INVITATION TO BID (SBD1)

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE DEPARTMENT OF FREE STATE HEALTH					
BID NUMBER:	**DOH(FS)14/2022/2023**	**CLOSING DATE:**	**25 NOVEMBER 2022**	**CLOSING TIME:**	**11H00**
DESCRIPTION	**SUPPLY AND DELIVERY OF MEDICAL EQUIPMENT FOR HEALTH FACILITIES IN THE FREE STATE DEPARTMENT OF HEALTH.** **PERIOD: ONCE- OFF PURCHASE OF EQUIPMENT AND (05) YEARS MAINTENANCE PLAN.**				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD1).					

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS*

DEPARTMENT OF FREE STATE HEALTH
GROUND FLOOR, BOPHELO HOUSE, BLOCK C-WEST, OPPOSITE MAIN DOOR
C/O CHARLOTTE MAXEKE STREET AND HARVEY ROAD, BLOEMFONTEIN

SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		**OR**	CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	☐ Yes ☐ No	

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]			
ARE YOU THE ACCREDITED REPRESENTATIVE **IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?**	☐Yes ☐No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?**	☐Yes ☐No [IF YES, ANSWER PART B:3]
TOTAL NUMBER OF ITEMS OFFERED		**TOTAL BID PRICE**	**R**
SIGNATURE OF BIDDER	.....	**DATE**	
CAPACITY UNDER WHICH THIS BID IS SIGNED			

FOR PROCUREMENT OF DOCUMENT ENQUIRIES MAY BE DIRECTED TO:		**FOR BIDDING AND TECHNICAL INFORMATION ENQUIRIES MAY BE DIRECTED TO:**	
DEPARTMENT	FREE STATE HEALTH	CONTACT PERSON	Mr. M.J Mathobisa
CONTACT PERSON	Mahlasi TE Sethunya TJ	TELEPHONE NUMBER	051 408 1310
TELEPHONE NUMBER	051 408 1457 / 1487	FACSIMILE NUMBER	N/A
FACSIMILE NUMBER	N/A	E-MAIL ADDRESS	MathobisaMJ@fshealth.gov.za
E-MAIL ADDRESS	MahlasiTE@fshealth.gov.za	**NB: Bidders may send any queries electronically to the above mentioned emails**	

PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.

1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR ONLINE**

1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) ANDSPECIAL CONDITIONS OF CONTRACT.

2. TAX COMPLIANCE REQUIREMENTS

2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.

2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.

2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.

2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.

2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.

2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.

2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

3.1.	IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ YES ☐ NO
3.2.	DOES THE ENTITY HAVE A BRANCH IN THE RSA?	☐ YES ☐ NO
3.3.	DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	☐ YES ☐ NO
3.4.	DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	☐ YES ☐ NO
3.5.	IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	☐ YES ☐ NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.

Signature Of Bidder: .....

Capacity Under Which This Bid Is Signed: .....

Date: .....

EXPLANATORY MEETING CERTIFICATE

BID NUMBER: **DOH (FS)14/2022/2023** Attendance list number: _____

SUPPLY AND DELIVERY OF MEDICAL EQUIPMENT FOR HEALTH FACILITIES IN THE FREE STATE DEPARTMENT OF HEALTH.

PERIOD: ONCE- OFF PURCHASE OF EQUIPMENT AND (05) YEARS MAINTENANCE PLAN.

Attendance of the explanatory meeting is COMPULSORY

An official of the Department must sign this certificate at the explanatory meeting. No certificate will be signed outside the meeting. The original certificate must be included in the bid document and will not be accepted after the closing time and date of the bid.

COMPULSORY EXPLANATORY MEETING DATE: 10 November 2022

TIME: 10H00

VENUE: **Auditorium,First Floor**
Bophelo House,C/O Charlotte
Maxeke Street and Harvey Road
Bloemfontein
9301.

CONTACT PERSON/S: Mr M. J Mathobisa
Tel: (051) 408 1310

This is to certify that _____ in his/her capacity as

_____ of the company _____ has attended the

Compulsory Explanatory meeting on the _____ day of _____ 2022 and is

therefore familiar with circumstances and the scope of the items to be supplied.

_____ _____
SIGNATURE /DEPARTMENTAL OFFICIAL **RANK**

_____ _____
SIGNATURE OF REPRESENTATIVE OF COMPANY **DATE**

OFFICIAL DATE STAMP

*** Note: Only one certificate per company**

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. BIDDERS' DECLARATION

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest1 in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State Institution

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

.....

.....

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1 the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

.....

.....

3 DECLARATION

I, the undersigned, (name) ..... in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

3.1 I have read and I understand the contents of this disclosure;

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium2 will not be construed as collusive bidding.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

3.5 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

3.6 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

3.7 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be

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2 Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.
I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....	.....
Signature	Date
.....	.....
Position	Name of bidder

health
Department of Health
FREE STATE PROVINCE

PROCUREMENT OF MEDICAL EQUIPMENT FOR HEALTH FACILITIES IN THE FREE STATE DEPARTMENT OF HEALTH

PERIOD: ONCE-OFF PURCHASE OF EQUIPMENT AND 5 YEAR MAINTENANCE PLAN

FOR FURTHER INFORMATION REGARDING THIS BID,

PLEASE CONTACT: MR M.J MATHOBISA

HEALTH TECHNOLOGY

TELEPHONE NUMBER (051) 408 1310

(6)

SECTION A:

GENERAL TENDER CONDITIONS

CONTENTS

Section A

1.1. INTRODUCTION

1.1.1. This document is an invitation to suppliers of X-ray equipment to bid for procurement of:

a) Mini PACS/RIS at Dr J.S Moroka District hospital (Thaba Nchu), Mantsopa MDR TB District Hospital (Ladybrand), Fezi Ngumbentombi (Sasolburg) and Phekolong/Nketoana Complex (Bethlehem/Reitz).
b) Ceiling Suspended X-ray Unit at Phekolong District Hospital (Bethlehem), Boitumelo Regional Hospital (Kroonstad), Dr J.S Moroka District hospital (Thaba Nchu) and Fezi Ngumbentombi District (Sasolburg);
c) High-Throughput Computed Radiography (CR) system at Boitumelo (Kroonstad), Mofumahadi Manapo Mopedi Regional hospital (Qwa Qwa) and Bongani regional (Welkom) hospitals;
d) Ceiling suspended X-ray unit Pelonomi Tertiary Hospital.
e) C -Arm X-ray unit for Albert Nzula District Hospital in trompsburg.

In order to accomplish a high-quality X-ray imaging service, it is necessary to conceptualise the relationship of the system with patient handling and care as point of departure. The functional system must therefore be able to handle acute patients with a minimum effort from personnel.

1.1.2. The objectives and priorities of the Department of Health in entering the contracts can be broadly divided into Administrative and Clinical as follows:

1.1.3. Clinical Objectives

1.1.3.1. The units will be installed at above mentioned facilities and will be used for patient care.

1.1.3.2. Imaging information must be readily available to ensure that the personnel in the hospitals will provide effective patient care and treatment in the shortest possible time.

1.1.3.3. To provide high quality health care services to patients.

1.1.4. Proposed Implementation Approach

1.1.4.1 The Bidder shall supply, deliver and install the equipment and issue a certificate of compliance with the regulations of the Radiation Control Directorate of the National Department of Health before official acceptance by the Hospital.

1.1.4.2 Training of personnel involved in the use of the units must be provided by the bidder.

1.1.4.3 The bidder shall ensure that there is a minimum disruption of normal services.

1.1.4.4 Acceptance testing shall be done by the bidder.

1.2. CONDITIONS AND FORMAT OF THIS BID

1.2.1. Conditions

1.2.1.1. These bid specifications are the minimum requirements.

1.2.1.2. The conditions of General Conditions of Contract (GCC) shall apply and form an integral part of these bid specifications.

1.2.1.3. With each tender condition in this document you shall clearly indicate in the column provided whether you agree or not. If an explanatory note is provided, the paragraph reference must be noted in the space provided. Bids not completed in this manner will not be taken into account.

1.2.1.4. A detailed description of how the non-compliance is overcome, shall be provided.

1.2.1.5. Tenders shall be answered in the same order as this document. Information supplied must be concise. Cross-references to related questions/answers in other Chapters will be ignored. The above will ensure easier evaluation of this tender.

1.2.1.6. The Free- State Department of Health reserves the right to terminate the tender at any time. The Free- State Department of Health further reserves the right to put out another tender for any of the items if deemed necessary.

1.2.1.7. The Free- State Department of Health reserves the right to receive a price quotation from the bidder for the enhancement and adaptation of an item if necessary. This will be done before the awarding of the bid after approval has been granted by the Free -State Department of Health.

1.2.1.8. It is envisaged that the total installation and commissioning be completed within 3 months after an official order has been placed.

1.2.1.9. Only new equipment may be proposed.

1.2.1.10. After the closing of bid, the bidders may be asked to furnish further information regarding the equipment, the software, the features, the components or design, the installation of equipment tendered for, as well as any other information that the Free- State Department of Health may require. Bidders shall adhere to this request in the shortest possible time. If the request for additional information has not been met within two days, it may be considered as sufficient grounds to disregard the bid. Responses to requests for additional information must be supplied free of charge by the bidder.

1.2.1.11. In the case of any non-compliance with the terms and conditions of the contract and specifications provided in the answers to the bid, the Free- State Department of Health will be refunded in full and the bidder will have to bear the cost of replacement of the system as a whole.

1.2.1.12. The bidder shall produce documented evidence from original supplier of the equipment included in this proposal that they are the bona-fide importers and/or distributor, or bona-fide agent of the importer and/or distributor for the product in the Republic of South Africa.

1.2.1.13. The bidder shall ensure that all equipment tendered for is fully compatible and inter-operable.

1.2.1.14.The details of the evaluation tests conducted by the Free State Department of Health will not be made available to any third party.

1.2.1.15.All items tendered for, must be commercially available as of the closing date of the bid. Items in Beta-phase are not considered to be commercially available.

1.2.1.16.All equipment supplied must be fully guaranteed and maintained at no cost to the Free State department of Health for a period of 2 years from the date of commissioning.

1.2.1.17.It is a requirement that sufficient spare parts be held in the country to ensure that the system is kept in good working order for ten (10) years after installation.

1.2.1.18.Notwithstanding any ambiguity and shortcomings of the tender specifications, the bidder shall undertake to make allowances in the proposal for all components and their costs required to make up a fully functional working system.

1.2.1.19.Bidders may bid for individual items.

1.2.2. Format

1.2.2.1. Bidders shall provide detailed quotations, showing unit prices and a brief description of each unit offered.

1.3. DELIVERY, INSTALLATION AND TERMS OF PAYMENT

1.3.1. General

1.3.1.1. The prices quoted must be for supply, delivery, installation, decommissioning where applicable and user training of the system.

1.3.1.2. Bidders are requested to indicate the period of delivery, calculated from the date of order.

1.3.1.3. With the submission of their bids, Bidders shall quote on the following options:

1.3.1.3.1.Outright purchase of the proposed system.
1.3.1.3.2.A five-year full service and maintenance contract post guarantee period.
1.3.1.3.3.Other costs which have possibly not been specified, for the effective operation of the system.

1.3.1.4. The equipment will be deemed to be fully delivered and installed when it has been tested and demonstrated in an operational situation at the installation location. Payment of an invoice will be authorised upon receipt of a detailed account supported by a Departmental certificate of satisfactory execution of the work.

1.3.2. Documentation and Licences

1.3.2.1. A complete set of all Operating Manuals, Standard Operating Procedures for maintenance, Standard Operating Procedures for routine tests and technical surveys, etc. must be provided on delivery of the equipment.

1.3.2.2. Should the hardware require an export licence according to the law of the country of origin, this licence, or sufficient evidence indicating that the licence has been issued, must be presented as soon as possible, but not later than 3 months after the acceptance of the offer.

1.3.2.3. Original manuals for all hardware supplied must be provided on delivery of the equipment.

1.3.2.4. Any changes made to hardware settings other than those stated in the manuals during installation shall be noted in the manuals.

1.3.3. Compulsory Pre-bid meeting and site inspections.

1.3.3.1. Only offers of bidders who attended the pre-bid meeting will be considered. Bidders shall acquaint themselves with the sites where the units will be installed at the healthcare facilities, since there will be no price adjustments after the bid has been awarded.

1.3.3.2. The explanatory meeting will be arranged as follows:

Venue: Auditorium, First Floor, Bophelo House, Free State Department of Health, C/O Charlotte Maxeke & Harvey road, Bloemfontein 9301

Time: 10:00

Date: 10 November 2022

1.3.3.3. It is required that all bidders visit the hospitals and facilities in order to familiarise themselves fully with the layout of the hospital, and facilities.

1.3.3.4. The responsibility rests with the bidder to ensure that the site is suitable for the system. Should any additional costs be incurred for this purpose after installation, it will be for the bidder's account.

1.3.4. Bidder's experience

1.3.4.1. Bidders shall furnish names, including telephone numbers of customers where similar systems have been installed and commissioned, state how long the equipment has been installed and attach this information to the bid, clearly marked, "**Annexure A".** It is the intention of the Free State Department of Health to request references from such customers and to inspect the installations where possible, to establish the bidder's bona-fides.

1.3.4.2. Bidders should be prepared to arrange visits to sites of the Free- State Department of Health`s choice where a system similar to the one proposed is operating successfully.

1.3.4.3. The bidder shall provide at **Annexure B,** a table of names, relevant qualifications, experience and capacity of all people that will be directly involved in this project.

1.3.5. Bidder's liability in respect of defects

1.3.5.1. Any defects or faults which may appear within twelve months of completion of the works due to materials or workmanship not being in accordance with the contract, shall be made good by the bidder within such a period as may be determined by the Free State Department of Health.

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1.3.5.2. Should the bidder fail to rectify the defects or faults, the Free- State Department of Health shall be entitled to rectify such defects or faults or to arrange for the rectification there-of and to recover from the bidder any damages as a result of the bidder's failure to comply with the terms of the contract.

1.3.6. Project management

1.3.6.1. It is required from the bidder to supply the Hospital with a complete implementation plan, that will include a project diagram with a list of activities showing starting and completion dates, project meeting dates (milestones), cash flow, resources and the deliverables. This information to be attached as **Annexure C.**

1.3.6.2. The bidder will be required to manage the installation process of the system from site preparation to final acceptance by the Free State Department of Health. The Free- State Department of Health must be notified of all related requirements which are essential for the successful implementation of the contract, i.e. upgrade power supply, etc. This includes the preparation of a project plan after consultation with all relevant parties. This responsibility lies primarily with the bidder.

1.3.6.3. The supplier must appoint a single project manager to be accountable and responsible for all supplier and sub-contractor activities from date of contract award through to final acceptance of the system.

1.3.6.4. Project management will run under control of the Chief Executive Officer of the Hospital or his / her appointed representative and the project manager will report formally as agreed.

1.3.7. Payment

1.3.7.1. All prices must be quoted in South African Rands and bidders must indicate whether the prices are linked to any foreign currency and at what rate. Bidders must also indicate what portion of the total cost or price is linked to the foreign currency.

1.3.7.2. Bidders must use the official exchange rate valid on the date of the publication of the bid.

1.3.7.3. All prices and costs submitted in terms of this bid must include the cost of manufacture, x-ray room/ site preparations, packing of transport, delivery and installation on site, complete in every aspect.

1.3.7.4. All prices must include VAT

1.3.8. Taxes and levies

1.3.8.1. All normal import duties and levies are payable by the bidder and must be included in the quoted prices.

1.3.8.2. All prices must include VAT.

1.4. SUPPORT SERVICES AND MAINTENANCE SERVICES

1.4.1. Support Services during the Guarantee period

1.4.1.1 The guarantee period will start on the day that the equipment is accepted as fully functional by the hospital by signing a formal letter of acceptance and will extend for two years.

1.4.1.2 All parts, services, maintenance and labour must be fully guaranteed for the first year. This guarantee will include all parts.

1.4.1.3 The support service during the Guarantee Period shall include:
- 1.4.1.3.1 Safety & Quality checks.
- 1.4.1.3.2 Diagnosis & repair including all spare parts.
- 1.4.1.3.3 Additional application training where necessary.
- 1.4.1.3.4 Standby technicians for diagnosis & repair.
- 1.4.1.3.5 All labour & travelling.

1.4.2 General conditions for Guarantee period

1.4.2.1 It is required that the successful bidder render a support service with a maximum response time of 30 minutes with onsite inspection within 4 hours. The mean time to repair will be three (3) calendar days and will immediately follow the response time.

1.4.2.2 The hours of coverage for Service, must be from 00:00 Monday to 24:00 Sunday.

1.4.2.3 Maintenance and service during the guarantee period in normal working hours will be between 07:30 and 16:00 Monday to Friday and carried out at no cost to the Hospital.

1.4.2.4 Overtime during the guarantee period is applicable between 16:00 and 07:30 from Monday evening to Saturday morning and will be carried out at no cost to the Hospital.

1.4.2.5 The repair process could be a physical exchange of the equipment or parts. It is envisaged that spare equipment be included in the tender of all units or parts of units in order to provide the required response times.

1.4.2.6 A reporting system which is capable to accept calls 24 hours per day, 7 days per week and keep track of the progress and escalation of problems must be utilised. This reporting system will also keep historic information on all equipment by serial number, as well as information regarding the performance of the bidder in respect to all calls. No information will be archived or deleted without clearing it with the Free-State Department of Health.

1.4.2.7 Bidders shall indicate whether: -
- 1.4.2.7.1 A remote support/diagnostic facility is available, how it would be carried out and any costs incurred.
- 1.4.2.7.2 Local diagnostic, fault finding and aids for trouble shooting are supplied.
- 1.4.2.7.3 Repair facilities are available in the Free-State area.

1.4.2.8 New releases and updates of the system must be supplied. Bidders shall indicate the costs associated with the installation of new releases and updates where applicable.

1.5. STAFF AND TRAINING REQUIREMENTS

1.5.1. Operating and Staffing Requirements

1.5.1.1 The bidder shall describe the operating requirements of the proposed system.

1.5.1.2 The bidder shall provide details of the personnel required to operate the system.

1.5.2. Training

1.5.2.1 Bidders shall describe how training is to be conducted. A complete implementation program, showing training at various levels, personnel involved and user support must also be provided.

SECTION B:

TECHNICAL SPECIFICATIONS.

ITEM 1: SPECIFICATION FOR MINI PACS. (PHEKOLONG/NKETOANA COMPLEX).

1.1	PACS/RIS REQUIREMENTS	BIDDERS RESPONSE	
		COMPLY	DOES NOT COMPLY/ STATE DEVIATION
1.1.1	The PACS/RIS solution shall have the capacity to meet the performance criteria as outlined in this specification.		
1.1.2	The solution shall store images for both Phekolong and Nketoana Hospitals, meaning that all modalities at both sites shall be setup to archive their images in Phekolong based PACS. Archive storage shall be scalable. DICOM images shall be safely stored for 5 years. It is estimated that the healthcare facilities will receive 11027 general X-ray patients per year in total for both sites. It is estimated that a total of 5 TB storage will be needed for both facilities including legacy data for a period of 5 years.		
1.1.3	The bidder shall provide an appropriate rack to mount the PACS Archive server, PACS storage system and RIS server.		
1.1.4	The bidder shall provide all hardware to support accessing the PACS archive server, PACS storage system and RIS server, this includes KVM switches, rack-mounted monitor, keyboard, and Mouse.		
1.1.5	Archive storage shall be scalable. DICOM images shall be safely stored for 5 years.		
1.1.6	Bidders shall include a backup solution with the capacity to store all DICOM objects stored on the PACS/RIS solution.		
1.1.7	The PACS/RIS storage system shall have built-in redundancy in the case of a disk failure, using Redundant Array of Independent Disks (RAID) technology.		
1.1.8	A minimum of a RAID 5 configured storage system shall be provided.		

1.1.9	The PACS/RIS solution shall be designed with a high availability architecture allowing for uptime of 95%.		
1.1.10	The PACS/RIS solution shall provide an exceptional user experience based on the speed of opening, manipulating and navigating through images.		
1.1.11	The PACS/RIS solution shall provide a web browser-based graphical user interface (GUI) for users to interact with the PACS solution.		
1.1.12	The web-based interface shall use standard web- based security using HTTPS protocols and certificates to ensure data is secure between client and server.		
1.1.13	The web technology used to deliver images through the web browser shall be based on HTML5 technology.		
1.1.14	Zero footprint technology shall be utilized by the PACS/RIS solution to deliver the images and reports to the clinical users.		
1.1.15	Basic PACS image manipulation functions associated with zero footprint viewers shall be available to the clinical users.		
1.1.16	The PACS/RIS solution shall provide access to authorised clinicians to view images stored on the solution.		
1.1.17	The PACS/RIS solution shall restrict user access by applying user authentication security based on username and password.		
1.1.18	The bidder shall provide an Uninterrupted Power Supply (UPS) with the capacity to keep the solution powered for at least an hour to an hour and a half or until a seamless transition to emergency power has occurred or a smooth shutdown of the server or workstation can be performed by a super user.		
1.1.19	The proposed UPS shall be a 5-10 kva power unit.		

1.2 PACS/RIS PATIENT INFORMATION AND ORDER MANAGEMENT		**BIDDERS RESPONSE**	
		COMPLY	**DOES NOT COMPLY/ STATE DEVIATION**
1.2.1	It shall be possible for an authorised user to register basic patient demographic information into the PACS/RIS solution.		
1.2.2	It shall be possible for an authorised user to select a study from a pre-populated list of studies and register the order in the PACS/RIS solution.		

		BIDDERS RESPONSE	
1.3	**1.3 BASIC PACS ADMINISTRATOR FUNCTIONALITY**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
1.3.1	The PACS/RIS solution shall support a user audit tracking mechanism keeping a record of user activity on the solution.		
1.3.2	The PACS/RIS solution shall provide a super user with the ability to create and manage user profiles on the solution.		
1.3.3	The PACS/RIS solution shall provide a super user with the ability to enable or disable the availability of functions based on a specific user group profile. An example would be that radiology users have access to a different set of functions than clinicians' users.		
1.3.4	The PACS/RIS solution shall provide a super user with the ability to add DICOM nodes to the solution		
1.3.5	The PACS/RIS solution shall provide a super user with the ability to change the value of DICOM tags to correct incorrectly entered data.		
1.3.6	In the case of a DICOM tags value being changed; these changes shall be applied to the original DICOM files stored in the PACS solution.		
1.3.7	The PACS solution shall provide a super user with the ability to import DICOM images from external media such as CD, DVD as long as the data on the media is DICOM part 10 compliant.		
1.3.8	When the DICOM images are exported aDICOM viewing program shall be automatically attached to the external Media.		
1.3.9	Bidders shall be responsible to liaise with modality suppliers and ensure correct connection of all modalities (at both Phekolong and Nketoana Hospitals) to the PACS server at their own cost.		

1.4	**PACS/RIS WORKLIST**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
1.4.1	The PACS/RIS solution shall provide a query function for authorised users to search for patients on the PACS/RIS solution.		
1.4.2	An authorised user shall be able to query on both the patient level and study level DICOM tags		
1.4.3	Search criteria shall support the following formats, single value matching, Universal matching, wildcard matching, date range matching, and time range matching.		

1.4.4	An authorised user shall have the ability to define predetermine search criteria and configure worklists based on their personal requirements.		
1.4.5	An authorised user shall have the ability to define which columns and DICOM Tags are shown in a worklist.		
1.4.6	The patient information banner of any clinical system (PACS and/or RIS) should include the following attributes if available: Patient Name, Date of Birth, Sex, Medical Record Number (Patient ID), Patient location, responsible consultant.		
1.4.7	The PACS/RIS solution shall provide a query function for authorised users to search for patients on the PACS/RIS solution.		
1.4.8	The PACS/RIS solution shall support a status tag which indicates the current status of the study.		
1.4.9	The status should be synchronized between RIS and PACS and should consist of the following statuses: Arrived, Study Started, Study Completed.		
1.4.10	Once the study status has changed to indicate that the study is completed the study shall be removed from the DICOM Modality Work list.		
1.5	**INTEGRATION STANDARDS**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
	IHE INTEGRATION PROFILES		
1.5.1	The PACS shall adhere to the IHE profile: patient information reconciliation (PIR)		
1.5.2	The PACS shall adhere to the following IHE Standard: IHE Standards— Consistent Presentation of Images (CPI)		
1.5.3	The PACS shall adhere to the following IHE Standard: IHE Standard: PACS must support Audit Trail & Node Authentication		
1.5.4	The PACS shall satisfy the following IHE Standard: IHE Standard—Cross Community Access of IHE		
1.5.5	The PACS shall adhere to the IHE profile: Portable data of imaging (pdi)		
1.5.6	Bidders shall provide IHE Profiles for the PACS and RIS solution offered. Bidders shall clearly indicate where to reference IHE integration profiles in their proposals. **Failure to comply will invalidate the offer.**		

1.6	**DICOM**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
1.6.1	Bidders are to provide DICOM conformance statement for the solution offered.		
1.6.2	The PACS solution shall support the DICOM storage service as SCP and SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
1.6.3	The PACS solution shall support the DICOM query and retrieve service as SCP and SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
1.6.4	The PACS solution shall support the DICOM print service as SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
1.6.5	The PACS solution shall support the DICOM Modality Performed Procedure Step (MPPS) service as SCP. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
1.6.6	The PACS solution shall support the DICOM Storage commitment service as SCP. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
1.6.7	The solution shall support the DICOM Modality Worklist Service as SCP. This service may be implemented in the PACS or RIS solution. Indicate which solution will be providing this service. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
1.6.8	Bidders shall provide DICOM conformance statement for the PACS and RIS solution offered. If the RIS is not providing any DICOM services, please indicate so. An electronic copy shall be included for the DICOM Conformance Statements. Bidders shall clearly indicate where to reference DICOM conformance statements appropriate to the specifications stated in their proposal. **Failure to comply will invalidate the offer.**		

		BIDDERS RESPONSE	
1.7	**ADDITIONAL HARDWARE**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
1.7.1	5 X RIS Workstations shall be deployed for the project, 3 workstations at Phekolong hospital and 2 workstations at Nketoana hospital. 2 x external CD/DVD ROMS to be included for 1 RIS Workstation at each institution. The RIS workstations shall be of small form factor PC type and not AIO type.		
1.7.2	Bidders shall supply RIS workstations which are set up in a single (1) monitor configuration. Bidders shall provide RIS workstation hardware designed to perform as RIS workstations in a PACS/RIS solution. The workstations shall include a keyboard and mouse and shall have wifi capability. Please indicate the specification of your proposed RIS workstations.		
1.7.3	The RIS monitor shall be a Commercially available off the shelf (COTS) colour monitors with a minimum size of 19 inches.		
1.7.4	The RIS workstations including the monitors shall be installed with a security mechanism which prevents the workstations from being stolen or removed by unauthorised persons.		
1.7.5	A total of 11 Clinical Review workstations shall be deployed for the project, 9 workstations at Phekolong hospital and 2 workstations at Nketoana hospital. The Clinical Review workstations shall be of small form factor PC type and not AIO type. A total of 6 mounting brackets shall be included, which will be used in Casualty and Trauma respectively.		
1.7.6	Bidders shall supply clinical review workstations which are set up in a single (1) monitor configuration.		
1.7.7	Bidders shall provide clinical workstation hardware designed to perform as clinical review workstations in a PACS solution. The workstations shall include a keyboard and mouse and shall have wifi capability. Please indicate the specification of your proposed clinical review workstations.		
1.7.8	The clinical review monitor shall be a COTS colour monitors with a minimum size of 22 inches.		

1.7.9	The clinical review workstations including the monitors shall be installed with a security mechanism which prevents the workstations from being stolen or removed by unauthorised persons.		
1.8	**NETWORK REQUIREMENTS**	COMPLY	DOES NOTCOMPLY/STATE DEVIATION
1.8.1	Bidders shall submit a detailed network infrastructure proposal as part of their bid.		
1.8.2	It is preferred that the network solution is sub-contracted to a recognized network, cabling and infrastructure company. Bidders shall indicate if the networking infrastructure is outsourced and to which company.		
1.8.3	Bidders shall supply a cabled network infrastructure to support all the servers, workstations AND modalities that will be connected to the network.		
1.8.4	The Radiology department X-Ray Room has a back room that shall be converted into a server room, with access control and air conditioner and power reticulation needs shall be covered by bidder.		
1.8.5	The identified server room shall have a 9 BTU air-conditioning unit installed as part of the tender and power reticulation needs shall be at the expense of the bidder.		
1.8.6	Network points shall be installed at Phekolong Hospital as follows: • 2 x network points at Radiology Reception • 3 x network points in Radiology Digitizer Room • 6 x network points in Casualty • 1 x network point in Medical Ward • 2 x network points in Maternity Ward • 1 x network point in COVID Ward • 1 x network point in Rehab Ward • 1 x network point in Theatre • 1 x network point in Trauma		
1.8.7	Network points shall be installed at Nketoana Hospital as follows: 5 x network points in Nketoana Hospital.		

1.8.8	The minimum requirements for network at Phekolong and Nketoana Hospitals are as follows: **Phekolong Hospital: 2x 24 port PoE switches** • 25u Rack Floor Standing cabinet with normal DC volt. • 1 x switch at radiology and 1 x switch in the server room. • Preferably Extreme ERS 3626GTS PoE 24 port. **Nketoana Hospital: 1x 24 port with 2 x Fiber Converters** • Preferably Extreme ERS 3626GTS PoE 24 port. **Connection between 2 switches:** • Fiber or utp. • If link is already available, link shall be tested **Cat 6 network cabling** • Dependent on current layout and radiology needs.		
1.8.9	Bidders shall supply the complete network infrastructure including switches, cabinets, patch panels, brushes, fly leads, network wall boxes, all cables in trunking and identification marking of network cables and port numbers.		
1.8.10	Bidders shall ensure that when installing cabinets the appropriate power source is available to power the network.		
1.8.11	The bidder shall show the pricing for the network infrastructure separately in their proposals		
1.8.12	All costs including professional services, implementation, travel and labour for the network infrastructure shall be included in the bid.		

		BIDDERS RESPONSE	
1.9	**MIGRATION**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
1.9.1	It is the intention of Phekolong Hospital to migrate all data from the existing mini PACS to the newly installed PACS solution.		
1.9.2	Bidders are advised that the successful bidder shall migrate the current mini PACS data to the newly Installed PACS Archive. It shall be possible to view the current PACS images in the new PACS archive. The migration process shall in no way affect clinical imaging/ workflow activities. The successful bidder shall be 100% complete with migration within 12 months.		
1.9.3	Supplier to provide detailed description on how migration will be executed.		
1.9.4	Provide us with your data migration methodology statement.		
1.9.5	An integrity data check shall be done by the bidder.		
1.9.6	Corrupted data identified during the migration process, shall be highlighted to Phekolong and successful bidder shall provide a viable solution to deal with it.		
1.9.7	All expenses of migration including any third-party dealings shall be at the expense of the bidder.		
1.10	**TRAINING**	COMPLY	DOES NOT COMPLY/ STATE DEVIATION
1.10.1	Bidders shall be responsible for providing full training to all staff in the Radiology department. (Radiographers, PACS Administrators, Admin staff, IT and all clinicians).		
1.10.2	This training shall comprise of a minimum of 2 separate training sessions spread over a year period. Please provide us with your detailed solution.		
1.10.3	Each of these sessions shall provide a full training curriculum to all staff in the Radiology department, including new staff.		
1.10.4	Session one shall be the initial training of staff before going live.		
1.10.5	Session two shall be 6 months after going live, and shall comprise of refresher training for existing staff and comprehensive training for new staff.		
1.10.6	Training shall include all material required.		

		BIDDER RESPONSE	
1.11	**PROJECT IMPLEMENTATION AND SOLUTION WARRANTY**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
1.11.1	The overall implementation of the mini PACS/RIS solution, network, and server room alterations shall be managed based on sound project management principles. Bidders' proposals shall be inclusive of all project management costs, resource costs, and travel costs as part of their proposal. The proposal shall have a clear and precise breakdown of all costs associated with the project.		
1.11.2	As part of this proposal, bidders shall submit a high-level project plan. This plan shall outline the approach to the project, timelines to deliver each phase and resources that will be allocated to each phase of the project.		
1.11.3	The complete solution including all components as defined in this document shall be covered by a solution warranty.		
1.11.4	The initial warranty period shall run for 24 months, starting on the day the system goes live into clinical use.		
1.11.5	The warranty shall cover all labour, travel and parts used in performing preventative and corrective maintenance.		
1.11.6	The warranty shall include at least 2 preventative maintenance trips to the site per year. To perform various tasks as defined by the bidder.		
1.11.7	Bidders shall show the cost of this warranty as a separate item in their financial proposals.		
1.11.8	Bidders shall show the cost to extend this 24-month warranty by an additional 12-months and all above conditions shall apply to the extended warranty.		

ITEM 2: SPECIFICATION FOR MINI PACS. (MANTSOPA MDR HOSPITAL).

		BIDDERS RESPONSE	
2.1	**PACS/RIS REQUIREMENTS**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
2.1.1	The PACS/RIS solution shall have the capacity to meet the performance criteria as outlined in this specification.		
2.1.2	The solution shall store images for Mantsopa MDR hospital, meaning that all modalities on site shall be setup to archive their images in Mantsopa MDR hospital based PACS. Archive storage shall be scalable. DICOM images shall be safely stored for 5 years. It is estimated that the healthcare facility will receive 200 general X-ray patients per month. It is estimated that 1 TB of storage would be needed for the facility for a period of 5 years.		
2.1.3	The bidder shall provide an appropriate rack to mount the PACS Archive server, PACS storage system and RIS server.		
2.1.4	The bidder shall provide all hardware to support accessing the PACS archive server, PACS storage system and RIS server, this includes KVM switches, rack-mounted monitor, keyboard, and Mouse.		
2.1.5	Archive storage shall be scalable. DICOM images shall be safely stored for 5 years.		
2.1.6	Bidders shall include a backup solution with the capacity to store all DICOM objects stored on the PACS/RIS solution.		
2.1.7	The PACS/RIS storage system shall have built-in redundancy in the case of a disk failure, using Redundant Array of Independent Disks (RAID) technology.		
2.1.8	A minimum of a RAID 5 configured storage system shall be provided.		
2.1.9	The PACS/RIS solution shall be designed with a high availability architecture allowing for uptime of 95%.		
2.1.10	The PACS/RIS solution shall provide an exceptional user experience based on the speed of opening, manipulating and navigating through images.		
2.1.11	The PACS/RIS solution shall provide a web browser-based graphical user interface (GUI) for users to interact with the PACS solution.		

2.1.12	The web-based interface shall use standard web- based security using HTTPS protocols and certificates to ensure data is secure between client and server.		
2.1.13	The web technology used to deliver images through the web browser shall be based on HTML5 technology.		
2.1.14	Zero footprint technology shall be utilized by the PACS/RIS solution to deliver the images and reports to the clinical users.		
2.1.15	Basic PACS image manipulation functions associated with zero footprint viewers shall be available to the clinical users.		
2.1.16	The PACS/RIS solution shall provide access to authorised clinicians to view images stored on the solution.		
2.1.17	The PACS/RIS solution shall restrict user access by applying user authentication security based on username and password.		
2.1.18	The bidder shall provide an Uninterrupted Power Supply (UPS) with the capacity to keep the solution powered for at least an hour to an hour and a half or until a seamless transition to emergency power has occurred or a smooth shutdown of the server or workstation can be performed by a super user.		
2.1.19	The proposed UPS shall be a 5-10 kva power unit.		

		BIDDERS RESPONSE	
2.2	**PACS/RIS PATIENT INFORMATION AND ORDER MANAGEMENT**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
2.2.1	It shall be possible for an authorised user to register basic patient demographic information into the PACS/RIS solution.		
2.2.2	It shall be possible for an authorised user to select a study from a pre-populated list of studies and register the order in the PACS/RIS solution.		

		BIDDERS RESPONSE	
2.3	**BASIC PACS ADMINISTRATOR FUNCTIONALITY**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
2.3.1	The PACS/RIS solution shall support a user audit tracking mechanism keeping a record of user activity on the solution.		
2.3.2	The PACS/RIS solution shall provide a super user with the ability to create and manage user profiles on the solution.		

2.3.3	The PACS/RIS solution shall provide a super user with the ability to enable or disable the availability of functions based on a specific user group profile. An example would be that radiology users have access to a different set of functions than clinicians' users.		
2.3.4	The PACS/RIS solution shall provide a super user with the ability to add DICOM nodes to the solution		
2.3.5	The PACS/RIS solution shall provide a super user with the ability to change the value of DICOM tags to correct incorrectly entered data.		
2.3.6	In the case of a DICOM tags value being changed; these changes shall be applied to the original DICOM files stored in the PACS solution.		
2.3.7	The PACS solution shall provide a super user with the ability to import DICOM images from external media such as CD, DVD as long as the data on the media is DICOM part 10 compliant.		
2.3.8	When the DICOM images are exported aDICOM viewing program shall be automatically attached to the external Media.		
2.3.9	Bidders shall be responsible to liaise with modality suppliers and ensure correct connection of all modalities Matsopa Hospital to the PACS server at their own cost.		

		BIDDERS RESPONSE	
2.4	**PACS/RIS WORKLIST**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
24.1	The PACS/RIS solution shall provide a query function for authorised users to search for patients on the PACS/RIS solution.		
2.4.2	An authorised user shall be able to query on both the patient level and study level DICOM tags		
2.4.3	Search criteria shall support the following formats, single value matching, Universal matching, wildcard matching, date range matching, and time range matching.		
2.4.4	An authorised user shall have the ability to define predetermine search criteria and configure worklists based on their personal requirements.		
2.4.5	An authorised user shall have the ability to define which columns and DICOM Tags are shown in a worklist.		
2.4.6	The patient information banner of any clinical system (PACS and/or RIS) should include the following attributes if available:		

	Patient Name, Date of Birth, Sex, Medical Record Number (Patient ID), Patient location, responsible consultant.		
2.4.7	The PACS/RIS solution shall provide a query function for authorised users to search for patients on the PACS/RIS solution.		
2.4.8	The PACS/RIS solution shall support a status tag which indicates the current status of the study.		
2.4.9	The status should be synchronized between RIS and PACS and should consist of the following statuses: Arrived, Study Started, Study Completed.		
2.4.10	Once the study status has changed to indicate that the study is completed the study shall be removed from the DICOM Modality Work list.		

		BIDDERS RESPONSE	
2.5	**INTEGRATION STANDARDS**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
	IHE INTEGRATION PROFILES		
2.5.1	The PACS shall adhere to the IHE profile: patient information reconciliation (PIR)		
2.5.2	The PACS shall adhere to the following IHE Standard: IHE Standards—Consistent Presentation of Images (CPI)		
2.5.3	The PACS shall adhere to the following IHE Standard: IHE Standard: PACS must support Audit Trail & Node Authentication		
2.5.4	The PACS shall satisfy the following IHE Standard: IHE Standard—Cross Community Access of IHE		
2.5.5	The PACS shall adhere to the IHE profile: Portable data of imaging (pdi)		
2.5.6	Bidders shall provide IHE Profiles for the PACS and RIS solution offered. Bidders shall clearly indicate where to reference IHE integration profiles in their proposals. **Failure to comply will invalidate the offer.**		

		BIDDERS RESPONSE	
2.6	**DICOM**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
2.6.1	Bidders are to provide DICOM conformance statement for the solution offered.		

2.6.2	The PACS solution shall support the DICOM storage service as SCP and SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
2.6.3	The PACS solution shall support the DICOM query and retrieve service as SCP and SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
2.6.4	The PACS solution shall support the DICOM print service as SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
2.6.5	The PACS solution shall support the DICOM Modality Performed Procedure Step (MPPS) service as SCP. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
2.6.6	The PACS solution shall support the DICOM Storage commitment service as SCP. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
2.6.7	The solution shall support the DICOM Modality Worklist Service as SCP. This service may be implemented in the PACS or RIS solution. Indicate which solution will be providing this service. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
2.6.8	Bidders shall provide DICOM conformance statement for the PACS and RIS solution offered. If the RIS is not providing any DICOM services, please indicate so. An electronic copy shall be included for the DICOM Conformance Statements. Bidders shall clearly indicate where to reference DICOM conformance statements appropriate to the specifications stated in their proposal. **Failure to comply will invalidate the offer.**		

		BIDDERS RESPONSE	
2.7	**ADDITIONAL HARDWARE**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
2.7.1	2 X RIS Workstations shall be deployed for the project. 1 x external CD/DVD ROM to be included for 1 RIS Workstation.		

	The RIS workstations shall be of small form factor PC type and not AIO type.		
2.7.2	Bidders shall supply RIS workstations which are set up in a single (1) monitor configuration. Bidders shall provide RIS workstation hardware designed to perform as RIS workstations in a PACS/RIS solution. The workstations shall include a keyboard and mouse and shall have wifi capability. Please indicate the specification of your proposed RIS workstations.		
2.7.3	The RIS monitor shall be a Commercially available of the shelf (COTS) colour monitors with a minimum size of 19 inches.		
27.4	The RIS workstations including the monitors shall be installed with a security mechanism which prevents the workstations from being stolen or removed by unauthorised persons.		

		BIDDERS RESPONSE	
2.8	**NETWORK REQUIREMENTS**	**COMPLY**	**DOES NOTCOMPLY/STATE DEVIATION**
2.8.1	The Radiology department has a back room that shall be converted into a server room, with access control and air conditioner and power reticulation needs shall be covered by bidder.		

		BIDDERS RESPONSE	
2.9	**TRAINING**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
2.9.1	Bidders shall be responsible for providing full training to all staff in the Radiology department. (Radiographers, PACS Administrators, Admin staff, IT and all clinicians).		
2.9.2	This training shall comprise of a minimum of 2 separate training sessions spread over a year period. Please provide us with your detailed solution.		
2.9.3	Each of these sessions shall provide a full training curriculum to all staff in the Radiology department, including new staff.		
2.9.4	Session one shall be the initial training of staff before going live.		
2.9.5	Session two shall be 6 months after going live, and shall comprise of refresher training for existing staff and comprehensive training for new staff.		

2.9.6	Training shall include all material required.		

		BIDDERS RESPONSE	
2.10	**PROJECT IMPLEMENTATION AND SOLUTION WARRANTY**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
2.10.1	The overall implementation of the mini PACS/RIS solution, network, and server room alterations shall be managed based on sound project management principles. Bidders' proposals shall be inclusive of all project management costs, resource costs, and travel costs as part of their proposal. The proposal shall have a clear and precise breakdown of all costs associated with the project.		
2.10.2	As part of this proposal, bidders shall submit a high-level project plan. This plan shall outline the approach to the project, timelines to deliver each phase and resources that will be allocated to each phase of the project.		
2.10.3	The complete solution including all components as defined in this document shall be covered by a solution warranty.		
2.10.4	The initial warranty period shall run for 24 months, starting on the day the system goes live into clinical use.		
2.10.5	The warranty shall cover all labour, travel and parts used in performing preventative and corrective maintenance.		
2.10.6	The warranty shall include at least 2 preventative maintenance trips to the site per year. To perform various tasks as defined by the bidder.		
2.10.7	Bidders shall show the cost of this warranty as a separate item in their financial proposals.		
2.10.8	Bidders shall show the cost to extend this 24-month warranty by an additional 12-months and all above conditions shall apply to the extended warranty.		

ITEM 3: SPECIFICATION FOR MINI PACS. (DR J.S MOROKA HOSPITAL)

		BIDDERS RESPONSE	
3.1	**PACS/RIS REQUIREMENTS**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
3.1.1	The PACS/RIS solution shall have the capacity to meet the performance criteria as outlined in this specification.		
3.1.2	The solution shall store images for Dr J.S Moroka Hospital. The site shall be setup to archive images PACS Archive. Archive storage shall be scalable. DICOM images shall be safely stored for 5 years. It is estimated that the healthcare facility will receive 5029 general X-ray patients per year. It is estimated that 2 TB of storage including legacy data on CR modality would be needed for the facility for a period of 5 years.		
3.1.3	The bidder shall provide an appropriate rack to mount the PACS Archive server, PACS storage system and RIS server.		
3.1.4	The bidder shall provide all hardware to support accessing the PACS archive server, PACS storage system and RIS server, this includes KVM switches, rack-mounted monitor, keyboard, and Mouse.		
3.1.5	Archive storage shall be scalable. DICOM images shall be safely stored for 5 years.		
3.1.6	Bidders shall include a backup solution with the capacity to store all DICOM objects stored on the PACS/RIS solution.		
3.1.7	The PACS/RIS storage system shall have built-in redundancy in the case of a disk failure, using Redundant Array of Independent Disks (RAID) technology.		
3.1.8	A minimum of a RAID 5 configured storage system shall be provided.		
3.1.9	The PACS/RIS solution shall be designed with a high availability architecture allowing for uptime of 95%.		
3.1.10	The PACS/RIS solution shall provide an exceptional user experience based on the speed of opening, manipulating and navigating through images.		
3.1.11	The PACS/RIS solution shall provide a web browser-based graphical user interface (GUI) for users to interact with the PACS solution.		
3.1.12	The web-based interface shall use standard web- based security using HTTPS protocols and certificates to ensure data is secure between client and server.		

3.1.13	The web technology used to deliver images through the web browser shall be based on HTML5 technology.		
3.1.14	Zero footprint technology shall be utilized by the PACS/RIS solution to deliver the images and reports to the clinical users.		
3.1.15	Basic PACS image manipulation functions associated with zero footprint viewers shall be available to the clinical users.		
3.1.16	The PACS/RIS solution shall provide access to authorised clinicians to view images stored on the solution.		
3.1.17	The PACS/RIS solution shall restrict user access by applying user authentication security based on username and password.		
3.1.18	The bidder shall provide an Uninterrupted Power Supply (UPS) with the capacity to keep the solution powered for at least an hour to an hour and a half or until a seamless transition to emergency power has occurred or a smooth shutdown of the server or workstation can be performed by a super user.		
3.1.19	The proposed UPS shall be a 5-10 kva power unit.		

		BIDDERS RESPONSE	
3.2	**PACS/RIS PATIENT INFORMATION AND ORDER MANAGEMENT**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
3.2.1	It shall be possible for an authorised user to register basic patient demographic information into the PACS/RIS solution.		
3.2.2	It shall be possible for an authorised user to select a study from a pre-populated list of studies and register the order in the PACS/RIS solution.		

		BIDDERS RESPONSE	
3.3	**BASIC PACS ADMINISTRATOR FUNCTIONALITY**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
3.3.1	The PACS/RIS solution shall support a user audit tracking mechanism keeping a record of user activity on the solution.		
3.3.2	The PACS/RIS solution shall provide a super user with the ability to create and manage user profiles on the solution.		
3.3.3	The PACS/RIS solution shall provide a super user with the ability to enable or disable the availability of functions based on a specific user group profile. An example would be that radiology users have access to a different set of functions than clinicians' users.		

3.3.4	The PACS/RIS solution shall provide a super user with the ability to add DICOM nodes to the solution		
3.3.5	The PACS/RIS solution shall provide a super user with the ability to change the value of DICOM tags to correct incorrectly entered data.		
3.3.6	In the case of a DICOM tags value being changed; these changes shall be applied to the original DICOM files stored in the PACS solution.		
3.3.7	The PACS solution shall provide a super user with the ability to import DICOM images from external media such as CD, DVD as long as the data on the media is DICOM part 10 compliant.		
3.3.8	When the DICOM images are exported aDICOM viewing program shall be automatically attached to the external Media.		
3.3.9	Bidders shall be responsible to liaise with modality suppliers and ensure correct connection of all modalities at Dr J.S Moroka Hospital to the PACS server at their own cost.		

		BIDDERS RESPONSE	
3.4	**PACS/RIS WORKLIST**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
3.4.1	The PACS/RIS solution shall provide a query function for authorised users to search for patients on the PACS/RIS solution.		
3.4.2	An authorised user shall be able to query on both the patient level and study level DICOM tags		
3.4.3	Search criteria shall support the following formats, single value matching, Universal matching, wildcard matching, date range matching, and time range matching.		
3.4.4	An authorised user shall have the ability to define predetermine search criteria and configure worklists based on their personal requirements.		
3.4.5	An authorised user shall have the ability to define which columns and DICOM Tags are shown in a worklist.		
3.4.6	The patient information banner of any clinical system (PACS and/or RIS) should include the following attributes if available: Patient Name, Date of Birth, Sex, Medical Record Number (Patient ID), Patient location, responsible consultant.		
3.4.7	The PACS/RIS solution shall provide a query function for authorised users to search for patients on the PACS/RIS solution.		

3.4.8	The PACS/RIS solution shall support a status tag which indicates the current status of the study.		
3.4.9	The status should be synchronized between RIS and PACS and should consist of the following statuses: Arrived, Study Started, Study Completed.		
3.4.10	Once the study status has changed to indicate that the study is completed the study shall be removed from the DICOM Modality Work list.		

		BIDDERS RESPONSE	
3.5	**INTEGRATION STANDARDS**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
	IHE INTEGRATION PROFILES		
3.5.1	The PACS shall adhere to the IHE profile: patient information reconciliation (PIR)		
3.5.2	The PACS shall adhere to the following IHE Standard: IHE Standards—Consistent Presentation of Images (CPI)		
3.5.3	The PACS shall adhere to the following IHE Standard: IHE Standard: PACS must support Audit Trail & Node Authentication		
3.5.4	The PACS shall satisfy the following IHE Standard: IHE Standard—Cross Community Access of IHE		
3.5.5	The PACS shall adhere to the IHE profile: Portable data of imaging (pdi)		
3.5.6	Bidders shall provide IHE Profiles for the PACS and RIS solution offered. Bidders shall clearly indicate where to reference IHE integration profiles in their proposals. **Failure to comply will invalidate the offer.**		

		BIDDERS RESPONSE	
3.6	**DICOM**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
3.6.1	Bidders are to provide DICOM conformance statement for the solution offered.		
3.6.2	The PACS solution shall support the DICOM storage service as SCP and SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
3.6.3	The PACS solution shall support the DICOM query and retrieve service as		

	SCP and SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
3.6.4	The PACS solution shall support the DICOM print service as SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
3.6.5	The PACS solution shall support the DICOM Modality Performed Procedure Step (MPPS) service as SCP. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
3.6.6	The PACS solution shall support the DICOM Storage commitment service as SCP. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
3.6.7	The solution shall support the DICOM Modality Worklist Service as SCP. This service may be implemented in the PACS or RIS solution. Indicate which solution will be providing this service. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
3.6.8	Bidders shall provide DICOM conformance statement for the PACS and RIS solution offered. If the RIS is not providing any DICOM services, please indicate so. An electronic copy shall be included for the DICOM Conformance Statements. Bidders shall clearly indicate where to reference DICOM conformance statements appropriate to the specifications stated in their proposal. **Failure to comply will invalidate the offer.**		

		BIDDERS RESPONSE	
3.7	**ADDITIONAL HARDWARE**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
3.7.1	2 X RIS Workstations shall be deployed for the project, 1 workstation at Radiology Reception and 1 workstation at Radiology CR Room. 1 x external CD/DVD ROM to be included for 1 RIS Workstation. The RIS workstations shall be of small form factor PC type and not AIO type.		
3.7.2	Bidders shall supply RIS workstations which are set up in a single (1) monitor configuration.		

	Bidders shall provide RIS workstation hardware designed to perform as RIS workstations in a PACS/RIS solution. The workstations shall include a keyboard and mouse and shall have wifi capability. Please indicate the specification of your proposed RIS workstations.		
3.7.3	The RIS monitor shall be a Commercially available off the shelf (COTS) colour monitors with a minimum size of 19 inches.		
3.7.4	The RIS workstations including the monitors shall be installed with a security mechanism which prevents the workstations from being stolen or removed by unauthorised persons.		
3.7.5	A total of 10 Clinical Review workstations shall be deployed for the project. The Clinical Review workstations shall be of small form factor PC type and not AIO type.		
3.7.6	Bidders shall supply clinical review workstations which are set up in a single (1) monitor configuration.		
3.7.7	Bidders shall provide clinical workstation hardware designed to perform as clinical review workstations in a PACS solution. The workstations shall include a keyboard and mouse and shall have wifi capability. Please indicate the specification of your proposed clinical review workstations.		
3.7.8	The clinical review monitor shall be a COTS colour monitors with a minimum size of 22 inches.		
3.7.9	The clinical review workstations including the monitors shall be installed with a security mechanism which prevents the workstations from being stolen or removed by unauthorised persons.		

		BIDDERS RESPONSE	
3.8	**NETWORK REQUIREMENTS**	**COMPLY**	**DOES NOTCOMPLY/STATE DEVIATION**
3.8.1	Bidders shall submit a detailed network infrastructure proposal as part of their bid.		
3.8.2	It is preferred that the network solution is sub-contracted to a recognized network, cabling and infrastructure company. Bidders shall indicate if the		

	networking infrastructure is outsourced and to which company.		
3.8.3	Bidders shall supply a cabled network infrastructure to support all the servers, workstations AND modalities that will be connected to the network.		
3.8.4	The identified server room shall have a 9 BTU air-conditioning unit installed as part of the tender and power reticulation needs shall be at the expense of the bidder.		
3.8.5	Network points shall be installed at Dr J.S Moroka Hospital as follows: • 2 x network points at Radiology CR Room • 1 x network points in Casualty Ward • 3 x network points in OPD consultancy Rooms		
3.8.6	The minimum requirements for network at Dr J.S Moroka Hospital are as follows: • 25u Rack Floor Standing cabinet with normal DC volt. • Preferably Extreme ERS 3626GTS PoE 24 port. **Cat 6/Fibre network cabling** • Dependent on current layout and radiology needs.		
3.8.7	The Radiology department store room shall be converted into a server room, with access control and air conditioner and power reticulation needs to be covered by bidder.		
3.8.8	Bidders shall supply the complete network infrastructure including switches, cabinets, patch panels, brushes, fly leads, network wall boxes, all cables in trunking and identification marking of network cables and port numbers.		
3.8.9	Bidders shall ensure that when installing cabinets, the appropriate power source is available to power the network.		

3.8.10	The bidder shall show the pricing for the network infrastructure separately in their proposals		
3.8.11	All costs including professional services, implementation, travel and labour for the network infrastructure shall be included in the bid.		

		BIDDERS RESPONSE	
3.9	**TRAINING**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
3.9.1	Bidders shall be responsible for providing full training to all staff in the Radiology department. (Radiographers, PACS Administrators, Admin staff, IT and all clinicians).		
3.9.2	This training shall comprise of a minimum of 2 separate training sessions spread over a year period. Please provide us with your detailed solution.		
3.9.3	Each of these sessions shall provide a full training curriculum to all staff in the Radiology department, including new staff.		
3.9.4	Session one shall be the initial training of staff before going live.		
3.9.5	Session two shall be 6 months after going live, and shall comprise of refresher training for existing staff and comprehensive training for new staff.		
3.9.6	Training shall include all material required.		

		BIDDERS RESPONSE	
3.10	**PROJECT IMPLEMENTATION AND SOLUTION WARRANTY**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
3.10.1	The overall implementation of the mini PACS/RIS solution, network, and server room alterations shall be managed based on sound project management principles. Bidders' proposals shall be inclusive of all project management costs, resource costs, and travel costs as part of their proposal. The proposal shall have a clear and precise breakdown of all costs associated with the project.		
3.10.2	As part of this proposal, bidders shall submit a high-level project plan. This plan shall outline the approach to the project, timelines to deliver each phase and resources that will be allocated to each phase of the project.		

3.10.3	The complete solution including all components as defined in this document shall be covered by a solution warranty.		
3.10.4	The initial warranty period shall run for 24 months, starting on the day the system goes live into clinical use.		
3.10.5	The warranty shall cover all labour, travel and parts used in performing preventative and corrective maintenance.		
3.10.6	The warranty shall include at least 2 preventative maintenance trips to the site per year. To perform various tasks as defined by the bidder.		
3.10.7	Bidders shall show the cost of this warranty as a separate item in their financial proposals.		
3.10.8	Bidders shall show the cost to extend this 24-month warranty by an additional 12-months and all above conditions shall apply to the extended warranty.		

ITEM 4: SPECIFICATION FOR MINI PACS. (FEZI NGUMBENTOMBI HOSPITAL).

		BIDDERS RESPONSE	
4.1	**PACS/RIS REQUIREMENTS**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
4.1.1	The PACS/RIS solution shall have the capacity to meet the performance criteria as outlined in this specification.		
4.1.2	The solution shall store images for Fezi Ngumbentombi Hospital, meaning that all modalities shall be setup to archive their images at Fezi Ngumbentombi Hospital PACS. Archive storage shall be scalable. DICOM images shall be safely stored for 5 years. It is estimated that the healthcare facility will receive 5029 general X-ray patients per year. It is estimated that 3 TB of storage including legacy data on Multi slot CR would be needed for the facility for a period of 5 years.		
4.1.3	The bidder shall provide an appropriate rack to mount the PACS Archive server, PACS storage system and RIS server.		

4.1.4	The bidder shall provide all hardware to support accessing the PACS archive server, PACS storage system and RIS server, this includes KVM switches, rack-mounted monitor, keyboard, and Mouse.		
4.1.5	Archive storage shall be scalable. DICOM images shall be safely stored for 5 years.		
4.1.6	Bidders shall include a backup solution with the capacity to store all DICOM objects stored on the PACS/RIS solution.		
4.1.7	The PACS/RIS storage system shall have built-in redundancy in the case of a disk failure, using Redundant Array of Independent Disks (RAID) technology.		
4.1.8	A minimum of a RAID 5 configured storage system shall be provided.		
4.1.9	The PACS/RIS solution shall be designed with a high availability architecture allowing for uptime of 95%.		
4.1.10	The PACS/RIS solution shall provide an exceptional user experience based on the speed of opening, manipulating and navigating through images.		
4.1.11	The PACS/RIS solution shall provide a web browser-based graphical user interface (GUI) for users to interact with the PACS solution.		
4.1.12	The web-based interface shall use standard web- based security using HTTPS protocols and certificates to ensure data is secure between client and server.		
4.1.13	The web technology used to deliver images through the web browser shall be based on HTML5 technology.		
4.1.14	Zero footprint technology shall be utilized by the PACS/RIS solution to deliver the images and reports to the clinical users.		
4.1.15	Basic PACS image manipulation functions associated with zero footprint viewers shall be available to the clinical users.		
4.1.16	The PACS/RIS solution shall provide access to authorised clinicians to view images stored on the solution.		
4.1.17	The PACS/RIS solution shall restrict user access by applying user authentication security based on username and password.		
4.1.18	The bidder shall provide an Uninterrupted Power Supply (UPS) with the capacity to keep the solution		

	powered for at least an hour to an hour and a half or until a seamless transition to emergency power has occurred or a smooth shutdown of the server or workstation can be performed by a super user.		
4.1.19	The proposed UPS shall be a 5-10 kva power unit.		

		BIDDERS RESPONSE	
4.2	**PACS/RIS PATIENT INFORMATION AND ORDER MANAGEMENT**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
4.2.1	It shall be possible for an authorised user to register basic patient demographic information into the PACS/RIS solution.		
4.2.2	It shall be possible for an authorised user to select a study from a pre-populated list of studies and register the order in the PACS/RIS solution.		

		BIDDERS RESPONSE	
4.3	**BASIC PACS ADMINISTRATOR FUNCTIONALITY**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
4.3.1	The PACS/RIS solution shall support a user audit tracking mechanism keeping a record of user activity on the solution.		
4.3.2	The PACS/RIS solution shall provide a super user with the ability to create and manage user profiles on the solution.		
4.3.3	The PACS/RIS solution shall provide a super user with the ability to enable or disable the availability of functions based on a specific user group profile. An example would be that radiology users have access to a different set of functions than clinicians users.		
4.3.4	The PACS/RIS solution shall provide a super user with the ability to add DICOM nodes to the solution		
4.3.5	The PACS/RIS solution shall provide a super user with the ability to change the value of DICOM tags to correct incorrectly entered data.		
4.3.6	In the case of a DICOM tags value being changed; these changes shall be applied to the original DICOM files stored in the PACS solution.		
4.3.7	The PACS solution shall provide a super user with the ability to import DICOM images from external media such as CD, DVD as long as the data on the media is DICOM part 10 compliant.		
4.3.8	When the DICOM images are exported aDICOM viewing program shall be automatically attached to the external Media.		

4.3.9	Bidders shall be responsible to liaise with modality suppliers and ensure correct connection of all modalities at Fezi Ngumbentombi Hospital to the PACS server at their own cost.		

		BIDDERS RESPONSE	
4.4	**PACS/RIS WORKLIST**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
4.4.1	The PACS/RIS solution shall provide a query function for authorised users to search for patients on the PACS/RIS solution.		
4.4.2	An authorised user shall be able to query on both the patient level and study level DICOM tags		
4.4.3	Search criteria shall support the following formats, single value matching, Universal matching, wildcard matching, date range matching, and time range matching.		
4.4.4	An authorised user shall have the ability to define predetermine search criteria and configure worklists based on their personal requirements.		
4.4.5	An authorised user shall have the ability to define which columns and DICOM Tags are shown in a worklist.		
4.4.6	The patient information banner of any clinical system (PACS and/or RIS) should include the following attributes if available: Patient Name, Date of Birth, Sex, Medical Record Number (Patient ID), Patient location, responsible consultant.		
4.4.7	The PACS/RIS solution shall provide a query function for authorised users to search for patients on the PACS/RIS solution.		
4.4.8	The PACS/RIS solution shall support a status tag which indicates the current status of the study.		
4.4.9	The status should be synchronized between RIS and PACS and should consist of the following statuses: Arrived, Study Started, Study Completed.		
4.4.10	Once the study status has changed to indicate that the study is completed the study shall be removed from the DICOM Modality Work list.		

		BIDDERS RESPONSE	
4.5	**INTEGRATION STANDARDS**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
	IHE INTEGRATION PROFILES		
4.5.1	The PACS shall adhere to the IHE profile: patient information reconciliation (PIR)		
4.5.2	The PACS shall adhere to the following IHE Standard: IHE Standards—Consistent Presentation of Images (CPI)		
4.5.3	The PACS shall adhere to the following IHE Standard: IHE Standard: PACS must support Audit Trail & Node Authentication		
4.5.4	The PACS shall satisfy the following IHE Standard: IHE Standard—Cross Community Access of IHE		
4.5.5	The PACS shall adhere to the IHE profile: Portable data of imaging (pdi)		
4.5.6	Bidders shall provide IHE Profiles for the PACS and RIS solution offered. Bidders shall clearly indicate where to reference IHE integration profiles in their proposals. **Failure to comply will invalidate the offer.**		

		BIDDERS RESPONSE	
4.6	**DICOM**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
4.6.1	Bidders are to provide DICOM conformance statement for the solution offered.		
4.6.2	The PACS solution shall support the DICOM storage service as SCP and SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
4.6.3	The PACS solution shall support the DICOM query and retrieve service as SCP and SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
4.6.4	The PACS solution shall support the DICOM print service as SCU. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
4.6.5	The PACS solution shall support the DICOM Modality Performed Procedure Step (MPPS) service as SCP. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		

4.6.6	The PACS solution shall support the DICOM Storage commitment service as SCP. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
4.6.7	The solution shall support the DICOM Modality Worklist Service as SCP. This service may be implemented in the PACS or RIS solution. Indicate which solution will be providing this service. Provide evidence of required service by referencing the appropriate section in your DICOM Conformance Statement.		
4.6.8	Bidders shall provide DICOM conformance statement for the PACS and RIS solution offered. If the RIS is not providing any DICOM services, please indicate so. An electronic copy shall be included for the DICOM Conformance Statements. Bidders shall clearly indicate where to reference DICOM conformance statements appropriate to the specifications stated in their proposal. **Failure to comply will invalidate the offer.**		

		BIDDERS RESPONSE	
4.7	**ADDITIONAL HARDWARE**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
4.7.1	2 X RIS Workstations shall be deployed for the project with 1 X external CD/DVD ROM to be included for 1 RIS Workstation. The RIS workstations shall be of small form factor PC type and not AIO type.		
4.7.2	Bidders shall supply RIS workstations which are set up in a single (1) monitor configuration. Bidders shall provide RIS workstation hardware designed to perform as RIS workstations in a PACS/RIS solution. The workstations shall include a keyboard and mouse and shall have wifi capability. Please indicate the specification of your proposed RIS workstations.		
4.7.3	The RIS monitor shall be a Commercially available of the shelf (COTS) colour monitors with a minimum size of 19 inches.		
4.7.4	The RIS workstations including the monitors shall be installed with a security mechanism which prevents the		

	workstations from being stolen or removed by unauthorised persons.		
4.7.5	A total of 10 Clinical Review workstations shall be deployed for the project. The Clinical Review workstations shall be of small form factor PC type and not AIO type.		
4.7.6	Bidders shall supply clinical review workstations which are set up in a single (1) monitor configuration.		
4.7.7	Bidders shall provide clinical workstation hardware designed to perform as clinical review workstations in a PACS solution. The workstations shall include a keyboard and mouse and shall have wifi capability. Please indicate the specification of your proposed clinical review workstations.		
4.7.8	The clinical review monitor shall be a COTS colour monitors with a minimum size of 22 inches.		
4.7.9	The clinical review workstations including the monitors shall be installed with a security mechanism which prevents the workstations from being stolen or removed by unauthorised persons.		

		BIDDERS RESPONSE	
4.8	**NETWORK REQUIREMENTS**	**COMPLY**	**DOES NOTCOMPLY/STATE DEVIATION**
4.8.1	Bidders shall submit a detailed network infrastructure proposal as part of their bid.		
4.8.2	It is preferred that the network solution is sub-contracted to a recognized network, cabling and infrastructure company. Bidders shall indicate if the networking infrastructure is outsourced and to which company.		
4.8.3	Bidders shall supply a cabled network infrastructure to support all the servers, workstations AND modalities that will be connected to the network.		
4.8.4	Network points shall be installed at Fezi Ngumbentombi Hospital as follows: • 3 x network points in Radiology Digitizer Room		

	• 1 x network point in Doctors Room. • 1 x network point in Casualty Ward • 1 x network point in OPD Clinic		
4.8.5	The minimum requirements for network at Fezi Ngumbentombi Hospital is as follows: **Fezi Ngumbentombi Hospital: 1 x 24 port PoE switches** • 25u Rack Floor Standing cabinet with normal DC volt. • Preferably Extreme ERS 3626GTS PoE 24 port. **Cat 6/Fibre network cabling** • Dependent on current layout and radiology needs.		
4.8.6	Bidders shall supply the complete network infrastructure including switches, cabinets, patch panels, brushes, fly leads, network wall boxes, all cables in trunking and identification marking of network cables and port numbers.		
4.8.7	Bidders shall ensure that when installing cabinets the appropriate power source is available to power the network.		
4.8.8	The bidder shall show the pricing for the network infrastructure separately in their proposals		
4.8.9	All costs including professional services, implementation, travel and labour for the network infrastructure shall be included in the bid.		

		BIDDERS RESPONSE	
4.9	**MIGRATION**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
4.9.1	It is the intention of Fezi Ngumbentombi Hospital to migrate all data from the		

	existing mini PACS to the newly installed PACS solution.		
4.9.2	The migration process shall in no way affect clinical imaging/ workflow activities. The process shall be completed within 3months of going live		
4.9.3	Supply us with a detailed description how you will do the migration.		
4.9.4	Provide us with your data migration methodology statement.		
4.9.5	An integrity data check and test patients shall be done by the new vendor.		
4.9.6	Corrupted data identified during the migration process, shall be highlighted to Phekolong and successful bidder shall provide a viable solution to deal with corrupted data. Outline your solution for corrupted data		
4.9.7	All expenses of migration including any third-party dealings shall be at the expense of the bidder.		

		BIDDERS RESPONSE	
4.10	**TRAINING**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
4.10.1	Bidders shall be responsible for providing full training to all staff in the Radiology department. (Radiographers, PACS Administrators, Admin staff, IT and all clinicians).		
4.10.2	This training shall comprise of a minimum of 2 separate training sessions spread over a year period. Please provide us with your detailed solution.		
4.10.3	Each of these sessions shall provide a full training curriculum to all staff in the Radiology department, including new staff.		
4.10.4	Session one shall be the initial training of staff before going live.		
4.10.5	Session two shall be 6 months after going live, and shall comprise of refresher training for existing staff and comprehensive training for new staff.		
4.10.6	Training shall include all material required.		

		BIDDERS RESPONSE	
4.11	**PROJECT IMPLEMENTATION AND SOLUTION WARRANTY**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
4.11.1	The overall implementation of the mini PACS/RIS solution, network, and server room alterations shall be managed based		

	on sound project management principles. Bidders' proposals shall be inclusive of all project management costs, resource costs, and travel costs as part of their proposal. The proposal shall have a clear and precise breakdown of all costs associated with the project.		
4.11.2	As part of this proposal, bidders shall submit a high-level project plan. This plan shall outline the approach to the project, timelines to deliver each phase and resources that will be allocated to each phase of the project.		
4.11.3	The complete solution including all components as defined in this document shall be covered by a solution warranty.		
4.11.4	The initial warranty period shall run for 24 months, starting on the day the system goes live into clinical use.		
4.11.5	The warranty shall cover all labour, travel and parts used in performing preventative and corrective maintenance.		
4.11.6	The warranty shall include at least 2 preventative maintenance trips to the site per year. To perform various tasks as defined by the bidder.		
4.11.7	Bidders shall show the cost of this warranty as a separate item in their financial proposals.		
4.11.8	Bidders shall show the cost to extend this 24-month warranty by an additional 12-months and all above conditions shall apply to the extended warranty.		

ITEM 5: SPECIFICATION FOR DIGITAL C-ARM UNIT FOR ALBERT NZULA DISTRICT HOSPITAL.

		BIDDERS RESPONSE	
5.1	**X-RAY GENERATOR**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
5.1.1	Generator shall be of medium/high frequency type and have an 10kW output or better. a) Radiography 110kV at 16 – 20 mA. b) Fluoroscopy a minimum of 110kV and 0.5 – 3 mA. c) State generator type:		
5.1.2	Automatic dose control regulating both kV and mA shall be included, but manual override to be available.		
5.1.3	Fixed or rotating anode system may be offered. Bidder to state type.		
5.1.4	Anode heat capacity shall be at least 40 kHU.		

5.1.5	X-ray tube focal spots shall not be more than 0.6mm x 0.6mm for fluoroscopy and radiography.		
5.1.6	A High mode pulsed fluoroscopy shall be possible for larger patients.		
5.1.7	Laser positioning device mounted on generator.		
	Collimation		
5.1.8	a) System to include circular and or slot diaphragms that are able to rotate. Facility to position the diaphragm without radiation must be present to reduce exposure. b) Total filtration of x-ray tube and collimator shall be at least 3mm AI. c) Dose area product (DAP) meter shall be supplied. System shall be easily manipulated		
	Flat Panel Detector System		
5.1.9	a) Grid requirement: Bidder to specify type. b) Bidder to state resolution of system in Lp/cm. c) Panel size of minimum 30cm x 30cm.		
	User Interface (UI)		
5.1.10	It must be premised on an End-User oriented design and must comply with the following: a) Touch screens with intuitive icons. b) Emergency stop button. c) Radiation lamp.		
	C-arm mobile stand		
5.1.11	Visual display of radiation warning signs.		
5.1.12	3D acquisition shall be motorized		
5.1.13	Mass of no more than 500kg		
5.1.14	Motor driven vertical travel more than 40cm		
5.1.15	Movements of the C-arm shall be counter balanced and the locking system must have electromagnetic or mechanical brakes: a) Orbital 90°both directions, Bidder to state range. b) Angulation of C-arm must be at least 190°. c) Swivel of C-arm 10° both directions. d) Movement of C-arm away from control desk at least 20cm.		
5.1.16	Colour coding of C-arm movements.		
5.1.17	Stand castors shall have cable deflectors.		

5.1.18	Steering handle controlling castors must be incorporated and allow for rotation through 90°		
5.1.19	A central floor lock/brake for stand		
5.1.20	Vertical free space shall be at least 70cm		
5.1.21	Shall come with at least 2 footswitch pedals		
5.1.22	The whole C-arm system shall be able to go through a standard door entrance.		
	Monitor cart		
5.1.23	Monitors: a) Dual flat screen- high definition. b) Minimum size of 19-inch touch screen. c) Connectors for external monitors.		
5.1.24	Control cabinet of no more than 200kg.		
5.1.25	Timer indicating lapsed screening time.		
5.1.26	Integrated thermal printer shall be supplied: Bidder to state make, model and size of prints.		
5.1.27	3D technology hardware and software: a) Control software for 3D visualisation and reconstruction. b) 3D image acquisition.		
5.1.28	Digital image processing: a) Digital rotation of image. b) Grayscale inversion. c) Last image hold. d) Orthopaedic software (anatomic/3D/patient/metal). e) Metal artifacts reduction software. f) Continuous and pulsed mode fluoroscopy.		
5.1.29	Digital storage: a) Storage capacity minimum of 4TB: Bidder to state amount. b) USB port. c) DICOM networking and software sending to PACS.		
5.1.30	It must be compatible with navigation.		
	RADIATION PROTECTION		
5.1.31	The system shall have the ability to display Exposure Indicator values (EI/ S-values), immediately after exposure.		
5.1.32	An advanced Retake / Reject / Repeat analysis software package that includes analysis as well as calculations in percentages, shall be provided for applicable systems.		
5.1.33	The applicable systems shall have an integrated Dose Area Product (DAP) meter that includes skin dose equivalent measurement functions.		

5.1.34	A radiation report shall be automatically generated and transferable via DICOM.		
5.1.35	Acceptance testing shall be performed as part of the installation.		
5.1.36	Safety aspects of Radiation dosage leakage shall be spelt out		
5.1.37	DB boards and electrical filters shall be installed.		
	Display Exposure index values		
5.1.38	Radiation protection Lead equivalence of the radiation protection screen shall be 0.5m Pb and shall be convex, covering the radiographer from various angles against scatter radiation.		
5.1.39	Emergency stop controls shall be supplied on both sides of the gantry and on the Acquisition Workstation.		
5.1.40	Interlocks to stop system movement when compression is applied shall be provided.		
5.1.41	Interlock for premature release of the X-ray switch shall be available.		
5.1.42	Interlock preventing an exposure whenever the filter or light field is not positioned correctly shall be possible.		
	POWER SUPPLY		
5.1.43	The bidder shall install adequate electrical power supply for the optimal functionality of the equipment.		
5.1.44	The mains cable of the unit being quoted for shall be the hospital grade type and it shall be of an adequate length (minimum length of three (3) meters).		
5.1.45	The power input shall be 220-240V, 50Hz AC. Bidders shall ensure that the product quoted for is fitted. appropriately with a 15 Amp SABS approved mains plug that is held together by two screws.		
5.1.46	A 3 phase in / out power supply shall be offered. State details.		
5.1.47	The equipment tendered for shall not overload and trip the hospital power in the area where it is installed. Resettable overcurrent breaker/s shall be fitted for protection. State details.		
5.1.48	Software Package options: a) Orthopaedic software (anatomic/3D/patient/metal).		
	NETWORK CONNECTIVITY / DICOM 3.0.		
	The system shall be capable to perform the following DICOM 3.0 functionality. Please supply DICOM 3.0 statement with the bid.		

	• DICOM Send / Receive for sending and receiving patient data • DICOM Storage Commitment with feedback/storage confirmation from the archive • DICOM Print with film sheet preview, film sheet layout and image processing functions • DICOM Query/Retrieve • For querying/retrieving patient data from the network • Loading of preoperative images into the C-arm system • Loading of images from the same modality and images from other modalities (CT, MR, XA, US) • Post-processing of images from the same modality and images from other modalities (CT, MR, XA, US) at the C-arm imaging system • Loading of images from the same modality and images from other modalities (CT, MR, XA, US) on the reference monitor • DICOM Modality Work-list for automatic transfer of patient data from the network DICOM MPPS (Modality Performed Procedure Step) provides documentation of performed procedure steps, resources used, performance codes etc.		
	IHE INTEGRATION PROFILES.		
	Which IHE integration profiles are supported with regard to the participants, profiles and options?		

ITEM 6: SPECIFICATION FOR CEILING SUSPENDED X-RAY UNITS (PHEKOLONG, BOITUMELO, DR J.S MOROKA AND FEZI NGUMBENTOMBI HOSPITALS).

		BIDDERS RESPONSE	
6.1	**GENERAL REQUIREMENTS**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
6.1.1	The system shall support both, connection to a Radiology Information System (RIS) and to DICOM-compatible diagnostic unit and archives.		
6.1.2	The system shall have very high image quality due to state-of-the-art flat panel detector technology.		

		BIDDERS RESPONSE	
6.2	**SYSTEM REQUIREMENTS.**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
6.2.1	High frequency, computer-controlled X-ray generator.		
6.2.2	Table Bucky with flat panel detector.		
6.2.3	Erect Bucky stand with flat panel detector.		

		BIDDERS RESPONSE	
6.3	**GENERATOR.**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
6.3.1	3 phase, 360 - 440 VAC, 50Hz.		
6.3.2	State maximum power at 100 kV according to IEC601 (kW).		
6.3.3	Minimum rated output power shall be at least 65 kW.		
6.3.4	State mA values at: a) 70kV b) 80kV c) 100kV d) 125kV e) 150kV		
6.3.5	KV selection for radiography from 40 – 150 kV shall be selectable in one kV steps. State, all possible steps within specified range.		

6.3.6	A selection of one point (kV), two point (kV and mAs) and three point (kV, mA and seconds) techniques shall be possible.		
6.3.7	State mA range.		
6.3.8	The mAs integrator shall provide selection from 0.6mAs or less to 800mAs or greater. State range.		
6.3.9	Exposure times from 2ms or less to 5s or greater shall be possible for kV/mAs technique and automatic exposure device.		
6.3.10	Automatic exposure device shall be included.		
6.3.11	Full user anatomical programmed radiography shall be possible. State number of programs available.		
6.3.12	Micro-processor self-diagnostic function and overload protection with error code read out.		
6.3.13	An indicator to show that the tube capacity is not exceeded.		
6.3.14	User Interface shall display the following as LED display and indication lamps: preparation, READY, x-ray on, kV; mAs; ms; mA; tube load, incorrect exposure error.		

		BIDDERS RESPONSE	
6.4	**X-RAY TUBE**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
6.4.1	Dual focal spot sizes not to exceed 0,6 and 1,2mm with ratings compatible to the required generator. State sizes.		
6.4.2	Anode heat storage capacity to be at least 300 kHU. State capacity.		
6.4.3	Automatic thermal cutout must be provided with the tube.		
6.4.4	The cooling time to reduce the maximum heat units (300 kHU) to 50% should not exceed 3 minutes.		
.4.5	Set of high tension cables to suit the installation.		

		BIDDERS RESPONSE	
6.5	**CEILING SUSPENSION FOR TUBE**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
6.5.1	The unit shall have a ceiling suspended column for ceiling suspension of tube.		
6.5.2	Tracking where the tube follows the image receptor, of the ***height adjustable table*** as well as the ***vertical stand***, in vertical and tilted position must be included.		
6.5.3	Vertical movement shall be at least 1,5m.		
6.5.4	Longitudinal operating range shall be ≥ 3.5m.		
6.5.5	Transverse operating range shall be at ≥ 3m. State range.		
6.5.6	Angulation of focal spot around horizontal axis: ±125°, with lock position in ±90°.		
6.5.7	State rotation of focal spot around vertical axis of column: 360°, with rotation stops and lock positions.		
6.5.8	The unit shall be supplied with centring devices (automatic or click-stop) in the longitudinal and transverse direction to allow centring to the table and erect Bucky.		
6.5.9	It shall be possible to lock all movements with electromagnetic brakes.		
6.5.10	Controls for all movements shall be located on the tube handlebar and clearly marked.		
6.5.11	The unit shall have APR control with LCD display, duplicating the generator settings and must be colour coded for ease of operation.		

		BIDDERS RESPONSE	
6.6	**COLLIMATOR**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
6.6.1	Shall be of the multi-leaf type and automatically operated.		
6.6.2	There shall be a light beam controlled by means of an electronic timer, switching the light off within 60 seconds.		
6.6.3	Not less than 80W localization lamp.		
6.6.4	The light source shall be of the halogen type. The lamps shall be freely available.		
6.6.5	The x-ray light field correlation shall be within 2cm on the 43 X 43cm field at 100cm.		
6.6.6	Automatic collimation with program selection.		

		BIDDERS RESPONSE	
6.7	**HEIGHT ADJUSTABLE HORIZONTAL FLOATING TOP BUCKY TABLE**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
6.7.1	The tabletop shall be flat, fully floating, radiolucent with a scratch resistant finish and flat rails. Loading capacity of ≥ 200kg. Please state loading capacity.		
6.7.2	The tabletop shall be within the following dimensions: Length: 2 200 - 2 400mm Width: 750 - 850mm.		
6.7.3	The table shall be motorized height adjustable from 50cm – 90cm with automatic F.F.D sensing for 100cm.		
6.7.4	The tabletop travel shall not be less than the following dimensions: (i) –130 mm to +130mm transversely (ii) –600 mm to +600mm longitudinally		
6.7.5	Collision protection of tabletop for downward movement is required.		

6.7.6	The table shall include electromagnetic locks, which are foot operated.		
6.7.7	The unit shall have a digital flat panel detector.		
6.7.8	The active image size of the detector shall be 43cm x 43cm.		
6.7.9	Image matrix size: > 3000 pixels x 3000 pixels.		
6.7.10	The A/D conversion provides at least 14 bits/ pixel.		
6.7.11	Pixel size: < 0,15 mm (150µm).		
6.7.12	Image resolution: > 3.33 lp/mm.		
6.7.13	Sensitivity range: speed 200 to 800.		
6.7.14	The vendor shall ensure that no additional cooling is needed for the detector.		
6.7.15	Removable grid (without tools) is required.		
6.7.16	Oscillating grid required.		
6.7.17	The grid shall have a ratio of 12:1 with 36 - 40 lines per cm to be used through the FFD range from 110 cm up to a distance of 120 cm.		
6.7.18	Radiolucent mattress is required		

		BIDDERS RESPONSE	
6.8	**ERECT DIGITAL BUCKY STAND**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
6.8.1	The stand shall be movable and multi purposed to allow fast and efficient exposures as well as special angulations across the table. Please describe all possible angulations and movement.		
6.8.2	Digital wall stand with motorized height setting and motorized tilting from -20° via vertical (0°) position to horizontal (+90°) position is a requirement.		
6.8.3	Motorized vertical movements of detector between predefined positions shall be possible ("move to position").		
6.8.4	The unit shall have a digital flat panel detector.		

6.8.5	The active image size of the detector shall be 43cm x 43cm.		
6.8.6	Image matrix size: > 3000 pixels x 3000 pixels.		
6.8.7	The A/D conversion provides at least 14 bits/ pixel.		
6.8.8	Pixel size: < 0,15 mm (150µm).		
6.8.9	Image resolution: > 3.33 Lp/mm.		
6.8.10	Sensitivity range: speed 200 to 800.		
6.8.11	The vendor shall ensure that no additional cooling is needed for the detector.		
6.8.12	Removable grid (without tools) is required.		
6.8.13	Oscillating grid required.		
6.8.14	Automatic exposure control of at least 3 chambers, to ensure correct dosage of any projection done, shall be included. Give details.		
6.8.15	The grid shall have a ratio of 12:1 with 36 - 40 lines per cm to be used through the FFD range up to a distance of 180 cm.		
6.8.16	To include an overhead armrest, for lateral lung exposures. State whether height adjustable and hinge-able.		

		BIDDERS RESPONSE	
6.9	**IMAGE PROCESSING SUBSYTEM AND OPERATORS CONSOLE**	**COMPLY**	**DOES NOT COMPLY/ STATE DEVIATION**
	Hardware: The following shall be included:		
6.9.1	RAM storage capacity > 2GB.		
6.9.2	Local storage of typical images ≥ 2000 images uncompressed.		
6.9.3	Image storage on CD or DVD.		

6.9.4	High resolution LCD Monitor ≥ 19" with 1280 x 1024 resolution.		
6.9.5	The unit shall have a Windows based operating system.		
6.9.6	The time required to display image on operators monitor should be ≤ 3s.		
6.9.7	UPS for image and database security during power failure as well as to filter power fluctuations shall be included.		
	Image processing: The following shall be included:		
6.9.8	Automatic detection of exposure area.		
6.9.9	Pre-defined anatomically specific processing sets.		
6.9.10	Customizable processing sets.		
6.9.11	Auto-ranging (WL/WW).		
6.9.12	Image rotation and mirroring.		
	Connectivity: The following shall be included:		
6.9.13	***DICOM Basic Work List Management*** - DICOM service for loading the acquisition modality's work list from a RIS server.		
6.9.14	***DICOM Modality Performed Procedure Step*** - DICOM service for notifying the RIS server about start and end of performed procedure steps.		
6.9.15	***DICOM Print*** - DICOM Print option for printing of Digital images on DICOM compatible printers. Including the DICOM Print Editor for composing individual film layouts and for advanced manual print adaptations. The system must be linked to the dry laser printer.		
6.9.16	***DICOM Greyscale Standard Display*** - software enabled relationship between digital image values and displayed		