment
8.1.13 Underground irrigation system
8.1.14 6 x full equipped ambulances



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Annex B: Financial Annex I - Projected fin. statements

Income statement	0	1	2	3
Revenues				
Hospital		$78,327,000	$130,545,000	$195,817,500
Hotels		$1,266,768	$2,111,280	$3,166,920
Housing		$86,328	$143,880	$215,820
Shopping centre		$642,060	$1,070,100	$1,605,150
Schools		$162,000	$270,000	$405,000
Other		$259,200	$432,000	$648,000
Total revenue		**$80,743,356**	**$134,572,260**	**$201,858,390**
Expenses				
General hospital		$30,533,062	$42,746,287	$48,852,899
Hotels		$167,161	$234,025	$267,457
Housing		$50,424	$70,593	$80,678
Schools		$162,492	$227,488	$259,986
Shopping centre		$113,464	$158,850	$181,543
Insurance		$807,434	$1,345,723	$2,018,584
Management		$1,453,380	$2,422,301	$3,633,451
Marketing		$807,434	$1,345,723	$2,018,584
Overhead		$403,717	$672,861	$1,009,292
Other		$4,020	$5,628	$6,432
Depreciation		$39,560,343	$39,560,343	$39,560,343
Total expenses		**$74,062,930**	**$88,789,821**	**$97,889,249**
Earnings before taxes		$6,680,426	$45,782,439	$103,969,141
Taxes				
Net earnings		**$6,680,426**	**$45,782,439**	**$103,969,141**

Balance Sheet	0	1	2	3
Assets				
Buildings	$1,098,898,415	$1,060,494,091	$1,023,067,318	$987,095,212
Cash	$75,000,000	$120,084,750	$203,293,962	$343,235,209
Equity				
Equity capital	$1,173,898,415	$1,173,898,415	$1,173,898,415	$1,173,898,415
Retained earnings		$6,680,426	$52,462,865	$156,432,006
Shareholder's equity	$1,173,898,415	$1,180,578,841	$1,226,361,280	$1,330,330,421

Cash flow	1	2	3
Net earnings	$6,680,426	$45,782,439	$103,969,141
Plus: Depreciation	$39,560,343	$39,560,343	$39,560,343
Cash from operations	**$46,240,769**	**$85,342,782**	**$143,529,484**
Investing cash flow	**$1,156,019**	**$2,133,570**	**$3,588,237**
Cash resources	**$45,084,750**	**$83,209,212**	**$139,941,247**

Income statement	4	5	6	7
Revenues				
Hospital	$234,981,000	$248,035,500	$261,090,000	$261,090,000
Hotels	$3,800,304	$4,011,432	$4,222,560	$4,222,560
Housing	$258,984	$273,372	$287,760	$287,760
Shopping centre	$1,926,180	$2,033,190	$2,140,200	$2,140,200
Schools	$486,000	$513,000	$540,000	$540,000
Other	$777,600	$820,800	$864,000	$864,000
Total revenue	**$242,230,068**	**$255,687,294**	**$269,144,520**	**$269,144,520**
Expenses				
General hospital	$61,066,124	$61,066,124	$61,066,124	$61,066,124
Hotels	$334,321	$334,321	$334,321	$334,321
Housing	$100,847	$100,847	$100,847	$100,847
Schools	$324,983	$324,983	$324,983	$324,983
Shopping centre	$226,929	$226,929	$226,929	$226,929
Insurance	$2,422,301	$2,556,873	$2,691,445	$2,691,445
Management	$4,360,141	$4,602,371	$4,844,601	$4,844,601
Marketing	$2,422,301	$2,556,873	$2,691,445	$2,691,445
Overhead	$1,211,150	$1,278,436	$1,345,723	$1,345,723
Other	$8,040	$8,040	$8,040	$8,040
Depreciation	$39,560,343	$39,560,343	$39,560,343	$39,560,343
Total expenses	**$112,037,480**	**$112,616,141**	**$113,194,802**	**$113,194,802**
Earnings before taxes	$130,192,588	$143,071,153	$155,949,718	$155,949,718
Taxes				
Net earnings	**$130,192,588**	**$143,071,153**	**$155,949,718**	**$155,949,718**

Balance Sheet	4	5	6	7
Assets				
Buildings	$951,778,692	$916,784,137	$882,111,545	$847,438,954
Cash	$508,744,316	$686,810,025	$877,432,334	$1,068,054,644
Equity				
Equity capital	$1,173,898,415	$1,173,898,415	$1,173,898,415	$1,173,898,415
Retained earnings	$286,624,593	$429,695,746	$585,645,465	$741,595,183
Shareholder's equity	$1,460,523,008	$1,603,594,161	$1,759,543,879	$1,915,493,598

Cash flow	4	5	6	7
Net earnings	$130,192,588	$143,071,153	$155,949,718	$155,949,718
Plus: Depreciation	$39,560,343	$39,560,343	$39,560,343	$39,560,343
Cash from operations	**$169,752,931**	**$182,631,496**	**$195,510,061**	**$195,510,061**
Investing cash flow	**$4,243,823**	**$4,565,787**	**$4,887,752**	**$4,887,752**
Cash resources	**$165,509,107**	**$178,065,708**	**$190,622,310**	**$190,622,310**

Income statement	8	9	10	11
Revenues				
Hospital	$261,090,000	$261,090,000	$261,090,000	$261,090,000
Hotels	$4,222,560	$4,222,560	$4,222,560	$4,222,560
Housing	$287,760	$287,760	$287,760	$287,760
Shopping centre	$2,140,200	$2,140,200	$2,140,200	$2,140,200
Schools	$540,000	$540,000	$540,000	$540,000
Other	$864,000	$864,000	$864,000	$864,000
Total revenue	**$269,144,520**	**$269,144,520**	**$269,144,520**	**$269,144,520**
Expenses				
General hospital	$61,066,124	$61,066,124	$61,066,124	$61,066,124
Hotels	$334,321	$334,321	$334,321	$334,321
Housing	$100,847	$100,847	$100,847	$100,847
Schools	$324,983	$324,983	$324,983	$324,983
Shopping centre	$226,929	$226,929	$226,929	$226,929
Insurance	$2,691,445	$2,691,445	$2,691,445	$2,691,445
Management	$4,844,601	$4,844,601	$4,844,601	$4,844,601
Marketing	$2,691,445	$2,691,445	$2,691,445	$2,691,445
Overhead	$1,345,723	$1,345,723	$1,345,723	$1,345,723
Other	$8,040	$8,040	$8,040	$8,040
Depreciation	$39,560,343	$39,560,343	$39,560,343	$39,560,343
Total expenses	**$113,194,802**	**$113,194,802**	**$113,194,802**	**$113,194,802**
Earnings before taxes	$155,949,718	$155,949,718	$155,949,718	$155,949,718
Taxes				
Net earnings	**$155,949,718**	**$155,949,718**	**$155,949,718**	**$155,949,718**

Balance Sheet	8	9	10	11
Assets				
Buildings	$812,766,362	$778,093,771	$743,421,180	$708,748,588
Cash	$1,258,676,953	$1,449,299,263	$1,639,921,572	$1,830,543,882
Equity				
Equity capital	$1,173,898,415	$1,173,898,415	$1,173,898,415	$1,173,898,415
Retained earnings	$897,544,901	$1,053,494,619	$1,209,444,337	$1,365,394,055
Shareholder's equity	$2,071,443,316	$2,227,393,034	$2,383,342,752	$2,539,292,470

Cash flow	8	9	10	11
Net earnings	$155,949,718	$155,949,718	$155,949,718	$155,949,718
Plus: Depreciation	$39,560,343	$39,560,343	$39,560,343	$39,560,343
Cash from operations	**$195,510,061**	**$195,510,061**	**$195,510,061**	**$195,510,061**
Investing cash flow	**$4,887,752**	**$4,887,752**	**$4,887,752**	**$4,887,752**
Cash resources	**$190,622,310**	**$190,622,310**	**$190,622,310**	**$190,622,310**

Income statement	12	13	14	15
Revenues				
Hospital	$261,090,000	$261,090,000	$261,090,000	$261,090,000
Hotels	$4,222,560	$4,222,560	$4,222,560	$4,222,560
Housing	$287,760	$287,760	$287,760	$287,760
Shopping centre	$2,140,200	$2,140,200	$2,140,200	$2,140,200
Schools	$540,000	$540,000	$540,000	$540,000
Other	$864,000	$864,000	$864,000	$864,000
Total revenue	**$269,144,520**	**$269,144,520**	**$269,144,520**	**$269,144,520**
Expenses				
General hospital	$61,066,124	$61,066,124	$61,066,124	$61,066,124
Hotels	$334,321	$334,321	$334,321	$334,321
Housing	$100,847	$100,847	$100,847	$100,847
Schools	$324,983	$324,983	$324,983	$324,983
Shopping centre	$226,929	$226,929	$226,929	$226,929
Insurance	$2,691,445	$2,691,445	$2,691,445	$2,691,445
Management	$4,844,601	$4,844,601	$4,844,601	$4,844,601
Marketing	$2,691,445	$2,691,445	$2,691,445	$2,691,445
Overhead	$1,345,723	$1,345,723	$1,345,723	$1,345,723
Other	$8,040	$8,040	$8,040	$8,040
Depreciation	$39,560,343	$39,560,343	$39,560,343	$39,560,343
Total expenses	**$113,194,802**	**$113,194,802**	**$113,194,802**	**$113,194,802**
Earnings before taxes	$155,949,718	$155,949,718	$155,949,718	$155,949,718
Taxes				
Net earnings	**$155,949,718**	**$155,949,718**	**$155,949,718**	**$155,949,718**

Balance Sheet	12	13	14	15
Assets				
Buildings	$674,075,997	$639,403,405	$604,730,814	$570,058,223
Cash	$2,021,166,192	$2,211,788,501	$2,402,410,811	$2,593,033,120
Equity				
Equity capital	$1,173,898,415	$1,173,898,415	$1,173,898,415	$1,173,898,415
Retained earnings	$1,521,343,774	$1,677,293,492	$1,833,243,210	$1,989,192,928
Shareholder's equity	$2,695,242,188	$2,851,191,907	$3,007,141,625	$3,163,091,343

Cash flow	12	13	14	15
Net earnings	$155,949,718	$155,949,718	$155,949,718	$155,949,718
Plus: Depreciation	$39,560,343	$39,560,343	$39,560,343	$39,560,343
Cash from operations	**$195,510,061**	**$195,510,061**	**$195,510,061**	**$195,510,061**
Investing cash flow	**$4,887,752**	**$4,887,752**	**$4,887,752**	**$4,887,752**
Cash resources	**$190,622,310**	**$190,622,310**	**$190,622,310**	**$190,622,310**

Income statement	16	17	18	19
Revenues				
Hospital	$261,090,000	$261,090,000	$261,090,000	$261,090,000
Hotels	$4,222,560	$4,222,560	$4,222,560	$4,222,560
Housing	$287,760	$287,760	$287,760	$287,760
Shopping centre	$2,140,200	$2,140,200	$2,140,200	$2,140,200
Schools	$540,000	$540,000	$540,000	$540,000
Other	$864,000	$864,000	$864,000	$864,000
Total revenue	**$269,144,520**	**$269,144,520**	**$269,144,520**	**$269,144,520**
Expenses				
General hospital	$61,066,124	$61,066,124	$61,066,124	$61,066,124
Hotels	$334,321	$334,321	$334,321	$334,321
Housing	$100,847	$100,847	$100,847	$100,847
Schools	$324,983	$324,983	$324,983	$324,983
Shopping centre	$226,929	$226,929	$226,929	$226,929
Insurance	$2,691,445	$2,691,445	$2,691,445	$2,691,445
Management	$4,844,601	$4,844,601	$4,844,601	$4,844,601
Marketing	$2,691,445	$2,691,445	$2,691,445	$2,691,445
Overhead	$1,345,723	$1,345,723	$1,345,723	$1,345,723
Other	$8,040	$8,040	$8,040	$8,040
Depreciation	$39,560,343	$39,560,343	$39,560,343	$39,560,343
Total expenses	**$113,194,802**	**$113,194,802**	**$113,194,802**	**$113,194,802**
Earnings before taxes	$155,949,718	$155,949,718	$155,949,718	$155,949,718
Taxes				
Net earnings	**$155,949,718**	**$155,949,718**	**$155,949,718**	**$155,949,718**

Balance Sheet	16	17	18	19
Assets				
Buildings	$535,385,631	$500,713,040	$466,040,448	$431,367,857
Cash	$2,783,655,430	$2,974,277,739	$3,164,900,049	$3,355,522,359
Equity				
Equity capital	$1,173,898,415	$1,173,898,415	$1,173,898,415	$1,173,898,415
Retained earnings	$2,145,142,646	$2,301,092,364	$2,457,042,083	$2,612,991,801
Shareholder's equity	$3,319,041,061	$3,474,990,779	$3,630,940,497	$3,786,890,216

Cash flow	16	17	18	19
Net earnings	$155,949,718	$155,949,718	$155,949,718	$155,949,718
Plus: Depreciation	$39,560,343	$39,560,343	$39,560,343	$39,560,343
Cash from operations	**$195,510,061**	**$195,510,061**	**$195,510,061**	**$195,510,061**
Investing cash flow	**$4,887,752**	**$4,887,752**	**$4,887,752**	**$4,887,752**
Cash resources	**$190,622,310**	**$190,622,310**	**$190,622,310**	**$190,622,310**

Income statement	20
Revenues	
Hospital	$261,090,000
Hotels	$4,222,560
Housing	$287,760
Shopping centre	$2,140,200
Schools	$540,000
Other	$864,000
Total revenue	**$269,144,520**
Expenses	
General hospital	$61,066,124
Hotels	$334,321
Housing	$100,847
Schools	$324,983
Shopping centre	$226,929
Insurance	$2,691,445
Management	$4,844,601
Marketing	$2,691,445
Overhead	$1,345,723
Other	$8,040
Depreciation	$39,560,343
Total expenses	**$113,194,802**
Earnings before taxes	$155,949,718
Taxes	
Net earnings	**$155,949,718**

Balance Sheet	20
Assets	
Buildings	$396,695,266
Cash	$3,546,144,668
Equity	
Equity capital	$1,173,898,415
Retained earnings	$2,768,941,519
Shareholder's equity	$3,942,839,934

Cash flow	20
Net earnings	$155,949,718
Plus: Depreciation	$39,560,343
Cash from operations	**$195,510,061**
Investing cash flow	**$4,887,752**
Cash resources	**$190,622,310**

Annex C: Financial Annex II - Extended profit calculation

Department	Expenses (monthly)	Income (monthly)	Profit (monthly)	Profit (annual)
General Hospital:				
General and orthopaedic surgery	$86,000.00	$180,000.00	$94,000.00	$1,128,000.00
Neurosurgery	$17,700.00	$45,000.00	$27,300.00	$327,600.00
Gynaecology and Urology	$33,000.00	$72,000.00	$39,000.00	$468,000.00
Other specialised surgery departments	$53,000.00	$72,000.00	$19,000.00	$228,000.00
Accident & emergency department	$260,000.00	$2,160,000.00	$1,900,000.00	$22,800,000.00
Operating room	$210,000.00	$6,000,000.00	$5,790,000.00	$69,480,000.00
Endoscopy	$31,000.00	$225,000.00	$194,000.00	$2,328,000.00
Radiology	$160,000.00	$3,600,000.00	$3,440,000.00	$41,280,000.00
Outpatient clinic	$307,000.00	$1,950,000.00	$1,643,000.00	$19,716,000.00
Pharmacy	$348,000.00	$432,000.00	$84,000.00	$1,008,000.00
General and specialised Laboratory	$690,000.00	$2,520,000.00	$1,830,000.00	$21,960,000.00
Day surgery	$229,000.00	$1,875,000.00	$1,646,000.00	$19,752,000.00
ICU/CCU/NICU	$330,000.00	$750,000.00	$420,000.00	$5,040,000.00
Psychiatry	$13,800.00	$27,000.00	$13,200.00	$158,400.00
Physio- and Hydrotherapy	$12,900.00	$22,500.00	$9,600.00	$115,200.00
Dialyses Centre	$210,000.00	$900,000.00	$690,000.00	$8,280,000.00
Telemedicine	$14,000.00	$90,000.00	$76,000.00	$912,000.00
Oncology	$14,500.00	$45,000.00	$30,500.00	$366,000.00
Ophtalmology	$14,500.00	$27,000.00	$12,500.00	$150,000.00
Other specialised centres	$269,000.00	$450,000.00	$181,000.00	$2,172,000.00
Canteen	$39,700.00	$315,000.00	$275,300.00	$3,303,600.00
Additional general expenses:				
General staff	$1,625,400.00	$0.00	-$1,625,400.00	-$19,504,800.00
Water	$73,040.00	$0.00	-$73,040.00	-$876,480.00
Diesel	$47,303.66	$0.00	-$47,303.66	-$567,643.88
Commercial Buildings:				
Fees for Parking	$670.00	$27,000.00	$26,330.00	$315,960.00
Shopping Mall with Auditorium	$18,910.73	$178,350.00	$159,439.27	$1,913,271.30
3 Star Hotel	$8,450.04	$48,480.00	$40,029.96	$480,359.49
5 Star Hotel	$19,410.08	$303,400.00	$283,989.92	$3,407,879.04
Nurses' residence	$3,905.65	$6,480.00	$2,574.35	$30,892.22
Staff House	$4,498.30	$17,500.00	$13,001.70	$156,020.35
Nurses Teaching School	$14,887.95	$30,000.00	$15,112.05	$181,344.64

Technician Teaching School	$12,193.97	$15,000.00	$2,806.03	$33,672.32
Sub-total	$5,171,770.38	$22,383,710.00	$17,211,939.62	$206,543,275.46
Additional costs	**per month**			**per year**
Maintenance / upgrade (2.5%)	$430,298.49			-$5,163,581.89
1 % for marketing	$172,119.40			-$2,065,432.75
Insurance (1%)	$172,119.40			-$2,065,432.75
Management (1.8%)	$309,814.91			-$3,717,778.96
Overhead (0.5%)	$86,059.70			-$1,032,716.38
Total additional costs:	$1,170,411.89			-$14,044,942.73
Total Profit before tax:			**$16,041,527.73**	**$192,498,332.73**

Annex D: Financial Annex III - Income per department

Parking lot				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Staff	1	$200.00	$200.00	$2,400.00
Security	2	$200.00	$400.00	$4,800.00
Operating cost incl. Electricity	1	$70.00	$70.00	$840.00
			$870.00	$10,440.00
Revenues				
Description	Quantity / day	Average fee	Monthly income	Total annual income
Vehicles	300	$3.00	$27,000.00	$324,000.00
			$27,000.00	$324,000.00
			Annual profit	$315,960

Shopping centre with auditorium				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Manager	1	$1,200.00	$1,200.00	$14,400.00
Staff	8	$200.00	$1,600.00	$19,200.00
Security	10	$200.00	$2,000.00	$24,000.00
cleaner	12	$150.00	$1,800.00	$21,600.00
Electricity (MWh from diesel)	144	$64.66	$9,310.73	$111,728.70
Other operating costs	1	$3,000.00	$3,000.00	$36,000.00
			$18,910.73	$226,928.70
Revenues				
	Quantity	Average rent	Monthly income	Total annual income
Supermarket sqm 2,000	1	$40,000.00	$40,000.00	$480,000.00
Store 130 sqm	15	$3,640.00	$54,600.00	$655,200.00
Store 50 sqm	15	$1,450.00	$21,750.00	$261,000.00
Store 20 sqm	15	$600.00	$9,000.00	$108,000.00
Office and practice area sqm 1,000	1	$29,000.00	$29,000.00	$348,000.00
Foodcourt 500 sqm	1	$14,000.00	$14,000.00	$168,000.00
Auditorum	10	$1,000.00	$10,000.00	$120,000.00
			$178,350.00	$2,140,200.00
			Annual profit	$1,913,271

Three-star hotel				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Manager	1	$1,000.00	$1,000.00	$12,000.00
Staff	6	$200.00	$1,200.00	$14,400.00
Security	2	$200.00	$400.00	$4,800.00
Cleaning Staff	12	$150.00	$1,800.00	$21,600.00
Electricity (MWh from diesel)	16	$64.66	$1,050.04	$12,600.51
Other operating costs	1	$3,000.00	$3,000.00	$36,000.00
			$8,450.04	$101,400.51
Revenues				
	Quantity	Daily revenues	Monthly income	Total annual income
Rooms	40	$99.00	$47,520.00	$570,240.00
Room service	1	$80.00	$960.00	$11,520.00
			$48,480.00	$581,760.00
			Annual profit	$480,359

Five-star hotel				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Manager	1	$1,200.00	$1,200.00	$14,400.00
Staff	12	$230.00	$2,760.00	$33,120.00
Security	4	$200.00	$800.00	$9,600.00
Cleaning Staff	18	$150.00	$2,700.00	$32,400.00
Kitchen Staff	10	$200.00	$2,000.00	$24,000.00
Electricity (MWh from diesel)	30	$64.66	$1,950.08	$23,400.96
Other operating costs	1	$8,000.00	$8,000.00	$96,000.00
			$19,410.08	$232,920.96
Revenues				
	Quantity	Daily revenues	Monthly income	Total annual income
Rooms	24	$200.00	$144,000.00	$1,728,000.00
Executive suites	16	$280.00	$134,400.00	$1,612,800.00
Presidential suite	0.3	$1,000.00	$10,000.00	$120,000.00
Restaurant income	1	$500.00	$15,000.00	$180,000.00
			$303,400.00	$3,640,800.00
			Annual profit	$3,407,879

Nurses' residence				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Security	2	$200.00	$400.00	$4,800.00
Staff	2	$200.00	$400.00	$4,800.00
Electricity (MWh from diesel)	17	$64.66	$1,105.65	$13,267.78
Other operating costs	1	$2,000.00	$2,000.00	$24,000.00
			$3,905.65	$46,867.78
Revenues				
	Quantity	Monthly rent per person	Monthly income	Total annual income
Shared housing	90	$60.00	$5,400.00	$64,800.00
1-bed apartment	9	$120.00	$1,080.00	$12,960.00
			$6,480.00	$77,760.00
			Annual profit	$30,892

Staff housing				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Security	2	$200.00	$400.00	$4,800.00
Staff	2	$200.00	$400.00	$4,800.00
Electricity (MWh from diesel)	11	$64.66	$698.30	$8,379.65
Other operating costs	1	$3,000.00	$3,000.00	$36,000.00
			$4,498.30	$53,979.65
Revenues				
	Quantity	Monthly rent per apartment	Monthly income	Total annual income
1-room apartment	20	$200.00	$4,000.00	$48,000.00
2-room apartment	20	$300.00	$6,000.00	$72,000.00
3-room apartment	10	$450.00	$4,500.00	$54,000.00
4-room apartment	5	$600.00	$3,000.00	$36,000.00
			$17,500.00	$210,000.00
			Annual profit	$156,020

Nursing school				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
European Teacher	1	$8,000.00	$8,000.00	$96,000.00
Other teachers	4	$1,000.00	$4,000.00	$48,000.00
Staff	2	$200.00	$400.00	$4,800.00
Cleaning Staff	4	$150.00	$600.00	$7,200.00
Electricity (MWh from diesel)	6	$64.66	$387.95	$4,655.36
Other operating costs	1	$1,500.00	$1,500.00	$18,000.00
			$14,887.95	$178,655.36
Revenues				
	Quantity	Monthly tuition fee	Monthly income	Total annual income
Students	200	$150.00	$30,000.00	$360,000.00
			$30,000.00	$360,000.00
			Annual profit	$181,345

Technician school				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
European Teacher	1	$8,000.00	$8,000.00	$96,000.00
Other teachers	2	$1,000.00	$2,000.00	$24,000.00
Staff	2	$200.00	$400.00	$4,800.00
Cleaning Staff	4	$150.00	$600.00	$7,200.00
Electricity (MWh from diesel)	3	$64.66	$193.97	$2,327.68
Other operating costs	1	$1,000.00	$1,000.00	$12,000.00
			$12,193.97	$146,327.68
Revenues				
	Quantity	Monthly tuition fee	Monthly income	Total annual income
Students	100	$150.00	$15,000.00	$180,000.00
			$15,000.00	$180,000.00
Annual profit				$33,672

General and orthopaedic surgery (120 beds)				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	30	$1,200.00	$36,000.00	$432,000.00
Nurses	80	$400.00	$32,000.00	$384,000.00
Cost per bed per day	120	$5.00	$18,000.00	$216,000.00
			$86,000.00	$1,032,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Occupation	120	$50.00	$180,000.00	$2,160,000.00
			$180,000.00	$2,160,000.00
			Annual profit	$1,128,000

Neurosurgery (30 beds)				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	6	$1,200.00	$7,200.00	$86,400.00
Nurses	15	$400.00	$6,000.00	$72,000.00
Cost per bed per day	30	$5.00	$4,500.00	$54,000.00
			$17,700.00	$212,400.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Occupation	30	$50.00	$45,000.00	$540,000.00
			$45,000.00	$540,000.00
			Annual profit	$327,600

Gynaecology and urology (60 beds)				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	10	$1,200.00	$12,000.00	$144,000.00
Nurses	30	$400.00	$12,000.00	$144,000.00
Cost per bed per day	60	$5.00	$9,000.00	$108,000.00
			$33,000.00	$396,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Occupation	60	$40.00	$72,000.00	$864,000.00
			$72,000.00	$864,000.00
			Annual profit	$468,000

Other specialised surgery departments (60 beds)				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	30	$1,200.00	$36,000.00	$432,000.00
Nurses	20	$400.00	$8,000.00	$96,000.00
Cost per bed per day	60	$5.00	$9,000.00	$108,000.00
			$53,000.00	$636,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Occupation	60	$40.00	$72,000.00	$864,000.00
			$72,000.00	$864,000.00
			Annual profit	$228,000

Accident and emergency department				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	10	$1,200.00	$12,000.00	$144,000.00
Nurses	20	$400.00	$8,000.00	$96,000.00
Material cost per case per day	800	$10.00	$240,000.00	$2,880,000.00
			$260,000.00	$3,120,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Cases per day	800	$90.00	$2,160,000.00	$25,920,000.00
			$2,160,000.00	$25,920,000.00
			Annual profit	$22,800,000

Operating Room (24 rooms)				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	30	$1,200.00	$36,000.00	$432,000.00
Nurses	60	$400.00	$24,000.00	$288,000.00
Material cost per case per day	100	$50.00	$150,000.00	$1,800,000.00
			$210,000.00	$2,520,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Cases per day	100	$2,000.00	$6,000,000.00	$72,000,000.00
			$6,000,000.00	$72,000,000.00
			Annual profit	$69,480,000

Endoscopy (10 rooms)				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	10	$1,200.00	$12,000.00	$144,000.00
Nurses	10	$400.00	$4,000.00	$48,000.00
Material cost per case per day	50	$10.00	$15,000.00	$180,000.00
			$31,000.00	$372,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Cases per day	50	$150.00	$225,000.00	$2,700,000.00
			$225,000.00	$2,700,000.00
			Annual profit	$2,328,000

Radiology				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	20	$1,200.00	$24,000.00	$288,000.00
Special personnel	40	$400.00	$16,000.00	$192,000.00
Material cost per case per day	800	$5.00	$120,000.00	$1,440,000.00
			$160,000.00	$1,920,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Cases per day	800	$150.00	$3,600,000.00	$43,200,000.00
			$3,600,000.00	$43,200,000.00
			Annual profit	$41,280,000

Outpatient Clinics				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	60	$1,200.00	$72,000.00	$864,000.00
Special personnel	100	$400.00	$40,000.00	$480,000.00
Material cost per case per day	1,300	$5.00	$195,000.00	$2,340,000.00
			$307,000.00	$3,684,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Cases per day	1,300	$50.00	$1,950,000.00	$23,400,000.00
			$1,950,000.00	$23,400,000.00
			Annual profit	$19,716,000

Pharmacy				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Pharmacist	12	$1,000.00	$12,000.00	$144,000.00
Material cost per medication	800	$14.00	$336,000.00	$4,032,000.00
			$348,000.00	$4,176,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Medication	800	$18.00	$432,000.00	$5,184,000.00
			$432,000.00	$5,184,000.00
			Annual profit	$1,008,000

General and specialised laboratory				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	30	$1,200.00	$36,000.00	$432,000.00
Pharmacist	60	$400.00	$24,000.00	$288,000.00
Material cost per case per day	7,000	$3.00	$630,000.00	$7,560,000.00
			$690,000.00	$8,280,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Cases per day	7,000	$12.00	$2,520,000.00	$30,240,000.00
			$2,520,000.00	$30,240,000.00
			Annual profit	$21,960,000

Day surgery unit				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	6	$1,200.00	$7,200.00	$86,400.00
Nurses	10	$400.00	$4,000.00	$48,000.00
Material cost per case per day	250	$30.00	$225,000.00	$2,700,000.00
			$229,000.00	$2,748,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Cases per day	250	$250.00	$1,875,000.00	$22,500,000.00
			$1,875,000.00	$22,500,000.00
			Annual profit	$19,752,000

ICU/CCU/NICU				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	50	$1,200.00	$60,000.00	$720,000.00
Nurses	300	$400.00	$120,000.00	$1,440,000.00
Cost per bed per day	100	$50.00	$150,000.00	$1,800,000.00
			$330,000.00	$3,960,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Occupation	100	$250.00	$750,000.00	$9,000,000.00
			$750,000.00	$9,000,000.00
			Annual profit	$5,040,000

Psychiatry (30 beds)				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	5	$1,200.00	$6,000.00	$72,000.00
Nurses	15	$400.00	$6,000.00	$72,000.00
Cost per bed per day	30	$2.00	$1,800.00	$21,600.00
			$13,800.00	$165,600.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Occupation	30	$30.00	$27,000.00	$324,000.00
			$27,000.00	$324,000.00
			Annual profit	$158,400

Physiotherapy / Hydrotherapy				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	5	$1,200.00	$6,000.00	$72,000.00
Special personnel	15	$400.00	$6,000.00	$72,000.00
Cases per day	30	$1.00	$900.00	$10,800.00
			$12,900.00	$154,800.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Cases per day	30	$25.00	$22,500.00	$270,000.00
			$22,500.00	$270,000.00
			Annual profit	$115,200

Dialysis centre (40 stations, 3x/day)				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	5	$1,200.00	$6,000.00	$72,000.00
Nurses	30	$400.00	$12,000.00	$144,000.00
Special personnel	30	$400.00	$12,000.00	$144,000.00
cases per day	120	$50.00	$180,000.00	$2,160,000.00
			$210,000.00	$2,520,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Cases per day	120	$250.00	$900,000.00	$10,800,000.00
			$900,000.00	$10,800,000.00
			Annual profit	$8,280,000

Telemedicine				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	5	$1,200.00	$6,000.00	$72,000.00
Nurses	20	$400.00	$8,000.00	$96,000.00
			$14,000.00	$168,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Cases per day	100	$30.00	$90,000.00	$1,080,000.00
			$90,000.00	$1,080,000.00
			Annual profit	$912,000

Oncology				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	5	$1,200.00	$6,000.00	$72,000.00
Nurses	10	$400.00	$4,000.00	$48,000.00
Cost per bed per day	30	$5.00	$4,500.00	$54,000.00
			$14,500.00	$174,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Occupation	30	$50.00	$45,000.00	$540,000.00
			$45,000.00	$540,000.00
			Annual profit	$366,000

Ophtalmology				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	5	$1,200.00	$6,000.00	$72,000.00
Nurses	10	$400.00	$4,000.00	$48,000.00
Cost per bed per day	30	$5.00	$4,500.00	$54,000.00
			$14,500.00	$174,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Occupation	30	$30.00	$27,000.00	$324,000.00
			$27,000.00	$324,000.00
			Annual profit	$150,000

Other specialised departments				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Physicians	120	$1,200.00	$144,000.00	$1,728,000.00
Nurses	200	$400.00	$80,000.00	$960,000.00
Cost per bed per day	300	$5.00	$45,000.00	$540,000.00
			$269,000.00	$3,228,000.00
Revenues				
	Quantity	Average revenue per case	Monthly income	Total annual income
Cases per day	300	$50.00	$450,000.00	$5,400,000.00
			$450,000.00	$5,400,000.00
			Annual profit	$2,172,000

Canteen				
Expenses				
Description	Quantity	Unit price	Monthly expenses	Total annual expenses
Kitchen head	1	$500.00	$500.00	$6,000.00
Kitchen staff	28	$200.00	$5,600.00	$67,200.00
Material cost morning	1,400	$0.80	$33,600.00	$403,200.00
Material cost afternoon	1,400	$1.50	$63,000.00	$756,000.00
Material cost evening	1,000	$1.20	$36,000.00	$432,000.00
			$39,700.00	$476,400.00
Revenues				
	Quantity	earning per day	Monthly income	Total annual income
Sales from patients/staff/students in the morning	800	$1.80	$43,200.00	$518,400.00
Sales from patients/staff/students in the afternoon	800	$3.20	$76,800.00	$921,600.00
Sales from patients/staff/students in the evening	800	$2.50	$60,000.00	$720,000.00
Sales from visitors in the morning	600	$2.40	$43,200.00	$518,400.00
Sales from visitors in the afternoon	600	$4.00	$72,000.00	$864,000.00
Sales from visitors in the evening	200	$3.30	$19,800.00	$237,600.00
			$315,000.00	$3,780,000.00
			Annual profit	$3,303,600

Additional costs for staff and (hospital) operation				
Expenses				
	Quantity	unit price	Monthly expenses	annual expenses
Staff / assistant	980	$200.00	$196,000.00	$2,352,000.00
Cleaning staff	120	$150.00	$18,000.00	$216,000.00
Security	40	$200.00	$8,000.00	$96,000.00
Ambulance drivers / paramedics	18	$200.00	$3,600.00	$43,200.00
Accountant	30	$400.00	$12,000.00	$144,000.00
Technician	22	$400.00	$8,800.00	$105,600.00
IT staff	10	$400.00	$4,000.00	$48,000.00
Manager	4	$1,000.00	$4,000.00	$48,000.00
European physician	30	$19,000.00	$570,000.00	$6,840,000.00
European nurse	30	$8,000.00	$240,000.00	$2,880,000.00
European specialist	45	$9,000.00	$405,000.00	$4,860,000.00
European manager	6	$14,000.00	$84,000.00	$1,008,000.00
European technician	8	$9,000.00	$72,000.00	$864,000.00
Water (m3 / month)	132,800	$0.55	$73,040.00	$876,480.00
Electricity (MWh from diesel)	732	$64.66	$47,303.66	$567,643.88
			$1,745,743.66	$20,948,923.88

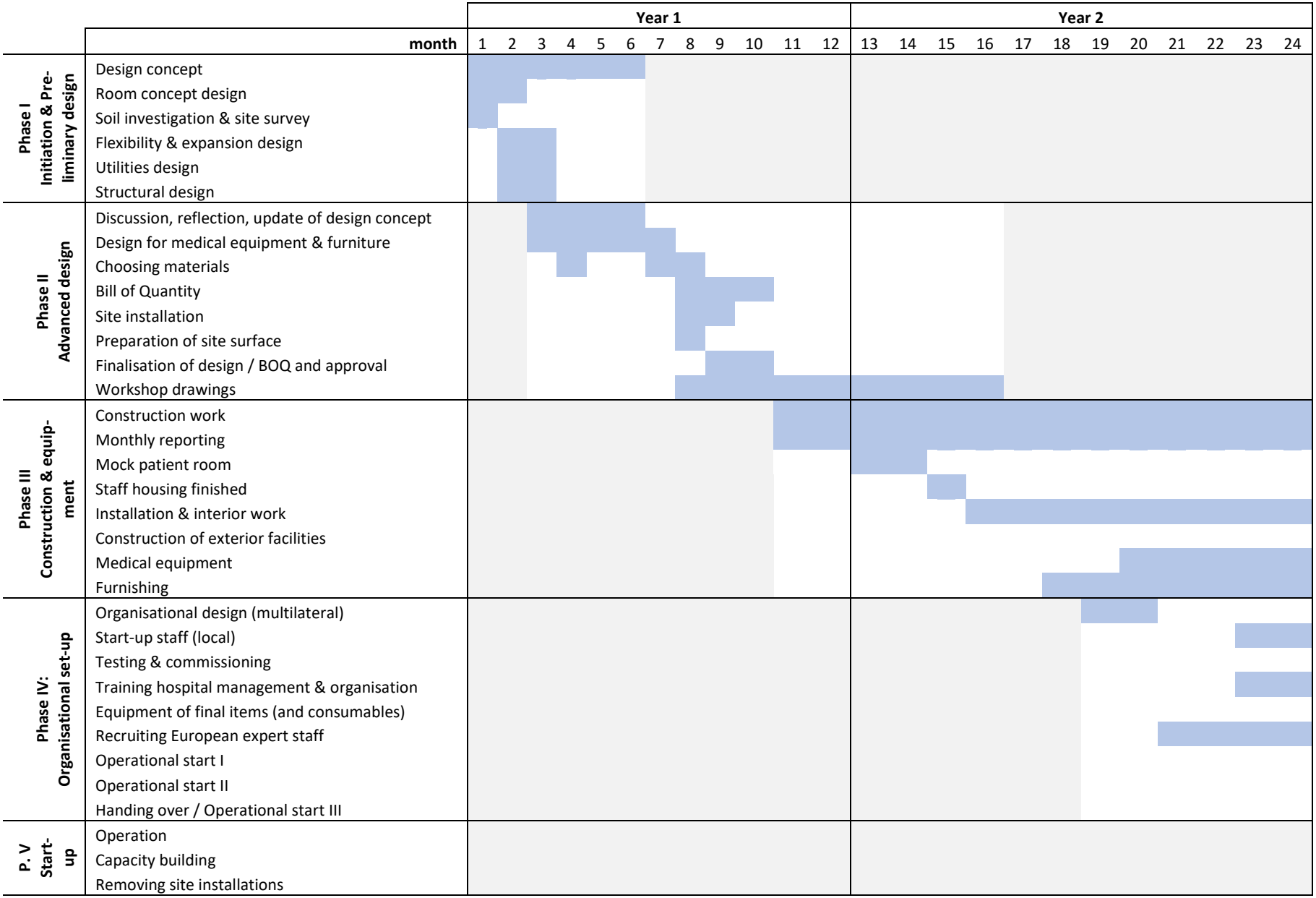
- The exact number of employees will be determined before the opening of the hospital.

Annex E: Financial Annex IV - Offer

Number	Name		Sqm	Design [$]	Building [$]	Site superv. [$]
1	**Site**		200,000.00	By the client		
	Infrastructure provisions			By the client		
		Road				
		Water				
		Sewage				
		Electric				
		Telephone				
		Internet				
	Survey			By the client		
	Soil investigation			By the client		
2	**Buildings**					
	Hospital		87,000.00			
	Design			$22,609,000.00		
		Architecture				
		Structural en.				
		Mechanical				
		Electrical				
		Medical desi				
		Fire protec.				
		It engineer				
		Hard and soft				
		Design				
		Outside				
	Building incl medical and technical equipment				$850,093,614.85	
	Site super vis.					$22,609,000.00
3	**Hotel 3 star**		2,500.00			
	Design			$460,000.00		
	Building				$12,937,500.00	
	Site supervision					$460,000.00
4	**Hotel 5 star**		4,500.00			
	Design			$1,058,000.00		
	Building				$31,050,000.00	
	Site superv.					$1,058,000.00
5	**Church & Mosque**		800 + 800			
	Design			$253,000.00		
	Building				3,680,000.00	

	Site superv.					$253,000.00
6	**Nursing**		2,000.00			
	Design			$331,200.00		
	Building				$8,280,000.00	
	Site superv.					$331,200.00
7	**Staff housing**		4,200.00			
	Design			$694,600.00		
	Building				$17,388,000.00	
	Site supervision					$694,600.00
8	**Shopping mall inc. Auditorium**		12,500.00			
	Design			$1,725,000.00		
	Building				$50,312,500.00	
	Site superv.					$1,725,000.00
9	**Nurse school**		3,000.00			
	Design			$575,000.00		
	Building				$12,420,000.00	
	Site superv.					$575,000.00
10	**Techn. School**		1,500.00			
	Design			$345,000.00		
	Building				$6,900,000.00	
	Site superv.					$345,000.00
11	**Outdoor work**		200,000.00			
	Design			$1,407,600.00		
	Outside work				$46,920,000.00	
	Soft and hard					
	Site superv.					$1,407,600.00
				Design	**Construction**	**Supervision**
				$29,458,400.00	$1,039,981,614.85	$29,458,400.00
				Total	$1,098,898,414.85	

Annex F: Plan of activities



		Year 3												Year 4											
	month	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Phase I Initiation & Pre-liminary design	Design concept																								
	Room concept design																								
	Soil investigation & site survey																								
	Flexibility & expansion design																								
	Utilities design																								
	Structural design																								
Phase II Advanced design	Discussion, reflection, update of design concept																								
	Design for medical equipment & furniture																								
	Choosing materials																								
	Bill of Quantity																								
	Site installation																								
	Preparation of site surface																								
	Finalisation of design / BOQ and approval																								
	Workshop drawings																								
Phase III Construction & equip-ment	Construction work																								
	Monthly reporting																								
	Mock patient room																								
	Staff housing finished																								
	Installation & interior work																								
	Construction of exterior facilities																								
	Medical equipment																								
	Furnishing																								
Phase IV: Organisational set-up	Organisational design (multilateral)																								
	Start-up staff (local)																								
	Testing & commissioning																								
	Training hospital management & organisation																								
	Equipment of final items (and consumables)																								
	Recruiting European expert staff																								
	Operational start I																								
	Operational start II																								
	Handing over / Operational start III																								
P. V Start-up	Operation																								
	Capacity building																								
	Removing site installations																								