

## ***ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER***

### **Part 1 of 2**

#### **1. OBJECTIVE, PURPOSE & EXPECTED RESULTS**

- 1.1. The aim of the turn-key project is the supply Hospital Furniture and Biomedical Equipment for the General Ward and the Delivery Unit of Saudi Maternity Hospital in Kassala.
- 1.2. The General Patient Ward for Obstetric has 90 beds distributed in 16 rooms and 1 nurse Station. Each module is considered is made of 30 beds for a total of three module. The ward has to be equipped with basic hospital furniture to host women in pre-partum and post-partum.
- 1.3. The Delivery Unit corresponds to Block H in the general layout of the Saudi Maternity Hospital. It includes Observation rooms and delivery rooms. Two nurse stations serve the unit. The Delivery Unit should facilitate the natural delivery and in case of complications the mother and child can be transferred to the Surgical Theatre for caesarean procedure. The delivery room shall also allow difficult natural delivery and should allow reanimation of the mother and newborn in case of complications.

#### **2. BACKGROUND INFORMATION**

- 2.1. The long-term Kassala Health Citadel Program started in October 2017 when the Governor of Kassala and the Federal Ministry of Health asked for the realization of the New Kassala Health Citadel through an unique General Master Plan that should include the construction of new General Surgical Unit, the rehabilitation of the existing facilities (Saudi Maternity Hospital, Diagnostic Centre, Blood Bank) and the integration of the uncompleted facilities built by the Islamic Development Bank inside a compound (about 230.000 sqmt) that also comprises the Academy of Health Sciences and the Midwifery School.

#### **3. REQUIREMENTS**

##### **Staff**

- 3.1. Personnel with proven experience on the systems whose training took place in the company or other companies and are constantly updated.

##### **Materials**

- 3.2. The supplier shall provide didactic material for user and maintenance training courses, in hard copy and CD/DVD support, in English language
- 3.3. All the instruments necessary for calibrations, measurements and technical measurement activities must be certified with updated certificates.

#### **4. TRAINING**

- 4.1. Upon delivery of equipment, training must be held locally in the English language. A qualified instructor approved by the Contracting Authority should carry out the training. The course shall cover the basic instructions for the use, maintenance, safety and any other relevant aspect needed for the proper functioning of the equipment, where required.

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- 4.2. Training courses shall last not less than **5 working days**, and in any case the training for each piece of equipment shall not be less than the duration and topics recommended by the Manufacturer.
- 4.3. The Tenderer shall include in his offer a detailed training (users and maintainers) plan and time schedule, and specifying topics, duration and personnel involved.
- 4.4. The location of the training course for users and maintenance technicians shall be the place where the equipment is delivered and installed.

### 5. User training

- 5.1. The training courses for users shall be theoretical and practical, using the equipment in the offered configuration, proper instrumentation, testers, simulators and phantoms, and planning simulations of all functions and possible mistakes.
- 5.2. The training course for users shall be organized for all the users expected/planned by the final beneficiary institution for each type/model of equipment installed.
- 5.3. The training course for users shall focus at least on the following topics:
  - Presentation and contacts of the reference technicians;
  - equipment's functions in the offered configuration, alarm signals and error signals;
  - calibrations (if requested), daily cleaning and maintenance operations in order to assure the longest equipment life;
  - correct equipment utilization and related possible risks for users and patients.
- 5.4. The average duration and the topics of the course shall be not less than the Manufacturer's recommendations.
- 5.5. A final test shall be organized at the end of the training course in order to verify the know-how acquired; the trainees shall certify that the received training is satisfactory.

### 6. Technical training

- 6.1. The training course for maintenance technicians shall be theoretical and practical, using the equipment in the configuration, proper instrumentation, testers, simulators and phantoms, and planning simulation and management of the most common problems; the training proposal shall be approved by the Contracting Authority.
- 6.2. The training course for maintenance technicians shall be organized to for all the technicians and engineers' expected/planned by the final beneficiary institution for each type/model of equipment installed.
- 6.3. The training course for maintenance technicians shall focus at least on the following topics:
  - Presentation and contacts of the reference technicians;
  - General equipment functions, specific technical characteristics and alarm signals;
  - Main electrical and functional schemes;
  - Calibrations (if required) and periodic maintenance in order to assure the longest equipment life;
  - Preventive maintenance and its regular recurrence;
  - Problem identification and corrective maintenance (to solve the most frequent problems);
  - Safety and quality controls, where applicable.

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- 6.4. The average duration and the topics of the course shall be not less than the Manufacturer's recommendations.
- 6.5. A final test shall be organized at the end of the training course in order to verify the know-how acquired and the results shall be delivered to the Contracting Authority.

### 7. WARRANTY

- 7.1. Warranty period shall last not less than **12 months** from the acceptance test.
- 7.2. Warranty shall include regular preventive maintenance / safety and functionality checks / QA as per Manufacturer's recommendations, or at least once per year if not differently specified by the manufacturer/tenderer.
- 7.3. Warranty shall include unlimited corrective and technical interventions with spare parts included.

### 8. DOCUMENTATION

- 8.1. Service and operational manuals must be provided in English for all equipment (2 soft and hard copies)
- 8.2. The Tenderer shall provide the original Manufacturer's brochure for each item, in hard-copy and CD/DVD support, in English language.
- 8.3. The Service Manual shall include all information necessary to carry out the maintenance procedures on the equipment, performed as applicable by the local technical staff at the Clinical Engineering Department of the health facility or in another location; the service manual shall include, at least the following information: system overview with full technical specifications and supply requirements; installation requirements and instructions; spare parts list with part number and ordering information; wiring diagrams and technical drawings/schemes; list of equipment needed for calibration and routine maintenance; calibration, quality control and preventive maintenance procedures and checklists; certificate of inspection and calibration from factory.
- 8.4. The User Manual shall include all information for proper functioning and operation of the equipment by the user; the user manual shall include at least the following information: physical description; features and functions; operating instructions; operational checks and technical procedures; illustrations; performance characteristics; adjustments, troubleshooting, calibrations, etc.; preventive maintenance.

### 9. AFTER SALE SERVICE

#### 9.1. Corrective maintenance:

- The service described will be performed with technicians located in the region by the contractor or local agent.
- The corrective maintenance service will use only original spare parts or tested parts with warranty.
- The *online* corrective maintenance service should use a web based *Remote Diagnosis* software to check system logs of the system and perform diagnostics and troubleshooting activities when a fault occurs.

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- The *on-site* corrective maintenance service shall take place from 08:30 to 18:30, excluding Friday and holidays, with average on-site intervention times of 1 working day from the ticket opening time.
- All corrective activities should be tracked in paper form and a copy shall be left in Logbok of equipment. A Software copy shall be sent as well.

### 9.2. Scheduled maintenance:

- The Contractor will provide the calendar of the visits and shared with the user.
- Scheduled activity visits will be planned based on user's needs and to minimize the interference with diagnostic activity.
- The activities and checks shall be done following the indications of the manufacturer.
- The preventive maintenance sheet will be issued in paper form, and will be part of the log book on the system.
- If the preventive activity should reveal a technical anomaly that cannot be resolved, an alert will be generated to the User.
- After sale and preventive maintenance will follow the frequency and procedure indicated by the manufacturer.