Request for Information

Healthcare Information System

and

Electronic Medical Record System

By

Public Hospitals Authority

Commonwealth of The Bahamas

Response Due: February 3, 2012

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Overview

RFI Intent

This Request for Information (RFI) is an invitation to qualified vendors to submit information regarding the functional and technical capabilities and pricing guidance for A) a Healthcare Information System (HIS - also commonly referred to as a Hospital Information System) and B) an Electronic Medical Record (EMR) information system.

A) Healthcare Information System

The scope of the **HIS** includes the following functional domains for **inpatient acute and long-term care, emergency services, hospital-based and community-based outpatient (primary care and speciality services)** settings:

- **Master Patient Index/Enterprise Master Patient Index**
    - Single-patient identifier across multiple facilities and services
- **Registration and ADT**
    - Bed management
    - Daily census
    - Discharge management
- **Patient accounting**
    - Charge capture and charge master maintenance
    - Patient billing
    - Insurance verification and claims management
    - Collections
- **Health Record Management**
    - Chart tracking and deficiencies
    - Release of information
    - Coding and abstracting
- **Patient scheduling**
    - Visit and procedure scheduling
- **Management and statistical reporting**
    - Reporting on service utilization levels
    - Reporting on patient information (demographics, diagnoses, procedures, acuity, etc.)
    - Basic statistical reports
    - Reporting on key performance indicators

B) Electronic Medical Records System

- The scope of interest for **EMR** system includes clinical documentation in **inpatient acute and long-term care, emergency services, hospital-based and community-based outpatient (primary care and speciality services)** settings.

This RFI will be used to pre-qualify vendors for a potential RFP for an HIS within the next six months, and will be used to guide invitations for to submit proposals for an EMR solution in the future. Although PHA will not award a contract based on the information received in response to this RFI, vendors must respond to the current RFI to be eligible to receive and respond to the any future RFPs regarding the HIS.

RFI Content

This RFI comprises the following sections:

- **Section 1: Background**

    o Background and contextual information on The Bahamas public healthcare system.

- **Section 2: Overview of Information Systems**

    o An overview of the existing and planned systems in The Bahamas public healthcare system.

- **Section 3: Submission Guidelines**

    o General guidelines regarding submission of Responses, including deadlines and formats

- **Section 4: Response Outline and Vendor Response Form**

    o Guidelines for the formatting and contents of the Response

    o The format and questions that the vendor must address in their Response.

- **Appendix A: Key Healthcare System Metrics**

- **Appendix B: Network Typology**

1 Background

1.1 Country Overview

The Commonwealth of The Bahamas is an archipelago of some 700 Islands and Cays stretching in the Atlantic Ocean between Florida (USA) and Cuba. The population of approximately 325,000 is dispersed on 29 of these islands, including the island of New Providence (population 225,000), on which the capital city Nassau is located, and the island of Grand Bahama (population 50,000), where the nation's second largest city of Freeport is located. The other islands are collectively known as the Family Islands.

1.2 Public Sector Health System Overview[1]

The health system of The Bahamas comprises a blend of publicly and privately provided services. Public sector services fall under one of two management establishments, the **Ministry of Health** and its agencies, and the **Public Hospitals Authority** (PHA) and its agencies.

The community-based primary care health services of the Ministry of Health (MOH) are managed by the **Department of Public Health**, and are delivered through a network of nine community health clinics in New Providence and some 88 clinics scattered throughout the remaining Family Islands. The Public Hospitals Authority manages the 10 community clinics located on Grand Bahama. There are approximately 500,000 outpatient visits annually across all community clinics in New Providence, Grand Bahamas and the Family Islands.

The Public Hospitals Authority is a quasi-government agency, established in July 1999 by Act of Parliament to manage the public hospitals in The Bahamas. There are three public hospitals:

- **Princess Margaret Hospital (PMH)** in Nassau is the main national acute care facility with 405 beds, over 31 medical specialties and subspecialties, and a full span of diagnostic, therapeutic and rehabilitation therapy services. This hospital provides primary, secondary and tertiary level care. Inpatient activity is of a high volume averaging 110,000 patient days and 16,000 discharges, per annum. Outpatient utilization is also very large and encompasses Accident & Emergency services (with over 50,000 visits annually), specialty and general practice outpatient clinics (totalling over 80,000 visits annually).

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[1] See Appendix A for a summary of key health system metrics.

- **Sandilands Rehabilitation Centre (SRC)** is the Bahamas' national resource for both Mental Health (including substance abuse treatment) and Geriatric Services. SRC's main compound is located in the eastern district of New Providence on Fox Hill Road and consists of two Hospitals: The Geriatrics Hospital (with 128 beds) which cares for the elderly with medical, social and psychiatric problems; and the Psychiatric Hospital (with 367 beds) that cares for the mentally and physically challenged children, adolescent and adult clients. SRC also consists of a community-based facility known as The Community Counselling & Assessment Centre (CCAC), situated on Market Street (in a centrally located area of the city) offering Outpatient mental health services.

- **Rand Memorial Hospital (RMH)** is an 85-bed facility located in Freeport, on the island of Grand Bahama. The Rand Memorial Hospital, together with the Community Health Services in Grand Bahama, form a local health system called Grand Bahama Health Services (GBHS).

In addition to its mandate for public hospitals, the PHA is also responsible for the management and development of three other areas of the public sector health services system:

- **The Bahamas National Drug Agency (BNDA)** is responsible for the procurement and control of drugs and drug-related items for all the healthcare facilities of the Public Hospitals Authority, the Public Health Clinics of the Ministry of Health and other relevant government institutions including the Royal Bahamas Police Force and Her Majesty's Prison.

- **The Materials Management Directorate (MMD)** provides support to PMH, SRC, GBHS, the Public Health Clinics of the Ministry of Health and other relevant government institutions including the Royal Bahamas Police Force and Her Majesty's Prison with respect to the procurement, warehousing and distribution of medical/surgical supplies and other related equipment and materials.

- **National Emergency Medical Services (NEMS)** provides services and co-ordinates the first response to national medical emergencies throughout the Bahamas. The NEMS system consists of Trained Paramedics, Emergency Medical Technicians (trained at three levels), and trained emergency medical dispatchers and drivers. The main ambulance bases of NEMS are located at PMH and Rand, with three remote bases in New Providence and one in Grand Bahama. There are 22 publicly owned and operated ambulances in the Bahamas, 6 of which are attached to clinics in the Family Islands. A First Responder Programme throughout the Family Islands seeks to provide an improved capacity in these more isolated locations with the training of local volunteers to respond

appropriately in medical emergencies and the coordination of required medical/technical support and the provision of equipment/supplies.

1.3 Vision for Integrated Care and Services

In 2010, the public health sector of The Bahamas undertook a national strategic planning exercise to set priorities for the health system from 2010-2020. The National Health System Strategic Plan (NHSSP) calls for improvements to the continuity and integration of health care services across all levels and settings of care, as well as the improved use of information for clinical, management and policy decision-making.

Guided by these broad national strategic directions, the Ministry of Health, Department of Public Health and the Public Hospital Authority undertook the development of a strategic and tactical planning exercise for the further development of information systems for the public health sector. In support of the broader strategic objectives, the outcome of this planning exercise called for investment in integrated health information systems that support the development of a single patient record across the continuum of care.

The Ministry of Health, Department of Public Health and the Public Hospitals Authority are guided by the principals of a single patient record and information systems that support integrated care and service delivery, and are seeking information from the vendor community on how their respective systems can help meet these strategic and operational goals.

2 Overview of Information Systems

2.1 Replacing Existing Hospital Information System and Public Health Information System

The current HIS is Keane Insight, a character-based application built on an IBM iSeries platform. Keane announced that this application will be "sunset" at the end of 2011. The PHA plans to begin implementation of a replacement system in July 2012. Keane is currently used for registration/ADT, patient management/accounting and HIM functions for acute and long-term inpatient, hospital-based outpatient and emergency services. Keane is also used for registration functions in limited community clinic settings.

The Department of Public Health is currently using a public health information system called iPHIS in community clinic settings. iPHIS provides registration, scheduling and basic electronic health record functions, as well as public health functions including communicable disease management and immunization registration.   The Department of Public Health is also expecting to begin replacement of iPHIS sometime 2012, including electronic clinical documentation for community-based outpatient services

While no specific timeline has yet been approved for the implementation of electronic clinical documentation for hospital-outpatient, inpatient and emergency services, the MOH and PHA want to ensure that HIS and EMR solutions support the vision of integrated care and patient management across the entire public health system. **As such, it is looking for information from vendors for both HIS and EMR solutions to better develop its short and long-term strategies for information systems in the public health system.**

2.2 Related Systems

The following, related systems are currently in place with healthcare settings across the Public Hospitals Authority and the Department of Public Health.

Information system	Description	Existing/planned interfaces with HIS
GE Centricity Pharmacy Information Management System	• Supports inpatient, outpatient pharmacy services, as well as drug inventory management for all PHA inpatient, outpatient and emergency services. • The roll-out of the use of this application to all relevant community clinics of DPH is currently underway	• ADT (existing) • Billing (existing)
Sunquest Laboratory Information System	• Supports laboratory and pathology services, and electronic provider order entry/results for all inpatient, hospital-based outpatients, and is currently being rolled out to DPHcommunity clinics	• ADT (existing) • Billing (existing)
Carefusion Pyxis Automated Drug Cabinets	• Currently implemented in the Emergency Rooms at PMH and RMH, and in one of the Operating Theatres at PMH with	• ADT (existing) • Billing (existing)

Information system	Description	Existing/planned interfaces with HIS
	implementation in 2012 for in ICU.	
CyberRen Renal Patient Care Management Information System	• Supports information management for renal care and dialysis at the Princess Margaret Hospital • ASP solution	• ADT (planned)
Keane Materials Management	• Currently supports ordering, receiving and distribution of medical/surgical and other supplies • Not currently used to track patient-level consumption of supplies, but this is planned for the future.	• ADT (planned) • Billing (planned)
Elekta METRIQ Hospital Cancer Registry	• Registry of cancer cases, treatments and outcomes at the Princess Margaret Hospital	• ADT (planned)
INFOR Masterpiece Accounting Suite	• Provides GL and AP for Public Hospitals Authority facilities	• GL (planned)

2.3 Network Architecture

In early 2008, PHA launched a new state-of-the-art secure data centre that houses all core applications, data and information systems. The data centre includes fully redundant power and

cooling systems, and is connected to PHA facilities through redundant fibre WAN. As well, PHA is in the process of upgrading WAN connections to community clinics throughout The Bahamas.

A logical typology of the network infrastructure can be found in **Appendix B.**

2.4 Future Systems

The following information systems have been identified as priorities, but have not yet been approved. It is expected that these systems (which are not listed in any order of priority) will be implemented within the next one to five years and will need to be interfaced or integrated with the HIS:

- Electronic Medical Record (inpatient, hospital-based outpatient, community-based outpatient, and emergency services)

- Perioperative Information System

- Document Imaging System (Medical Records)

- CPOE (Imaging, Medications, other diagnostic and therapeutic orders)

- Emergency Department Information System

- Emergency Medical Services Information System

- PACS/Radiology Information System

- Food Services Information System

3 Submission Guidelines

3.1 Eligible Respondents

This RFI is being issued as an open call for information and all qualified vendors are encouraged to submit.

> **Note that vendors must submit a Response to this RFI to be considered eligible to receive and respond to any future RFP for an HIS.**

3.2 PHA Property

Responses and accompanying documentation submitted by Vendors shall become the property of PHA and will not be returned. The information will be held in confidence and used only for the purposes identified within this RFI or purposes reasonably considered to be related to this RFI process.

3.3 No Payment to Vendors

No payment of any sort shall be made to vendors submitting Responses to this RFI. PHA is not responsible for any costs or damages incurred by the Vendor in preparation of their Response.

3.4 Response Deadline and Submission Format

1. Vendors are asked to indicate their intent to respond to the RFI by:

    January 20th , 2012 – 5:00 PM (EST)

2. Vendors shall submit their intent to respond and their RFI response by email to the contact identified below. Acceptable electronic formats are Microsoft Word, Excel, Project, and Adobe PDF.

    Ms. Astacia Brice
    Email: astewart@phabahamas.org

3. Vendor RFI Responses must be received by:

    February 3rd , 2012 - 5:00pm (EST)

Responses not received by the deadline will not be considered.

4. Vendors shall submit Responses according to the response format specified in Section 4: Response Outline. Vendors are welcome to include additional marketing or informational materials. These should be appended to the end of the submission.

5. It is the responsibility of all Vendors to examine the entire RFI package and seek clarification of any requirement that may not be clear and to check all responses for accuracy before submitting a Response.

3.5 Withdrawal or Amendment of Vendor Responses

A Vendor that submits a Response to this RFI may:

1. Withdraw its response by giving written notice to PHA prior to the deadline for Responses identified above.

2. Amend its response only by submitting an **amended** Response prior to the deadline for Responses identified above and according to the format identified in *Response Deadline and Submission Format.*

3.6 PHA's Right to Amend, Supplement, or Cancel RFI

PHA may at any time and in its sole discretion alter this RFI, the evaluation process, or cancel this RFI without liability, penalty, or cost.

3.7 Vendor Enquiries

1. All questions regarding this RFI are to be directed by email to:

   Ms. Astacia Brice
   Email: astewart@phabahamas.org

2. The deadline for questions is:

   January 25th , 2012 - 5:00pm (EST)

3. Answers to all enquiries will be emailed to all vendors that have indicated their intent to respond simultaneously. Source of the questions will not be identified. PHA will make every effort to respond to enquires within three business days, but makes no guarantee of response time.

3.8 Absence of Contractual Obligation

PHA has no obligation to any Vendor arising from this RFI, the RFI process or the submission of a response by a Vendor. For greater certainty, the issuance of this RFI is not an offer to contract or a tender, and the Sponsors do not intend, by issuing this RFI, to make any offer that can be accepted by any prospective Respondent to create a contractual relationship.

PHA may, in its sole discretion and for any reason whatsoever, take any action in respect of the Request for Information it receives at any time without incurring any liability to any Vendor and without any obligation to inform any Vendor of the reasons for PHA's actions including, but not limited to:

- Assessing whether, considering the Vendors' responses, PHA's intention to procure and deploy the services and solution is advisable;

- Entering into further discussions with one or more of the Vendors to review the Vendor's response;

- Engaging in a subsequent competitive procurement process in respect of the solution;

- Entering into a contractual agreement or relationship with one or more of the Vendors or another Vendor for the provision of the services and solution described within this RFI;

- Requesting one or more of the Vendors to supplement and resubmit its response;

- Requesting clarification where the Response is unclear

- Accepting or rejecting, in whole or in part, any or all Responses received whether or not completed properly;

- Cancelling this RFI process

- Cancelling this RFI process and commencing a new process.

3.9 Response Review

A committee of PHA will conduct an initial review of each Response to identify and reject those that are non-compliant (i.e., not completed according to the format specified in Section 4: Response Outline). Responses deemed to be compliant will be reviewed by a wider committee of PHA who are responsible for determining whether there are solutions that reasonably meet the business and functional objectives of PHA, and whether an RFP should be issued. **Vendors must respond to this RFI to be eligible to receive and respond to an RFP should one be issued.**

3.10 Anticipated Schedule of Events

The following schedule is presented for information purposes only. All dates and indications of time are tentative and subject to change.

No	Event	Anticipated Date
1	Vendor intent to respond due	January 20, 2012
2	Deadline day for vendor inquiries	January 25, 2012
3	Vendor submissions due	February 3, 2012
4	RFP released to vendor	TBD

4 Response Outline

To aid in the review, it is required that all responses follow the same general format.

PHA has developed a **Vendor Response Form** that follows. Please complete the Form with **clear and concise information** to describe your solutions' capabilities.

Note that completion of the Vendor Response Form is the minimum requirement for being considered to have delivered a complete and thorough response. Any additional marketing or supporting materials should be appended to the end of the Vendor Response Form and this will be considered the Vendor's complete Response.

4.1 Vendor Response Form

Consent to Use Information

The Vendor consents and has obtained written consent of any individuals identified in the response, to the use of the information in the response by the Public Hospitals Authority and individuals / organisations under contract with the Public Hospitals Authority to assist in evaluating the Response or associated projects.

Vendor Representative:	<<Name>> <<Title>>
Signature:	<<Signature of Vendor Representative>>
Date:	<<Date of signature>>
	I have the authority to bind the proponent.

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<<Insert Table of Contents>>

1. Vendor Profile

1.1 Contact Information

Vendor:	<<Legal name>> <<Mailing address>> <<Telephone number>> <<Fax number>> <<Web address>>
Contact Person:	<<Contact name>> <<Mailing address>> <<Telephone number>> <<Fax number>> <<Web address>>

1.2 General Information

Question	Answer
a) In what year did you begin business in the health information technology field?	
b) How many fulltime staff does your company employ? How many staff serve the healthcare market?	
c) How many office locations do you have worldwide service the healthcare market?	

Question	Answer
d) Do you have an office in The Bahamas, or a re-seller arrangement with any company located in The Bahamas?	
e) How many fulltime staff are dedicated to developing and enhancing the product that you are submitting for review?	
f) How many fulltime staff are dedicated to supporting the product?	

1.3 Client base

Question	Answer
a) How many users use this product worldwide?	
b) How many hospitals have deployed this product?	
c) Describe your typical client (e.g., beds, private vs public, multi-site vs single site, etc), inpatient/outpatient/primary care, etc.	

1.4 References

Question	Answer
a) Identify two projects that use solutions described in this response and that are of a similar size and focus as PHA.	**Reference #1** <<Name>> <<Title>> <<Organization>> <<Phone>> <<Email>> <<Project Description>> **Reference #2** <<Name>> <<Title>> <<Organization>> <<Phone>> <<Email>> <<Project Description>>

2. Solution Profile

2.1 Required Products/Modules

Provide a list of the products/modules **required** to meet the scope of HIS and EMR functional domains identified within this RFI.

Application	Version	Year first sold	Platform/OS	Brief Description of Purpose
<<Product/Module>>				
Add rows as necessary				

2.2 Required Third-Party Software

Provide a list of any third-party software (e.g., database) **required** to meet the HIS and EMR functional domains identified within this RFI.

Application	Version	Year first sold	Platform/OS	Brief Description of Purpose
<<Software>>				
Add rows as necessary				

2.3 Optional Products/Modules

Provide a list of any modules that are optional but that may enhance functionality or system use.

Application	Version	Year first sold	Platform/OS	Brief Description of Purpose
<<Products/Module>>				

Application	Version	Year first sold	Platform/OS	Brief Description of Purpose
Add rows as necessary				

2.4 Server Hardware

Describe the recommended server hardware for your proposed solution. Please distinguish between the production and testing or training environments

Server (or Purpose)	Specifications
(e.g., Web server)	
Add rows as necessary	

2.5 Other Hardware

Describe the basic technical specifications of other hardware required for your solution, including client hardware or other network infrastructure.

Device	Specifications
(e.g., client computer)	
Add rows as necessary	

2.6 Server and Network Architecture

Question	Answer
Describe a typical server and network architecture.	

Question	Answer
Provide a conceptual diagram of the server and network architecture, including communication or data flows with other systems	<<insert diagram below this table>>

2.7 Hardware and Software Sourcing

Question	Answer
Do you supply the third-party software required above? If yes, is PHA required to purchase it from you?	
Do you supply the hardware identified above? If yes, is PHA required to purchase it from you?	

3. Functional Capabilities

3.1 HIS Functional Domains

Question	Answer
Can your solution be used to share or integrate patient data across multiple health facilities? Describe the mechanisms (e.g., EMPI, single MPI database, etc.) used to link patient records or create a single patient record across care settings and levels of care.	
What is your system's primary patient identifier? (e.g. Medical Record Number, MPI Number, Other?)	
Describe the techniques that your solution offers for patient searching and duplicate prevention (e.g. combinations of fields, soundex, matching algorithms, flagging possible duplicates, etc.).	
Does your system allow for the addition of user-defined patient demographic fields?	

Question	Answer
What customization (e.g., of forms, screen layouts, workflow) can be done with your solution? Can these customizations be done by a System Administrator or do they require support from the vendor?	
Describe your solution's bed management, census and discharge management capabilities.	
Describe your solution's patient accounting capabilities, including charge master maintenance, charge capture, patient billing, insurance verification/claims management and collections?	
Describe your solution's HIM capabilities, including coding/abstracting, chart completion, and release of information.	

Question	Answer
Describe your solution's approach for ICD-10 coding? When will ICD-10 coding be available in your solution?	
Describe your solution's approach for coding Medical Procedures?	
Describe your solution's patient and procedure scheduling capabilities.	
Does your solution include a reporting system or does it require third party software?	
Are the reports customizable?	

3.2 EMR Functional Domains

If you do not provide EMR solutions.   Please indicate below and skip the following questions.

Question	Answer
Identify the services/levels of care for which you can provide an EMR solution (e.g. inpatient acute, inpatient LTC, hospital or community based outpatient (primary care and speciality service), emergency services, etc. Are these solutions available in a single or multiple product/modules? Please identify which products are required for each service/level of care.	
If your solution for different services/levels of care requirements multiple modules/products, describe your approach for support an integrated clinical record across care settings.	

Question	Answer
Can your solution be used with a third-party HIS (for patient identification, billing, HIM functions)? If yes, describe how your solution can be integrated with third-party HIS solution. Provide examples of third-party HIS products with which you have integrated/interfaced?	
For each product/module, please describe the scope of clinical documentation available (e.g. medical/surgical history, allergies, vital signs, encounter record, nursing documentation, medications, orders/results, etc.)	
Does your solution include integrated functionality for CPOE?	
Describe how your solution integrates with third-party CPOE solutions.	
Describe how your solution integrates with third party ancillary systems (e.g., Lab, Pharmacy, Radiology, etc.)	

Question	Answer
Describe how your solution integrates registration/ADT and scheduling functions to support inpatient, outpatient and emergency services workflow and patient flow.	
Describe any decision-support capabilities your solution offers.	
Does your solution support the use of mobile devices? If so, please identify supported platforms.	
Do you offer any communicable disease surveillance/management solutions to support the functions of a public health department? If so, please briefly describe.	

4. Non-Functional Requirements

4.1 Interfaces and Data Migration

Question	Answer
Describe your approach to interfacing with third-party information systems.	
Can our existing ADT/Billing interfaces be leveraged/re-used or will entirely new interfaces be required?	
Have you created interfaces between your product and a third-party Enterprise Master Patient Index? If so, please identify.	
Are there any known limitations/constraints to interfacing your product with other HL-7 compliant information systems?	
What is the typical cost and timeframe for creating a custom interface between your product and another information system?	

Question	Answer
PHA has existing information systems slated for replacement, as identified in this RFI. Describe your approach to extracting, transforming, and loading this data into your product. What is the scope of the data that can be transferred into your product? Are there any limitations/constraints to transferring legacy data?	
Have you completed any previous data migrations from a Keane solution to your solution? If so, please describe the product, the scope of data migrated. If possible, please identify the client and contact person.	

4.2 Privacy and Security

Question	Answer
Describe how your product enables the privacy of personal and personal health information (i.e., controls and monitors authorized access and dissemination).	
Describe how your product enables the security of personal and personal health information (i.e., controls and monitors unauthorized access).	

4.3 Continuity and Disaster Recovery

Question	Answer
Describe your recommended approach to data backup, archiving, and restoration.	
Describe your recommended approach to disaster recovery.	

5. Implementation and Organizational Change Management

Question	Answer
Describe your approach to defining system configuration requirements (i.e. how do you support the client in identifying their unique configuration parameters?)	
Describe your approach to software installation, configuration, and testing.	
Describe your approach to server installation, configuration, and testing.	
What are your typical timelines for implementation of your various proposed solutions?	

Question	Answer
Describe the acceptance testing procedure that occurs before go-live.	
Describe your training approach for end-users and system administrators.	
Describe any processes that you would use to assist PHA in transitioning to and adopting the new system.	
Describe your project management approach.	

6. Ongoing Support and Service

6.1 Issue Identification and Resolution

Question	Answer
Describe the types of ongoing support that you provide.	
Describe how you categorize and prioritise issues. What is the response time for these based on severity?	

6.2 Maintenance, Administration, and Upgrades

Question	Answer
Describe the pro-active maintenance and support you provide.	
Describe the regular system administration support that you would provide.	
Describe the maintenance and support role that PHA would have to provide.	
Describe the regular system administration that PHA would have to provide.	
How often are minor and major patches released?	

Question	Answer
Are product upgrades included in the annual maintenance fee?	
Describe the typical process for patching or upgrading your system.	
How is client-feedback on features and functionality incorporated into upgrades?	
Describe your approach to system customization. Are customized solutions eligible for major system upgrades?	

7. Costing

To support your cost estimates, please see **Appendix A: Key Healthcare System Metrics** for details regarding sites, users, and other information that may affect costing.

7.1 One-Time Costs

Please provide an estimated cost range **all** of the anticipated hardware, software, and professional service costs associated with a deployment across **all** public healthcare system facilities as described in this RFI. The costing information should be comprehensive and also include estimates of costs where the hardware, software, or services would be provided be a third-party.

Vendors should adjust the items or add rows as required assuming that it represents a comprehensive and accurate view of the costing.

7.1.1 HIS Solution

Item	Units	Cost Range		Assumptions
		Low	High	
Required Products/Module Software				
Optional Products/Module Software				
Server and Network Hardware				
Data Interfaces				

Item	Units	Cost Range		Assumptions
Required Third-Party Software (Server and client)				
Optional Third-Party Software (Server and client)				
Clients and Peripherals				Note: Please provide an estimates single unit cost for workstations, printers, mobile devices, etc.
	N/A			
	N/A			

Item	Units	Cost Range		Assumptions
Professional Services				Note: Vendor may use other categories or breakdowns for Professional Services – but the total cost must cover the items identified.
Data Migration from Keane HIS				
Configuration and Implementation				
Hardware Deployment				
Training				
Go-Live Support				
Project Management				

7.1.2 EMR Solution

Item	Units	Cost Range		Assumptions
		Low	High	
Required Products/Module Software				

Item	Units	Cost Range		Assumptions
Optional Products/Module Software				
Server and Network Hardware				
Data Interfaces				
Required Third-Party Software (Server and client)				

Item	Units	Cost Range		Assumptions
Optional Third-Party Software (Server and client)				
Clients and Peripherals				Note: Please provide an estimate range for a single unit cost for workstations, printers, mobile devices, etc.
	N/A			
	N/A			
Professional Services				Note: Vendor may use other categories or breakdowns for Professional Services – but the total cost must cover the items identified.
Data Migration – from iPHIS (clinical)				
Configuration and Implementation				
Hardware Deployment				
Training				

Item	Units	Cost Range		Assumptions
Go-Live Support				
Project Management				

7.2 Ongoing Costs

Identify **all** of the anticipated ongoing licensing, maintenance, and support costs. The costing information should be comprehensive and also include estimates of costs where the hardware, software, or services would be provided be a third-party.

Vendors should adjust the items or add rows as required assuming that it represents a comprehensive and accurate view of the costing.

7.2.1 HIS Solution

Item	Units	Cost Range		Assumptions
		Low	High	
Yearly Licensing and Support Costs (for required product/module software only)				
Interfaces				

Item	Units	Cost Range		Assumptions
Yearly Licensing and Support Costs (for optional product/module software only)				
Yearly Licensing and Support Costs (for required third-party software)				
Yearly Licensing and Support Costs (for optional third-party software)				
Other Yearly Licensing and Support Costs				

Item	Units	Cost Range		Assumptions
Other Yearly Costs				

7.2.2 EMR Solution

Item	Units	Cost Range		Assumptions
		Low	High	
Yearly Licensing and Support Costs (for required product/module software only)				
Interfaces				
Yearly Licensing and Support Costs (for optional product/module software only)				

Item	Units	Cost Range		Assumptions
Yearly Licensing and Support Costs (for required third-party software)				
Yearly Licensing and Support Costs (for optional third-party software)				
Other Yearly Licensing and Support Costs				
Other Yearly Costs				

Appendix A: Summary of Key Healthcare System Metrics

Note: All metrics are estimates for scoping and costing purpose only and do not represent official national metrics.

| Healthcare Facility	Number of beds	Number of Discharges	Number of Outpatient Visits	Number of Emergency Room Visits	Number of Physicians	Number of Nurses
Primary Care Health Centres						
New Providence	N/A	N/A	247,000	N/A	48	219
Grand Bahama (10 clinics)	N/A	N/A	80,000	N/A	Included in total for RMH	Included in total for RMH
Family Islands	N/A	N/A	170,000	N/A	19	114
Hospitals						
PMH	415	16,000	80,000	50,000	360	820
SRC – Geriatric (LTC)	128	23	N/A	N/A	20	450
SRC - Psychiatric	377	1,200	21,000	N/A		
RMH	85	5,000	67,000	4,000	70	260

NA = Not Applicable or Not Available

Estimated number of patients in existing Keane MPI – 450,000

Estimated number of patients in existing iPHIS MPI – 100,000

Note: An estimated 75% to 85% patients in the iPHIS MPI are also represented in the Keane MPI.

Appendix B: Network Typology
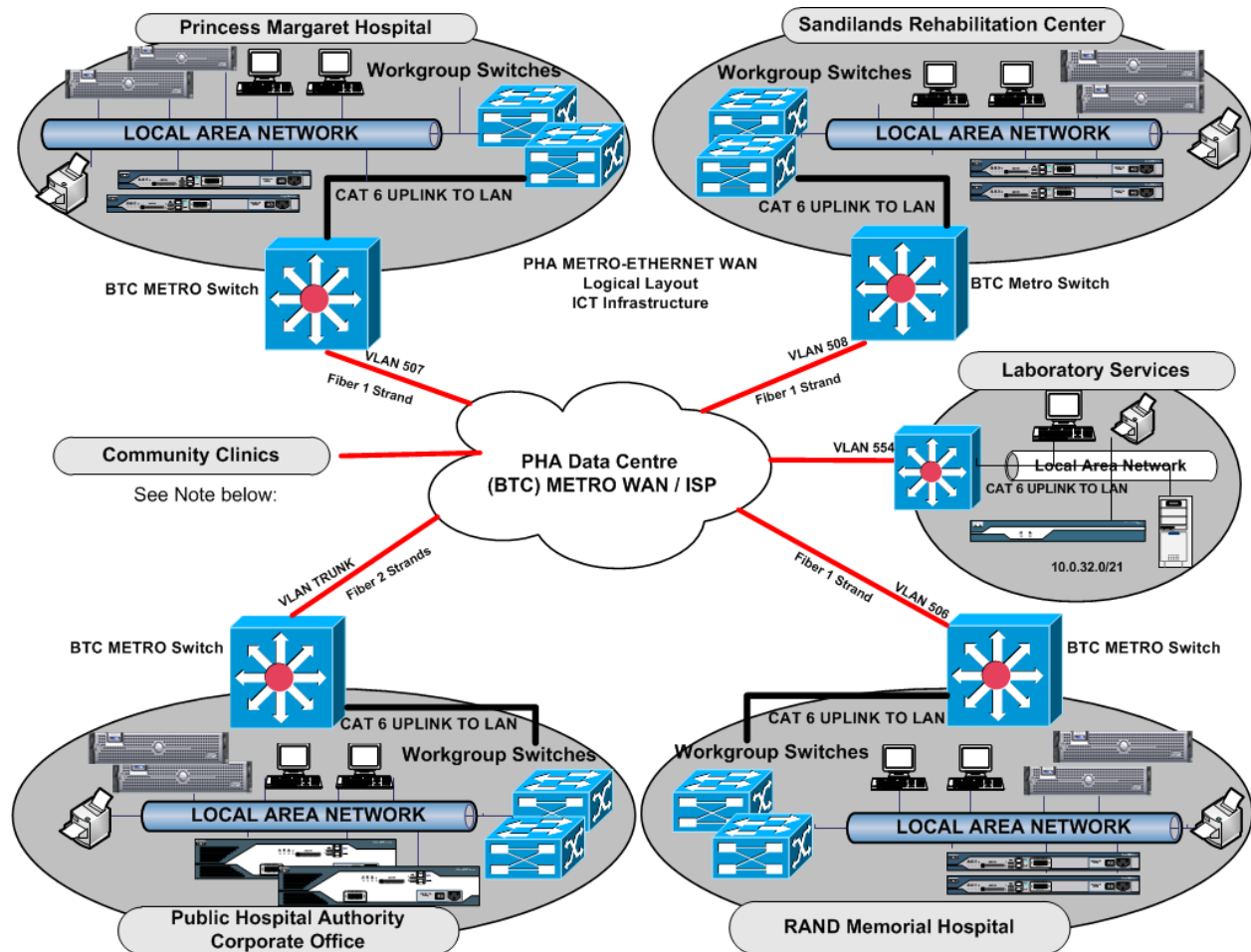
Note: Community Clinics in Grand Bahama are connected to the PHA data centre through various mechanisms, including DSL and Metro Ethernet. Community Clinics outside of Grand Bahama connect to PHA data centre through mechanisms including DSL, Cable, and the Government Wide Area Network. The PHA is in the planning process to migrate the majority of these connections to Metro Ethernet over the next year.