PAKISTAN ORDNANCE FACTORIES

POF HOSPITAL (A Teaching Hospital)
Wah Cantt

TURN KEY PROJECT
Expression of Interest (EOI) for acquiring of
HOSPITAL MANAGEMENT INFORMATION SYSTEM (HMIS)
&
PICTURE ARCHIVING & COMMUNICATION SYSTEM (PACS)

Disclaimer

The purpose of this EOI document is to provide interested parties with information to assist in formulation of their Proposal. This EOI document does not purport to contain all the information each bidder may require. Each bidder should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this EOI document and obtain independent advice from appropriate sources. The vendor will submit a turnkey solution for this project.

Introduction

POFs Hospital was established in 1962 with an initial capacity of 103 beds. Hospital capacity was increased 200, 400 and 500 beds in 1963, 1969 and 1987 respectively. Existing bed strength is 600 due to introduction of new departments over successive years. It is now a modern tertiary care hospital providing teaching facilities to Wah Medical College. Approximately 150,000 Radiology and Cardiology studies per year are being performed of different modalities X-Ray / CT scan / MRI / Ultrasound / Fluoroscopy / equipment.

Hospital is recognized for house job and postgraduate training in various disciplines. Hospital is responsible to provide health care facilities to serving / retired POF's employees and families / parents of the employees, army personnel posted to POF (including their families/ parents) and employees of allied departments (CMA, IDA etc.) It also extends diagnostic and treatment facilities to general public residing in the area on payment. Hospital is running three remote side clinics/dispensaries to the patients out-side the hospital and ten dispensaries located in different factories for employees.

Clinical Departments

• Internal Medicine	• Rehabilitation Medicine
• General Surgery, and Neurosurgery	• Coronary Care Unit
• Gynaecology/Obstetrics	• Medical ICU
• Paediatrics	• Surgical ITC
• Psychiatry	• Dialysis Unit
• Eye	• Urology
• ENT	• Endoscopy/ ERCP
• Skin	• Burn Centre
• TB/Isolation	• A & E Department
• Dental Centre	• Orthopaedics

Objectives

With the implementation of this project the capabilities of the administrative and other working departments of POF Hospital Wah will expand many folds.

As a result of successful implementation of the project, the patients, employees, doctors, administration, vendors, suppliers, departments of POF Hospital and other related entities will be able to get their related information on-line for effective use.

Major objectives of the project are:

- To design and develop Hospital Management and Information System software to automate the working process of all the departments of the Hospital.

- To develop an IT infrastructure and Computerized Teaching facility that will enable wide spread connectivity for patients, employees, doctors and management.

- To provide a uniform medium of information interchange between the various user's groups of the hospital right at their desktop.

The EOI for Turn Key Project of HMIS ERP would have following major Parts:

1. Hospital Management Information System (HMIS).

2. Integrated Picture Archiving & Communication System (PACS).

3. Hardware / Servers / Routers / Firewall / Storage / Tablets etc.

4. Employee's Security and Attendance System.

5. Non-entitled patient management.

6. Support & Maintenance for two years after complete roll out.

7. Suggest IT Organization necessary to absorb the project.

Hardware / Servers

The Hardware requirement for the System implementation and Deployment would be defined and supplied by the supplier according to the software systems and Hospital needs defined in this document. This would fulfill the Database Server, Application Server, Imaging Server, Backup Server, Storage Server and any other Mechanism for the provision of the HMIS and PACS. The parties will propose Quantity and Specifications of hardware, Servers, Storage requirement, Peripherals based on the HMIS and PACS software requirements and fulfill the hospital need of 1000 users, concurrent users up to 200. In solution it should also include remote locations connectivity and Wi-Fi enabled tablet solution. Solution will also include Imaging Data Storage requirement and robust retrieval for at least 5 years. List of Existing Available Hardware held with POF Hospital can be discussed with IT Department of POF Hospital.

Network requirement

The Network which include physical and Wireless requirement for the Software implementation and Deployment would be mentioned by the vendor according to the software systems and Hospital needs defined in this document. As such network establishment is not included in the scope of work.

Integrated Picture Archiving and Communication System (PACS)

POF Hospital is interested to purchase Picture Archiving and Communication System (PACS) and Radiology Information System (RIS) for Radiology department. The RIS and PACS must be supplied with all the software Licenses on concurrent renewal basis with 05 years Storage Capacity. System should support integration with all possible modern equipment and unlimited viewing workstation.

Diagnostic Imaging Department

Currently Hospital performs approximately 150,000 radiology and cardiology studies per year using its existing film based X-Ray / CT / MR / Ultrasound equipment. These digital images will be transmitted to radiology consultants group in conjunction with prior studies, and archived on the proposed PACS system. The images will be made available to Hospital Drs/staff and associated Departments as necessary along with other diagnostic reports of Radiology and Cardiology departments all over the hospital for the OPD and IPD services support.

Integrated PACS Features

1. System must be capable to archive unlimited studies including images of CR / CT / MRI / Ultrasound / Fluoroscopy / ECG / ECHO / DSA
2. Bi-Directional Communication Interface
3. Unlimited Workstations Enabled
4. DICOM Media Writing
5. DICOM Storage SCP to allow images from CR, DR, CT, MR, US, and any other DICOM modality to be received and stored automatically
6. Embedded DICOM file compressor - Allows images to be stored as DICOM uncompressed or lossless JPG to maximize storage space
7. Scalability – Multiple images can be received from multiple modalities
8. Automated backup of all data to DVD, NAS, or SAN
9. Must be scalable based on number of exams
10. Accepts plug and play storage upgrades
11. Image Routing with simultaneous inputs and outputs
12. Capability to interface with Hospital Management System (HMS)
13. PACS must demonstrate the ability to integrate seamlessly with the HMS.
14. PACS must be integrated with Radiology and Cardiology Information system to provide the images access with patient demographics and clinical information.

Hospital Management Information System (HMIS)

Integrated Modules of HMIS software Deployment, training of user and User manuals, built with state of the art technologies along with Onsite-Installation, Configuration, Customization, Integration with PACS, Testing, Training and management of HMIS comprising of following modules.

1.	**Patient Registration Management**	System should be able to: • Register a patient under unique Patient ID. • Allow flexibility to register a patient from different counters. • Search Patient details through multiple criteria. • Multiple Categories of Patients. • Multiple addresses / phone numbers related to patient can be stored • Standard form is used for panel patient registration and cash patient registration. • Data visualization on dashboards & statistical analysis capability. • Patient data status can be activated and deactivated. • Patient data can be set confidential which will be seen only to concerned dept/doctors. • Patient Detail Data should not be visible or editable other than the administration. • Duplication Check on Record based on PLNO CNIC etc • Pictures of Registered Patients should be visible in every clinical module. • CNIC and B Form Entry should be compulsory so that to avoid duplication. • 2D/3D barcode and QR code scanning ability for CNIC. • Patient card and labels (for pathology and Radiology etc.) can be printed from system with 2D/3D barcodes.
2.	**Pathology Management System**	• Parameter/Setup form is used when new test is created. • Test status can be made active or deactivate. • Logical Observation Identifiers Names and Codes • All historic record should be maintained for any patient. • Every test is attached with some group or sub category. • Reports are customizable. • Reports are accessible and printable through web access. • All lab equipment, machines, analyzers can be integrated to the Pathology Management system. • Ranges for attributes can be performed from setup menu. • Methods and timings of tests can also be entered from setup menu. • New specimen container can be added from setup menu. • Test request can be generated from receptions, OPD, Emergency & Indoor. • List can be shown to laboratory operator which has all requests of tests. • Free text that wants to be printed on each report can be performed from setup menu • Comments and opinion can be print on reports. • Tests reports can be forwarded to dispatcher. • Tube color is used to identify any test. • Capable to Machine interface to auto transform data in system. • Email reporting facility if required • Display name on report title can be customized from setup menu. • Doctor's name shown on the footer of each test result can also be customized from setup menu. • Specimen should have a unique id which is used as a reference which removes

		duplication.
		• Organization and there classification can be defined from setup menu.
		• Tracking in case of sample is damaged or incorrect
		• Security rights provision to users
		• Workflow can be defined from front end through which tests results will be forwarded for checking/signatures
		• Reports when signed or given to the users cannot be changed but only addendum are possible.
		• Interfaces with all machines used in laboratory can be linked with database if required.
		• Provision for Blood Bank Management including donor & inventory management for blood bags.
3.	**Radiology Management System**	• Doctor orders from OPD, IPD, Emergency, Radiology Reception or other required locations etc. with clinical history.
		• Test status can be made active or deactivate.
		• Patient booking / scheduling for Radiological tests
		• Differentiation of tests with color slots
		• Patient acknowledgement at Radiology counter
		• Technologist acknowledgement
		• Dictation capabilities for reports.
		• Different Film Sizes and no of films used for a test record for a patient entry screen.
		• Complete DICOM enabled solution with software and licenses for all radiology tests.
		• Radiologist's Menu with options of pending work, previous reports / history, transfer of cases, history, patient notes, final sign,
		• Writing oral report option
		• Radiology reporting queue for transcription report writing
		• Templates for report writing.
		• Radiologist's approval of report after resident's write-up
		• Addendum of verified report are available for Radiologists
		• Cancellation / un-verification of tests available
		• Radiology Activity Summary
		• Reports are accessible and printable through web access.
		• All radiology equipment can be integrated to the Radiology Management system.
4.	**Inpatient Management System**	• Admission and Discharge functionalities. Discharge includes sick leave, follow-up Performa and death certificate.
		• Doctors & Nurses Notes, Shifting Notes
		• Allocation of Beds
		• Services/visit of consultant
		• Grid shows all visit history against one patient.
		• Patient transfer from one ward to another or from one bed to another. Keeping the history of each bed change ward change.
		• Pharmacy & main store integration.
		• Integration with ECG monitors, ventilators & all other medical equipment.

- Lab requests / Radiology / Echo / OT and all other services can also be performed.
- Patient search criteria.
- Advise discharge and medication facility
- Doctors can see only his admitted patient detail or all admitted patient details.
- Doctors can also admit patient directly from OPD.
- Transfer of patient to other hospital. Transfer of Patient for just one day should hold the bed for the patient and transfer in/out record should also be kept.
- Charts regarding to different attributes like temperature, blood pressure etc can be stored and print from the system if required
- Different viewing rights available for different levels
- Customizable documentation for each clinical area
- Comparative report of specific or all tests.
- Access of Patient history for referral.
- Birth Certificate for New Born Babies Registration.
- Daily Admission report of CCU, Burn Centre, ITC & ICU.
- Death Cases Detailed Report.
- Daily Doctor wise CNE Statement is required.
- Daily CNE detail Report.
- Stoppages Rate, No of Days of admission in discharge screen is required.
- Case History, Follow up Performa also required when the patient is discharged.
- Staff Admission Report.
- Daily Bed Status Report.
- New Admission Detail Report.
- Indication of new admission in ward as an alert is required.
- Indent of ward medicines is required for Unit Basis for male and female units separately.
- Inventory Control of Ward.
- Record of Attendant in case Patient is less than 12 yrs
- Indent report for Ward. It should be patient wise.
- Discharge Notes, Transfers Notes.
- Ward dosing screen not showing latest patient event after indent generation.
- Referrer Transfer Letter report in the Ward.
- A&D Book Sequence of A&D Book no to be changed Year first BOOK, Serial No.
- Vital Signs and HSR Report.
- Discount on patients admitted on the basis of government charges.
- In case death of patients, Transfer of Dead Body into Mortuary with record.
- Category wise Treatment of Patient.
- Specialist Diagnosing Screen in the OPD is also required in Ward Module.
- Help desk for patient discharged and on Bed.

- Consultant wise report of checked patients.
- Diet List/record.
- Record of Dr. discharging the patients in ward.
- Entry Forms for
  - History

		- PC, HPC, along with all other histories should be part of it.
		  - Present, Past, gynae, drug, family, personal history etc.
		  o Examination
		  - Heading General Physical Exam and Systemic Examination are required
		  - Templates required in both.
		  o Investigation
		  - All services (Lab, Radiology, Echo, ETT. Endoscopy, ECG etc) selection from list available.
		  - View of all the services in EMR with an alert to know about the previous tests.
		  o Diagnosis
		  - Provisional, differential and final diagnosis
		  - Binary search for ICD-10 Disease list. In all three
		  o Treatment
		  - Medication (Rx)
		  - Tablets issuance like Tab Glucophage 2 TDS.
		  - Syrups issuance like Calpol Suryp 2 Tablespoon TDS.
		  - Drops Quedine E/D 5 Drops BD
		  - Humulin 20/30 units etc
		  - Steroids or other medicines detail use like 3 tab for 6 days, 2 tab for 2 days, and 1 tab for 1 day.
		  - Dispensary Items formula entry and with each field for area of application is required.
		  - For every medicine any special instruction optional field should be available if required.
		  o General Instructions
		  - Diet
		  - Disposal Plan
		  - Miscellaneous
		- Vital Signs like BP, Height, Weight, Pulse etc entry.
		- Binary search should be available for medicines, investigation and diagnosis.
		- Screens for entry of Diabetic and Major Surgeries and Allergies and availability in all clinical modules so that patients treatment should be done keeping them in view.
		- TB Card, Vaccination Card (Gynae, Peads) entry.

5.	**Emergency Management System**	- Patient Triage Notes - Patient Monitoring - Admission - Patient's search - Lab and Radiology ordering and reporting - Pharmacy Integration - Transferred to ward or discharged from emergency

6.	**Medical Services Management System**	- Order entry of orders
		- Service Diary
		  o Doctor-wise list
		  o Patient scheduling for the procedure
		- Patient acknowledgement for the procedures
		- Lab history recording

		• Queue management for the procedure performing and reporting
		• Performing the procedures and reporting
		• Reporting templates
		• Report verifications and printing
		• Integration with patient data
		• ECG / ETT / ECHO / Endoscopy / Fluoroscopy etc images and reports integration with data
7.	**OT Management**	• Different surgical services for number of different types of surgical procedures offered at POFH.
		• Fixed days for different surgical faculties.
		• Updateable HR hierarchy from which surgical teams for different categories.
		• Each type of a surgery has a special team both for surgery and anesthesia.
		• A patient should come to the operation theater from the ward.
		• In addition to the usage – there are items which expired after a particular time period. System will generate alerts to replace those items as well.
		• Fitness of the patient for the surgery and anesthesia will also be entered into the system. At the time of any operation the checklist from these fitness parameters should be provided on the screen., the surgeon may decide to do the surgery even if any of the conditions in the checklist is not complete (specially in case of an emergency) but the system will raise a reminder that one or more of the fitness parameters are not met with.
		• Before any surgery takes place, a document of agreement/consent will be signed by the patient or his next of kin. In case the patient is unable to sign the document and his/her next of kin is not available, the required surgical procedure will be carried out by following the protocol as provided by the institution/hospital.
		• The Anesthetist/surgeon may decide to stop the surgery in case if any of the fitness parameters are not met. The status of fitness or otherwise will be available to anybody who accesses the medical history of the patient.
		• After the surgery the operation notes and anesthesia notes will be entered by the doctor, which will also go into the patient's history for future reference.
		• Instruction for the patient care in the ITC and the ward will be entered by the surgeon/anesthetist. So the staff in the ward can take the appropriate actions in patient care.
		• An alert to recovery room/ITC and then to the Ward will be sent about the upcoming arrival of the patient.
		• Operation Theater's module should also keep a schedule for the training sessions to be held in the OT.
		• 'Operation list' (both emergency and routine) will be indicated a day before the procedure.
		• Order will be generated for any procedure.
		• Shows pending request of patient / Queue management
		• OT Tentative List is prepared
		• Add team to a surgery (doctors, nurses etc) with biometric evidence
		• Tentative list is then finalized
		• Patient is received and acknowledged at surgery counter
		• Doctors enter performed procedures and surgeries
		• Nursing supplies are entered in the system
		• Surgery notes are also recorded
		• Linked with admission and ward

		• Linked with ward and patient/order can be send to OT. • One procedure performed by multiple doctors • Linked with billing system for CNE and ward • Support multiple packages surgery • After procedure patient transfer situation can be handled • Test samples generated for Pathology • Blood bank requisition is generated • Images and videos related to any procedure can be store with patient data. • Per fusionist final status entry can be stored in cardiac surgery. • Outcome data of OT can be stored. • Cardiac history before operation can be stored. • Echo and Catha lab reports/images can be auto stored in system from machines/monitors. • Customizing reports facility. • Stock/inventory of medical equipment can also be maintained from the system. • Time for start and end of procedure entry facility and auto total calculation of total time of procedure • Anesthesia preoperative, intra operative and post operative documentation • Adverse event documentation for anesthesia • Automatic vital sign transfer to anesthesia documentation • Second Opinion option and alert for the doctor.
8.	**Pharmacy Management System**	• Drug Definition is made. Both Generic and Brand are defined • Store to store transfer (for general items) • Departmental return to stores (pharmacy) • Indent/Contract issuing facility. • Stock/inventory management. • History View of Patients Medicines Issued. • Medicines against same salt should be available if stock is not available. • Return medicines to supplier. • Store Transfer Request will be shown in queue • Store Issue Note. • Bulk/ LP Medicines. • Issuance of Patients and Ward Medicines from multiple stores from one request.. • Linked with ward, OT etc. • Make Invoice of drug issued • Option for free of cost / subsidized invoice • Expiry management and permanent disposal of expired drugs • Medicine return from patient in Emergency, Indoor and OPD • Cancel Indent • Deals with pharmacy and other items used in OT etc. • Items Return to Vendor stock is maintained. • Stock Balance / Current Stock. • Item Ledger / Bin card. • Ledger of item activity can be observed. • Linked with patient registration and Billing section. • Shows list of all PO's.

		• Stock of sub pharmacies is visible to main pharmacy. • Verification of doctor/nurse medicine orders by pharmacist • Goods Receiving Notes (GRN) facility. • Mapping of Pharmacy with Material Management System (Purchase POF).
9.	**Appointments & Scheduling Management**	• New doctor's entry can be performed from setup menu. • Roasters of all doctors, nurses & paramedical staff can be defined. • Roasters of all services can be defined. • Appointment registration & cancellation facility. • Multiple session of a doctor per day can be defined. • Time slot can be defined in the system. • Roaster can be activated or deactivated. • Outpatient Management System like queue management, patient registration, prescription notes, follow up etc. • On line appointment scheduling to be used by Radiology and other modules. • To maintenance and synchronize of leave records of doctors and rosters information. • AS will show all the FREE-BUSY slots for easy on the fly information will keep track for leaves and rescheduling. Rescheduled cases will be dropped in the information queue for staff to inform patients. • Global and Personnel views for information visibility. • Allowing doctors to configure what minimum time should be given to each patient for creating even time slots. The ASS will automatically give operators the slots, they will just have to click and enter the patient name/details. • Doctor wise appointment plan and Inquiries • Day wise appointment plan • On-Line Querying for help desk • Periodic Summaries and Statistics, Radiology Statistics
10.	**Outpatient Management**	• Doctors & Nurses Notes with proper disposal plan. • Clinical history of OPD should be available in the comments for the services • Grid shows all visit history against one patient. • Patient reports with all imaging data viewing (Xray, CT, MRI, US, ECHO, ETT, ECG etc.) • Pharmacy store integration with complete info of stock. Alternatives for out of stock medicines. • Lab requests can also be performed. • Provision of Cardiology / Radiology / laboratory / Echo and all services provided by hospital request entry. • Patient search criteria through name, CNIC, Pl#, Patient ID etc. • Advice and medication prescription facility and automatic calculation of quantity issued for tablets, drops, syrups etc for days, weeks and months. • Doctors can see only his clinic patient detail. • Doctors can also admit patient directly from OPD. • Customizable Examination setup for each specialty. • Doctor can see previous medications details given to the patient. • Reports of all services from hospital should be available for doctor reference in OPD. • Customizable Tests and Medications group favorites for prescription • Outside investigations recording facility

- Replication of previous visit details for prescription.
- Compulsion of diagnosis entry.
- Patient routing functionality is required for second opinion and also for referring to other OPDs.
- Vital Signs like BP, Height, Weight, Pulse etc entry.
- Binary search should be available for medicines, investigation and diagnosis.
- Screens for entry of Diabetic and Major Surgeries and Allergies and availability in all clinical modules so that patients treatment should be done keeping them in view.
- Based on condition of patient the priority status of patient in queue.
- Patient send for any immediate service should be in hold on with current entries. Tool tip should be available for the patients on hold telling for which service patient had gone
- Provisional, differential and final diagnosis should be associated with ICD 10 and customized diseases for OPSs.
- Multiple selection of diagnosis.
- Day wise list of patients should be viewed only and the pending list of that day should only be available on next day if date is given.
- No of days for which the medicines are issued should be customizable once and can be changed on screen for certain patients in particular OPD.
- After saving the report there should be an option for editing it on the same day.
- Spell check with medical dictionary to be inserted in the module in order to check while writing.
- Option for canceling the Patient from list if entered by fault.
- Disease should also be displayed above prescription.
- Available wards should b displayed in OPD so that the doctor can view and select a bed for the patient in specific ward.
- Entry Forms for
    - History
        - PC, HPC, along with all other histories should be part of it.
        - Present, Past, gynae, drug, family, personal history etc.
    - Examination
        - Heading General Physical Exam and Systemic Examination are required
        - Templates required in both.
    - Investigation
        - All services (Lab, Radiology, Echo, ETT, Endoscopy, ECG etc) selection from list available.
        - View of all the services in EMR with an alert to know about the previous tests.
    - Diagnosis
        - Provisional, differential and final diagnosis
        - Binary search for ICD-10 Disease list. In all three
    - Treatment
        - Medication (Rx)
        - Tablets issuance like Tab Glucophage 2 TDS.
        - Syrups issuance like Calpol Suryp 2 Tablespoon TDS.
        - Drops Quedine E/D 5 Drops BD
        - Humulin 20/30 units etc

		▪ Steroids or other medicines detail use like 3 tab for 6 days, 2 tab for 2 days, and 1 tab for 1 day.
		       ▪ Dispensary Items formula entry and with each field for area of application is required.
		       ▪ For every medicine any special instruction optional field should be available if required.
		   o General Instructions
		       ▪ Diet
		       ▪ Disposal Plan
		       ▪ Miscellaneous
		   o Summary
		       ▪ For assessment.
		• Parameter entry screen for headings, Image Archiving (Dentist, ENT).
		• Separate slip for Local & Central Store with diagnosis option.
		• Alerts on (Previous investigation, Previous Test Comparison, Previous prescription).
		• Facility for previous test comparisons in EMR.
		• Alerts for Previous medicine prescription before new prescription.
		• Customized Screens for Dental, Gynae OPD etc.
		• Sick leave report in case of leave.
		• Referrer Transfer Letter report
		• TB Card, Vaccination Card (Gynae, Peads) entry.

11.	**Queue Management System**	• Proper Patients visits based on first come first served basis for all modules. • Serious or VIP should be treated accordingly. • Dr's should have control of changing / calling the patient through queue.
12.	**User Matrix**	• Complete User Roles and Rights Definition for every Module • Complete User Audit for each entry made in any module. • Screen Level Rights.
13.	**Blood Bank**	• Blood Bags Stock Management and Compatibility Matrix • Complete donation Information and Issuance recording and history management of the registered patients. • Blood Bag Components Management and expiry details and alerts. • Donor's Honorarium and leave information. • Blood Bags Replacement information. • Blood Reservation. Blood Breaking Information. • Reaction Performa • Blood Bags Stock Report, Stock Movement Report, Expiry List, Donation Record, Rejected and Issued Blood Report. • Complete follow-up of pending Requests.
14.	**Executive Reporting**	• Based on all above modules, Electronic Medical Record Management should be there. • Different Executive Screen and Reports and Data Analysis on dash Board.

OTHER TERMS AND CONDITIONS / REQUIRED INFORMATION

 a. HMIS should be HL7 and all other standards compliant

 b. Healthcare Standards / Codes are applied like ICD-10, SNOMED, ICD-O, ACR, DICOM, etc.

 c. Introduction of the company / firm (complete company profile)

 d. Firms must have a registered office in Pakistan.

 e. List of similar projects completed/implemented with references. A minimum of two large deployments is preferred.

 f. Electronic Medical Records (EMR) of HMIS implementation must include establishing connections to all clinical data.

 g. Firms which are registered with sales tax and income tax departments and have sound financial strengths can participate.

 h. System & database must be compatible for integration with all the given solutions & platforms

 i. Project Manager should have minimum 2 years' experience preferably in integration and turnkey solutions.

 j. Licenses of software required (database, operating systems, applications, utilities etc.) for the solution should be clearly mentioned giving cost per user / per computer / per processor, whichever the case is.

 k. Operation, maintenance & managed services of all above-mentioned systems will be responsibility of the supplier for 2 years, free of cost including onsite Training on HMIS.

   I. During these 2 years, whenever there is new induction of employees or transfer of employees into the hospital, they will be completely trained by the solution provider.

   II. Whenever there is need of training, complete and acceptable Training Plan will be given by the supplier of the solution.

   III. Company will be responsible for the deployment, operation and uninterrupted maintenance of the HMIS for 24 hours a day, 7 days a week and 365 days an year i.e. 24/7/365.

   IV. The company will provide appropriate skilled staff members and a maintenance service center in the Hospital.

 l. All licenses should be in the name of the client.

 m. POF IT team will be made part of development / implementation stage to ensure smooth transition.

 n. A foreign training of IT specialists by OEM of proposed systems will be made part of proposal.

 o. Requirements of In-country / abroad will be explicitly spelled out by each participating vendor.

 p. Complete data security with redundant & encrypted storage.

q. Complete project plan as a turnkey solution with tentative time plan must be submitted.

r. Verifiable proof of evidence of all the above is required.

s. The successful bidder will be required to migrate data from the existing systems to the new solution. The exact scope of data to be migrated will be determined in consultation with the successful firm and data owners.

FIRMS PRE-QUALIFICATION CRITERIA

a) Interested firms must have deployed and implemented complete modules of HMIS over a 500 bed hospital. Reference of such implementation must be included as pre-requisite for pre-qualifying.

b) Firms will submit the successful implementation certificate from user (where the firm has implemented the HMIS).

c) Firms must have deployed integrated Picture Archiving and Communication System (PACS) at Radiology and Cardiology Deptt. (ECG,MRI,CT Scan, Digital Fluoroscopy etc)

d) Firms must have qualified staff for the project. List of certified professionals and professional experienced must be attached.

e) Firms must have partnership with OEM's of hardware and license of software (if any).

f) Firms must have support and maintenance staff for rectification of fault of HMIS and PACS on local basis, there should be less or zero dependency on foreign support team.

g) Worked on enterprise level solutions encompassing Disaster recovery of database, Application server and HMIS Application.

h) Expertise of performance tuning/optimization of Database and Application.

i) No of clients in public sector (Enterprise level projects only)

j) Financial stability of the firm.

k) Firms should preferably have local office in Rawalpindi / Islamabad.