| REFERENCE OF TENDER | DESCRIPTION OF TENDER | TIME PERIOD OF TENDER | DEPARTMENT/DIVISION / UNIT REQUESTING TENDER | FEES | CLOSING DATE NOT LATER THAN 2.00PM | FOCAL PERSON |
|---|---|---|---|---|---|---|
| KK/39/2023/HTD | SUPPLY, DELIVERY, INSTALLATION, TESTING, CALIBRATION AND COMMISSIONING TWO(2) UNITS OF ULTRASOUND SYSTEM FOR RADIOLOGY UNIT, MINISTRY OF HEALTH | - | DEPARTMENT OF HEALTHCARE TECHNOLOGY | $50.00 | 21ST MARCH 2023 | *Hjh Nur Aqilah bitni Hj Ismail*<br>*Biomedical Engineer*<br>*Healthcare Technology Department*<br>*Negara Brunei Darussalam*<br>*Contact No.: 2381640 EXT. 7551*<br>*email:*<br>*nuraqilah.ismail@moh.gov.bn* |

**NOMBOR TAWARAN : KK/39/2023/HTD**

# KEMENTERIAN KESIHATAN
# NEGARA BRUNEI DARUSSALAM

## SUPPLY, DELIVERY, INSTALLATION, TESTING, CALIBRATION AND COMMISSIONING TWO(2) UNITS OF ULTRASOUND SYSTEM FOR RADIOLOGY UNIT, MINISTRY OF HEALTH

**YURAN TAWARAN : $50.00**

**NOMBOR RESIT :**

**TARIKH TUTUP : HARI SELASA, 21HB MAC 2023**

**JAM : 2.00 PETANG**

**KEPADA :**

**PENGERUSI LEMBAGA TAWARAN KECIL**
**PETI TAWARAN, TINGKAT BAWAH**
**BANGUNAN KEMENTERIAN KESIHATAN**
**COMMONWEALTH DRIVE**
**BANDAR SERI BEGAWAN BB 3910**
**NEGARA BRUNEI DARUSSALAM**

( CLUSTERING )

# SECTION 2

# SPECIFICATIONS AND REQUIREMENTS

**TENDER REFERENCE NO: KK/39/2023/HTD**

**INVITATION TO TENDER**

**SUPPLY, DELIVERY, INSTALLATION, TESTING, CALIBRATION AND COMMISSIONING TWO(2) UNITS OF ULTRASOUND SYSTEM FOR RADIOLOGY UNIT, MINISTRY OF HEALTH**

| | | USER REQUIREMENT |
|---|---|---|
| **1. INTRODUCTION** | 1.1 | The Tenderer shall provide the following service i.e., to supply, delivery, install, test, calibrate and commissioning two (2) units cart-based Ultrasound System complete with examination couch and radiographer's chair. |
| | 1.2 | The Tenderers are required to propose all items and be wholly responsible for all products and services offered unless otherwise specified. The Government reserves the right to accept all or any part of the proposed items or services from the Tenderers. |
| | 1.3 | The System proposed shall be integrated to the existing BruHIMS and PACS. Any licenses/hardware required for this integration shall be included in the proposal. |
| | 1.4 | Tender submission shall include the cost of all items, services, licenses and supplies set out in this tender. |
| | 1.5 | The site of delivery and installation of the System is as follow<br>i. One (1) unit - Radiology Unit, Pengiran Muda Mahkota Pengiran Muda Haji Al-Muhtadee Billah (PMMPMHAMB) Hospital.<br>ii. One (1) unit- Radiology Unit, Suri Seri Begawan (SSB) Hospital. |
| **2. QUALITY STANDARDS, REGULATIONS AND GUIDELINES** | 2.1 | The proposed system must meet the Health Level 7 (HL 7) specifications for RIS and DICOM 3.0 compatible and ready, IHE compliance and ready for integration with existing BruHIMS and PACS. |
| | 2.2 | The DICOM standards shall include but not limited to:<br>• Send/Receive<br>• Query/Retrieve and Print<br>• Worklist<br>• Storage commitment<br>• Modality Performed Procedure Step (MPPS) |
| | 2.3 | • The proposed system should be US FDA and CE approved model. |
| | 2.4 | The proposed system Electrical safety should conform to requirement for electrical safety as per IEC 60601 standard. |
| | 2.5 | Copies of respective certificates should be included in the proposal submission. |
| **3. SYSTEM ARCHITECTURE** | | The system proposed shall have the following architecture: |
| | 3.1 | Fully digital, compact, lightweight, portability, cart-based design. |
| | 3.2 | Independent steer and lockable wheels. |
| | 3.3 | Front and rear handles. |

| | | USER REQUIREMENT |
|---|---|---|
| | 3.4 | Suitable for both adult and paediatric patients including abdominal, obstetrics, gynaecology, small parts, breasts, vascular, transcranial, paediatric and neonatal, musculoskeletal, urological and cardiac applications. |
| | 3.5 | Able to operate on AC and battery. The battery should be self-recharging and the system shall be able to scan for up to one hour on battery alone. Mechanism to indicate battery-low should be available. |
| | 3.6 | Able to compare images from previous study |
| | 3.7 | Short boot-up time. |
| | 3.8 | Multiple preloaded application pre-sets available. |
| | 3.9 | Automatic gain adjustment for B mode imaging. |
| | 3.10 | Broadband 64 channel (transmitting) digital beam former. |
| | 3.11 | Maximum depth of field: 33 cm. |
| | 3.12 | Minimum depth of field: 0-2 cm. |
| | 3.13 | Four (4) active transducer ports and 1 parking probe port. |
| | 3.14 | Support transducer technologies like Linear, Curved array, Phased array and intra-cavitary transducers. |
| | 3.15 | System has frequency range from 2-15 MHz. |
| | 3.16 | Alphanumeric soft keys physical keyboard with easy access scans controls, and facility to sanitize the System keyboard to avoid cross contamination. |
| | 3.17 | Trackball for moving cursor. |
| | 3.18 | Touchscreen (at least 9” wide) in the control panel for easy customization of settings and commands to user preference. |
| | 3.19 | Control panel Back-lighting. |
| | 3.20 | Two (2) gel bottle holders. |
| | 3.21 | On (1) unit of integrated gel warmer. |
| | 3.22 | Integrated cable management. |
| | 3.23 | Integrated HDD of at least 300GB. |
| | 3.24 | Integrated DVD RW drive (or its equivalent) with the facility to transfer images. |
| **4. CONTROL MONITOR** | 4.1 | Touch screen colour display |
| | 4.2 | At least 12 inch |
| **5. DISPLAY MONITOR** | | The monitor shall have the following features: |
| | 5.1 | LCD with screen resolution of at least 1920 x 1080. |
| | 5.2 | At least 23”. |

| | | USER REQUIREMENT |
|---|---|---|
| | 5.3 | Adjustable height with tilt/rotate capacity. |
| | 5.4 | Integrated speakers. |
| | 5.5 | Brightness and contrast adjustment. |
| | 5.6 | Fold down and lock mechanism for transportation. |
| **6. OPERATING MODES** | | The system proposed shall have the following operating modes: |
| | 6.1 | B-Mode (B). |
| | 6.2 | M-Mode (M). |
| | 6.3 | Trapezoidal Mode. |
| | 6.4 | Pulsed Wave (PW) Mode. |
| | 6.5 | Continuous Wave (CW) Doppler Mode. |
| | 6.6 | Colour Flow (CF) Mode. |
| | 6.7 | Power Doppler Imaging (PDI) Mode. |
| | 6.8 | Contrast and Tissue Harmonic Imaging. |
| | 6.9 | Spatial Compounding. |
| | 6.10 | Extended and Convex field of view. |
| | 6.11 | Speckle Reduction Imaging. |
| | 6.12 | Automatic Image Optimization for B-Mode and Doppler. |
| | 6.13 | 2D Shear Wave Elastography for assessing liver stiffness. |
| | 6.14 | Adjustment of Focal zone, Gain, TGC, Dynamic range, Edge enhancement, Gamma correction. |
| | 6.15 | Adjust the frequency range on all transducers. |
| | 6.16 | Operator controlled multiple and adjustable focal zones. |
| | 6.17 | Real time Pan Zoom facility. |
| | 6.18 | Image annotation (alphanumeric and body marks). |
| | 6.19 | Multiple user defined pre-sets for variety of clinical applications. |
| | 6.20 | 2D Cine memory, M-Mode scroll memory. |
| | 6.21 | Cine loop facility up to one minute at 25 frames per second (fps). |
| | 6.22 | Fast random-access image review. |
| | 6.23 | Ability to apply wide variety of image processing after the examination. |
| | 6.24 | Full size and split-screen display. |

| | | USER REQUIREMENT |
|---|---|---|
| | 6.25 | Simultaneous display capability:<br>• B / PW<br>• B / CF<br>• B / PDI<br>• B / M<br>• B / Spatial Compounding |
| | 6.26 | Multi-image split-screen display capability:<br>• Live and/or frozen<br>• B or spatial compounding and B or spatial compounding<br>• B or spatial compounding and CF<br>• B or spatial compounding and PDI<br>• PW / M |
| **7. IMAGE ARCHIVE AND RECORDING** | 7.1 | System able to store at least 10,000 2D images to scanner hard drive, with CD/DVD burner and USB port for connection to computer and printer. |
| | 7.2 | Digital B & W and Colour thermal printer. |
| | 7.3 | Video and audio connections for other devices such as digital cameras. |
| | 7.4 | JPEG / WMV & AVI format. |
| **8. MEASUREMENT AND CALCULATION PACKAGES:** | | The system proposed shall include the following: |
| | 8.1 | 4 distance measurements, 2 angle measurements, calculation of diameter, area, and circumference, calculation of volume by height/width/length, planimetry, automatic planimetry and empirical method. |
| | 8.2 | Automated measurement packages including reports, Urology, Renal, Cardiac (M and B mode), Obstetrics and Gynecological, and Vascular. |
| | 8.3 | Real time automatic Doppler calculations. |
| | 8.4 | Automated calculation of waveforms indices. |
| | 8.5 | Hip dysplasia calculations. |
| | 8.6 | Shear wave elastography measurement of liver stiffness in both m/s and kPa, with automated IQR/Median value. |
| | 8.7 | Breast productivity package |
| **9. TRANSDUCERS** | | The following transducers shall be included: |
| | 9.1 | High Frequency Linear Transducer for vascular, small parts, breast and musculoskeletal. Tenderer to state the frequency. |
| | 9.2 | Broadband Curved Array Transducer for general purpose abdominal and obstetric. Tenderer to state the frequency. |
| | 9.3 | Broadband Phased Array Transducer (micro-convex or sector) for cardia echo and paediatrics transcranial ultrasound. Tenderer to state the frequency. |
| | 9.4 | Curved Intra-cavitary Transducer for transvaginal obstetrics and gynaecology scan. Tenderer to state the frequency.<br>To include 6 boxes of transvaginal probe cover |
| | 9.5 | Broadband Curved Array Transducer for liver shear wave elastography. (applicable only if a separate probe from the above is required for this purpose). Tenderer to state the frequency. |
| | 9.6 | Transducer used in biopsy guided procedures and other needle guided ultrasound procedure. |

| | | USER REQUIREMENT |
|---|---|---|
| **10. ULTRASOUND EXAMINATION COUCH PER ULTRASOUND SYSTEM** | 10 | One (1) unit electronic ultrasound examination couch |
| | a | With adjustable height |
| | b | Adjustable back and leg rest |
| | c | Complete with disposable paper dispenser mounts to the head end of the couch |
| | d | Dimension: tenderer to specify |
| **11. RADIOGRAPHER'S CHAIR/STOOL PER ULTRASOUND SYSTEM** | 11. | One (1) unit ultrasound chair or stool with adjustable height |
| **12. NETWORKING AND CONNECTIVITY** | 12.1 | Ethernet network connection |
| | 12.2 | The proposed system must be DICOM activated |
| | 12.3 | Inclusive of all licenses and software needed to initiate and maintain connectivity to INFINITT CPACS in MOH Brunei Darussalam until the end of service |
| | 12.4 | The proposed system must be "plug-and-play" ready and should be easily integrated with the MOH Brunei INFINITT PACS system – this includes all necessary licenses and software required to initiate and maintain connectivity to PACS. |
| | 12.5 | The proposed system should be connected to PACS, any licenses or hardware required for the connectivity shall be included in the proposal. |
| **13.ELECTRICAL SAFETY** | 13.1 | The tenderer shall offer power plugs that are sufficient for the maximum voltage and current of the equipment. |
| | 13.2 | The tenderer shall provide UPS with at least 30 min backup for the entire system offered. |
| **14. OVER-CURRENT PROTECTION** | 14.1 | Loss of power to other equipment on the same branch circuit due to internal equipment faults shall be prevented by using fuses or circuit breakers that are clearly labelled and easy to replace or reset. |
| | 14.2 | If fuses are used, a set of spare fuses shall be provided in a labeled holder located next to the main fuse holder. Permanent markings near each fuse the holder shall indicate fuse ratings. |
| **15. LABELLING** | 15.1 | Labels and markings shall be clear and legible. |
| | 15.2 | Labels and markings shall be durable enough to withstand routine cleaning. |
| | 15.3 | All appropriate warning legends shall be provided by the Tenderer. |
| **16.EASE OF USE** | 16. | The equipment shall be simple to use, operate, maintain and is designed for easy access to serviceable parts. |
| **17. STORAGE AND TRANSPORT** | 17.1 | The equipment and components shall be able to withstand temperature and humidity extremes likely to be encountered during storage and transport. |
| | 17.2 | The Tenderer shall recommend procedures for storage of the equipment when not in use. The packaging shall be marked with the device's name and the distributor's name and address. |
| **18. DELIVERY, INSTALLATION, ACCEPTANCE AND COMMISSIONING** | 18.1 | The Contractor shall observe the following requirements during delivery and installation: |
| | 18.1.1 | All ordinances or regulations enforced in Brunei Darussalam shall be followed. |

| | | USER REQUIREMENT |
|---|---|---|
| | 18.1.2 | Appropriate measures shall be taken to protect the installation site as well as the immediate surroundings and any existing facilities from damage caused by preparation and installation works. |
| | 18.2 | Upon delivery of the equipment to the Customer's location, the Contractor together with the Customer shall ensure: |
| | 18.2.1 | The equipment is in good physical condition without defects. |
| | 18.2.2 | The equipment conforms with the stated Specifications in this document. |
| | 18.2.3 | All the required accessories and consumables are supplied. |
| | 18.3 | The Contractor shall then perform equipment and software installation and necessary hardware and software configurations including but not limited to: |
| | 18.3.1 | Installation of all software and drivers that come with the equipment. |
| | 18.3.2 | Installation and configuration of software and drivers for the equipment into existing computers, if required by the User. |
| | 18.3.3 | Configuration of network settings for the equipment, if required by the User |
| | 18.4 | The Contractor shall liaise and coordinate with the Customer to ensure the provision for any necessary network connectivity and configuration requirements. |
| | 18.5 | The Acceptance Testing shall consist of Installation Tests including but not limited to the Quality Assurance test(s) and recalibration of the equipment if it fails the test. |
| | 18.6 | Copies of test results obtained in 18.5 should then be provided to the Customer: |
| | 18.6.1 | The Contractor shall submit all test reports to the Customer for verification. |
| | 18.6.2 | The equipment shall be commissioned for use upon signing of the acceptance report by the Customer. |
| **19. TRAINING** | 19.1 | On-site training for all radiologists in the operation and application of the System by an application specialist which include but not limited to:<br>• Basic operation<br>• Application training for the use of the various applications provided with the system.<br>• Basic maintenance, including troubleshooting. |
| | 19.2 | The categories of training shall include, but not limited to:<br>• End-users Operation Training to all users.<br>• Training for Biomedical Engineers. |
| | 19.3 | The trainers shall be well-qualified, knowledgeable and well-versed with the System to provide the training. |
| | 18.4 | Training certificate should be provided after completion of training sessions |
| **20. WARRANTY** | 20.1 | Warranty for one (1) year that covers all the proposed hardware, system software and other peripherals that should include but not limited to: |
| | | a- Spare parts |
| | | b- Corrective and preventive maintenance service (at no additional charges) |
| | | c- Emergency and non-emergency breakdown calls to rectify problems |
| | | d- Two (2) times planned preventive maintenance (PPM) during warranty period. |

| | | USER REQUIREMENT |
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| | | e- Documentation of PM service and tests reports must be submitted for user and Biomedical Engineer (BME). |
| **21.DOCUMENTATION** | 21. | The following documentation must be provided during implementation or after completion in both hardcopy and softcopy form (Portable hard drive/USB and DVD); - multiple copies might be required upon user request. |
| | | a. User/operation manual in English |
| | | b. Service manual in English |
| | | c. Training manual in English |
| | | d. Certificate of calibration and inspection from factory. |
| | | e. Quality assurance and commissioning report. |
| | | f. Quality control procedures for the System. |
| | | g. List of major spare parts and related accessories with their part number and costs. |
| **22. MAINTENANCE (OPTIONAL)** | | **General Requirements and Scope of Work** |
| | 22.1 | This maintenance requirement after warranty is **OPTIONAL** and the Ministry of Health is not obliged to grant the Tenderer the maintenance agreement. |
| | 22.1.1 | The Tenderer shall propose maintenance services after a warranty period for **five (5) years** for the system offered. The objectives of the maintenance services are:<br>a. To improve the system's uptime<br>b. To minimize and prevent system breakdown during operation<br>c. To maintain the quality of results<br>**d.** To prolong the system's life- span |
| | 22.2 | The Tenderer shall provide maintenance services for the system inclusive of all necessary spare parts, replacement parts and material to keep the system in good working order and condition. |
| | 22.3 | The Maintenance Services are as follows:<br>1- Preventive Maintenance<br>2- Corrective Maintenance |
| | 22.3.1 | **Preventive Maintenance** |
| | a | The Tenderer shall carry out all scheduled or planned preventive maintenance on the system during Government working hours:<br>7:45 am -12.15 am<br>1:30 pm – 4:30 pm |
| | b | Preventive Maintenance shall include cleaning, adjusting, lubricating, inspecting, testing and safety procedures and engineering improvements and modifications as recommended by the manufacturer designed to help in reducing system failure and to verify good and safe operating condition. |
| | c | The Tenderer will rectify any identified problems during preventive maintenance. |
| | d | Preventive Maintenance shall be performed every six (6) months in accordance with the procedures specified in the system service manuals. This Preventive Maintenance shall be completed within one (1) day from the time the service engineer arrives at the site. |

| | | USER REQUIREMENT |
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| | e | The successful Tenderer shall submit to the Ministry of Health a maintenance servicing schedule in accordance with the manuals, which may be amended from time to time, by mutual agreement, in writing. This schedule shall be submitted annually to the Ministry of Health; **the first annual schedule to be submitted two (2) weeks prior to commencement of the Preventive Maintenance service.** |
| | f | After the Preventive Maintenance is completed, the Tenderer shall submit two (2) copies of the maintenance service and test reports to the Biomedical Engineer and the Radiology Department. |
| | g | The Tenderer shall also carry out 'special service calls' (service calls between the regular scheduled routine preventive maintenance service calls) at no additional charge, when requested by the Senior Biomedical Engineer or his/her representative(s) to be necessary to keep the system in good working order and condition. |
| | 22.3.2 | **Corrective Maintenance** |
| | a | The Tenderer shall also perform corrective maintenance on the system including its accessories. |
| | b. | This service shall be provided free of charge to the Ministry of Health with unlimited breakdown calls per year. |
| | c. | Corrective maintenance shall be performed at **ANY TIME (inclusive of public holidays)** following notification by the Senior Biomedical Engineer or Medical Equipment Maintenance Offer or their representative(s). |
| | d. | The Tenderer shall dispatch his service engineer to the location **within the agreed time** after being notified in writing or telephone that the system is inoperative. The service engineer shall complete any repair or replacement of parts within one (1) day from the time the service engineer arrives at the specified site. |
| **23. EXCLUDED SERVICE** | a. | The following services shall not be included in the scope of Maintenance Services to be provided by the Tenderer: |
| | b. | painting or refinishing of the system or supplying materials thereof; |
| | c. | repairs of equipment, accessories or facilities other than the system, or supervision thereof; and |
| | d. | supply of storage media or consumables. |
| **24. REPLACEMENT OF PARTS** | | Where the system is found or reported to require repairs, the Tenderer shall seek the replacement parts from the BME Department. The technical officer in charge of the system may issue written approval for and prior to the replacement of any faulty parts. |
| **25. PURCHASE OF PARTS** | | All parts or items recommended by the Manufacturer to be replaced during the scheduled preventive maintenance shall be free of charge to the Ministry of Health. |
| | | All spare parts costing below BND$2,000.00 shall be at the Tenderer's own expense. |
| | | The Tenderer shall submit a list price of the most common spare parts expected to be needed during breakdowns in the format set out in **Section 3** in this Invitation to Tender. The price list shall be quoted in Brunei dollars inclusive of duties and taxes **AND** maintained for a period of five (5) years. |
| **26. RESPONSE TIME** | | A response time by the Tenderer's service engineer of **30 minutes for Brunei-Muara and Tutong districts** and **90 minutes for Kuala Belait and Temburong districts** IS REQUIRED for locally-stationed service personnel after notification in writing or telephone by the Biomedical Engineer or the user that the system is inoperative. The service engineer shall complete any repair or replacement of parts |

| | | USER REQUIREMENT |
|---|---|---|
| | | within one (1) day from the time the service engineer arrives the site. |
| **27.** | | For overseas Tenderers, the Tenderer undertakes to dispatch a suitably qualified service engineer to the site **within 72 hours upon receipt of a request for breakdown service call** and shall complete any repair or replacements of parts within two (2) days from the time the service engineer arrives in Brunei Darussalam. |
| **28. SERVICE PERSONNEL** | | The Maintenance Services must be performed by qualified factory-trained service personnel. Training certificate(s) or a letter of certification from the manufacturer must be attached during submission of the Tender. |
| **29. ENGINEERING IMPROVEMENTS AND MODIFICATIONS** | | The Tenderer shall make engineering improvements and modifications to the system listed in the service contract recommended by the manufacturer. Such changes will be at no charge if they are done at the same time as the preventive maintenance or coincident with repair services. |
| **30. MAINTENANCE AND REPAIR LOG** | | The Tenderer shall provide on-site, a written maintenance and repair log for the system. The log shall contain the following information:<br>• Document each incident of system defect or malfunction;<br>• Time and duration of all work performed on the system, quantities and parts and supplies used; and<br>• A description of the reason for the work done. |
| | | As an alternative, the details of work performed and parts used may be provided by Service Reports in a form acceptable to the Ministry of Health. |
| **31. TERMS OF PAYMENT** | | The Tenderer shall quote the cost of an annual service contract. The Ministry of Health shall pay to the Tenderer the maintenance charges, the cost of repair per trip and the cost of parts replaced (if any), upon receipt of one original and one duplicate detailed maintenance report, inclusive of test and measurement results, in accordance with the Maintenance Procedures/Standards specified in the system service manuals. Pro-rated payment shall be due at the end of each maintenance cycle when the Tenderer shall submit a work schedule acknowledging the preventive maintenance has been completed and signed by the officer incharge of the system. |
| **32. AIRFARE AND ACCOMMODATION** | | The cost of air-fare and accommodation is included in each maintenance and in every breakdown service call. |
| **33. LOCAL TRANSPORTATION** | | It is the responsibility of the Tenderer to arrange their own transport for their service engineers. |

| **PRICE SUMMARY** |
|---|
| **Unit Price** |
| **Total price for 2 units** |
| **Cost of Integration to PACS** |
| **Overall cost (CIF)** |
| **Maintenance cost (item 22)** |
| **Maintenance cost** |

| SECTION II - PROCUREMENT REQUIREMENT |
| --- |
| **BRAND AND MODEL OF EQUIPMENT** |
| **COUNTRY OF ORIGIN** |
| **WHERE MARKETED** |
| **YEAR MANUFACTURED** |
| **WARRANTY** |
| **DELIVERY TIME** |
| **PRICE VALIDITY** |
| **SECTION III - TECHNICAL REQUIREMENTS** |
| **MAINS POWER SUPPLY** |
| **BATTERY BACKUP** |
| **INTERNATIONAL SAFETY STANDARD** |
| **TECHNICAL SUPPORT** |
| **DIMENSIONS (mm)** |
| **WEIGHT (in Kg)** |
| **EQUIPMENT WHOLE LIFE TIME SUPPORT** |

| | |
|---|---|
| **BROCHURE** | Detailed brochure submitted? |
| **USER MANUALS** | Tenderers must supply during commissioning, three sets of user manuals, one set must be in the form of soft copy. (PDF Format) |
| **SERVICE MANUALS** | Tenderers must supply during commissioning, three sets of service manuals, one set must be in the form of soft copy. (PDF Format). |
| **SPARE-PARTS AND CONSUMABLES LISTINGS** | Tenderers must supply during commissioning, a comprehensive list of equipment spare-parts and consumables in the form of soft copy (e.g.: Microsoft EXCEL). The listing must have the following details;<br>1) Part Number<br>2) Part Description |
| **WARRANTY PLANNED PREVENTIVE MAINTENANCE (PPM)** | Tenderers must carry-out a minimum of two times PPM per year during the equipment warranty period, starting from six months after the date of commissioning. |
| **TECHNICAL TRAINING** | Tenderers to conduct training to Biomedical Engineers and Technicians. |
| **ON-SITE** | Training to be conducted locally, tenderers are required to:<br>• Provide training materials, test equipment, demo equipment, etc.<br>• Provide training to two groups of technical staffs.<br>• Provide 2 days (minimum) of training for each group.<br>• Training to be conducted at BME respective Hospital |
| **Or AT MANUFACTURER'S PREMISES** | Training to be conducted at the manufacturer's training premises / facilities. Tenderers are required to:<br>• Provide air tickets, accommodation, transportation, etc. for 2 persons.<br>• Provide training for 2 persons.<br>• Minimum no of days for training – 3 days. |

# UNIT TAWARAN
# KEMENTERIAN KESIHATAN
# NEGARA BRUNEI DARUSSALAM

## SUPPLY, DELIVERY, INSTALLATION, TESTING, CALIBRATION AND COMMISSIONING TWO (2) UNITS OF ULTRASOUND SYSTEM FOR RADIOLOGY UNIT, MINISTRY OF HEALTH.

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| **1. INTRODUCTION** | 1.1 | The Tenderer shall provide the following service i.e., to supply, delivery, install, test, calibrate and commissioning two (2) units cart-based Ultrasound System complete with examination couch and radiographer's chair. | | | |
| | 1.2 | The Tenderers are required to propose all items and be wholly responsible for all products and services offered unless otherwise specified. The Government reserves the right to accept all or any part of the proposed items or services from the Tenderers. | | | |
| | 1.3 | The System proposed shall be integrated to the existing BruHIMS and PACS. Any licenses/hardware required for this integration shall be included in the proposal. | | | |
| | 1.4 | Tender submission shall include the cost of all items, services, licenses and supplies set out in this tender. | | | |
| | 1.5 | The site of delivery and installation of the System is as follow<br>i- One (1) unit - Radiology Unit, Pengiran Muda Mahkota Pengiran Muda Haji Al-Muhtadee Billah (PMMPMHAMB) Hospital.<br>ii- One (1) unit- Radiology Unit, Suri Seri Begawan (SSB) Hospital. | | | |
| **2. QUALITY STANDARDS,** | 2.1 | The proposed system must meet the Health Level 7 (HL 7) specifications for RIS | | | |

# UNIT TAWARAN
# KEMENTERIAN KESIHATAN
# NEGARA BRUNEI DARUSSALAM

## SUPPLY, DELIVERY, INSTALLATION, TESTING, CALIBRATION AND COMMISSIONING TWO (2) UNITS OF ULTRASOUND SYSTEM FOR RADIOLOGY UNIT, MINISTRY OF HEALTH.

| | | | | | |
|---|---|---|---|---|---|
| **REGULATIONS AND GUIDELINES** | | and DICOM 3.0 compatible and ready, IHE compliance and ready for integration with existing BruHIMS and PACS. | | | |
| | 2.2 | The DICOM standards shall include but not limited to:<br>• Send/Receive<br>• Query/Retrieve and Print<br>• Worklist<br>• Storage commitment<br>• Modality Performed Procedure Step (MPPS) | | | |
| | 2.3 | • The proposed system should be US FDA and CE approved model. | | | |
| | 2.4 | The proposed system Electrical safety should conform to requirement for electrical safety as per IEC 60601 standard. | | | |
| | 2.5 | Copies of respective certificates should be included in the proposal submission. | | | |
| **3. SYSTEM ARCHITECTURE** | | The system proposed shall have the following architecture: | | | |
| | 3.1 | Fully digital, compact, lightweight, portability, cart-based design. | | | |
| | 3.2 | Independent steer and lockable wheels. | | | |
| | 3.3 | Front and rear handles. | | | |
| | 3.4 | Suitable for both adult and paediatric patients including abdominal, obstetrics, gynaecology, small parts, breasts, vascular, transcranial, paediatric and neonatal, musculoskeletal, urological and cardiac applications. | | | |
| | 3.5 | Able to operate on AC and battery. The battery should be self-recharging and the system shall be able to scan for up to one hour on battery alone. Mechanism to indicate battery-low should be available. | | | |

# UNIT TAWARAN
# KEMENTERIAN KESIHATAN
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## SUPPLY, DELIVERY, INSTALLATION, TESTING, CALIBRATION AND COMMISSIONING TWO (2) UNITS OF ULTRASOUND SYSTEM FOR RADIOLOGY UNIT, MINISTRY OF HEALTH.

| | | | | | |
|---|---|---|---|---|---|
| | 3.6 | Able to compare images from previous study | | | |
| | 3.7 | Short boot-up time. | | | |
| | 3.8 | Multiple preloaded application pre-sets available. | | | |
| | 3.9 | Automatic gain adjustment for B mode imaging. | | | |
| | 3.10 | Broadband 64 channel (transmitting) digital beam former. | | | |
| | 3.11 | Maximum depth of field: 33 cm. | | | |
| | 3.12 | Minimum depth of field: 0-2 cm. | | | |
| | 3.13 | Four (4) active transducer ports and 1 parking probe port. | | | |
| | 3.14 | Support transducer technologies like Linear, Curved array, Phased array and intra-cavitary transducers. | | | |
| | 3.15 | System has frequency range from 2-15 MHz. | | | |
| | 3.16 | Alphanumeric soft keys physical keyboard with easy access scans controls, and facility to sanitize the System keyboard to avoid cross contamination. | | | |
| | 3.17 | Trackball for moving cursor. | | | |
| | 3.18 | Touchscreen (at least 9” wide) in the control panel for easy customization of settings and commands to user preference. | | | |
| | 3.19 | Control panel Back-lighting. | | | |
| | 3.20 | Two (2) gel bottle holders. | | | |
| | 3.21 | On (1) unit of integrated gel warmer. | | | |

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## SUPPLY, DELIVERY, INSTALLATION, TESTING, CALIBRATION AND COMMISSIONING TWO (2) UNITS OF ULTRASOUND SYSTEM FOR RADIOLOGY UNIT, MINISTRY OF HEALTH.

| | | | | | |
|---|---|---|---|---|---|
| | 3.22 | Integrated cable management. | | | |
| | 3.23 | Integrated HDD of at least 300GB. | | | |
| | 3.24 | Integrated DVD RW drive (or its equivalent) with the facility to transfer images. | | | |
| **4. CONTROL MONITOR** | 4.1 | Touch screen colour display | | | |
| | 4.2 | At least 12 inch | | | |
| **5. DISPLAY MONITOR** | | The monitor shall have the following features: | | | |
| | 5.1 | LCD with screen resolution of at least 1920 x 1080. | | | |
| | 5.2 | At least 23”. | | | |
| | 5.3 | Adjustable height with tilt/rotate capacity. | | | |
| | 5.4 | Integrated speakers. | | | |
| | 5.5 | Brightness and contrast adjustment. | | | |
| | 5.6 | Fold down and lock mechanism for transportation. | | | |
| **6. OPERATING MODES** | | The system proposed shall have the following operating modes: | | | |
| | 6.1 | B-Mode (B). | | | |
| | 6.2 | M-Mode (M). | | | |
| | 6.3 | Trapezoidal Mode. | | | |
| | 6.4 | Pulsed Wave (PW) Mode. | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | 6.5 | Continuous Wave (CW) Doppler Mode. | | | |
| | 6.6 | Colour Flow (CF) Mode. | | | |
| | 6.7 | Power Doppler Imaging (PDI) Mode. | | | |
| | 6.8 | Contrast and Tissue Harmonic Imaging. | | | |
| | 6.9 | Spatial Compounding. | | | |
| | 6.10 | Extended and Convex field of view. | | | |
| | 6.11 | Speckle Reduction Imaging. | | | |
| | 6.12 | Automatic Image Optimization for B-Mode and Doppler. | | | |
| | 6.13 | 2D Shear Wave Elastography for assessing liver stiffness. | | | |
| | 6.14 | Adjustment of Focal zone, Gain, TGC, Dynamic range, Edge enhancement, Gamma correction. | | | |
| | 6.15 | Adjust the frequency range on all transducers. | | | |
| | 6.16 | Operator controlled multiple and adjustable focal zones. | | | |
| | 6.17 | Real time Pan Zoom facility. | | | |
| | 6.18 | Image annotation (alphanumeric and body marks). | | | |

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## SUPPLY, DELIVERY, INSTALLATION, TESTING, CALIBRATION AND COMMISSIONING TWO (2) UNITS OF ULTRASOUND SYSTEM FOR RADIOLOGY UNIT, MINISTRY OF HEALTH.

| | | | | | |
|---|---|---|---|---|---|
| | 6.19 | Multiple user defined pre-sets for variety of clinical applications. | | | |
| | 6.20 | 2D Cine memory, M-Mode scroll memory. | | | |
| | 6.21 | Cine loop facility up to one minute at 25 frames per second (fps). | | | |
| | 6.22 | Fast random-access image review. | | | |
| | 6.23 | Ability to apply wide variety of image processing after the examination. | | | |
| | 6.24 | Full size and split-screen display. | | | |
| | 6.25 | Simultaneous display capability:<br>• B / PW<br>• B / CF<br>• B / PDI<br>• B / M<br>• B / Spatial Compounding | | | |
| | 6.26 | Multi-image split-screen display capability:<br>• Live and/or frozen<br>• B or spatial compounding and B or spatial compounding<br>• B or spatial compounding and CF<br>• B or spatial compounding and PDI<br>• PW / M | | | |
| **7. IMAGE ARCHIVE AND RECORDING** | 7.1 | System able to store at least 10,000 2D images to scanner hard drive, with CD/DVD burner and USB port for connection to computer and printer. | | | |
| | 7.2 | Digital B & W and Colour thermal printer. | | | |
| | 7.3 | Video and audio connections for other devices such as digital cameras. | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | 7.4 | JPEG / WMV & AVI format. | | | |
| **8. MEASUREMENT AND CALCULATION PACKAGES:** | | The system proposed shall include the following: | | | |
| | 8.1 | 4 distance measurements, 2 angle measurements, calculation of diameter, area, and circumference, calculation of volume by height/width/length, planimetry, automatic planimetry and empirical method. | | | |
| | 8.2 | Automated measurement packages including reports, Urology, Renal, Cardiac (M and B mode), Obstetrics and Gynecological, and Vascular. | | | |
| | 8.3 | Real time automatic Doppler calculations. | | | |
| | 8.4 | Automated calculation of waveforms indices. | | | |
| | 8.5 | Hip dysplasia calculations. | | | |
| | 8.6 | Shear wave elastography measurement of liver stiffness in both m/s and kPa, with automated IQR/Median value. | | | |
| | 8.7 | Breast productivity package | | | |
| **9. TRANSDUCERS** | | The following transducers shall be included: | | | |
| | 9.1 | High Frequency Linear Transducer for vascular, small parts, breast and musculoskeletal. Tenderer to state the frequency. | | | |
| | 9.2 | Broadband Curved Array Transducer for general purpose abdominal and obstetric. Tenderer to state the frequency. | | | |
| | 9.3 | Broadband Phased Array Transducer (micro-convex or sector) for cardia echo and paediatrics transcranial ultrasound. Tenderer to state the frequency. | | | |
| | 9.4 | Curved Intra-cavitary Transducer for transvaginal obstetrics and gynaecology | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | | scan. Tenderer to state the frequency.<br>To include 6 boxes of transvaginal probe cover | | | |
| | 9.5 | Broadband Curved Array Transducer for liver shear wave elastography. (applicable only if a separate probe from the above is required for this purpose). Tenderer to state the frequency. | | | |
| | 9.6 | Transducer used in biopsy guided procedures and other needle guided ultrasound procedure. | | | |
| **10. ULTRASOUND EXAMINATION COUCH PER ULTRASOUND SYSTEM** | 10 | One (1) unit electronic ultrasound examination couch | | | |
| | a | With adjustable height | | | |
| | b | Adjustable back and leg rest | | | |
| | c | Complete with disposable paper dispenser mounts to the head end of the couch | | | |
| | d | Dimension: tenderer to specify | | | |
| **11. RADIOGRAPHER'S CHAIR/STOOL PER ULTRASOUND SYSTEM** | 11. | One (1) unit ultrasound chair or stool with adjustable height | | | |
| **12. NETWORKING AND CONNECTIVITY** | 12.1 | Ethernet network connection | | | |
| | 12.2 | The proposed system must be DICOM activated | | | |
| | 12.3 | Inclusive of all licenses and software needed to initiate and maintain connectivity to INFINITT CPACS in MOH Brunei Darussalam until the end of service | | | |
| | 12.4 | The proposed system must be "plug-and-play" ready and should be easily integrated with the MOH Brunei INFINITT PACS system – this includes all necessary licenses and software required to initiate and maintain connectivity to | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | | PACS. | | | |
| | 12.5 | The proposed system should be connected to PACS, any licenses or hardware required for the connectivity shall be included in the proposal. | | | |
| **13.ELECTRICAL SAFETY** | 13.1 | The tenderer shall offer power plugs that are sufficient for the maximum voltage and current of the equipment. | | | |
| | 13.2 | The tenderer shall provide UPS with at least 30 min backup for the entire system offered. | | | |
| **14. OVER-CURRENT PROTECTION** | 14.1 | Loss of power to other equipment on the same branch circuit due to internal equipment faults shall be prevented by using fuses or circuit breakers that are clearly labelled and easy to replace or reset. | | | |
| | 14.2 | If fuses are used, a set of spare fuses shall be provided in a labeled holder located next to the main fuse holder. Permanent markings near each fuse the holder shall indicate fuse ratings. | | | |
| **15. LABELLING** | 15.1 | Labels and markings shall be clear and legible. | | | |
| | 15.2 | Labels and markings shall be durable enough to withstand routine cleaning. | | | |
| | 15.3 | All appropriate warning legends shall be provided by the Tenderer. | | | |
| **16.EASE OF USE** | 16. | The equipment shall be simple to use, operate, maintain and is designed for easy access to serviceable parts. | | | |
| **17. STORAGE AND TRANSPORT** | 17.1 | The equipment and components shall be able to withstand temperature and humidity extremes likely to be encountered during storage and transport. | | | |
| | 17.2 | The Tenderer shall recommend procedures for storage of the equipment when not in use. The packaging shall be marked with the device's name and the | | | |

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|---|---|---|---|---|---|
| | | distributor's name and address. | | | |
| **18. DELIVERY, INSTALLATION, ACCEPTANCE AND COMMISSIONING** | 18.1 | The Contractor shall observe the following requirements during delivery and installation: | | | |
| | 18.1.1 | All ordinances or regulations enforced in Brunei Darussalam shall be followed. | | | |
| | 18.1.2 | Appropriate measures shall be taken to protect the installation site as well as the immediate surroundings and any existing facilities from damage caused by preparation and installation works. | | | |
| | 18.2 | Upon delivery of the equipment to the Customer's location, the Contractor together with the Customer shall ensure: | | | |
| | 18.2.1 | The equipment is in good physical condition without defects. | | | |
| | 18.2.2 | The equipment conforms with the stated Specifications in this document. | | | |
| | 18.2.3 | All the required accessories and consumables are supplied. | | | |
| | 18.3 | The Contractor shall then perform equipment and software installation and necessary hardware and software configurations including but not limited to: | | | |
| | 18.3.1 | Installation of all software and drivers that come with the equipment. | | | |
| | 18.3.2 | Installation and configuration of software and drivers for the equipment into existing computers, if required by the User. | | | |
| | 18.3.3 | Configuration of network settings for the equipment, if required by the User | | | |
| | 18.4 | The Contractor shall liaise and coordinate with the Customer to ensure the provision for any necessary network connectivity and configuration requirements. | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | 18.5 | The Acceptance Testing shall consist of Installation Tests including but not limited to the Quality Assurance test(s) and recalibration of the equipment if it fails the test. | | | |
| | 18.6 | Copies of test results obtained in 18.5 should then be provided to the Customer: | | | |
| | 18.6.1 | The Contractor shall submit all test reports to the Customer for verification. | | | |
| | 18.6.2 | The equipment shall be commissioned for use upon signing of the acceptance report by the Customer. | | | |
| **19. TRAINING** | 19.1 | On-site training for all radiologists in the operation and application of the System by an application specialist which include but not limited to:<br>• Basic operation<br>• Application training for the use of the various applications provided with the system.<br>• Basic maintenance, including troubleshooting. | | | |
| | 19.2 | The categories of training shall include, but not limited to:<br>• End-users Operation Training to all users.<br>• Training for Biomedical Engineers. | | | |
| | 19.3 | The trainers shall be well-qualified, knowledgeable and well-versed with the System to provide the training. | | | |
| | 18.4 | Training certificate should be provided after completion of training sessions | | | |
| **WARRANTY** | 20.1 | Warranty for one (1) year that covers all the proposed hardware, system software and other peripherals that should include but not limited to: | | | |
| | | a- Spare parts | | | |
| | | b- Corrective and preventive maintenance service (at no additional charges) | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | | c- Emergency and non-emergency breakdown calls to rectify problems | | | |
| | | d- Two (2) times planned preventive maintenance (PPM) during warranty period. | | | |
| | | e- Documentation of PM service and tests reports must be submitted for user and Biomedical Engineer (BME). | | | |
| **21.DOCUMENTATION** | 21. | The following documentation must be provided during implementation or after completion in both hardcopy and softcopy form (Portable hard drive/USB and DVD); - multiple copies might be required upon user request. | | | |
| | | a. User/operation manual in English | | | |
| | | b. Service manual in English | | | |
| | | c. Training manual in English | | | |
| | | d. Certificate of calibration and inspection from factory. | | | |
| | | e. Quality assurance and commissioning report. | | | |
| | | f. Quality control procedures for the System. | | | |
| | | g. List of major spare parts and related accessories with their part number and costs. | | | |
| **22. MAINTENANCE (OPTIONAL)** | | **General Requirements and Scope of Work** | | | |
| | 22.1 | This maintenance requirement after warranty is **OPTIONAL** and the Ministry of Health is not obliged to grant the Tenderer the maintenance agreement. | | | |
| | 22.1.1 | The Tenderer shall propose maintenance services after a warranty period for **five (5) years** for the system offered. The objectives of the maintenance services | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | | are:<br>a. To improve the system's uptime<br>b. To minimize and prevent system breakdown during operation<br>c. To maintain the quality of results<br>**d.** To prolong the system's life- span | | | |
| | 22.2 | The Tenderer shall provide maintenance services for the system inclusive of all necessary spare parts, replacement parts and material to keep the system in good working order and condition. | | | |
| | 22.3 | The Maintenance Services are as follows:<br>1- Preventive Maintenance<br>2- Corrective Maintenance | | | |
| | 22.3.1 | **Preventive Maintenance** | | | |
| | a | The Tenderer shall carry out all scheduled or planned preventive maintenance on the system during Government working hours:<br>7:45 am -12.15 am<br>1:30 pm – 4:30 pm | | | |
| | b | Preventive Maintenance shall include cleaning, adjusting, lubricating, inspecting, testing and safety procedures and engineering improvements and modifications as recommended by the manufacturer designed to help in reducing system failure and to verify good and safe operating condition. | | | |
| | c | The Tenderer will rectify any identified problems during preventive maintenance. | | | |
| | d | Preventive Maintenance shall be performed every six (6) months in accordance with the procedures specified in the system service manuals. This Preventive | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | | Maintenance shall be completed within one (1) day from the time the service engineer arrives at the site. | | | |
| | e | The successful Tenderer shall submit to the Ministry of Health a maintenance servicing schedule in accordance with the manuals, which may be amended from time to time, by mutual agreement, in writing. This schedule shall be submitted annually to the Ministry of Health; **the first annual schedule to be submitted two (2) weeks prior to commencement of the Preventive Maintenance service.** | | | |
| | f | After the Preventive Maintenance is completed, the Tenderer shall submit two (2) copies of the maintenance service and test reports to the Biomedical Engineer and the Radiology Department. | | | |
| | g | The Tenderer shall also carry out 'special service calls' (service calls between the regular scheduled routine preventive maintenance service calls) at no additional charge, when requested by the Senior Biomedical Engineer or his/her representative(s) to be necessary to keep the system in good working order and condition. | | | |
| | 22.3.2 | **Corrective Maintenance** | | | |
| | a | The Tenderer shall also perform corrective maintenance on the system including its accessories. | | | |
| | b. | This service shall be provided free of charge to the Ministry of Health with unlimited breakdown calls per year. | | | |
| | c. | Corrective maintenance shall be performed at **ANY TIME (inclusive of public holidays)** following notification by the Senior Biomedical Engineer or Medical Equipment Maintenance Offer or their representative(s). | | | |
| | d. | The Tenderer shall dispatch his service engineer to the location **within the agreed** | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | | **time** after being notified in writing or telephone that the system is inoperative. The service engineer shall complete any repair or replacement of parts within one (1) day from the time the service engineer arrives at the specified site. | | | |
| **23. Excluded service** | a. | The following services shall not be included in the scope of Maintenance Services to be provided by the Tenderer: | | | |
| | b. | painting or refinishing of the system or supplying materials thereof; | | | |
| | c. | repairs of equipment, accessories or facilities other than the system, or supervision thereof; and | | | |
| | d. | supply of storage media or consumables. | | | |
| **24. Replacement of parts** | 24 | Where the system is found or reported to require repairs, the Tenderer shall seek the replacement parts from the BME Department. The technical officer in charge of the system may issue written approval for and prior to the replacement of any faulty parts. | | | |
| **25. Purchase of parts** | 25 | All parts or items recommended by the Manufacturer to be replaced during the scheduled preventive maintenance shall be free of charge to the Ministry of Health. | | | |
| | | All spare parts costing below BND$2,000.00 shall be at the Tenderer's own expense. | | | |
| | | The Tenderer shall submit a list price of the most common spare parts expected to be needed during breakdowns in the format set out in **Section 3** in this Invitation to Tender. The price list shall be quoted in Brunei dollars inclusive of duties and taxes **AND** maintained for a period of five (5) years. | | | |
| **26. Response time** | 26 | A response time by the Tenderer's service engineer of **30 minutes for Brunei-Muara and Tutong districts** and **90 minutes for Kuala Belait and Temburong** | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | | **districts** IS REQUIRED for locally-stationed service personnel after notification in writing or telephone by the Biomedical Engineer or the user that the system is inoperative. The service engineer shall complete any repair or replacement of parts within one (1) day from the time the service engineer arrives the site. | | | |
| **27.** | 27 | For overseas Tenderers, the Tenderer undertakes to dispatch a suitably qualified service engineer to the site **within 72 hours upon receipt of a request for breakdown service call** and shall complete any repair or replacements of parts within two (2) days from the time the service engineer arrives in Brunei Darussalam. | | | |
| **28. Service Personnel** | 28 | The Maintenance Services must be performed by qualified factory-trained service personnel. Training certificate(s) or a letter of certification from the manufacturer must be attached during submission of the Tender. | | | |
| **29. Engineering Improvements and Modifications** | 29 | The Tenderer shall make engineering improvements and modifications to the system listed in the service contract recommended by the manufacturer. Such changes will be at no charge if they are done at the same time as the preventive maintenance or coincident with repair services. | | | |
| **30. Maintenance and Repair Log** | 30 | The Tenderer shall provide on-site, a written maintenance and repair log for the system. The log shall contain the following information:<br>• Document each incident of system defect or malfunction;<br>• Time and duration of all work performed on the system, quantities and parts and supplies used; and<br>• A description of the reason for the work done. | | | |
| | | As an alternative, the details of work performed and parts used may be provided by Service Reports in a form acceptable to the Ministry of Health. | | | |
| **31. Terms of payment** | 31 | The Tenderer shall quote the cost of an annual service contract. The Ministry of | | | |

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| | | | | | |
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| | | Health shall pay to the Tenderer the maintenance charges, the cost of repair per trip and the cost of parts replaced (if any), upon receipt of one original and one duplicate detailed maintenance report, inclusive of test and measurement results, in accordance with the Maintenance Procedures/Standards specified in the system service manuals. Pro-rated payment shall be due at the end of each maintenance cycle when the Tenderer shall submit a work schedule acknowledging the preventive maintenance has been completed and signed by the officer incharge of the system. | | | |
| **32. Airfare and Accomodation** | 32 | The cost of air-fare and accommodation is included in each maintenance and in every breakdown service call. | | | |
| **33. Local Transportation** | 33 | It is the responsibility of the Tenderer to arrange their own transport for their service engineers. | | | |

Please provide breakdown cost or itemized price for each accessories/ consumables

** Folec Communications (B) Sdn Bhd – PACS integration
Precept/Dynamik Technologies Sdn Bhd – BruHIMS integration

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| **PRICE SUMMARY** | | |
|---|---|---|
| **Unit Price** | **BND$** | |
| **Total price for 2 units** | **BND$** | |
| **Cost of Integration to PACS** | **BND$** | |
| **Overall cost (CIF)** | **BND$** | |
| **Maintenance cost (item 22)** | | **Per Year** |
| **Maintenance cost** | | **5 years** |

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| | SECTION II - PROCUREMENT REQUIREMENT |
|---|---|
| **BRAND AND MODEL OF EQUIPMENT:** | |
| **COUNTRY OF ORIGIN:** | |
| **WHERE MARKETED:** | |
| **YEAR MANUFACTURED:** | |
| **WARRANTY:** | |
| **DELIVERY TIME:** | |
| **PRICE VALIDITY:** | |

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| | SECTION III - TECHNICAL REQUIREMENTS |
|---|---|
| **MAINS POWER SUPPLY** | |
| **BATTERY BACKUP:** | |
| **INTERNATIONAL SAFETY STANDARD:** | |
| **TECHNICAL SUPPORT:** | |
| **DIMENSIONS (mm):** | |
| **WEIGHT (in Kg):** | |
| **EQUIPMENT WHOLE LIFE TIME SUPPORT:** | Number of years, spare parts are available after the installation of the equipment:_____ years. |

# UNIT TAWARAN
# KEMENTERIAN KESIHATAN
# NEGARA BRUNEI DARUSSALAM

## SUPPLY, DELIVERY, INSTALLATION, TESTING, CALIBRATION AND COMMISSIONING TWO (2) UNITS OF ULTRASOUND SYSTEM FOR RADIOLOGY UNIT, MINISTRY OF HEALTH.

| | | YES | NO |
|---|---|---|---|
| **BROCHURE** | Detailed brochure submitted? | | |
| **USER MANUALS** | Tenderers must supply during commissioning, three sets of user manuals, one set must be in the form of soft copy. (PDF Format) | | |
| **SERVICE MANUALS** | Tenderers must supply during commissioning, three sets of service manuals, one set must be in the form of soft copy. (PDF Format). | | |
| **SPARE-PARTS AND CONSUMABLES LISTINGS** | Tenderers must supply during commissioning, a comprehensive list of equipment spare-parts and consumables in the form of soft copy (e.g.: Microsoft EXCEL). The listing must have the following details;<br>1) Part Number<br>2) Part Description | | |
| **WARRANTY PLANNED PREVENTIVE MAINTENANCE (PPM)** | Tenderers must carry-out a minimum of two times PPM per year during the equipment warranty period, starting from six months after the date of commissioning. | | |
| **TECHNICAL TRAINING:** | Tenderers to conduct training to Biomedical Engineers and Technicians. | | |
| **ON-SITE:** | Training to be conducted locally, tenderers are required to:<br>• Provide training materials, test equipment, demo equipment, etc.<br>• Provide training to two groups of technical staffs.<br>• Provide 2 days (minimum) of training for each group.<br>• Training to be conducted at BME respective Hospital | | |
| **Or AT MANUFACTURER'S PREMISES:** | Training to be conducted at the manufacturer's training premises / facilities. Tenderers are required to:<br>• Provide air tickets, accommodation, transportation, etc. for 2 persons.<br>• Provide training for 2 persons.<br>• Minimum no of days for training – 3 days. | | |

## SECTION 3

## TENDER FORM

To:

**TENDER REFERENCE NO: KK/39/2023/HTD**

**INVITATION TO TENDER**

**SUPPLY, DELIVERY, INSTALLATION, TESTING, CALIBRATION AND COMMISSIONING TWO(2) UNITS OF ULTRASOUND SYSTEM FOR RADIOLOGY UNIT, MINISTRY OF HEALTH**

**TENDER OF *(name of tenderer)*** : _____

Company/Business Registration No. : _____

Tender Closing Date : _____

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| **1. INTRODUCTION** | 1.1 | The Tenderer shall provide the following service i.e., to supply, delivery, install, test, calibrate and commissioning two (2) units cart-based Ultrasound System complete with examination couch and radiographer's chair. | | | |
| | 1.2 | The Tenderers are required to propose all items and be wholly responsible for all products and services offered unless otherwise specified. The Government | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| | | reserves the right to accept all or any part of the proposed items or services from the Tenderers. | | | |
| | 1.3 | The System proposed shall be integrated to the existing BruHIMS and PACS. Any licenses/hardware required for this integration shall be included in the proposal. | | | |
| | 1.4 | Tender submission shall include the cost of all items, services, licenses and supplies set out in this tender. | | | |
| | 1.5 | The site of delivery and installation of the System is as follow<br>i- One (1) unit - Radiology Unit, Pengiran Muda Mahkota Pengiran Muda Haji Al-Muhtadee Billah (PMMPMHAMB) Hospital.<br>ii- One (1) unit- Radiology Unit, Suri Seri Begawan (SSB) Hospital. | | | |
| **2. QUALITY STANDARDS, REGULATIONS AND GUIDELINES** | 2.1 | The proposed system must meet the Health Level 7 (HL 7) specifications for RIS and DICOM 3.0 compatible and ready, IHE compliance and ready for integration with existing BruHIMS and PACS. | | | |
| | 2.2 | The DICOM standards shall include but not limited to:<br>• Send/Receive<br>• Query/Retrieve and Print<br>• Worklist<br>• Storage commitment<br>• Modality Performed Procedure Step (MPPS) | | | |
| | 2.3 | • The proposed system should be US FDA and CE approved model. | | | |
| | 2.4 | The proposed system Electrical safety should conform to requirement for electrical safety as per IEC 60601 standard. | | | |
| | 2.5 | Copies of respective certificates should be included in the proposal submission. | | | |
| **3. SYSTEM** | | The system proposed shall have the following architecture: | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| **ARCHITECTURE** | 3.1 | Fully digital, compact, lightweight, portability, cart-based design. | | | |
| | 3.2 | Independent steer and lockable wheels. | | | |
| | 3.3 | Front and rear handles. | | | |
| | 3.4 | Suitable for both adult and paediatric patients including abdominal, obstetrics, gynaecology, small parts, breasts, vascular, transcranial, paediatric and neonatal, musculoskeletal, urological and cardiac applications. | | | |
| | 3.5 | Able to operate on AC and battery. The battery should be self-recharging and the system shall be able to scan for up to one hour on battery alone. Mechanism to indicate battery-low should be available. | | | |
| | 3.6 | Able to compare images from previous study | | | |
| | 3.7 | Short boot-up time. | | | |
| | 3.8 | Multiple preloaded application pre-sets available. | | | |
| | 3.9 | Automatic gain adjustment for B mode imaging. | | | |
| | 3.10 | Broadband 64 channel (transmitting) digital beam former. | | | |
| | 3.11 | Maximum depth of field: 33 cm. | | | |
| | 3.12 | Minimum depth of field: 0-2 cm. | | | |
| | 3.13 | Four (4) active transducer ports and 1 parking probe port. | | | |
| | 3.14 | Support transducer technologies like Linear, Curved array, Phased array and intra-cavitary transducers. | | | |
| | 3.15 | System has frequency range from 2-15 MHz. | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| | 3.16 | Alphanumeric soft keys physical keyboard with easy access scans controls, and facility to sanitize the System keyboard to avoid cross contamination. | | | |
| | 3.17 | Trackball for moving cursor. | | | |
| | 3.18 | Touchscreen (at least 9” wide) in the control panel for easy customization of settings and commands to user preference. | | | |
| | 3.19 | Control panel Back-lighting. | | | |
| | 3.20 | Two (2) gel bottle holders. | | | |
| | 3.21 | On (1) unit of integrated gel warmer. | | | |
| | 3.22 | Integrated cable management. | | | |
| | 3.23 | Integrated HDD of at least 300GB. | | | |
| | 3.24 | Integrated DVD RW drive (or its equivalent) with the facility to transfer images. | | | |
| **4. CONTROL MONITOR** | 4.1 | Touch screen colour display | | | |
| | 4.2 | At least 12 inch | | | |
| **5. DISPLAY MONITOR** | | The monitor shall have the following features: | | | |
| | 5.1 | LCD with screen resolution of at least 1920 x 1080. | | | |
| | 5.2 | At least 23”. | | | |
| | 5.3 | Adjustable height with tilt/rotate capacity. | | | |
| | 5.4 | Integrated speakers. | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| | 5.5 | Brightness and contrast adjustment. | | | |
| | 5.6 | Fold down and lock mechanism for transportation. | | | |
| **6. OPERATING MODES** | | The system proposed shall have the following operating modes: | | | |
| | 6.1 | B-Mode (B). | | | |
| | 6.2 | M-Mode (M). | | | |
| | 6.3 | Trapezoidal Mode. | | | |
| | 6.4 | Pulsed Wave (PW) Mode. | | | |
| | 6.5 | Continuous Wave (CW) Doppler Mode. | | | |
| | 6.6 | Colour Flow (CF) Mode. | | | |
| | 6.7 | Power Doppler Imaging (PDI) Mode. | | | |
| | 6.8 | Contrast and Tissue Harmonic Imaging. | | | |
| | 6.9 | Spatial Compounding. | | | |
| | 6.10 | Extended and Convex field of view. | | | |
| | 6.11 | Speckle Reduction Imaging. | | | |
| | 6.12 | Automatic Image Optimization for B-Mode and Doppler. | | | |
| | 6.13 | 2D Shear Wave Elastography for assessing liver stiffness. | | | |
| | 6.14 | Adjustment of Focal zone, Gain, TGC, Dynamic range, Edge enhancement, Gamma correction. | | | |
| | 6.15 | Adjust the frequency range on all transducers. | | | |
| | 6.16 | Operator controlled multiple and adjustable focal zones. | | | |
| | 6.17 | Real time Pan Zoom facility. | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| | 6.18 | Image annotation (alphanumeric and body marks). | | | |
| | 6.19 | Multiple user defined pre-sets for variety of clinical applications. | | | |
| | 6.20 | 2D Cine memory, M-Mode scroll memory. | | | |
| | 6.21 | Cine loop facility up to one minute at 25 frames per second (fps). | | | |
| | 6.22 | Fast random-access image review. | | | |
| | 6.23 | Ability to apply wide variety of image processing after the examination. | | | |
| | 6.24 | Full size and split-screen display. | | | |
| | 6.25 | Simultaneous display capability:<br>• B / PW<br>• B / CF<br>• B / PDI<br>• B / M<br>• B / Spatial Compounding | | | |
| | 6.26 | Multi-image split-screen display capability:<br>• Live and/or frozen<br>• B or spatial compounding and B or spatial compounding<br>• B or spatial compounding and CF<br>• B or spatial compounding and PDI<br>• PW / M | | | |
| **7. IMAGE ARCHIVE AND RECORDING** | 7.1 | System able to store at least 10,000 2D images to scanner hard drive, with CD/DVD burner and USB port for connection to computer and printer. | | | |
| | 7.2 | Digital B & W and Colour thermal printer. | | | |
| | 7.3 | Video and audio connections for other devices such as digital cameras. | | | |
| | 7.4 | JPEG / WMV & AVI format. | | | |
| **8. MEASUREMENT** | | The system proposed shall include the following: | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| **AND CALCULATION PACKAGES:** | 8.1 | 4 distance measurements, 2 angle measurements, calculation of diameter, area, and circumference, calculation of volume by height/width/length, planimetry, automatic planimetry and empirical method. | | | |
| | 8.2 | Automated measurement packages including reports, Urology, Renal, Cardiac (M and B mode), Obstetrics and Gynecological, and Vascular. | | | |
| | 8.3 | Real time automatic Doppler calculations. | | | |
| | 8.4 | Automated calculation of waveforms indices. | | | |
| | 8.5 | Hip dysplasia calculations. | | | |
| | 8.6 | Shear wave elastography measurement of liver stiffness in both m/s and kPa, with automated IQR/Median value. | | | |
| | 8.7 | Breast productivity package | | | |
| **9. TRANSDUCERS** | | The following transducers shall be included: | | | |
| | 9.1 | High Frequency Linear Transducer for vascular, small parts, breast and musculoskeletal. Tenderer to state the frequency. | | | |
| | 9.2 | Broadband Curved Array Transducer for general purpose abdominal and obstetric. Tenderer to state the frequency. | | | |
| | 9.3 | Broadband Phased Array Transducer (micro-convex or sector) for cardia echo and paediatrics transcranial ultrasound. Tenderer to state the frequency. | | | |
| | 9.4 | Curved Intra-cavitary Transducer for transvaginal obstetrics and gynaecology scan. Tenderer to state the frequency.<br>To include 6 boxes of transvaginal probe cover | | | |
| | 9.5 | Broadband Curved Array Transducer for liver shear wave elastography. (applicable only if a separate probe from the above is required for this purpose). Tenderer to state the frequency. | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| | 9.6 | Transducer used in biopsy guided procedures and other needle guided ultrasound procedure. | | | |
| **10. ULTRASOUND EXAMINATION COUCH PER ULTRASOUND SYSTEM** | 10 | One (1) unit electronic ultrasound examination couch | | | |
| | a | With adjustable height | | | |
| | b | Adjustable back and leg rest | | | |
| | c | Complete with disposable paper dispenser mounts to the head end of the couch | | | |
| | d | Dimension: tenderer to specify | | | |
| **11. RADIOGRAPHER'S CHAIR/STOOL PER ULTRASOUND SYSTEM** | 11. | One (1) unit ultrasound chair or stool with adjustable height | | | |
| **12. NETWORKING AND CONNECTIVITY** | 12.1 | Ethernet network connection | | | |
| | 12.2 | The proposed system must be DICOM activated | | | |
| | 12.3 | Inclusive of all licenses and software needed to initiate and maintain connectivity to INFINITT CPACS in MOH Brunei Darussalam until the end of service | | | |
| | 12.4 | The proposed system must be "plug-and-play" ready and should be easily integrated with the MOH Brunei INFINITT PACS system – this includes all necessary licenses and software required to initiate and maintain connectivity to PACS. | | | |
| | 12.5 | The proposed system should be connected to PACS, any licenses or hardware required for the connectivity shall be included in the proposal. | | | |
| **13.ELECTRICAL SAFETY** | 13.1 | The tenderer shall offer power plugs that are sufficient for the maximum voltage and current of the equipment. | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
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| | 13.2 | The tenderer shall provide UPS with at least 30 min backup for the entire system offered. | | | |
| **14. OVER-CURRENT PROTECTION** | 14.1 | Loss of power to other equipment on the same branch circuit due to internal equipment faults shall be prevented by using fuses or circuit breakers that are clearly labelled and easy to replace or reset. | | | |
| | 14.2 | If fuses are used, a set of spare fuses shall be provided in a labeled holder located next to the main fuse holder. Permanent markings near each fuse the holder shall indicate fuse ratings. | | | |
| **15. LABELLING** | 15.1 | Labels and markings shall be clear and legible. | | | |
| | 15.2 | Labels and markings shall be durable enough to withstand routine cleaning. | | | |
| | 15.3 | All appropriate warning legends shall be provided by the Tenderer. | | | |
| **16.EASE OF USE** | 16. | The equipment shall be simple to use, operate, maintain and is designed for easy access to serviceable parts. | | | |
| **17. STORAGE AND TRANSPORT** | 17.1 | The equipment and components shall be able to withstand temperature and humidity extremes likely to be encountered during storage and transport. | | | |
| | 17.2 | The Tenderer shall recommend procedures for storage of the equipment when not in use. The packaging shall be marked with the device's name and the distributor's name and address. | | | |
| **18. DELIVERY, INSTALLATION, ACCEPTANCE AND COMMISSIONING** | 18.1 | The Contractor shall observe the following requirements during delivery and installation: | | | |
| | 18.1.1 | All ordinances or regulations enforced in Brunei Darussalam shall be followed. | | | |
| | 18.1.2 | Appropriate measures shall be taken to protect the installation site as well as the immediate surroundings and any existing facilities from damage caused by preparation and installation works. | | | |
| | 18.2 | Upon delivery of the equipment to the Customer's location, the Contractor together with the Customer shall ensure: | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| | 18.2.1 | The equipment is in good physical condition without defects. | | | |
| | 18.2.2 | The equipment conforms with the stated Specifications in this document. | | | |
| | 18.2.3 | All the required accessories and consumables are supplied. | | | |
| | 18.3 | The Contractor shall then perform equipment and software installation and necessary hardware and software configurations including but not limited to: | | | |
| | 18.3.1 | Installation of all software and drivers that come with the equipment. | | | |
| | 18.3.2 | Installation and configuration of software and drivers for the equipment into existing computers, if required by the User. | | | |
| | 18.3.3 | Configuration of network settings for the equipment, if required by the User | | | |
| | 18.4 | The Contractor shall liaise and coordinate with the Customer to ensure the provision for any necessary network connectivity and configuration requirements. | | | |
| | 18.5 | The Acceptance Testing shall consist of Installation Tests including but not limited to the Quality Assurance test(s) and recalibration of the equipment if it fails the test. | | | |
| | 18.6 | Copies of test results obtained in 18.5 should then be provided to the Customer: | | | |
| | 18.6.1 | The Contractor shall submit all test reports to the Customer for verification. | | | |
| | 18.6.2 | The equipment shall be commissioned for use upon signing of the acceptance report by the Customer. | | | |
| **19. TRAINING** | 19.1 | On-site training for all radiologists in the operation and application of the System by an application specialist which include but not limited to:<br>• Basic operation<br>• Application training for the use of the various applications | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
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| | | provided with the system.<br>• Basic maintenance, including troubleshooting. | | | |
| | 19.2 | The categories of training shall include, but not limited to:<br>• End-users Operation Training to all users.<br>• Training for Biomedical Engineers. | | | |
| | 19.3 | The trainers shall be well-qualified, knowledgeable and well-versed with the System to provide the training. | | | |
| | 18.4 | Training certificate should be provided after completion of training sessions | | | |
| **20. WARRANTY** | 20.1 | Warranty for one (1) year that covers all the proposed hardware, system software and other peripherals that should include but not limited to: | | | |
| | | a- Spare parts | | | |
| | | b- Corrective and preventive maintenance service (at no additional charges) | | | |
| | | c- Emergency and non-emergency breakdown calls to rectify problems | | | |
| | | d- Two (2) times planned preventive maintenance (PPM) during warranty period. | | | |
| | | e- Documentation of PM service and tests reports must be submitted for user and Biomedical Engineer (BME). | | | |
| **21.DOCUMENTATION** | 21. | The following documentation must be provided during implementation or after completion in both hardcopy and softcopy form (Portable hard drive/USB and DVD); - multiple copies might be required upon user request. | | | |
| | | a. User/operation manual in English | | | |
| | | b. Service manual in English | | | |
| | | c. Training manual in English | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| | | d. Certificate of calibration and inspection from factory. | | | |
| | | e. Quality assurance and commissioning report. | | | |
| | | f. Quality control procedures for the System. | | | |
| | | g. List of major spare parts and related accessories with their part number and costs. | | | |
| **22. MAINTENANCE (OPTIONAL)** | | **<u>General Requirements and Scope of Work</u>** | | | |
| | 22.1 | This maintenance requirement after warranty is **OPTIONAL** and the Ministry of Health is not obliged to grant the Tenderer the maintenance agreement. | | | |
| | 22.1.1 | The Tenderer shall propose maintenance services after a warranty period for **five (5) years** for the system offered. The objectives of the maintenance services are:<br>a. To improve the system's uptime<br>b. To minimize and prevent system breakdown during operation<br>c. To maintain the quality of results<br>d. To prolong the system's life- span | | | |
| | 22.2 | The Tenderer shall provide maintenance services for the system inclusive of all necessary spare parts, replacement parts and material to keep the system in good working order and condition. | | | |
| | 22.3 | The Maintenance Services are as follows:<br>1- Preventive Maintenance<br>2- Corrective Maintenance | | | |
| | 22.3.1 | **Preventive Maintenance** | | | |
| | a | The Tenderer shall carry out all scheduled or planned preventive maintenance on the system during Government working hours:<br>7:45 am -12.15 am | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
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| | | 1:30 pm – 4:30 pm | | | |
| | b | Preventive Maintenance shall include cleaning, adjusting, lubricating, inspecting, testing and safety procedures and engineering improvements and modifications as recommended by the manufacturer designed to help in reducing system failure and to verify good and safe operating condition. | | | |
| | c | The Tenderer will rectify any identified problems during preventive maintenance. | | | |
| | d | Preventive Maintenance shall be performed every six (6) months in accordance with the procedures specified in the system service manuals. This Preventive Maintenance shall be completed within one (1) day from the time the service engineer arrives at the site. | | | |
| | e | The successful Tenderer shall submit to the Ministry of Health a maintenance servicing schedule in accordance with the manuals, which may be amended from time to time, by mutual agreement, in writing. This schedule shall be submitted annually to the Ministry of Health; **the first annual schedule to be submitted two (2) weeks prior to commencement of the Preventive Maintenance service.** | | | |
| | f | After the Preventive Maintenance is completed, the Tenderer shall submit two (2) copies of the maintenance service and test reports to the Biomedical Engineer and the Radiology Department. | | | |
| | g | The Tenderer shall also carry out 'special service calls' (service calls between the regular scheduled routine preventive maintenance service calls) at no additional charge, when requested by the Senior Biomedical Engineer or his/her representative(s) to be necessary to keep the system in good working order and condition. | | | |
| | 22.3.2 | **Corrective Maintenance** | | | |
| | a | The Tenderer shall also perform corrective maintenance on the system including its accessories. | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| | b. | This service shall be provided free of charge to the Ministry of Health with unlimited breakdown calls per year. | | | |
| | c. | Corrective maintenance shall be performed at **ANY TIME (inclusive of public holidays)** following notification by the Senior Biomedical Engineer or Medical Equipment Maintenance Offer or their representative(s). | | | |
| | d. | The Tenderer shall dispatch his service engineer to the location **within the agreed time** after being notified in writing or telephone that the system is inoperative. The service engineer shall complete any repair or replacement of parts within one (1) day from the time the service engineer arrives at the specified site. | | | |
| **23. EXCLUDED SERVICE** | a. | The following services shall not be included in the scope of Maintenance Services to be provided by the Tenderer: | | | |
| | b. | painting or refinishing of the system or supplying materials thereof; | | | |
| | c. | repairs of equipment, accessories or facilities other than the system, or supervision thereof; and | | | |
| | d. | supply of storage media or consumables. | | | |
| **24. REPLACEMENT OF PARTS** | | Where the system is found or reported to require repairs, the Tenderer shall seek the replacement parts from the BME Department. The technical officer in charge of the system may issue written approval for and prior to the replacement of any faulty parts. | | | |
| **25. PURCHASE OF PARTS** | | All parts or items recommended by the Manufacturer to be replaced during the scheduled preventive maintenance shall be free of charge to the Ministry of Health. | | | |
| | | All spare parts costing below BND$2,000.00 shall be at the Tenderer's own expense. | | | |
| | | The Tenderer shall submit a list price of the most common spare parts expected to be needed during breakdowns in the format set out in **Section 3** in this Invitation to Tender. The price list shall be quoted in Brunei dollars inclusive of duties and taxes **AND** maintained for a period of five | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| | | (5) years. | | | |
| **26. RESPONSE TIME** | | A response time by the Tenderer's service engineer of **30 minutes for Brunei-Muara and Tutong districts** and **90 minutes for Kuala Belait and Temburong districts** IS REQUIRED for locally-stationed service personnel after notification in writing or telephone by the Biomedical Engineer or the user that the system is inoperative. The service engineer shall complete any repair or replacement of parts within one (1) day from the time the service engineer arrives the site. | | | |
| **27.** | | For overseas Tenderers, the Tenderer undertakes to dispatch a suitably qualified service engineer to the site **within 72 hours upon receipt of a request for breakdown service call** and shall complete any repair or replacements of parts within two (2) days from the time the service engineer arrives in Brunei Darussalam. | | | |
| **28. SERVICE PERSONNEL** | | The Maintenance Services must be performed by qualified factory-trained service personnel. Training certificate(s) or a letter of certification from the manufacturer must be attached during submission of the Tender. | | | |
| **29. ENGINEERING IMPROVEMENTS AND MODIFICATIONS** | | The Tenderer shall make engineering improvements and modifications to the system listed in the service contract recommended by the manufacturer. Such changes will be at no charge if they are done at the same time as the preventive maintenance or coincident with repair services. | | | |
| **30. MAINTENANCE AND REPAIR LOG** | | The Tenderer shall provide on-site, a written maintenance and repair log for the system. The log shall contain the following information:<br>• Document each incident of system defect or malfunction;<br>• Time and duration of all work performed on the system, quantities and parts and supplies used; and<br>• A description of the reason for the work done. | | | |

| | | USER REQUIREMENT | YES | NO | PLEASE SPECIFY THE SPECIFICATION/ SCOPE OFFERED<br>FAILURE TO FILL THE OFFER DETAIL SHALL BE IDENTIFIED AS NON-COMPLIANCE TO THE OFFER |
|---|---|---|---|---|---|
| | | As an alternative, the details of work performed and parts used may be provided by Service Reports in a form acceptable to the Ministry of Health. | | | |
| **31. TERMS OF PAYMENT** | | The Tenderer shall quote the cost of an annual service contract. The Ministry of Health shall pay to the Tenderer the maintenance charges, the cost of repair per trip and the cost of parts replaced (if any), upon receipt of one original and one duplicate detailed maintenance report, inclusive of test and measurement results, in accordance with the Maintenance Procedures/Standards specified in the system service manuals. Pro-rated payment shall be due at the end of each maintenance cycle when the Tenderer shall submit a work schedule acknowledging the preventive maintenance has been completed and signed by the officer incharge of the system. | | | |
| **32. AIRFARE AND ACCOMODATION** | | The cost of air-fare and accommodation is included in each maintenance and in every breakdown service call. | | | |
| **33. LOCAL TRANSPORTATION** | | It is the responsibility of the Tenderer to arrange their own transport for their service engineers. | | | |

**Please provide breakdown cost or itemized price for each accessories/ consumables**

****** **Folec Communications (B) Sdn Bhd – PACS integration**
**Precept/Dynamik Technologies Sdn Bhd – BruHIMS integration**

| PRICE SUMMARY | | |
|---|---|---|
| **Unit Price** | **BND$** | |
| **Total price for 2 units** | **BND$** | |
| **Cost of Integration to PACS** | **BND$** | |
| **Overall cost (CIF)** | **BND$** | |
| **Maintenance cost (item 22)** | | **Per Year** |
| **Maintenance cost** | | **5 years** |

| | SECTION II - PROCUREMENT REQUIREMENT |
|---|---|
| **BRAND AND MODEL OF EQUIPMENT:** | |
| **COUNTRY OF ORIGIN:** | |
| **WHERE MARKETED:** | |
| **YEAR MANUFACTURED:** | |
| **WARRANTY:** | |
| **DELIVERY TIME:** | |
| **PRICE VALIDITY:** | |

| | SECTION III - TECHNICAL REQUIREMENTS |
|---|---|
| **MAINS POWER SUPPLY** | |
| **BATTERY BACKUP:** | |
| **INTERNATIONAL SAFETY STANDARD:** | |
| **TECHNICAL SUPPORT:** | |
| **DIMENSIONS (mm):** | |
| **WEIGHT (in Kg):** | |
| **EQUIPMENT WHOLE LIFE TIME SUPPORT:** | Number of years, spare parts are available after the installation of the equipment:_____ years. |

| | | YES | NO |
|---|---|---|---|
| **BROCHURE** | Detailed brochure submitted? | | |
| **USER MANUALS** | Tenderers must supply during commissioning, three sets of user manuals, one set must be in the form of soft copy. (PDF Format) | | |
| **SERVICE MANUALS** | Tenderers must supply during commissioning, three sets of service manuals, one set must be in the form of soft copy. (PDF Format). | | |
| **SPARE-PARTS AND CONSUMABLES LISTINGS** | Tenderers must supply during commissioning, a comprehensive list of equipment spare-parts and consumables in the form of soft copy (e.g.: Microsoft EXCEL). The listing must have the following details;<br>1) Part Number<br>2) Part Description | | |
| **WARRANTY PLANNED PREVENTIVE MAINTENANCE (PPM)** | Tenderers must carry-out a minimum of two times PPM per year during the equipment warranty period, starting from six months after the date of commissioning. | | |
| **TECHNICAL TRAINING:** | Tenderers to conduct training to Biomedical Engineers and Technicians. | | |
| **ON-SITE:** | Training to be conducted locally, tenderers are required to:<br>• Provide training materials, test equipment, demo equipment, etc.<br>• Provide training to two groups of technical staffs.<br>• Provide 2 days (minimum) of training for each group.<br>• Training to be conducted at BME respective Hospital | | |
| **Or AT MANUFACTURER'S PREMISES:** | Training to be conducted at the manufacturer's training premises / facilities. Tenderers are required to:<br>• Provide air tickets, accommodation, transportation, etc. for 2 persons.<br>• Provide training for 2 persons.<br>• Minimum no of days for training – 3 days. | | |

1. We offer and undertake on your acceptance of our Tender to provide the above mentioned services in accordance with your Invitation To Tender.

2. Our Tender is fully consistent with and does no contradict or derogate from anything in your Invitation To Tender. We have not qualified or changed any of the provisions of your Invitation To Tender.

3. OUR OFFER IS VALID FOR **TWELVE (12)** CALENDAR MONTHS FROM THE TENDER CLOSING DATE.

4. When requested by you, we shall extend the validity of this offer.

5. We further undertake to give you any further information which you may require.

Dated this_____day of_____, _____

_____ Tenderer's official stamp

**Signature of authorised officer of Tenderer**
Name:
Designation: