

REPUBLIC OF KENYA



KISII COUNTY GOVERNMENT



ARAB BANK FOR ECONOMIC
DEVELOPMENT IN AFRICA



SAUDI FUND FOR
DEVELOPMENT



MINISTRY OF HEALTH

BID DOCUMENT FOR

**PROPOSED CANCER CENTRE AT
THE KISII TEACHING AND REFERRAL HOSPITAL**

**SUPPLY, INSTALLATION HOSPITAL MANAGEMENT
INFORMATION SYSTEM (HMIS) INCLUDING ICT GOODS
AND EQUIPMENT**

**FORM OF TENDER
GENERAL REQUIREMENTS
QUALIFICATION INFORMATION
SPECIFICATIONS
BILLS OF QUANTITIES**

TENDER NO.: MOH/NCCP/ICB/006/2021-2022

HMIS AND ICT GOODS & EQUIPMENT

CLOSING DATE: 1ST JULY 2022 AT 10.00 A.M. LOCAL TIME

SCHON ASSOCIATES



NARCO ENGINEERING
CONSULTANTS



DR. NABEEL ABDUL-RAHEEM CONSULTANTS

Issued on: 1st June 2022

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INVITATION FOR TENDERS

COUNTRY:	KENYA
PROJECT NAME:	CONSTRUCTION AND EQUIPPING OF A NEW CANCER DIAGNOSTIC AND TREATMENT CENTRE AT KISII TEACHING AND REFERRAL HOSPITAL
TENDER NO:	MOH/NCCP/ICB/006/2021-2022
TENDER NAME:	SUPPLY, INSTALLATION HOSPITAL MANAGEMENT INFORMATION SYSTEM (HMIS) INCLUDING ICT GOODS AND EQUIPMENT
CLOSING DATE:	FRIDAY, 8TH JULY 2022 AT 11:00 A.M. KENYAN TIME

1. The Government of the Republic of Kenya has obtained a loan from the Arab Bank for Economic Development in Africa and the Saudi Fund for Development to finance the Construction, Equipping and Commissioning of a new Cancer Diagnostic and Treatment Centre at Kisii Teaching and Referral Hospital and it is intended that part of the proceeds of the said loan will be applied towards the costs of the Works.
2. The Ministry of Health invites sealed Tenders from eligible Tenderers for the Construction, Equipping and Commissioning of a new Cancer Diagnostic and Treatment Centre at Kisii Teaching and Referral Hospital (hereinafter called the Works) and the remedying of any defects therein.
3. Eligible interested Tenderers may obtain further information, addendums or clarifications in respect to this Tender from the Ministry website www.health.go.ke. All eligible Tenderers are advised to regularly check the website during the bidding period.

4. A complete set of the Tender documents may be downloaded from the Ministry’s website www.health.go.ke or public procurement information portal: www.tenders.go.ke, free of charge. Eligible Tenderers downloading the Tender document MUST forward their company’s details to procurement@health.go.ke so that any addendum/ clarifications can be sent to their email address.

Requests for clarification to be sent either by mail to Principal Secretary, Ministry of Health P. O Box 30016 Nairobi, Kenya or through email address procurement@health.go.ke, at any time, but not later than 14 days before the closing date for submittal of bids.

The Tender is comprised of the following Six (6) Volumes (with sub-volumes):

Item	Tender Volume		Name of Tender
1.	I. Main Works		Main Works
2.	II. Electrical Installations		
3.	II	(1 of 3)	Electrical Installations
4.	II	(2 of 3)	Lift Installation
5.	II	(3 of 3)	Extra-Low Voltage (ELV) System Installations
6.	III. Mechanical Installations		
7.	III	(1 of 5)	Plumbing, Drainage, and Fire Fighting installations
8.	III	(2 of 5)	Air Conditioning and Mechanical Ventilation Installations
9.	III	(3 of 5)	Medical Gases Installations
10.	III	(4 of 5)	Kitchen and Laundry Equipment Installations
11.	III	(5 of 5)	LP Gas Installations
12.	IV. Medical Equipment		Supplying, Installation, Commissioning, Operation, Maintenance and Handover of Medical Equipment
13.	V. HMIS		Supply and Installation of Hospital Management Information System (HMIS) including ICT Goods and Equipment
14.	VI. Hospital Furniture		Supply, Installation, Commissioning, Operation, Maintenance and Handover of Hospital Furniture

Interested bidders may participate on their own or as a joint venture. All partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms. A copy of the agreement entered into by the joint venture partners shall be submitted with the tender.

5. A Pre-Tender site visit will be held at the *site located opposite Kisii School along Kericho-Kisii Highway on Monday, 6th June 2022 at 09:00 a.m.* The site has a conspicuous signpost that reads “Proposed Kisii Cancer Centre”.
6. The **original** and **one copy** of the Tender Document shall be placed inside of a sealed envelope, clearly marked with, “[Name of the TENDER] “, reference number with a warning “**Do Not Open until [Friday, 8th July 2022 at 11.00 a.m. (Kenyan Time)]**”.
7. If the envelopes and packages with the tenders are not sealed and marked as required, the Client will assume no responsibility for the misplacement, loss, or premature opening of the tender.
8. Every Tender must be accompanied by a **Tender Security (Bank Guarantee) of 2% of the Total Tender Amount** or equivalent amount in the currency of the Tender.
9. Tenders must be delivered to the address below,

The Principal Secretary,
Ministry of Health,
Afya House Building, Cathedral Road,
P.O. Box 30016-00100,
NAIROBI.

or be deposited in the Tender Box located on 1st Floor of Afya House, Ministry of Health, Cathedral Road, Nairobi, so as to be received on or before **11:00 a.m. on Friday, 8th July 2022.**

Electronic bidding will *not* be permitted. Late tenders will be rejected.

10. Technical Proposals will be opened immediately thereafter at the GTZ Boardroom located at Afya House Ground Floor.

Head Supply Chain Management Services

For: Principal Secretary

FORM OF TENDER

Date:
.....

Invitation of Tenders No.:
.....

To: *[Name of the Employer /Issuer of Invitation
of Tenders] [Address of the Employer
/Issuer of Invitation of Tenders]*

Dear Sirs,

Subject: Invitation of Tenders No.....
For [Name of Tender]

1. Having examined the tender documents, including, in particular, the Conditions of Contract, the Specifications, Drawings and Bills of Quantities *[as well as Addenda Nos.and..... , if any]* we, the undersigned, offer to supply and install *[insert description of the Works]* (hereinafter referred to as the Works) and to remedy any defects therein, all in conformity with the said tender documents for the sum of:

.....
[Insert amount in figures]
.....

[Insert amount in words]

or such other sum as determined in accordance with the said Conditions of Contract and other documents of such contract as may be concluded between us.

2. We undertake, if our Tender is accepted, to commence the Works as soon as reasonably possible after receipt of the Engineer's notice to commence and to complete the whole of the Works within the Time for Completion.

3. We undertake, if our Tender is accepted, to provide a performance bank security in an amount equivalent to percent of the Contract Price for the due performance of the Contract, such performance security being in accordance with the requirements stated in the tender documents and the form prescribed therein.

4. We agree to abide by this Tender for a period of 120 days from the closing date for the submittal of tenders, and this Tender shall remain valid and binding upon us for the said duration and may be accepted by you at any time before expiry of the period stated.

5. Until a formal contract is prepared and executed, this Tender and your written acceptance thereof shall constitute a binding contract between us.

6. We confirm that we recognize that you are not bound to accept the lowest or any other bid received by you.

Yours truly,

[Name of Tenderer]
By: *[Signature of Authorized Representative]* *[Name of Authorized Representative]*
[Designation/Capacity]

Witness: *[Signature]*
[Name] [Occupation] [Address]

PART I – QUALIFICATION INFORMATION

MANADATORY REQUIREMENTS

Item	Description	Yes	No
1	Copy of a valid Certificate of Incorporation or /Business Registration		
2	Copy of Pin Number from Kenya Revenue Authority (KRA)/ Internationally Recognized body		
3	Copy of Valid Tax Compliance from their respective country of residence		
4	Copy of Current & valid Single Business Permit		
5	The bidder should show evidence of a strong office base established in the country and the region with demonstrated support service for not less than 12 months		
6	The bidder shall establish to the Employer’s satisfaction, proof of similar contracts (Hospitals) successfully completed in the last 10 years indicating the contract sums and Client references		
7	Detailed project work plan and delivery schedule is required. Bidders will be evaluated against time to deliver the full functionality and adoption of the facility		
8	Written power of attorney of the signatory of the tender to commit the bidder for Consortiums, a joint venture agreement and power of attorney to commit the others.		
9	Financial Capability (As supported by Audited Accounts for the last five (5) years		
10	The Bidder shall provide details of line(s) of credit available to the bidder, including amount(s) and name of bank(s) making available such line(s) of credit and contact details		
11	The bidders and must provide information for all the activities and areas of specialties including relevant licenses, registration, and certifications.		
12	Attach copies of Recommendation letters from three of your major clients having undertaken similar assignment		
13	Documentary evidence of the equipment/instruments proposed in the form of brochures or catalogues		

Item	Description	Yes	No
14	The bidder shall provide a manufacturer authorization specifying name, model number and country of origin and status of equipment production for all such equipment without any alteration		
15	Total Compliance to Specifications with Clause-by-Clause Statement of Compliance (SOC) of the response in the stipulated format		
16	The bidder should demonstrate Proof of availability of local training capacity		
16	Tender must be accompanied by a Bid Bank Guarantee of 2% of Tender Amount in the tender currency.		
	Bidders must meet ALL the mandatory requirements to qualify for Further Evaluation		
	FOR FOREIGN FIRMS PROVIDE EQUIVALENT OF ALL THE ABOVE WHERE APPLICABLE. FOR A SUCCESSFUL FOREIGN FIRM, IT WILL BE A MUST OR WILL BE REQUIRED TO REGISTER WITH KENYA NATIONAL CONSTRUCTION AUTHORITY BEFORE SIGNING OF THE CONTRACT.NCA Website: http://nca.go.ke/		

PART II GENERAL REQUIREMENTS

1. The specifications provided describe the basic requirements for equipment. Tenderers are requested to submit with their offers the detailed specifications, drawings, catalogues, etc. for the products they intend to supply.
2. This project is tax exempt, tenderers are requested to quote excluding applicable local taxes.
3. Tenderers must indicate on the specifications sheets whether the equipment offered comply with each specific requirement.
4. All the dimensions and capacities of the equipment to be supplied shall not be less than those required in these specifications. Deviations from the basic requirements, if any, shall be explained in detail in writing with the offer, with supporting data such as calculation sheets, etc. The Employer reserves the right to reject the products, if such deviations shall be found critical to the use and operation of the products.
5. The tenderers are requested to present information along with their offers as follows:
 - a) Shortest possible delivery period of each product.
 - b) Information on proper representative and/or workshop for back-up service/repair and maintenance including their names and addresses.
 - c) provide information for all the activities and areas of specialties including relevant licenses, registration, and certifications.
 - d) Manufacturers authorization for all the products being supplied specifying name, model number and country of origin and status of equipment production for all such equipment without any alteration.
 - e) Documentary evidence of the instruments proposed for in the form of brochures or catalogues.

PART III - INSTRUCTIONS TO TENDERERS

A. GENERAL

1. Purpose of Tender Invitation

Tenders are invited by **The Ministry of Health**. (hereinafter referred to as the Purchaser) for the supply of **Medical Equipment** (the Goods) required for the **Kisii Cancer Centre** Project (the Project) and described in the tender documents accompanying these Instructions.

2. Interpretation

The terms used in these Instructions shall have the same meanings assigned to them in Article I (Definitions and Interpretation) of Part I (General Conditions of Contract) of the tender documents, subject to any amendments stated in Part II (Special Conditions of Contract). The words "tender" and "bid" are used here interchangeably and shall have the same meaning and any derivative of either shall have the same meaning as the corresponding derivative of the other.

3. Financing

The Purchaser is the Government of the **Republic of Kenya** (hereinafter referred to as the Beneficiary) has applied for and obtained financing from **BADEA and SBF** (hereinafter referred to as the financing institution(s)) for the Project and part of such financing will be applied towards meeting the cost of the Goods. However the proceeds of such financing will only be paid by the financing institution(s) at the request of the Beneficiary in accordance with the loan(s)/ financing agreement(s).

4. Eligibility

- 4.1 . Except as otherwise expressly stated in these Instructions, this invitation to bid is open to all suppliers having the legal capacity to bid and enter into contracts. Bidders shall not at the time of tendering or thereafter be ineligible to bid or subject to boycott under the rules applied by the financing institution(s) referred to in Clause 3 of these Instructions.
- 4.2. Unless the bidders are manufacturers or producers of the type of goods required and will manufacture or produce the Goods, they must be authorized agents or marketing representatives of such manufacturers or producers.
- 4.3. No bidder shall be affiliated or associated with a firm engaged by the Purchaser as consultants for the preparation of designs specifications or other documents for procurement of the Goods.

5. Eligibility of Goods and Services

Goods and incidental services required under the tender documents shall not be produced wholly or partly in any country subject to boycott under the rules applied by the financing institution(s) referred to in Clause 3 of these Instructions.

6. Language

The tender, contract documents, correspondence and other related documents shall be in **English** Language(s).

7. Tender Documents

The tender documents comprise all the following:

- a) Invitation to Tender.
- b) Instructions to Tenderers.
- c) Form of Tender.
- d) Form of Tender Security.
- e) Conditions of Contract:

Part I: General Conditions of Contract.

Part II: Special Conditions of Contract.

- f) Technical Specifications.
- g) Price Schedule.
- h) Form of Agreement.
- i) Form Or Performance Security.
- j) Form of Bank Guarantee for Advance Payment

The above-mentioned tender documents and other related documents, as may be issued by the Purchaser or agreed with the successful bidder before award of the Contract, shall apply in accordance with the order of precedence stated in the Contract Agreement.

8. Receipt of Tender Documents and Contact Person

The tenderer shall confirm in writing by mail, telex or facsimile transmission receipt of the tender documents and advise the Purchaser of the name, address and facsimile number of the person authorized to receive, on behalf of the prospective tenderer, any further information and instructions by the Purchaser and/or any addenda to the tender documents.

9. Costs of Bidding

The tenderer shall bear all costs associated with the preparation and submission of its tender. The Purchaser shall, under no circumstances, be responsible for such costs.

10. Single Bids

No bidder may submit either separately or as a partner in a joint venture more than one bid, except, however, where alternative bids are allowed.

11. Closing Date for Submittal of Bids

Bids shall be submitted and delivered by mail, courier service or by the bidder or any agent thereof in person not later than **11:00** hours on **8th July 2022** at the address of the Employer stated below:

**The Principal Secretary,
Ministry of Health,
Afya House Building, Cathedral Road,
P.O. Box 30016-00100,
NAIROBI.**

Any bid received after the closing time stated in this Clause will be rejected and returned unopened to the bidder submitting such bid.

12. Amendment of Tender Documents

The Purchaser may, at any time before the closing time for submittal of bids, amend the tender documents by issuing an addendum or addenda in writing to all prospective bidders who obtained the tender documents. Such addendum or addenda shall form part of the tender documents and all prospective bidders shall promptly acknowledge by mail, telex or facsimile transmission the receipt of the same. The time for submittal of bids may be extended as appropriate by the Purchaser to enable prospective bidders to take any addendum into account in the preparation of their bids.

13. Clarification of Tender Documents

Any prospective bidder may at any time, but not later than 14 days before the closing date for submittal of bids, request in writing clarification of any matter stated in the bidding documents and the Purchaser will respond to such request in writing by circular letter to all prospective bidders who obtained the tender documents, but without identifying the source of the request for clarification.

B. PREPARATION OF TENDERS

14. Forms and Schedules

The bidder shall use, fill-in and furnish the Form of Tender (shown as Annex I to the Tender Documents), Price Schedule (s), Form of Tender Security and any other forms and schedules contained in the tender documents. The tenderer shall also submit with its bid any information or material required under these Instructions and may, if

necessary, provide additional sheets. Failure to use and fill-in the forms which are mandatory in accordance with the above may result in rejection of the bid. All entries shall either be typed or printed in indelible ink, without interlineations or erasures.

15. Bid Prices

- 15.1. The bidder shall state in the price schedule the unit prices, where applicable, and the total price of its bid.
- 15.2. The unit rates and prices and the total price of the bidder shall be deemed to include all taxes, duties and other levies payable by the bidder in any country. But insofar as the bidder is liable to pay any taxes, duties or levies imposed under the laws of the Purchaser's country, the unit rates and prices and the total price quoted by the bidder shall not be deemed to include such taxes, duties and levies except insofar as they have been in force 28 days before the closing date for submittal of bids.
- 15.3. Prices to be indicated in the price schedule shall be stated in the following manner:
 - (a) For goods to be supplied locally from the Purchaser's country, the price of the Goods shall be stated including all custom duties, sales and other taxes and levies with a breakdown showing the following:
 - (i) the price of the Goods ex-works or factory or ex-warehouse.
 - (ii) taxes, duties and levies including, without limitation, excise taxes, sales taxes and custom duties paid or payable on materials and components for the manufacture or assembly of the Goods the price of which is quoted ex-works (ex-factory) or on previously imported goods quoted ex-warehouse or showroom.
 - (iii) the price for inland transportation, insurance and other local costs incidental to delivery of the Goods, if so required in the tender documents, to their final destination.
 - (iv) the price of other incidental services required in the tender documents in connection with the supply of the Goods.
 - (b) For goods to be supplied from outside the Purchaser's country, the price of the Goods shall be stated CIF, FOB, CFR port of destination, CIP or CPT (named place), as required in accordance with the terms of delivery stated in the tender documents. The following components of the price, if any, shall be identified and stated:
 - (i) the price for inland transportation, insurance and other local costs incidental to delivery of the Goods from the port of entry to their final destination, if so required in the tender documents.

- (ii) the price of other incidental services required in the tender documents in connection with supply of the Goods.

- 15.4. The terms ex-works, CIF, FOB and other abbreviations, referred to in these Instructions or in the tender documents in connection to the terms of delivery of the Goods, shall be interpreted in accordance with and governed by the current edition of Incoterms published by the international Chamber of Commerce.
- 15.5. The statement of components of the price referred to in Clause 15.3 of these Instructions is solely required for the purpose of comparison of bids.
- 15.6. Unless otherwise stated in the tender documents, the prices of the Goods quoted by the bidder shall be fixed and not subject to any adjustment.

16. Bid Currencies

- 16.1. Except as otherwise stated in the tender documents, prices of goods and incidental services, which will be supplied by the bidder from within the country of the Purchaser, shall be quoted in the currency of the Purchaser's country. But the bidder may quote part of its total price in one or more foreign currencies (not exceeding three) if it will procure part of the materials for, or components of, the Goods from outside the Purchaser's country. The bidder shall justify quotation in a combination of local and foreign currencies by reference to the quantities and costs of such imported materials or components of the Goods.
- 16.2. Unless otherwise stated in the tender documents, prices of the Goods and incidental services to be supplied from outside the Purchaser's country shall be quoted in the currency of the bidder's home country or, if so allowed in the bidding documents, in a currency widely used in international trade. However, the bidder may quote part of its total price in one or more other currencies (not exceeding three) if it will procure part of the materials for, or components of, the Goods from outside its home country. The bidder shall justify quotation in a combination of currencies by references to the quantities of such materials and/or components procured from outside its home country.

17. Evidence of Eligibility and Qualifications of the Bidder

The bidder shall submit with its tender documents establishing, to the satisfaction of the Purchaser, the eligibility and qualifications of the bidder at the time of submission of its bid. Such documents shall include the following:

- (i) An authenticated copy of a recent certificate of its registration in its home country and a certificate from the Chamber of Commerce of that country that it carries on business in the said country.
- (ii) If the bidder will not be the manufacturer or producer of the Goods, evidence that it is an authorized agent or marketing representative of the manufacturer or producer or that it has been specifically authorized by the manufacturer or producer to supply the Goods to the Purchaser.
- (iii) Evidence of financial, technical and production capability of the bidder to perform the Contract.
- (iv) If the bidder does not carry on business in the Purchaser's country, evidence that the bidder is or will be represented by an agent in that country capable of performing the supplier's obligations relating to maintenance, repair and stockpiling of spare parts, as stipulated in the tender documents.

18. Confirmation of Eligibility and Compliance of the Goods with the Tender Documents

- 18.1. The bidder shall state the country or countries of origin of the Goods and incidental services, if any, in order to enable the Purchaser to ascertain compliance with the requirement of eligibility stated in Clause 5 of these Instructions. Documentary evidence, in the form of certificate(s) of origin, confirming such compliance shall be furnished at the time of shipment.
- 18.2. The bidder shall furnish with its bid documentary evidence of conformity of the Goods to the bidding documents. Such evidence may be in the form of literature, drawings and data and shall consist of the following:
- (i) a detailed description of the essential technical performance characteristics of the Goods.
 - (ii) a list giving full particulars, including available sources and current prices of spare parts, special tools and other items necessary for the proper and continuing functioning of the Goods for years after commencement of the use thereof or such other period as stated in the tender documents.
 - (iii) a detailed comparison of the technical specifications of the Goods proposed to be supplied by the bidder with the technical specifications stated in the bidding documents, so as to demonstrate conformity of the Goods to the latter technical specifications or otherwise indicate deviations therefrom. For the purpose of such comparison, it should be noted that references in the bidding documents to standards for workmanship, materials or equipment and any brand names or catalogue

numbers are intended to be descriptive only. Alternative standards, brand names and/or catalogue numbers may be accepted by the Purchaser provided it is demonstrated to its satisfaction that they are equal or better than those stated in the tender documents.

19. Period of Tender Validity

Tenderers shall remain bound by their tenders for a period of **120** days from the final closing date for submittal of bids. Any tender stated to be valid for a shorter time may be rejected by the Purchaser.

20. Tender Security

- 20.1. The tender shall be accompanied by a tender security in the form of a certified cheque or of a bank guarantee issued or endorsed by a bank acceptable to the Purchaser. Such bank guarantee shall be in the form prescribed in the tender documents and shown in Annex II thereto and shall be valid for the same period of the required tender validity.
- 20.2. Any tender not accompanied by the required tender security will be rejected. The tender security of a joint venture must be in the name of the joint venture partners submitting the tender.
- 20.3. . The tender securities of unsuccessful tenderers will be returned to them within 30 days after the expiration of the period of tender validity.
- 20.4. The tender security of the successful tenderer will be released promptly after signature of the Agreement and submittal by the said tenderer of the said tender of the performance security required under Article IV of the General Conditions of Contract.
- 20.5. The tender security of a tenderer shall be forfeited by it:
 - (a) If the tenderer withdraws its tender before expiry of the period of tender validity.
 - (b) In the case of the successful tenderer, if it fails within the prescribed time limit either to sign the Agreement or furnish the required performance security.

21. Signature of Tender

The tender and copies thereof shall be signed by the tenderer or a person duly authorized on its behalf. Proof of such authorization in the form of a power of attorney shall accompany the tender. All pages of the bid where entries or amendments have been made shall be initialed by the tenderer or on its behalf by a person duly authorized as aforesaid.

C. SUBMISSION OF TENDERS

22. Format of Tender

Tenders shall be submitted in one original comprising all documents listed in Clause 23 of these Instructions, together with the section containing the form of bid and Appendix to the bid and clearly marked "ORIGINAL". In addition the tenderer shall submit **One (1)** copies of the bid each clearly marked "COPY". In case of any discrepancy between the Copies and Original, the Original shall prevail.

23. Contents of Tender

The tender shall, in accordance with the requirements stated in the tender documents, comprise the following:

- (a) The tender form and completed Price Schedule,
- (b) The tender security,
- (c) Documentary evidence confirming eligibility of the Bidder and the Goods,
- (d) The completed schedules of supplementary information,
- (e) All information on any subcontract envisaged.

24. Sealing and Marking of Tenders

24.1. The tenderer shall put and seal the Original and each Copy of its tender in separate envelopes marked "ORIGINAL" and "COPY". The envelopes shall then be put in an outer envelope which shall be sealed. All such envelopes shall be addressed to the Purchaser at his address stated in Clause 11 of these Instructions, bear the name and identification number of the Project or Contract and a warning that they shall not be opened before the date for opening of bids.

24.2. The inner envelopes shall state the name and address of the tenderer for returning the tender to it in case it is not received at or before the closing time for submittal of bids.

25. Modification, Substitution or Withdrawal of Tenders

The tenderer may modify, substitute or withdraw its tender by written notice to the Purchaser before the closing time for submittal of bids. Such modification, substitution or withdrawal shall be contained in a sealed envelope marked as "Modification", "Substitution" or "Withdrawal of Tender". No modification, substitution or withdrawal of a tender will be accepted after the closing time for submittal of bids.

D. BID OPENING AND EVALUATION

26. Bid Opening

- 26.1. Bids will be opened by the Purchaser in a session to which all bidders will be invited, the time and place being stated in the invitation addressed to the tenderers. Each bidder may attend in person, or designate an authorized representative to attend on its behalf, and shall sign a register of attendance.
- 26.2. Envelopes marked "Withdrawal" or "Substitution" will be opened first and the name of the bidder submitting the same shall be announced. Bids for which notice of withdrawal thereof or substitution therefor was duly received before the closing time for submittal of bids will not be opened.
- 26.3. The remaining bids, will then be opened and the Purchaser will announce the bidders' names, the bid prices, including any alternative bid prices, the presence (or absence) of tender security and any such other details as the Purchaser may consider appropriate. The envelopes marked "Modifications" will then be opened and their content read out in appropriate detail.
- 26.4. The Purchaser will prepare minutes of the tender opening session, including the information announced during the session. Such minutes are for the administrative purposes of the Purchaser and the bidders shall not be entitled to receive copies thereof.

27. Confidentiality of Process of Evaluation of Bids

All information concerning the examination, clarification and evaluation of bids and the recommendation for award are confidential and will not be disclosed to bidders or to any person not officially concerned with such process until award to the successful bidder. Any attempt by any bidder to influence the process of evaluation of bids or award will lead to the rejection of its bid.

28. Clarification of Bids

The Purchaser may request any bidder to clarify any matter in its bid, including the breakdown of its unit rates. Such request will be made in writing, but no bidder will be allowed to make, through any clarification given by it, any change in the price or substance of its bid.

29. Determination of Responsiveness of Bids

- 29.1. Prior to the detailed evaluation of bids the Purchaser will examine each tender to determine whether it: (a) meets the eligibility criteria set forth in Clauses 4 and 5 of these instructions, (b) has been properly signed, (c) is accompanied by the required bid security, (d) is valid for the period required and, (e) is substantially responsive to the requirements of the tender documents. For this latter purpose, a substantially responsive tender is one which conforms to all terms, conditions and

specifications stated in the tender documents without any material deviation or reservation. A material deviation or reservation is one which: (i) affects in a substantial way the price, scope, quality, performance or the required timing of execution and completion of the works, or (ii) limits in any substantial way, inconsistent with the tender documents, the rights of the Purchaser or obligations of the tenderer, and (iii) whose rectification would unfairly affect the competitive position of the tenderers who have presented substantially responsive bids.

29.2. If a tender is found not to be substantially responsive, it may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation and it will be rejected by the Purchaser.

30. Correction of Errors

30.1. The tenders determined to be substantially responsive will be checked by the Purchaser for any arithmetical errors. The Purchaser shall have the right to correct such errors using the following method:

- (a) Where there is a discrepancy between the amounts stated in figures and the amount stated in words, the latter shall govern.
- (b) Where there is an error in any amount resulting from the multiplication of a unit rate for an item by the quantity thereof, the unit rate shall govern and the product of the multiplication shall be corrected accordingly, unless in the opinion of the Purchaser there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total stated will govern and the unit rate will be corrected accordingly.
- (c) The total tender price will be recalculated on the basis of correction of errors in the manner stated in paragraph (b) above, or if there are no such errors by correcting any errors in the summation of the prices for the various line items in the Price Schedule(s). The total price arrived at after either of these corrections shall be deemed to be the correct total price of the tender, unless the total price stated in the tender is lower than the corrected total tender price, in which case the former shall be deemed as the correct tender price and the tenderer shall be deemed to have offered a discount to be applied pro rata to the prices of all items in the schedule of prices.

- 30.2. The correction and adjustment of the tender prices and total tender price resulting from the application of the methods for correction stated above shall be binding on the tenderer and if the tenderer does not accept the corrected amount of its bid, it shall forfeit its tender security.

E. EVALUATION AND COMPARISON OF TENDERS

31. The Bids to be Evaluated:

Only bids determined to be substantially responsive will be evaluated and compared with one another by the Purchaser.

32. Currency of Evaluation

For the purpose of evaluation and comparison of the bids, all bid prices will be converted to the currency of the Purchaser's country at the selling rates of exchange published on the day of opening of bids by the Central Bank or an institution performing the functions of a central bank in the purchaser's country.

33. Determining the Lowest Evaluated Bid

33.1. For evaluation of the bids, the Purchaser will determine the evaluated bid price for each bid by adjusting the bid price, as determined in accordance with Clauses 30 and 32 of these Instructions, as follows:

- (a) excluding provisional sums.
- (b) making an appropriate adjustment on sound technical and/or financial grounds for any quantifiable acceptable deviations or reservations or alternative offers.
- (c) making an allowance in financial terms for completion time or times, which are different, if allowed, from those stated in the tender documents.
- (d) taking into account the cost of mandatory spare parts and services incidental to the supply of goods, if such services are required.
- (e) taking into account the availability in the Purchaser's country of spare parts and after-sales services for any equipment to be supplied by the bidder.
- (f) taking into account the projected operating and maintenance costs during the life of any equipment to be supplied by the bidder as well as the performance and productivity of such equipment.
- (g) applying any other criteria stated in the bidding documents.

33.2. The estimated effect of price adjustment provisions in the Conditions of Contract over the period of execution of the Contract shall be disregarded in the evaluation of bids.

34. Preference for Certain Bidders

34.1. The Purchaser will grant a margin of preference in the comparison of bids for goods manufactured or produced in the Purchaser's country and/or in the country of member countries of the financing institution(s)¹, provided the following conditions are satisfied:

- (i) the cost of the goods net of taxes and duties, includes a value added in one of the countries referred to above of not less than 20% of the exfactory bid price of the goods.
- (ii) the bidder is owned or beneficially owned to the extent of not less than 50% by nationals of that country.

34.2. The margin or preference to be accorded to the bidder eligible therefore will not exceed the amount of custom duties and other import taxes or the CIF or CIP price (or equivalent) on the basis of the lowest evaluated bid or 15% of such price, whichever is lower.

F. AWARD OF CONTRACT

35. Award

Subject to Clause 36 and to the application of Clause 34 of these Instructions, the Purchaser will award the Contract to the successful bidder satisfying the requirements of qualifications under Clause 17 of these Instructions and whose bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest evaluated bid as determined in accordance with Clause 33 of these Instructions.

36. Annulment of Tender Procedure

The Purchaser reserves the right to accept or reject any tender or to annul the tendering process and reject all tenders at any time prior to the award of the Contract, without thereby incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderers of the grounds for the Purchaser's action.

(1) If the Goods are wholly or partly financed by the Arab Bank for Economic Development in Africa, insert after the word "institution(s)" the expression "and any African Country."

37. Notification of Award

- 37.1. Prior to expiration of the period of validity of bids, as such period may be extended with the agreement of the successful bidder, the Purchaser will notify the successful bidder in writing by registered letter or by cable, telex or facsimile, that its bid has been accepted. This letter (hereinafter and in the Conditions of Contract called the "Letter of Acceptance") shall specify the sum which the Purchaser will pay to the Supplier in consideration of the supply of the Goods, the remedying of any defects therein as prescribed by the Contract and the provision of any incidental services required in the tender documents (such sum hereinafter and in the Conditions of Contract called "the Contract Price").
- 37.2. Pending signature and entry into force of the Contract, the notification of award will constitute a contract between the Purchaser and the successful bidder.

38. Signature of Contract

The successful bidder shall, on such date as notified to it by the Purchaser, sign the Agreement (in the form shown in Annex III) constituting the Contract for the supply of the Goods and any incidental services required in the tender documents.

39. Furnishing of Performance Security

Within 30 days of receipt of the Letter of Acceptance or notification of contract award, the successful bidder shall furnish the Purchaser with a Performance Security in accordance with the General Conditions of Contract, being in conformity with the form prescribed for this purpose in the tender documents (Annex IV).

40. Failure to Sign Contract or Furnish Performance Security

Failure of the successful bidder to comply with the requirements of Clause 38 and/or Clause 39 of these Instructions shall constitute a breach of contract and cause for annulment of the award, forfeiture of the bid security, and any such other remedy the Purchaser may take under the Contract. The Purchaser may also resort to awarding the Contract to the next ranked bidder or call for new bids.

PART IV - GENERAL CONDITIONS OF CONTRACT

ARTICLE-I DEFINITIONS & INTERPRETATION

- 1-1 In the Contract, unless the context otherwise requires, the following terms shall have the meaning assigned to each of them hereunder:
- (a) "Goods" means any equipment, machinery, merchandise or material to be supplied under the Contract and includes any accessories or spare parts required thereunder.
 - (b) "Supplier" means the person, firm, company or entity supplying the Goods.
 - (c) "Purchaser" means the entity or organization purchasing the Goods and stated in the Special Conditions.
 - (d) "Contract" or "Agreement" means the agreement entered into between the Supplier and the Purchaser for the supply of the Goods including all documents listed therein as constituting part thereof.
 - (e) "Contract Price" means the price of the Goods required to be paid by the Purchaser to the Supplier pursuant to the Contract.
 - (f) "General Conditions" means the General Conditions of Contract provided for herein.
 - (g) "Special Conditions" means the Special Conditions of Contract provided for in Part II of the Conditions of Contract.
 - (h) "Specifications" means specifications of the Goods as shown in the Bidding Documents.
 - (i) "The Services" means such ancillary services as transportation and insurance of the Goods, as provided for in the Contract, as well as incidental services to the supply of the Goods, as may be required under the Contract, such as installation and commissioning, provision of technical assistance, training and other services.
- 1-2 In the Contract, unless the context otherwise requires, words denoting the singular include the plural and vice-versa, and references in any document constituting part of the Contract to articles, clauses or sections are references to articles, clauses or sections of that document, while reference to a specified Appendix or Annex is a reference to that Appendix or Annex of the Contract.

ARTICLE-II APPLICATION OF THE GENERAL CONDITIONS, CONTRACT DOCUMENTS

- 2-1 The Contract Documents shall be as defined in the Contract Agreement and shall be taken as mutually explanatory of one another. In case of ambiguity or discrepancy, the Contract Documents shall prevail in the order specified in the Contract Agreement.

- 2-2 The Contract Documents constitute the entire agreement between the parties and shall supersede any previous correspondence between the parties not specifically incorporated in the Contract Documents.

ARTICLE-III

THE SUPPLIER TO INFORM HIMSELF FULLY

The Supplier shall be deemed to have examined the General Conditions, Special Conditions, Specifications, Appendices, Drawings and other Contract Documents and to have investigated and taken into account any conditions relevant to local conditions within the Purchaser's country that may affect the Supplier's performance of its obligations under the Contract.

ARTICLE-IV

PERFORMANCE SECURITY

- 41 Within 30 (thirty) days after the Supplier's receipt of notification of award of the Contract in the form of Letter of Acceptance, the Supplier shall furnish a performance security to the Purchaser in an amount equivalent to 10% of the Contract Price. The performance security shall cover the Warranty Period specified in the Special Conditions.
- 42 The performance security shall be denominated in the currency of the Contract or in another freely convertible currency acceptable to the Purchaser, and shall be in one of the following forms and issued by a bank acceptable to the Purchase:
- (a) An unconditional and irrevocable bank guarantee in the form provided in Annex-IV hereto.
 - (b) A standby letter of credit, the amount of which shall be payable to the Purchaser on the presentation of a simple statement that the Supplier has failed to carry out its obligations under the Contract.
- 43 The performance security shall be discharged by the Purchaser not later than 30 (thirty) days following the date of fulfillment of the Supplier's obligations under the Contract including the Warranty obligations of the Supplier stated in Article XVIII hereof as supplemented by the Special Conditions.

ARTICLE-V

PATENTS

The Supplier warrants that the Goods and any materials used in their manufacturing shall not be such as to cause the Purchaser to become liable for any infringement of any patent, registered design, trademark, proprietary know-how or copyright or anything

analogous or similar and the Supplier shall indemnify and hold harmless the Purchaser against any liability (howsoever arising or described) that may be incurred by the Purchaser as a result of the breach by the Supplier of the terms of this provision.

ARTICLE-VI TIME SCHEDULE FOR DELIVERY

The Supplier shall, prior to the signing of the Contract Agreement, provide to the Purchaser for approval a time schedule for delivery of the Goods which shall be within the time specified in the Bid and according to the specific requirements (if any) stated in the Special Conditions or in any of the Contract Documents. The approved time schedule shall be binding upon signing of the Contract Agreement.

ARTICLE-VII INSPECTION AND TESTING BEFORE SHIPMENT

- 7-1 The Purchaser or its designated agent or representative, shall be entitled at all reasonable times during manufacture, storage and packing of the Goods to inspect and examine them and to witness, at the Purchaser's own cost, tests on the Supplier's premises of the materials, workmanship and performance of the Goods or any component part thereof, and if part of the Goods is being manufactured on other premises, the Supplier shall obtain for the Purchaser permission to inspect, examine and witness tests as if the Goods were being manufactured on the Supplier's premises. Such inspection, examination or testing shall not release the Supplier from any obligation under the Contract.
- 7-2 The Supplier shall give the Purchaser not less than twenty-one (21) days notice in writing of the date on, and the place at which any Goods will be ready for testing and the Purchaser shall give the Supplier ten (10) days notice in writing of its intention to attend the tests. If the Purchaser fails to attend at the place so named on the date the Supplier has stated in its notice, the Supplier may proceed with the tests and the Purchaser shall be deemed to have waived its right to attend. The Supplier shall forthwith forward to the Purchaser duly certified copies of the test reports.
- 7-3 Where the Specifications provide for tests on the premises of the Supplier or of any Sub-Supplier, the Supplier, except insofar as otherwise specified in the Contract, shall provide free of charge such adequate office space, reasonable facilities, labour, materials, electricity, fuel, stores, apparatus and instruments as may be required for carrying out such tests efficiently.

- 7-4 As and when the Purchaser is satisfied that the Goods or any part thereof shall have passed the tests referred to in this Article which it has attended, the Purchaser shall issue to the Supplier a Shop Inspection Certificate to that effect within seven (7) days after the tests have been performed.
- 7-5 In case the Purchaser is not attending any shop test of which it was given due notice, the Supplier may issue the certificate after the part or parts of the Goods subject of such notice shall have successfully passed the tests, and it shall submit such certificate to the Purchaser via special courier service or by facsimile. If within ten (10) days after receipt of such certificate by the Purchaser, no objection has been made by the Purchaser, this certificate shall be deemed to have been accepted by the Purchaser.
- 7-6 If after inspecting, examining, or testing the Goods or any part thereof the Purchaser shall decide that such Goods or any part thereof are defective, it may require the Supplier to rectify the defects or replace the defective parts of the Goods.

ARTICLE-VIII PACKING

- 8-1 The Supplier shall provide such packing of the Goods as is required in the Special Conditions or in any of the Contract Documents.
- 8-2 Without prejudice to the generality of Section 8-1 hereof:
- (a) The final packing shall be such that the weight and dimensions of packages are within reasonable limits in order to facilitate handling, storage and transportation.
 - (b) Each crate, case box, package or bundle shall have labels and/or tags made from strong waterproof material and marked in indelible and non-fading ink, securely attached thereto. These labels or tags shall indicate at least the name of the manufacturer, the type of Goods or components and the quantity it contains so that it can be easily checked upon delivery. A packing list shall be included in each crate or box.
 - (c) Each package delivered under the Contract shall be consecutively numbered and shall also be marked with a code number or other identification to be approved by the Purchaser so that various components of the Goods which are shipped disassembled and which may not be interchangeable can be identified, collected and stored at site together. Additional information and/or colour codings that may reasonably be required by the Purchaser to facilitate identification, shipment to stores or site handling and storage will also be provided.

- (d) In addition to labels and markings indicated above, all packages, cases or boxes shall be clearly and boldly marked on two opposite sides and on the top as follows:

CONSIGNEE (The Purchaser)

DESTINATION

CONTRACT NUMBER

NAME OF SUPPLIER

WEIGHT AND DIMENSIONS

SERIAL NUMBER

CODE NUMBER

ARTICLE-IX DELIVERY AND DOCUMENTS

- 9-1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified by the Purchaser in its Schedule of Requirements and the Special Conditions.
- 9-2 For the purposes of the Contract, "FOB", "CIF", and "CIP" and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of the International Rules for the Interpretation of the Trade Terms published by the International Chamber of Commerce, commonly known as INCOTERMS.
- 9-3 Shipping documents to be provided by the Supplier shall be as stipulated in the Special Conditions.

ARTICLE-X INSURANCE

Where the Goods are to be supplied under the Contract on CIF, CIP or C&I basis, the Goods shall be fully insured by the Supplier in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in an amount equal to that, and in the manner, stipulated in the Special Conditions.

ARTICLE-XI TRANSPORTATION

- 11-1 Where the Goods are required to be supplied FOB, transportation of the Goods up to the vessel receiving the Goods shall be arranged and paid for by the Supplier.

11-2 Without prejudice to the provisions of Section 11-1 hereof, the responsibility for arranging transportation of the Goods and the costs thereof shall depend upon the basis on which the Goods are to be delivered. In all cases the responsibilities of either party shall be governed by the INCOTERMS.

11-3 In all cases, transportation of the Goods after delivery shall be the responsibility of the Purchaser.

ARTICLE-XII INCIDENTAL SERVICES AND SPARE PARTS

12-1 The Supplier shall provide such incidental services as specified in the Special Conditions.

12-2 The Supplier shall provide such spare parts as are required in the Special Conditions. The Supplier also undertakes to provide, on the request of the Purchaser, spare parts necessary for the operation and proper functioning of the Goods. Such undertaking shall be valid and binding for the period indicated in the Special Conditions.

ARTICLE-XIII CHANGE ORDERS - VARIATIONS

The Purchaser shall be entitled to:

- (a) Increase or decrease the quantity of the Goods or any item or items thereof within the limit of the percentage stated in the Special Conditions, and the Contract Price shall be increased or decreased accordingly by applying the unit price stated in the Contract for the Goods or item thereof subject of increase or decrease in quantity pursuant to this provision.
- (b) Make any change or modification in the designs, specifications and/or schedule of delivery of the Goods under the contract. However in case of such modification or in case of a variation in the quantity of the Goods or any item thereof exceeding the percentage stated in the Special Conditions, the Supplier and the Purchaser shall negotiate in good faith and agree on an increase or decrease in the Contract Price, as may be reasonable in the circumstances, and shall agree on the manner of payment of any agreed increase.

ARTICLE-XIV BASIS AND PAYMENT OF CONTRACT PRICE

14-1 Unless otherwise stipulated in the Special Conditions, the Contract Price shall be fixed and not subject to revision.

- 14-2 Payment of the Contract Price shall be made in the manner stated in the Special Conditions.
- 14-3 Should the Supplier require an advance payment, such advance payment, not exceeding 20% of the Contract Price, may be made upon the submission of an invoice and a Bank Guarantee in the form provided in Annex-V hereto.
- 14-4 Requests for payment shall be in writing and shall include all documents required under the Contract and satisfy all conditions prescribed therein.

ARTICLE -XV ASSIGNMENT

The Supplier shall not assign or transfer any of its rights or obligations under the Contract without the written consent of the Purchaser.

ARTICLE-XVI EXTENSION OF TIME FOR PERFORMANCE OF THE SUPPLIER'S OBLIGATIONS

- 16-1 The Supplier shall guarantee and strictly comply with the delivery dates and time limits set forth in the Contract, which shall be deemed of the essence of the Contract. In the event of any delay arising in any phase of performance by the Supplier of his obligations under the Contract, the Supplier shall promptly give notice to the Purchaser of the delay or expected delay with the reasons therefore, not later than seven (7) days after the occurrence of the alleged cause of delay. The Supplier shall at all times use its best efforts to act with diligence to cure any such delay.
- 16-2 If the Supplier shall deem that any delay justifies an extension of time in accordance with the provisions hereof, it shall submit a request in writing to the Purchaser for extension of time for its performance under the Contract. The Purchaser will grant the Supplier such extension of time if the Purchaser is satisfied, after substantiation of the Supplier's written request therefor, that:-
- (i) such delay in the Supplier's performance was due to unforeseeable causes beyond the Supplier's control or caused by a Force Majeure event, as defined in Article XIX hereof; and
 - (ii) the Supplier has, from the occurrence of the event causing such delay, used its best efforts to cure any delay of the Supplier's performance resulting therefrom. Any extension of time granted by the Purchaser in accordance with the provisions of this Article shall be notified to the Supplier in writing and shall be for that period of time which the Purchaser deems justified and reasonable under the circumstances.

ARTICLE-XVII

LIQUIDATED DAMAGES

- 17-1 To the extent that the time for performance of the Supplier's obligations under the Contract has not been extended in accordance with the provisions of Section 16-2 hereof and subject to the provisions of Article XIX hereof, should the Supplier fail to perform any of its obligations under the Contract, and in particular its obligation to effect the shipment of any item of the Goods by the time or times specified in the Delivery Schedule, the Purchaser shall have the right to deduct from the Contract Price or demand and receive from the Supplier, as liquidated damages for delay for every week or part of a week of delay after the date scheduled for performance or delivery according to the Delivery Schedule, the amount specified in the Special Conditions.
- 17-2 The total liability of the Supplier for liquidated damages under the Contract shall be limited to ten per cent (10%) of the Contract Price.
- 17-3 If the Purchaser shall demand the payment of any of the liquidated damages specified herein, the Supplier shall pay to the Purchaser the said liquidated damages by means of telegraphic or telex transfer remittance within thirty (30) days after receipt by the Supplier of the Purchaser's invoice.
- 17-4 The payment of liquidated damages pursuant to this Article shall be without prejudice to any other right or remedy that the Purchaser may be entitled to under the Contract or by law.

ARTICLE-XVIII

WARRANTY

- 18-1 The Supplier warrants that the Goods are new, unused and are manufactured in accordance with the current state of the art. The Supplier also warrants that the Goods and any part thereof, whether manufactured by the Supplier or procured from a sub-supplier shall be free from any defect in design, materials or workmanship.
- 18-2 The warranty stated herein shall remain valid for the period specified in the Special Conditions (the Warranty Period). The Warranty Period shall start after the Goods have been delivered to the final destination indicated in the Contract.
- 18-3 If at any time within the Warranty Period, the Purchaser alleges the existence of a defect in the Goods the particulars of such defect shall be promptly notified to the Supplier who shall be afforded a reasonable opportunity for inspection of the same.

- 18-4 Promptly upon receipt of such notice the Supplier shall either remedy, repair or replace the Goods.
- 18-5 The Warranty Period shall be extended by any period during which the Goods shall have been inoperative by reason of any defect therein or omission on the part of the Supplier. Further, in the event that any part or parts are replaced in accordance with this Article (either by the Supplier or by its sub-supplier(s)), the Warranty Period for such part or parts shall be extended for a further period, which shall be the greater of six calendar months from the date of the replacement of such part or parts, or the un-expired portion of the Warranty Period. A similar extension to the initially extended Warranty Period shall occur if the replacement part or parts need to be replaced again during the initially extended Warranty Period.
- 18-6 The Purchaser, or any of its duly authorized representatives, shall promptly notify the Supplier by telex/telegram or facsimile of the discovery of any defect for which a claim is to be made under this Article. Such notice shall include full particulars as to the nature of the defect and the extent of such defect which at the date of the notice is apparent. The Supplier shall have no obligation under the Warranty for any defects discovered during the Warranty Period, unless notice of such defects is received by the Supplier no later than thirty calendar days after the expiry of the Warranty Period. The Supplier shall have no obligation with respect to defects discovered after the expiration of the Warranty Period, as such period may be extended pursuant to Article 18-5 hereof.
- 18-7 The Supplier shall remedy at its expense any defect against which the Goods or any part thereof is warranted under this Article by making all necessary repairs and replacements at its expense in his Plant or such other place as directed by the Purchaser. If the Supplier delays or fails to remedy the defect within 21 days of sending the notice to it, the Purchaser or its authorized representatives shall in their discretion cause the necessary repairs or replacements to be made elsewhere for the account of the Supplier, provided, however, that the Purchaser shall have used reasonable endeavours to mitigate the cost of such repairs or replacement. For the avoidance of doubt, the Supplier shall reimburse the Purchaser for all costs reasonably incurred by the Purchaser in effecting repairs at any place other than the Supplier's Plant.
- 18-8 The Supplier shall guarantee all repairs and replacements effected to the Goods other than by the Supplier during the Warranty Period, provided that the Purchaser shall have given the Supplier reasonable notice to enable the Supplier to attend to and/or supervise or direct such repairs or replacements. For the avoidance of doubt, it is agreed that if the Supplier fails to attend to or supervise such repairs, after having been given notice, it shall nonetheless guarantee any and all such repairs or replacements that are effected to the Goods.

ARTICLE-XIX FORCE MAJEURE

- 19-1 In the event of any delay brought about by war, hostilities, blockade, revolution, insurrection, mobilization, civil commotion, act of the public enemy, strikes, lock-outs, plagues or other epidemics, quarantines, earthquakes, accidents, fire (not caused by negligence of the Supplier, its servants or agents), storm damage or any identical or similar event affecting the Supplier's performance of its obligations under the Contract in general, and the delivery of the Goods in accordance with the Delivery Schedule of the Goods in particular, the Supplier shall be allowed such extension of time as may be agreed with the Purchaser subject, expressly to a detailed written application for such extension being lodged with the Purchaser within ten working days of the occurrence of such Force Majeure.
- 19-2 The Supplier shall not be entitled to extension of time, under this Article or Section 16-2, for the delivery of the Goods or the performance of any other obligation of the Supplier under the Contract, unless:
- (i) the Supplier has duly given the notices provided for in Section 16-1 and in 19-1 above; and
 - (ii) the delay has not in any way been caused or contributed to by any error, neglect or default of the Supplier or any its directors, servants or agents; and
 - (iii) the Supplier has taken all reasonable steps to avoid or mitigate the delay whether before or after the occurrence of the event causing the delay.
- 19-3 The Purchaser shall be entitled to dispute the occurrence of any event of Force Majeure or the duration thereof or whether any event constitutes an event of Force Majeure as defined above or whether the occurrence of such event of Force Majeure actually delays the delivery of the Goods or the performance of any other obligation of the Supplier thereby entitling the Supplier to any extension of time as set out above or the duration of such extension of time requested.
- 19-4 In the event that the Purchaser exercises any of its rights under Section 19-3 above and, if an agreement cannot be reached between the Supplier and the Purchaser on the matter, such matter shall be referred to arbitration in accordance with Article XXV hereof.
- 19-5 At all times, the onus shall be on the Supplier to establish the facts entitling it to rely on this Article and in particular, without prejudice to the generality of the foregoing, that the requirements set out in Paragraphs (i), (ii) and (iii) of Section 19-2 hereof have been satisfied.

19-6 If a Force Majeure event occurs and its effect continues for a period of 90 days, either party may give to the other notice of termination of the contract which shall take effect 14 days after the giving thereof. If, at the end of the 14 - day period, the effect of the force majeure continues, the Contract shall terminate.

ARTICLE-XX

DEFAULT AND TERMINATION

20-1 Subject to the provisions of Articles XVI and XIX hereof, in the event:

- (a) the Supplier fails to provide the Performance Security in accordance with Article IV hereof; or
- (b) the Supplier fails to deliver the Goods or any part thereof within the Time Schedule of Delivery specified in the Contract; or
- (c) the Supplier, having delivered part of the Goods, fails or refuses to remedy any defect brought to its notice by the Purchaser; or
- (d) the Supplier shall have otherwise defaulted in the performance of any of its obligations under the Contract;

the Purchaser may, by 30 (thirty) days' notice, terminate the Contract. The Contract shall be deemed terminated if the default is not remedied before the expiry of the 30 (thirty) days.

20-2 If the Purchaser fails to pay to the Supplier any amount due to the Supplier within 60 (sixty) days of the request for payment, and such amount or any part thereof is not contested by the Purchaser within 30 (thirty) days of the receipt of the request, the Supplier may, by a written notice of 30 (thirty) days (after the expiry of the initial 60 days period), terminate the Contract. The Contract shall be deemed terminated if the Purchaser fails to remedy the default before the expiry of the 30 (thirty) days notice.

20-3 If the Supplier shall have become voluntarily or involuntarily dissolved, or become bankrupt or insolvent (howsoever such bankruptcy or insolvency may be evidenced) or shall have taken steps to compound with its creditors, or proceedings are commenced for its voluntary or involuntary winding-up, or if the Supplier shall carry on its business under a receiver for the benefit of its creditors or any of them, the Contract shall thereupon be terminated without any notice, court proceedings or other legal procedure of any kind, all of which are hereby expressly waived.

20-4 In the event that the Contract is terminated pursuant to any of the above provisions of this Article or if the Contract is terminated under the provisions of Article 19-6 hereof, the Supplier shall be entitled, insofar as the price of any part of the Goods delivered or Services executed is not covered by payments made prior to the date of termination, to such price at the rates and prices stated in the Contract. Subject to the foregoing, the Supplier shall also be entitled to:

- (a) the price of any part of the Goods ordered by the Purchaser, which have been shipped to the Purchaser or of which the Purchaser is legally liable to accept delivery, such Goods becoming the property of the Purchaser upon payment therefore by the Purchaser;
- (b) the price of any part of the Goods ordered by the Purchaser which are ready for shipment to the Purchaser, where manufacture and assembly of the same, whether by the Supplier or by a sub-supplier thereof, is complete, provided that such part of the Goods becomes the property of the Purchaser, upon payment therefore by the Purchaser;

Provided that the Supplier shall not be entitled to payment under (a) and (b) above unless and until the Purchaser shall have received such part of the Goods at the final destination and accepted the same.

20-5 Notwithstanding anything contained in this Article or in any of the Contract Documents, if the Contract is terminated as a result of the default of the Supplier, the Purchaser shall be entitled to purchase all, or any part of the Goods not supplied by the Supplier and obtain any of the Services not executed by the Supplier, from another source as the Purchaser may, in its sole discretion, decide and shall be entitled to deduct from the payments due to the Supplier or claim and recover from the Supplier any cost the Purchaser has incurred over and above the amount of the Contract Price and also to recover, by way of deduction from the amounts due to the Supplier or otherwise, the amount of any damages or loss suffered by the Purchaser as a result of the default of the Supplier in carrying out its obligations.

ARTICLE-XXI NON-WAIVER

21-1 Failure of or delay by either party to exercise any rights or remedies provided for herein or by law or to properly notify the other party in the event of breach, shall not release the other party from any of its obligations under the Contract (including warranties in the case of the Supplier) and shall not be deemed a waiver of any right of that party to insist upon strict performance of the Contract or as a waiver of any rights or remedies which that party may have under the Contract and shall not be deemed as acquiescence in any subsequent default in the performance of the terms and conditions of the Contract.

21-2 The shipping or delivery by the Supplier or receiving or acceptance of or payment by the Purchaser for the Goods or for any designs or drawings therefor shall not be deemed a waiver of any rights in respect of any prior failure by the Supplier to comply with any of the provisions of the contract. No purported oral modifications to the Contract by the Purchaser shall operate as a waiver of any of the terms thereof.

**ARTICLE-XXII
LANGUAGE - NOTICES**

- 22-1 Any document, order, request or communication to either party shall be in writing in the language or one of the languages specified in the Special Conditions. Should any document be in a language other than the above, certified translation of the same in the language or one of the languages specified in the Special Conditions shall be provided.
- 22-2 Any notice or request to be given or to be made by any party to the other under the Contract or in connection therewith may be given by telex, facsimile or letter. Such notice or request shall be deemed to have been duly given when it shall be delivered by hand, mail, telex or facsimile to the other party at its address specified in the Contract or any other address as that party may designate by notice to the other.

**ARTICLE-XXIII
APPLICABLE LAW**

The Contract shall be subject to and shall be construed in accordance with the laws for the time being in force in the country of the Purchaser.

**ARTICLE-XXIV
TAXES**

- 24-1 Any taxes, dues, fees, stamp duties or any other levies in the country of the Supplier or any other place outside the country of the Purchaser shall be borne by the Supplier.
- 24-2 Any taxes, dues, fees, stamp duties or any other levies in the country of the Purchaser for the importation of the Goods or in relation to any matter relating to the Contract, other than income tax imposed on the personnel of the Supplier providing incidental services required by the Contract, shall be borne by the Purchaser.

**ARTICLE-XXV
SETTLEMENT OF DISPUTES**

Any dispute between the parties to the Contract and any claim by either party against the other arising from the Contract and which could not be settled amicably by the parties within 60 (sixty) days from the date of notice by either party to the other, shall be submitted to [the court of competent jurisdiction in the Purchaser's country/arbitration by an Arbitral Tribunal as provided for in the Special Conditions]*.

(*) State as appropriate.

PART V - SPECIAL CONDITIONS OF CONTRACT

1. General

The Special Conditions of Contract herein stated shall supplement the General Conditions of Contract. Wherever there is a conflict, these Special Conditions shall prevail over the General Conditions.

2. Definitions The Purchaser is **Ministry of Health**

3. Performance Security

The performance security shall be equal to 10% of the total Contract Price and shall be valid **to the end of Defects Liability Period.**

4. Inspection and Testing

The inspection and testing required by the Purchaser shall be carried out according to the following procedure:

Equipment to be factory tested to the relevant British standards and test certificate issued.

The contractor shall supply all instruments and equipment necessary to carry out site tests and shall arrange with other sub-contractors for the testing of associated equipment which may affect the performance of the plant installed under this sub-contract works.

5. Delivery and Documents

- i) The Supplier shall, upon shipment, notify the Purchaser by cable, telex or facsimile of the full details of the shipment including description and quantity of goods, the liner or vessel, the bill of lading number and date of shipment, port of loading and port of delivery.
- ii) The Supplier shall promptly forward the following documents to the Purchaser:
 - Original of negotiable, clear, on board bill of lading and a non-negotiable copy of the bill of lading.
 - 4 copies of the packing list indicating contents.
 - Insurance certificate.
 - Inspection and/or testing certificate issued by the authorized inspection agency.
 - Certificate of origin.

The document mentioned above shall be received by the Purchaser at least one week prior to the arrival of the Goods.

6. Schedule of Delivery

The delivery of Goods shall be according to the following Schedule of Requirements:

.....
.....
.....

7. Insurance

The comprehensive insurance, referred to under Article X of the General Conditions of Contract shall be equal to 110% of the "CIF/CIP" value of the goods on "all risks" basis, including war risks and strikes.

8. Contract Price

The Contract Price shall not be subject to any revision or adjustment unless explicitly stated herein.

9. Payment of Contract Price

- i) The method and terms of payment of the Contract Price to the Supplier shall be as follows:
 - a) **The supplier will be entitled to payment from time to time for materials and/or any work carried out under this Sub-Contract, the value of which shall be determined by the Consultant Engineer and included in Payment Certificate to the Main Contractor under the Main Contract. The Nominated Sub-Contractor will be informed by the Quantity Surveyor when such payments are certified and should he not receive from the Main Contractor the payment due within the period stipulated in the Conditions of Sub-Contract he should immediately report to the Architect and the Engineer.**
 - b) **Unless otherwise agreed by the Architect all materials relating to this Sub-Contract must be delivered to the site before payment for such items may be certified.**
 - c) **Materials delivered to site will be valued and amount certified shall be a maximum of 70% of the equipment/material contract value.**
- ii) The currency or currencies in which payment is to be made to the Supplier under this Contract shall be in accordance with the Contract Price currency which has been quoted in the Supplier's tender, including other currencies which the Supplier shall have indicated in its bid as required by him, unless otherwise stated herein .

- iii) Unless payments are to be made by letter of credit, payments shall be effected by the Purchaser within a period not exceeding days of receiving the Supplier's invoice and other documents required under Section 5 (ii) hereof, except for any advance payment required which shall be made within the aforesaid period against the Supplier's invoice and the bank guarantee provided for in Section 14.3 of the General Conditions.

10.Change Orders and Variations

The change orders and variations referred to under Article XIII of the General Conditions may take any one or more of the following forms:

- i) Amendment of design or specifications of certain components which are required to be specially designed or manufactured for the Purchaser.
- ii) The method of shipment or packing.
- iii) Increase or decrease of quantities limited to **15%** of the original quantities of goods specified in the Contract.
- iv) Place of delivery.

11.Subcontracting

The Supplier shall notify the Purchaser in writing of any subcontract it intends to conclude for manufacturing or supplying part(s) of the Goods. Such notification, in its original tender or later, shall not relieve the Supplier from any liability or obligation under the Contract. The total amount of subcontracts shall not exceed
% of the
Contract Price.

12.Packing

The Supplier shall provide packing that shall be sufficient to withstand rough handling during loading, transport or storage. Further specific requirements of packing shall be as follows:

Meet the manufacturer's recommended material/Equipment packaging standards

.....
.....
.....

13. Transportation

- i) If Goods are required to be supplied on CIF or C&F price basis, transport of the Goods shall be arranged and paid for by the Supplier up to the destination specified in the Contract.
- ii) If Goods are required to be supplied on FOB price basis, the Supplier shall arrange and pay for transport of the Goods up to and including loading of the Goods on board the vessel.
- iii) Other requirements of transportation of the Goods are as follows:
.....
.....
.....

14. Spare Parts

The Supplier shall carry sufficient ex-stock supply of consumable (fast-moving) spare parts required for operation for a period of not less than **2 years**. Other spare parts shall be supplied as promptly as possible, but in any case within six months of placement of order and establishment of a letter of credit.

15. Incidental Services

The incidental services required under Section 12.1 of the General Conditions are
(i).....
(ii).....
(iii).....

16. Change Orders - Variations

The percentage specified for the purpose of Article XIII of the General Conditions is% of the quantity of the Goods or an item of the Goods, as the case maybe.

17. Liquidated Damages

The liquidated damages payable under Article XVII of the General Conditions shall be.....(state currency and amount) for each week of delay.

18. Warranty Period

The warranty period under Section 18.2 of the General Conditions shall be **At least 2 years from the date of Commissioning.**

19. Language(s) of the Contract

The **English** language(s) is/are designated for the purpose of Section 22.1 of the General Conditions. In case the Contract is made in more than one language and in case of divergence between the texts in different languages, the text in the **English** language shall prevail.

20. Notices

The following addresses are designated for the purpose of Section 22.2 of the General Conditions.

For the Purchaser:

Mailing Address:

.....
.....
.....
.....

Telex:.....

Fax:.....

Email:.....

For the Supplier:

Mailing Address:

.....
.....
.....
.....

Telex:.....

Fax:.....

Email:.....

21. Settlement of Disputes

The formation of the Arbitral Tribunal and the rules relating to arbitration for settlement of disputes pursuant to Article XXV of the General Conditions shall be in accordance with the following:

.....
.....

PART VI – TECHNICAL SPECIFICATIONS

3.1 SUMMARY OF TECHNICAL SPECIFICATIONS

The Goods and Related Services shall comply with following Specifications and Standards:

LOT NO.	Item No	Name of Goods or Related Service	Technical Specifications and Standards	COMPLIED YES/NO	COMMENTS
	<i>[insert item No]</i>	<i>[insert name]</i>	<i>[insert TS and Standards]</i>		

3.2 DETAILED TECHNICAL SPECIFICATIONS AND STANDARDS

1. HMIS SOFTWARE

GENERAL	
1	Functional Requirements
1.1	<p>System Capability – Proposed solution MUST contain the following modules including functional, technical and module integration information of each module or product as per Tender Document. Clinical Modules:</p> <ul style="list-style-type: none"> Clinical Data Repository Clinical Decision Support Computerized Provider Order Entry Physician Portal Patient Portal Physician Documentation Nursing Documentation Registries – Patient, Providers, and Location HL7 Interface Engine Ancillary systems Pharmacy Clinical Laboratory Radiology Patient Registration Systems Departmental systems Health Information Management Outpatient Clinics Emergency Room Management Neuro-Physiology Services Cardio-Pulmonary Services Blood Bank Operating Rooms Management Endoscopy Services CSSD Inventory Control System Revenue Control Patient Billing House Keeping Laundry and Linen Customer Feedback Document Imaging Asset Acquisition, Management, and Retirement
2	Technical Proposal Requirements
2.1	<p>System MUST offer Clinical Data Repository (CDR) and Clinical Data Warehouse functions. Tenderer to describe the main functions of CDR and how data is managed in the CDR. Tenderer to also describe the tools and utilities included in proposal to build Clinical Data Warehouse for research and analytics.</p>

2.2	<p>System Architecture and Design Provide overall technical architecture of proposed solution Provide a typical architecture (server and network) and description for an organization implementing the scope of solution proposed? Provide details of Database Management System. If it is not off-the-shelf software, please provide a brief description of the key features of the database management system. Provide approach to enterprise level integration of patient flows, activities and documentation from emergency to inpatient to ambulatory.</p>
2.3	<p>Supply and Implementation Provide a detailed implementation methodology that contains Program of works and Key performance indicators Reporting and recording systems; and Quality Plan. Tenderer to provide Implementation Plan and corresponding performance indicators including duration, robustness and efficiency of plan Provide details how proposed solution will facilitate the implementation of Policies, Joint Commission International Accreditation (JCIA) Standards and Current Documentation Practices especially on Medical Records documentation.</p>
2.4	<p>Training and Knowledge transfer Tenderer to provide a training schedule which should cover all departments of the hospital Provide evidence from past implementation on number of staff trained. Above 10,000 5000 – 9999 0 – 4999</p>
2.5	<p>Customer Support / Capacity Building An undertaking from three reputable references (International/Local) indicating level of support offered, evidence of scheduled system patches/updates, evidence of user technical training schedules and testimonials of tenderer’s building capacity of technical staff. Indicate duration of preliminary (free) support after System go-live. Above 3 years 1 - 3 years 0.1 – 1 year</p>
2.6	<p>Customization and Modifications An undertaking by the tenderer to show capacity to customize and modify the information system according to hospital policies and procedures. Provide details of technology innovation indicating timeframes between each system modification. Less than 1 year 2 – 5 years Above 5 years</p>
2.7	<p>Provide documentary evidence (but not limited to either questionnaires or interviews) from existing customer base on: (Cite any accreditation achieved) Maturity - frequency of failure of the software. Fault tolerance - ability of software to withstand (and recover) from component, or environmental, failure. Recoverability - Ability to bring back a failed system to full operation, including data and network connections. Learnability - Learning effort for different users, i.e. novice, expert, casual etc. Operability - Ability of the software to be easily operated by a given user in a given environment.</p>

	<p>Security - The degree of protection of information and data so that unauthorized persons or systems cannot read or modify them and authorized persons or systems are not denied access to them</p> <p>Compatibility and interoperability - The degree to which two or more systems or components can exchange information and/or perform their required functions while sharing the same hardware or software environment</p> <p>Maintainability - The degree of effectiveness and efficiency with which the product can be modified</p>
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S/NO.	DESCRIPTION
1	Queue Management System (QMS)

S/NO.	DESCRIPTION		
2	Hospital Management Information System (HMIS)		
Department		Room Name/No.	
Item Code No.	LOT-V-01	Item Description	Patient Management System
General Description			
This system will automate the patient's diagnostic journey from registration to discharge, reducing errors and improving patient care.			
Composition			
Hospital Management Information System Clinical Module Requirements Back-Office Function Requirements Reporting Function Requirements Medical devices Management Requirements Warranty & Support End user Training Life Cycle Management Support			
N.B: - Documentation of design and architecture of proposed solution			
Performance Specification			
Hospital Management Information System Clinical Module Requirements	<p>The solution includes an information system that provides the following</p> <ul style="list-style-type: none"> Should work in a decentralized and centralized environment Supports Biometric identification of patients Reception i.e patient registration as per MOH requirements i,e (MOH 405 , MOH 511 , MOH 512 ,MOH 301 , MOH 240 ,MOH 333 ,MOH 204A , MOH 333A ,MOH 510 , MOH 406 ,MOH 209) Registration Admission Emergency Patient Care Management Transfer Patient Billing Discharge Electronic Medical Records Nursing Management System Surgery Management Radiology/Imaging management Laboratory Information System Blood Bank Medico-Legal Case/Report Ambulance Services Hospital Connectivity to other institutions Birth/Death Registration Surveillance of Diseases – new as well as emerging Pharmacy Management 		

<p>Back-Office Function Requirements</p>	<p>The solution includes an information system that provides the following Organization Structure, Master Data & General Purchase & Inventory Management Dispatch/Issue Administration Fixed Assets Management Financial management Human Resource Management Record Room Integration with Drug Procurement Management System Inventory Management Purchase Order Processing Stores Management</p>
<p>Reporting Function Requirements</p>	<p>Reporting Ad-hoc Query and Analysis Content management and Search Enterprise Data Search Business Process Monitoring Bill Transfer</p>
<p>Medical devices Management Requirements</p>	<p>The HMIS Solution should be based on web based multi-tiered Service Oriented Architecture (SOA) model. The proposed application will be built based on the Open Standards policy and shall comply with e-governance standards. Also, solution should conform to the HL7, ICD 10, DICOM and other health standards.</p>

HMIS DETAILED SPECIFICATIONS

HOSPITAL MANAGEMENT INFORMATION SYSTEM MODULAR REQUIREMENTS

ACRONYMS

ABC	- Activity-Based Costing
ABN	- Advance Beneficiary Notice
ABW	- Actual Body Weight
ACRS	- Accelerated Cost Recovery System
ADT	- Admission, Discharge, and Transfer
ANSI	- American National Standards Institute
BSA	- Body Surface Area
CBC	- Complete Blood Count
CMG	- Case Mix Groups
CPOE	- Computerized Physician Order Entry
CPT	- Current Procedural Terminology
DICOM	- Digital Imaging and Communications in Medicine
DRG	- Diagnosis-related group
EDI	- Electronic Data Interchange
EMR	- Electronic Medical Records
EOQ	- Economic Order Quantity
FFP	- Fresh Frozen Plasma
GL	- General Ledger
HCPCS	- Healthcare Common Procedure Coding System
HIM	- Health Information Management
HIPAA	- Health Insurance Portability and Accountability Act
HL 7	- Health Level Seven
HMIS	- Hospital Management Information System
IBW	- Ideal Body Weight
ICD	- International Classification of Disease
LIS	- Laboratory Information System
LOS	- Length of Stay
MAR	- Medication Administrative Reports
MD	- Medical Doctor
MIC	- Medical Intensive Care
MPI	- Master Patient Index
PACS	- Picture Archiving and Communication System
RN	- Registered Nurse
TPN	- Total Parenteral Nutrition

EMERGENCY DEPARTMENT

Patient Triage

Automatically incorporates current patient demographic data from previous visits

Imports data from hospital system

Ability to run short registration form, with user-defined fields.

Includes patient reception routine to enter patient into the system with minimal data fields

Provide multiple search methods to identify patient, including:

Name

Partial name
Social security number
Medical Record Number
Maiden Name
Alias
Soundex Search Ability to view patient picture online to ensure proper identification
Ability to enter patient as Peter Maina
Ability to merge Peter Maina with actual account number once patient identified
Ability to capture chief complaint upon check in
Ability to identify patient status (urgent, critical, non-critical)
Ability to enter minimal patient data before patient arrives (ambulance)
Ability to assign room prior to patient arrival
Provide triage documentation
Ability to capture ER doctor
Ability to generate plans of care based on patient's chief complaint
Documentation on patient's vital signs
Ability to review patient allergies and current medications
Ability to view patient history
Ability to capture triage notes
Ability to document arrival method (walk-in, ambulance, life-flight)
Ability to capture patient's emergency contact and next of kin
Ability to edit registration when more information can be obtained
Automatically prints patient face sheet and bracelet
Incorporates anatomical drawings to locate problem areas
Provides waitlist capabilities
Identify multiple chief complaints

Documentation

Ability to enter physician and nursing notes
Incorporate vital signs from patient monitors
Ability to manually enter vital signs
Ability to enter nursing assessment data
Ability to insert canned text
Ability to graph flow sheets
Issues time and date stamp on all notes
Supports user defined plans of care
Allows unlimited free text on notes
Includes on-line prescription writer
Includes electronic signature capabilities
Ability to calculate medications
Ability to view and update hospital's MAR
Provide bedside ordering and interaction checks including:
Drug dosage checks
Drug interaction checks
Drug-allergy checks
Drug-disease checks
Duplicate therapy checks
Disease contraindication checks
Organization-defined rules

Ability to order x-rays and lab tests
Ability to base assessments on patient's chief complaint
Ability to select pre-defined order sets based on patient's chief complaint
Ability to place orders, document care and review a patient's record through a single portal
Automatically captures charges and sends to Billing
Ability to assign diagnosis codes

Patient Tracking

Provide Ability to track patient's location throughout the Emergency Room/Hospital color-coded display
Displays patient wait times/Que management
Automatically notifies staff of new results
Provide full display of results from single screen including lab and radiology.
Provides graphical display of vital signs
Flags abnormal vital signs or lab results
Provides at least a 24-hour panel
Ability to define time limits per task
Provides warning indicators based on user-defined criteria
Ability to view all outstanding and completed orders with escalation capabilities based on set timelines.
Ability to track patients on bedside terminal
Ability to time stamp all tasks
Ability to track all providers involved in a patient's care
Flags patients who have not been assessed over a user-defined period of time

Patient Discharge

Ability to transfer patient from Emergency Room to Hospital, with all documented information carried over. Not redundant entry of data.
Ability to print patient discharge instructions
Ability to customize discharge instructions for each patient, including information from patient's record
Ability to print hospital logo on discharge instructions
Hospitals have the capability to amend standard discharge instructions
Ability to create new discharge instruction
Discharge instructions based on best practice
Include medication information with discharge instructions
Ability to generate prescriptions upon discharge
Ability to schedule follow up appointments
Prints reminder letters for follow up appointments
Ability to print return to work/school information
Ability to generate patient surveys
Ability to print other referrals and forms upon discharge

Reports

Includes census of all patients by location
Generate logs by patient type, diagnosis, service, classification, physician and arrival mode
Provide Adhoc report capabilities

Document reports on patient wait-time
Generate reports of patients awaiting transfer
Prints audit report of all changes made to patient record

Integration

Provides integration with the following applications:

Nursing

Admissions

Patient Accounting

Order Management

CPOE

Surgery

Scheduling

Electronic Medical Record

Pharmacy

Laboratory

Radiology

Abstracting

Report Writing Tool

Inventory

ADMISSIONS DEPARTMENT

Master Patient Index

Provide multiple search criteria including:

Name

Partial Name

Maiden Name

Alias

Social Security Number

Medical Record Number

Soundex

Healthcare policy number

Ability to specify MPI search levels for your organization.

Identify potential duplicate records through date of birth or ID number, etc.

Automatically update MPI when new information entered.

Capability to view patient's address and phone number before selecting patient Information already captured on a patient defaults in when patient selected.

Provide reports identifying duplicate ID numbers, etc.

Display critical care indicators when selecting a patient- such as patient's allergies.

Information is shared from previous visits at other facilities throughout the enterprise

(County/Country*)-**Future option*

Automatically assign a medical record number for patients not in the system

Provides both a facility-specific medical record number and an enterprise number

Ability to merge duplicate medical records

Automatically assigns new account number for each visit.

Registration

Captures at a minimum the following information on a patient:

Name

Age/Birth Date

Admitting Physician

Attending Physician

Service

Admit Priority

Restrict Direct Disclosure

Admit Date/Time

Requested Accommodation

Room/Bed

Employer

Employer Address

Employer Phone Number

Occupation

Next of Kin

Next of Kin Address and Phone Number

Relationship of next of Kin

Emergency Contact

Up to four Insurance Fields

Policy Number

Subscriber

Guarantor

Co-pay Amount
Effective Dates
Financial Class
Medicare Questionnaire- if applicable
Primary Care Physician
Attending Physician
Resident
Referring Physician
Other Physician
Admitting Diagnosis
Capability to add new fields
Allows administrator to define required fields
Provides online insurance eligibility checks
System flags pre-authorization requirements
Provides quick registration form with minimal data
Ability to pre-register patients
Ability to enter frequently used default zip codes
Ability to change insurance for current visit without affecting future appointments.
Provide bad debt warning
Capability to collect co-pay at time of registration
System can print receipts
Provides Medical Necessity checks
Automatically prints ABN upon failed medical necessity check
Supports unlimited physicians
Ability to schedule recurring patients.
Supports Peter Maina registration with minimal data
Supports workman's compensation visits without affecting future appointments not covered under workman's compensation
Automatically generates face sheet, card and bracelet upon registration.
Ability to view information on patient referrals and automatically deplete visits upon registration
Ability to cancel registrations
Ability for authorized users to edit registrations
Capability to transfer patient from outpatient to inpatient without having to reenter data

Information captured during registration is available in real-time throughout the enterprise.
Can restrict users to view only
Can view patient pictures online at the point of registration
Ability to place outpatient in a bed without charging for the room
Supports recurring patients without having to reenter data at each visit
Ability to view patient history.
Print outpatients by service, By department.

Admissions

Provides online bed board updated in real time
Ability to print patient census on demand
Ability to assign beds based on patient preference
Conflict checks when assigning beds, (assigning male patient to female bed)
Alerts users of rooms in need of cleaning
Capability to reserve bed

Allow currently occupied bed to be reserved for future use
Capability to designate beds for certain types of patients
Ability for authorized user to override room assignments
Ability to transfer patients without having to reenter data
Captures reason for transfer
Captures separate rates for different rooms (private, semi-private)
Does not charge private room rate for patients that request semi-private when only private rooms are available
Ability to print census by nursing station
Ability to set rooms aside for observation patients
Ability to bill observation patient rooms by the hour
Ability to admit observation patient to a room
Ability to automatically admit newborns with mother's information defaulting in.
Ability to readmit a patient that was accidentally discharged
Ability to assign patient to overflow bed if room is occupied
Print census by physician
Print census by religion and/or parish
Allow patient to be removed from patient list or religion list to meet HIPAA requirements
Print list of unoccupied beds per unit
Ability to swap beds
Ability to assign patient a confidential or VIP status
Assign confidential status to all patients with a specified disease or within a specified location.
Restrict access to confidential patients to only authorized personnel
Ability to view bed status of other facilities within the enterprise
Allows user to edit admission time
Capability to toggle between admissions screens
Print labels at time of admission
Captures length of stay and warns user when patient is nearing end of LOS

Pre-admission

Ability to verify patient eligibility prior to admissions
Ability to flag pre-authorization requirements
Automatically transfer pre-admission data to admissions without having to re-enter data
Assign account number during pre-admissions
Assign room to pre-admitted patients
Ability to automatically purge pre-admission if patient not admitted within a specified number of days
Information updated during pre-admissions automatically updates patient record.
Ability to capture all vital patient information during pre-admissions
Ability to assign a billing number to pre-admitted patients
Allows re-scheduling of pre-admitted patients
Ability to enter free text notes during pre-admissions
Ability to record patient room preferences
Capability to print report of all pre-admitted patients for a user-defined period of time
Upon arrival, user can select pre-admission from list of pending visits
Ability to place orders during preadmission

Patient Discharge

Ability to update or cancel pending discharges
Ability to edit patient discharge

Ability to view patient information on-line following discharge
Ability to readmit discharged patient under same account
Ability to schedule follow up appointments following discharge
Ability to place outpatient orders during discharge
Provides daily list of patients with pending discharge
Can print list of pending discharges by nursing station
Notify housekeeping following patient discharge
Print discharge list for recurring outpatients
Ability to backdate discharge
Bed board updated upon patient discharge
Automatically notify appropriate departments of cancelled discharge

Bed Tracking

Ability to provide a departmental and enterprise wide, real-time patient tracking board.
Ability to provide a bed board view that can be configured to allow patient name to be viewed
Ability to provide a bed board view that can be configured to allow medical record number to be viewed
Ability to provide a bed board view that can be configured to allow visit number to be viewed
Ability to provide a bed board view that can be configured to allow insurance number to be viewed
Ability to provide a bed board view that can be configured to allow patient type to be viewed
Ability to provide a bed board view that can be configured to allow patient age to be viewed
Ability to provide a bed board view that can be configured to allow patient gender to be viewed
Ability to provide a bed board view that can be configured to allow a patient's requested accommodation type to be viewed
Ability to provide a bed board view that can be configured to reflect any clinical requirement for a patient, such as isolation, oxygen, etc.
Ability to provide a bed board view that can be configured to allow leave of absence status to be viewed
Ability to provide a bed board view that can be configured to allow CMG to be viewed
Ability to provide a bed board view that can be configured to allow an alternate level of care indicator to appear
Ability to provide a bed board view that can be configured to allow patient expected discharge date/LOS to be viewed
Can provide a bed board view that can be configured to allow patient confidential status to be viewed
Can provide a bed board view that can be configured to allow patient visitor status to be viewed
Can provide a bed board view that can be configured to allow admitting diagnosis to be viewed
Can provide a bed board view that can be configured to allow patient's medical service to be viewed
Can provide census information to be viewed through the Bed Board
Can provide an "off service" placement to be indicated through the Bed Board
Can provide multiple facilities to be viewed through the Bed Board
Ability for the Bed Board to display Pending Transfers

Ability for the Bed Board to display Pending Discharges
Ability for the Bed Board to display Emergency Registrations
Ability for the Bed Board to indicate if a patient has expired
Ability for the Bed Board to support blocking beds for periods of time.
Ability for the Bed Board to improve the management of housekeeping functions
Can notify management teams if beds are not filled within a pre-determined amount of time
Ability for the Bed Board to notify housekeeping teams of the would be status
Ability for the Bed Board to help to predict bed shortages
Automated bed board function to display current occupants including: Nursing unit, room, accommodation type, occupied beds, patient sex, and special conditions.
Supports ADT linkage for accurate patient tracking
System supports transport management, including Transport specifications, assignments, productivity reporting etc.
Describe your system's provide a warning device observation nearing the 23 hour.
Ability to review floor layout plans with patient names.

Integration

Admissions integrate with the following systems:

Patient Accounting

Nursing

Pharmacy

Order Management

Laboratory

Scheduling

Data Warehouse

Electronic Medical Record

Radiology

ED Systems

Operating Room

Physician Office Systems

Medical Records

Physician Systems

Quality Management

Abstracting

Reporting Tool

Oncology system

NURSING SERVICES

Care Planning

Contains user defined patient assessments
Assessments may include patient problems, treatments, vital signs, medications, outcomes, allergies, and dietary information.
Captures patient demographic data from patient's medical record
Capability to view patient's medications
Capability to view patient's clinical history
Captures patients' dietary order and restrictions
Can access care plans from throughout the organization from any workstation.
Captures patient's primary care, attending, and consulting physicians
Captures procedures to be performed during specified shift
Captures patient allergies
May add special precautions to plans of care
Provides discharge planning and patient education
Includes pre-op procedures
Provides capability to view all active orders
Can individualize plans of care by patient
Vendor provides standard plans of care based on national benchmarks
Can base focus of plan of care on outcome
Supports both single and multi-disciplinary plans of care
Provides critical pathways
Can combine two or more plans of care
Allows identification of problems and expected outcomes
User can correlate critical path activities with length of stay
Users have access to treatment plans from previous treatments
System generates work lists by provider
New orders can be flagged on work lists
Problems can be added to care plan based upon response to an assessment
Ability to determine which interventions should appear on the Kardex
Ability to display and print patient Kardex
Plans of care can be generated based on initial assessment using standard treatment protocols
Incorporate lab results into plans of care
Ability to modify treatments
Ability to maintain interdisciplinary plan of care by NANDA
Ability to discontinue portion of care plan once resolved
Ability to assign target dates to plans of care
Logs changes made to plan of care
Ability to enter free text information for interventions
Supports unlimited standard plans of care
Capability to copy and paste plans of care

Clinical Care Documentation

Supports multi-disciplinary documentation
Allows for bedside point of care documentation on mobile devices
All documentation includes User ID and date/time stamp
Can back date documentation time

Documents vital signs, I & O, weight, medication, etc.
Ability to view lab results
Provides drill down capabilities
Documentation updates patient's chart in real time
Supports multiple documentation methodologies
Provide summary list of patient allergies, medications and diagnoses
Ability to customize view by provider
Provides capability to edit notes
Flags abnormal vital signs
Capability to access input and output results
Ability to view Radiology images and reports
Provides electronic signature capability to sign off on results
Ability to define required fields
Ability to create user-defined flow sheets
Ability to graph results
Captures information from bedside monitors
Ability to send charges to billing
Ability to document patient goals
Generates outcome variance reports from charting
Capability to customize screens
Capability to enter new allergy information and update a patient's medical record
Authorized users can view documentation at any time
Capability to generate canned text
Capability to document History and Physical (H & P) Examination
Capability to update progress notes
Alerts clinicians of overdue charting
Provides support for touch screen
Supports voice recognition
Ability to document wound appearance and drainage
Ability to standardize wound descriptions via canned entries
Ability to attach appended entry to note
Can generate patient lists by clinician.
Viewing of documentation is restricted by user
User-defined viewing format (chronological, reverse chronological, by problem, by discipline)
Documentation includes clinical decision support
Updates care plans based on documented problems
Can print documentation by shift, day, week, month, and upon discharge
Provides patient tracking and documents with time. Uses a color-coded display
View 24-hour snapshot of patient results
Allows caregivers to prioritize tasks on work list
Work list alerts staff of situations or potential problems requiring attention
Documents all medications and allergies on an online Medication Administrative Record
Captures insulin history for diabetic patients

Critical Pathways

Clinical pathways include interdisciplinary orders
Orders and outcomes entered generate entries on the Kardex
Supports multi-disciplinary critical pathways
Critical pathways are user definable

Expected outcomes will auto-complete when charted as met and be rescheduled when charted as not met
Integrated with Order Entry System
Can document against variances to critical pathway
Variance reporting includes LOS, procedure, diagnosis, DRG, providers, type of variance, and source of variance.
Can edit critical pathways

Discharge Planning

Automatically generate prescriptions upon discharge
Capability to document patient education
Ability to print patient discharge instructions
Ability to print drug monographs
Ability to schedule follow up appointments
Ability to review all patient information online at time of discharge
Ability to produce user-defined checklists
Ability to print patient surveys upon discharge

Medication Administration

Provides interaction checks upon medication administration including:
Drug-drug
Drug-Allergy
Duplicate Drug
Drug-food
Provide ability for authorized users to override warning
Notifies clinician of abnormal lab results and/or vital signs prior to medication administration. Allow for rules-based logic.
Automatically calculates dosage based on patient's age, height, weight, and BSA.
Offers bar-coding of medications and patient wrist bands to verify prescriptions at patient's bedside
Charts one-time doses
Documents over the counter medications
Capability to document IV volume, drip rates, additives and type
Ability to place orders on hold
Ability to administer medications on a set or alternating schedule
Ability to document reason why a medication was not administered
Ability to provide add notes that can be viewed upon administration
Support interfaces with dispensing systems
Capability to print patient's online MAR on demand.

Integration

System is integrated with the following:
Pharmacy
Electronic Medical Record
Order Management
Dietary
Ancillary Services
Physician's Practices
Emergency Department
Surgery

Radiology
Admissions
Patient Accounting
CPOE (Computerized Physician Order Entry)
Provides Adhoc reporting tool

MEDICAL RECORDS

Master Patient Index

- Supports online access to Medical Records
- Automatically updates MPI when new information entered
- Provides multiple means of identification including; name, partial name, alias, ID number, medical record number, Soundex, etc.
- Provides multiple levels of search
- Capability to retain MPI information permanently
- Automatically assign a medical record number for patients not in the system
- Provide reports identifying duplicate ID numbers
- Information is shared from previous visits at other facilities throughout the enterprise
- Provides for multiple facility numbers linked to a single enterprise number.
- Ability to merge duplicate medical records
- Ability to unmerge records that have been merged.
- Ability to link multiple names to a record when merging records (Alias, maiden name, other name)
- Automatically alerts appropriate department of merged records
- Allows multiple users to view medical record at the same time
- Prohibits access to confidential patients and/or test results
- Ability to remove a patient from the Master Patient Index
- Ability to restore a patient who's been removed from the MPI
- Compile a list of duplicate or potentially duplicate patient accounts

Medical Record Tracking

- Provide online inquiry into chart location
- Ability to sign out medical record
- Ability to sign out portions of a medical record
- Ability to bar code medical records
- Ability to define chart locations
- Ability to change chart location
- Provide ability to request a chart
- Ability to reserve a chart
- Print chart request in medical records department
- Track charts by physician
- Print report of all overdue charts by:
 - Date
 - Location
 - Physician
 - Department
- Automatically notify users of overdue charts after a user-defined number of days
- Ability to transfer charts from one user to another without having to return the chart
- Print charts by location
- Ability to update chart status online
- Ability to view what portions of a chart are signed out
- Print daily chart retrieval lists
- Captures name of person that signed chart out
- Tracks correspondence reason, date needed, type of requester and comment.

Deficiency Tracking

- Tracks deficiencies by physician
- Provides work list to track deficiencies
- Automatically updates work list when record completed
- Ability to electronically sign off on record
- Ability to assign delinquency status
- Automatically generates delinquency letters
- Generate hospital-defined physician deficiency, suspension, and reinstatement letters
- Define user-defined number of days a delinquency can be outstanding before letter is generated
- Ability to email and fax delinquency letters
- Produce user-defined delinquency aging reports

Release of Information

- Print list of parties that have requested patient records
- Allow patients to request their name be left off of certain lists (floor census, parish)
- Provides patients the means to view who has looked at their records
- Support the ability to print or fax requested patient information for outside parties
- Ability to bill requesting organization for release of information
- Support HIPAA requirements for release of information.

Integration

Provides integration with the following applications:

- Registration
- Abstracting
- Patient Accounting
- Scheduling
- Reporting Tool
- Pharmacy
- Radiology
- Laboratory

Reports

- Provide a log of delete and restore activity
- Provide a log of merge and unmerge activity
- Provide a log of specific changes that were made to patient data
- Provide a list of sealed and unsealed EMR accounts
- Provide an audit trail for patients' incomplete records
- Provide a log of user productivity in incomplete records
- Provide a log of on productivity related to chart location
- Audit trail inquiry specific to a patient account
- Accounting of Disclosures report
- Compiled report capability
- Report of productivity in Release of Information

LABORATORY

General Laboratory

The HMIS should have an integrated laboratory module

Should be able to check for Medical Necessity

Ability for the lab interface to support the uploading and downloading of patient and procedure information between the Lab Information System and the analyzer

Ability for the results to be automatically printed to the patient's current location and/or the resulting department

Ability for the results to be user defined to auto flag as high, low, critical high or critical low using multiple criteria based on gender and/or age (years, months or days)

Ability to support Delta Checking

Ability for the system to allow for auto verification

Ability to support reflex testing

Ability for the system to have online result review capability

Ability to have custom report capabilities

Ability to have Quality Control capabilities

Allow a miscellaneous test code so previously undefined tests can be ordered and charged

Support retrieval of patient records by partial (e.g. first few letters of) patient last name

Ability to interface with reference lab

Restrict access to certain functions to authorized users

Capability to modify patient results

Ability to enter multiple comments for the same test

Support the use of ICD-10 and SNOMED codes

Ability to interface with Pharmacy

Ability to support specimen tracking

Provides time, date, and User ID stamp on all transactions

Incorporates patient demographic data from Admissions

Ability to override results

Collections

Ability to print collection labels:

On demand

At pre-defined intervals

Ability to define what information appears on collection label

Ability to print barcode labels on demand

Collection lists include:

Test name or code

Priority

Accession number

Patient allergies

Comments

Scheduled draw time

Sample size

Tube type

All associated physicians

Ability to determine number and size of labels

The labels should support bar coding (either Code 39, Code 128, ISBT 128 – or all)

System should support sample type barcodes and separate out sample types

Ability to change collection priority

Ability to sort collection labels based on patient location. Based on order status
System should support sample type barcodes
Require reason for specimens not collected
Stores canned reasons
Print log of pending collections
Prints list of uncollected specimens
Defines which specimens are collected by lab and which by nursing
Date, time, and User ID stamp for all collections
Automatically alert users of overdue collections
Ability to reassign improperly collected specimen to collection list
Ability to determine number and size of labels

Charge processing

Provide integration with a hospital's patient accounting system
Charges can be posted at a user-defined time (order entry, collection, results)
Can include comments with charges
Automatically generates charges based on orders
Provides multiple pricing schemes
Provides automatic credit for cancelled tests
Can generate manual charges
Ability to prevent charges from being posted for redraws
Ability to tracks costs per procedure
Can place multiple charges per test

Order Entry

Ability to store standard orders
Ability to check for duplicate orders
Captures verbal orders
Provides electronic signature
Ability to enter diagnosis code for each order
Accommodates multiple diagnosis codes
Capability to select codes from drop down menu
Ability to enter free text comments
Ability to order additional tests based on results of previous tests
Ability to enter pre-testing information
Allow for order cancellation
Automatically prints labels following order entry
Provides medical necessity checks at order entry
Automatically prints ABN if medical necessity check fails
Ability to update orders and track changes
Ability to change ordering physician
Ability to enter no charge tests
Ability to override duplicate orders
Ability to cancel tests at any time
Allows for tests to be ordered reflexively
Allow users to define required fields that must be completed before an order is filed
Allow multiple CPT codes per ordered test
Allow for tests to be ordered in groups, such as CBC

Ability to receive orders from order communication system

Work list Management

Sort work lists by user-defined sequence

Work list includes user-defined data types

List previous result on work list

Print work lists on demand

Include separate work lists for reference labs

Ability to create temporary work lists with tests taken from multiple work lists

Provide work list by technologist

Provide for work list inquiry by multiple criteria.

Results Reporting

Allow result entry both manually and via instrument interface or bar code reader

Ability to attach free text comments to results

Provide automatically calculations based on test results

Display previous results for comparison

Provide graphical display of results

Display normal values

Allow user to override test results

Highlight abnormal test results

Automatically alert providers of panic values

Automatic rounding of results based on user-defined criteria

Provide controls for highly classified results, such as HIV

The system to provide Infection Control reporting

Integration

Integrates with the following:

Patient Accounting

Admissions

Medical Records

Pharmacy

Radiology

CPOE

Emergency Department

Oncology system

Electronic Medical Record

Reporting Tools

Data Warehouse

Materials Management

Physician Practices

Nursing

Quality Management

Pathology

Ability to assign accession numbers in a format specified by the user

Ability to transfer a pending case into another pathologist for consultation
Ability to generate processing labels for each phase of processing (gross, blocks, slides, etc.)
Ability to include clinical impressions, diagnoses or other clinical data as part of the anatomic pathology record
Ability to utilize voice recognition for entry of reports with integrated templates
Ability to store electronic images and display them as needed and import them into patient reports as desired
Ability to annotate embedded anatomic images
Ability to use Microsoft Word for Pathology reporting
Ability to use SNOMED coding
Ability to sign-out with electronic signature restricted by security access

Blood Bank

Ability to track blood products e.g. packed cells, whole blood, FFP, Cryo, Platelets, etc.
Ability to provide ISBT 128 Barcode read/write capability
Is your Blood Bank system FDA 510K approved
Support computerized electronic cross match
Track and display blood bank patient history when ordering
Ability to record multiple donor types as required. For example: autologous, directed, platelets, etc
Provide Transfusion and Transfusion Reaction capabilities

Microbiology

Microbiology-reporting package should be designed to be a paperless module
Ability to support Kirby-Bauer (KB) and MIC zone size and interpretation
Ability to support online paperless work card
Ability to capture specific source and specimen description information
Ability to define valid susceptibility results for each antibiotic
Ability to suppress reporting of certain antibiotics
Ability to have full Preliminary and Final report functionality

Laboratory Outreach

Provide standard integration with the other LIS applications
Provides for medical necessity checking and ABN printing
Provides an Order Entry solution screen customizable to fit the needs of the individual client
Provides a comment section for easy free text entry of additional information
Provides quick registration with limited patient information
Provide clients with the option of maintaining their own numbering wheel and patient identifiers
Perform Batch Requisitioning for “Mall or Fair” screening
Preprint bar coded client requisitions and labels

IMAGING

Patient Records

Provide full integration with electronic patient record
Ability to search for patient by patient name, orders number, film number, medical record number, SSN, physician, date of service.
Ability to view online list of scheduled exams
Ability to create unique exam identifier numbers
Provide online access to clinical information, including lab, pathology, and pharmacy.
Ability to see online exam status
Ability to track patients by arrival time, exam time and departure time.
Ability to track turnaround time statistics.
Real time updating of electronic medical record
Allow users to view current and past orders from any PC
Supports online Master Patient Index
Ability to document patient wait time

Exam Scheduling

Capability to schedule:
Physicians
Technicians
Radiologists
Rooms
Equipment
Other resources
Capability to schedule:
Multiple exams
Multiple facilities
Multiple resource
Checks for proper exam sequence
Checks against duplicate exams
Provides conflict checks that factor in preparation time and procedure duration.
Provides conflict checking for staff and other resources
Flags problems when scheduling multiple exams
Automatically finds next available time for inpatient and/or outpatient.
Print schedules by:
Room
Radiologist
Technician
Nursing station
Department
Equipment
Patient
Provides capability to designate times when staff, rooms, equipment, etc are not available.
Allows overriding of schedules with appropriate access.
Allows multiple exams to be scheduled from one screen
Allows booking of appointments at other facilities based upon patient's need and preferences from a single process screen.
Offers role-based security

Can schedule from multiple departments from a single source.
 Capable of printing reminder letters, cancellation notices, follow-up questionnaires and other notifications
 Letters can incorporate patient information
 Provides reminders for f/u procedures based upon user-defined time frame
 Provide continuous follow-up, based on user-defined intervals until issue resolved.
 Tracks ongoing communication with follow up patients
 Provides online inquiry of patient-related information including:
 Orders
 Results
 Patient history
 Patient demographic data
 Transcribed reports
 Patient location
 Retains patient's scheduled appointment information in an on-line mode for a user specified date range.
 Ability to review comments from order entry
 Ability to schedule a series of appointments
 Ability to schedule for up to a year in advance
 Ability to schedule for all types of procedures (inpatient, outpatient, ER)
 Provide the capability to override the automated schedule.
 Provide the capability to quickly review on-line schedules using different views.
 Day
 Week
 Month
 Room
 Equipment
 Patient
 The ability to print, e-mail, or fax appointment notices
 Ability to enter orders from scheduling screen
 Record and track:
 Patient arrival times
 Exam begin/end time
 Patient departure time
 Exam/film repeat reason
 Patient no shows
 Cancel appointment with redefined list of cancellation reasons
 Tracks cancellations along with reason.
 Tracks no shows automatically
 Provides allergy interaction checks (patient allergic to dye)
 Automatically routes required paperwork to appropriate department
 Provides alerts for patient conflicts (pregnancy)
 Ability to identify length of time for a procedure

Order Entry and Procedure Tracking

Ability to generate orders based on the procedure/exam scheduled.
 Ability to tie orders to appointments
 Ability to identify order priority
 Ability to flag order time conflicts to ensure correct order sequence

Automatic flags using rules-based logic can be set to identify duplicate orders, inappropriate procedures and conflicts reducing the potential for errors.

Ability to perform medical necessity checks prior to patient having the procedure

Procedures can be started, and completed by technologists by using a scanner to read a bar-coded exam ascension number on the paper requisition

Documents supplies used during the exam

Ability to automatically capture charges associated with supplies and send to billing.

Ability to charge patient when procedure is complete

Captures technologist that performed the exam

More than one technologist can be recorded

Can record and track quality assurance and quality control data for each exam, such as number of repeats, reason for repeats, etc.

Documents adverse patient incidents

Quickly review all exam activity through online exam log for area of interest to determine what's been completed/

Ability to track wait times

Ability to capture procedure-specific technologist workload.

Image Management

Provide an online film tracker

Track films that have been signed out, with reports for all late returns

Send automatic reminder letters for outstanding films after a hospital-defined number of days

Capability to track films via barcoding.

Prints pull slip in medical records.

Allow films to be signed outside the organization

Ability to sign out films and jackets

Ability to reserve films that have not yet been returned

Ability to transfer films from one party to another

Ability to print labels for films and film jackets

Ability to interface with PACS systems to:

View images online

View images from any workstation

Link transcribed reports to associated images

Results

Access results from electronic medical record

Sign off on results using electronic signature

Incorporates canned text into reports

Incorporates schematics

Integrates with Microsoft Word

Provides spell checking

Automatically populates fields with demographic data

Print reports by:

Patient

Physician

Department

Procedure

Alert physicians of unsigned reports and deficiencies

Enable rapid online signature of unsigned reports

Transcription capabilities

- Provides communication between physicians and transcriptionists
- Provides integration with voice recognition system.
- Ability to automatically update order status upon entering results
- Ability to automatically direct reports to the right location
- Ability to route reports to any printer in the network
- Ability to print results on demand
- Ability to hold results for viewing prior to them being reviewed and verified
- Ability to track follow up for abnormal results

Reporting

- Monitors lifetime exposure to radiation
- Allow radiologists to view all unsigned reports under their name
- Provide quality assurance reporting
- Easy mechanism to analyze film repeat/reject reasons
- Provide productivity reporting
- Produce daily log of exams
- Provide audit reporting
- Provide customizable ad-hoc reporting tool
- Print list of patients requiring follow-up
- Report physician utilization by type of exam, patient type, and total exams
- Real-time on-line report viewing
- User friendly method to customize reports
- Ability to add reports to custom menu
- Automatically tracks accuracy statistics
- Ability to maintain reports online for a user-defined period of time
- Ability to print monthly and yearly statistics
- Generate workload statistics by physician, radiologist, technician, facility, equipment, etc.

Inventory Control

- Ability to interface to central supply
- Ability to track film supplies
- Ability to automatically decrement stock levels based on usage
- Incorporates bar code technology in supply room
- Ability to automatically place charges for supplies used
- Provide auto re-stock notification when supplies fall below user-defined level.
- Tracks equipment maintenance

Charge Capture

- Charges placed according to user-defined intervals
- Provides integration with billing for automatic charge capture
- Allows for exam retakes without duplicating patient charges
- Allows for discounts by patient type
- Ability to check charges per patient or for the whole day
- Ability to track department financial data
- Allow for independent radiologist billing

Image Viewing

- Should be interfaced to a PACS system

The Radiology application should automatically transmit patient information to the PACS system.

Radiology should automatically submit patient exam information to the PACS system to set pre-fetch function.

Radiology should automatically transmit result interpretations to the PACS system.

The PACS image should be viewed within electronic medical record.

Integration

Integrated with the following:

Scheduling

Registration

Patient Accounting

Medical Records

Abstracting

Materials Management

CPOE

Pharmacy

Laboratory

Pathology

Nursing

Emergency Department

Physician's Office

Remote Clinics

Reporting Software

PHARMACY

General Requirements

Ability to define following fields:

Weight

Height

Age

Physician

Store all orders on-line for a user-defined number of years. Supports remote locations.

Ability to support physician order entry and medication review, along with Electronic Signature for processing medication orders.

Ability to document medications using on-line MAR and at bedside using bar-code technology.

Support HL7 interfaces to Dispensing Machines.

Support processing of outpatient and employee prescriptions.

Ability to run reports based upon lot numbers associated with patients in order to generate recall lists

Ability to enter text to be reviewed by pharmacy users.

Support long-term care facilities.

Integrated functionality between Pharmacy and HMIS system allows for seamless flow of information.

Checks for physician and/or resident DEA number when ordering.

Provides inventory for central pharmacy substances room and satellite pharmacies.

Patient Information

Lookup record by:

Name

Partial name

Medical Record

Location

Room

RX number

Account number

Social Security number

Ability to access previous visit information to carry forward onto new record.

Ability to view user-defined patient profile.

Reporting capabilities for user-defined patient group.

Produce departmental transfer and discharge lists as requested.

Ordering

Ability to define which orders are required for review vs. which orders are required for verification.

Display orders needing to review by user-defined criteria.

Ability to program stop order warning and print if required.

Ability to flag stop order warnings electronically to the responsible physician.

Renewal of patient orders flagged.

Allow for free text changes to drug identifier.

Check for duplicate orders using various user defined criteria:

Duplicate class

Duplicate generic

Duplicate ingredient
Can shut off duplicate order check.
Order data changed during the ordering process.
Check dosage using various parameters including:
Physical makeup of patient
IBW vs ABW
Dose dependent on weight
Dose dependent on BSA
Dose independent of weight and/or BSA
Various orders supported:
Med orders
Chemotherapy
Large Volume IV's
Alternating IV
TPN
Piggyback IV's
Medications from Home
Compound Medications
Medications with different strengths using combined forms
Medication Protocols
Standing Orders
The following are displayed during ordering:
Trade name
Generic name
Date and Time of Order
Order Type
Directions
Associated times
Stop date (if identified)
Additional comments
Medication support provided for discharged patients.
Allows all patients' orders to be placed on hold for specific reasons.
Adverse drug reactions posted at time of order entry.
Captures life-time dosage of medications.

Profiles

Various profile types defined including:
Inpatient
Outpatient
Staff defined
Maintain patient name, patient medical record #, sex, height/weight.
Maintains:
Patient birthdate
Account number
Physician
Allergies
Drug name (generic and trade)

Dose, strength
Ordering physician

Maintain Medication Administration Data below:

Nurse administering medication
Units administered (including PRN)
Instructions for administer times
Doses missed
Medication categories accepted (ex. Scheduled/routine daily, IV's, PRN's)
Ability to manipulate sort order of profile
Provides following on IV label:
Patient
Start time
Solution and volume
Time to run
Drip rate
Initials of pharmacist/technician that compounded solution
Administration instructions
Expiration dates
Provides condensed IV patient profile
Free text field
Provides pre-programming of common IV solutions into code order entry system.

MAR (Medication Administrative Reports)

Provides ability to use electronic means for documenting administration of medication.
Ability to print multiple day formatted MAR for manual administration at end of this section for those who are not using eMAR yet.
Provides capability to monitor drug administration once unit enters administration record into the system.
System prompts for additional user-defined capture of information at the point of administration

Output/ Printing

Provides following on IV label:
Patient
Start time
Solution and volume
Drip rate
Initials of pharmacist/technician that compounded solution
Administration instructions
Expiration dates
Free text field for additional comments
Ability to print MARs to specified locations.
Ability to define number of labels to print.
Ability to tailor format of:
Labels
Reports
MARs
Profiles
Order Detail information

Controlled Substance

Stores, generates, and updates substances stock lists for different hospital units.

Ability to charge for controlled substance when administered.

Provide reports or documentation for controlled substances dispensed.

Inventory reports that include the following:

Daily/Monthly audit reports

Annual/Biannual summary reports

Provides reports listing controlled substances requiring review for reordering.

Provides patient's controlled substance activity since admission.

Cart Fill

Provides online cart fills.

Support cart fill for single or multiple days.

Calculate cart fill based on prior fill.

Cart fill list/screen includes:

Patient

Drug

Dose – Strength/Quantity

Age

Cart filler name/cart checked by

Total units dispensed

Provides list of total units for cart fill.

Medication fill lists for patient care stations which decrease inventory.

Provides IV processing list including supplies needed for the IV orders for that day.

Satellite cart fill locations available.

Medication Processing

Online remote access to processing screens allowing for quick updates of medication/IV information

User-defined abilities to process medications

Processes include but are not limited to:

D/C

Cancel

Move med to new account

Place on Hold

Change to outpatient Rx for Pass meds

Edit IV Rate

Edit next dose due

Reporting

Monthly and annual distribution reports including stats and expense reports for individual patient care units available.

Drug utilization statistics reports available by:

Drug

Physician

Service

Location

Workload Statistics allow you to track and print workload using various selection ranges and sort criteria.

Drug adverse reactions and interactions reports available.

Patient profile and specific drugs by patients or patients by drug printout available.

Reports available based upon access throughout the enterprise.

Information provided to patient care unit includes:

Medication Administration Records

Nursing Station Worksheets

Renewal Notice List

Expired Rx List

Patient Monographs

Floor stock reports provided.

Provides the following exception reports:

Stop orders

Productivity statistics

Low inventory

Slow moving inventory items

Inventory Usage Reports

Annual inventory count lists

User-friendly ad-hoc reporting capability

Quality Control

Medication errors tracked.

Adverse drug reactions tracked and reported.

Monitors online drug interactions, allergic reactions and incompatibility.

Provides monitoring for drug utilization review by physician, service, patient or diagnosis.

Track changes or additions to orders by users.

Patient Monitoring Reports include:

Progress Notes

IV status report

Override Interactions Report

Microbiology Report

MAR Variance Report

Inventory management

Ability to transfer stock between different pharmacy sub-units

SURGERY

OR Scheduling

Provides centralized and de-centralized scheduling
Supports block scheduling, with each surgeon having reserved blocks and time ranges for each appointment
Provide ability to override blocks
Ability to assign multiple surgeons to case
Ability to schedule multiple rooms (exam, recovery, admission)
Ability to schedule non-physician staff (anesthesiologists, scrub nurses, RNs)
Allow user to select from list of authorized surgeons
Ability to schedule equipment
Ability to update resources assigned to a case
Ability to list equipment as unavailable and prevent scheduling when down for maintenance
Restrict scheduling of Operating rooms for specific surgeries.
Allow users to define how much information they want captured and displayed on a patient
Provide color coded graphical display listing available time slots
Ability to view daily/weekly schedule by:
Surgeon
Exam room
Department
Anesthesiologist
Other staff member
Ability to reschedule appointments through dragging and dropping
Automatically locate next available time slot
Maintain a surgery waitlist
Tracks duration for each appointment
Use's surgeon's average case time when scheduling cases
Ability to move cases if resource becomes unavailable
Ability to attach orders to procedure
Ability to include comments for OR staff
Provide resource conflict checks
Ability for authorized users to override conflict checks
Provide ability to swap cases
Include reason for cancellation
Set rooms aside for specific procedures
Ability to cancel surgeries

Preference Cards

Ability to create standard preference cards
Ability to copy preference cards from one clinician to another
Ability to select items for preference cards from pick lists
Ability to edit all preference cards at once when an item discontinued or changed
Ability to track implants and explants
Ability to print a list of implants/explants in the event of a recall.
Automatically submit charges to billing as items are used
Automatically decrement inventory as items are used
Use bar code readers to scan inventory items

Take into account clinician allergies when defining preference cards (Latex)
Provide the ability to select items from picklists
Track surgeon preferences (hand size, left of right handed)
Maintain floor inventory of general supplies (bandages, Tylenol, etc.)

Documentation

Supports multi-disciplinary documentation
Enables multiple care providers to document on a patient's chart at once
Supports customizable documentation templates
Ability to document deferred cases.
Ability to view nursing assessments from pre-testing to recovery
Provide audit trails of who entered information, including time and date
Document medications as they are dispensed
Allow for documentation to be completed after the procedure
Supports the ability to finalize an operative episode once all information is entered
Determine which fields within the documentation are required
Support the ability to add addendum to documentation after it is finalized
Documentation is accessible through the Electronic Patient Record

Tracking Patients

All patient activity can be viewed through a patient tracker
A private tracker is available to display in public areas and protect patient confidentiality
Support ability to document from the tracker
Displays patient's current location
Displays patient's duration within a location
Supports the ability to customize the tracker by department
All updates to the tracker are provided in real-time

Reporting

Standard reports are provided with your system
The system supports the creation of custom reports
Custom reports can be saved as standard reports
Reports can be sent to any printer in the network or emailed.
All information included on reports is real-time.

Integration

System shares the same inventory as your HMIS
System automatically submits charges to billing
Medications entered automatically generate pharmacy orders
System integrates with scheduling in order to schedule appointments for associated procedures at the same time
Shares patient demographic and insurance information with HMIS
Automatically sends CPT and ICD codes to Abstracting
Information becomes part of the Electronic Health Record
Pre-op lab tests can be ordered when scheduling surgery
System shares common dictionaries with HMIS (Procedures, providers, resources, etc.)

ABSTRACTING

Abstracting

Automatic calculation of Diagnostic Related Groups (DRGs)
Patient charges reviewed concurrently
DRG statistics generated for case mix analysis
Concurrent or retrospective coding supported to help identify cost and day outliers
Users may define data elements for abstracting and reporting
On-line patient abstracts
DRG and Abstract statuses may be changed or updated
Worklists enable users to select a specific group of patient accounts for processing
Top ten diagnoses and procedures may be compiled
May receive other vendor's coding data for automatic inclusion into patient abstracts
Generation of letters and messages based on review outcomes
Generation of abstract statistics
Creation worksheets and collection forms for patient data
Creation of organization-defined case mix reports
Ability to monitor patient records for length of stay and provide exception reporting
Produce summaries of statistics required by managed care contracts
Provides federally mandated updates to the DRG calculation program
Maintains software to comply with all state and federal requirements
An interface to patient information automatically from other applications
Includes on-line access to case mix data for inquiry
Case mix database which includes:
Physician by specialty
Patients by financial class
On-line storage of at least three years of historical data
On-line access to revenue, costs, and payment history
Users have the capability to print:
Summary report by DRG
Summary report by MD
Detailed report by MD
Track inpatient data and expected versus calculated length-of-stay
Provides online help screens

Utilization Management

Provides concurrent review functions to monitor utilization
Support utilization review
On-line entry and tracking of UR functions, including review dates, criteria, referrals, etc.

Ability to track and report:
Pre-admission reviews
Certifications
Continued stay reviews
Referrals
Denials
Discharge planning activities.
Track ID for each UR action

Support on-line inquiry of patient data, including name, visit number, medical record number, birthdate, age, social security, address and phone
Support on-line inquiry of patient visit data, including admit and discharge dates, length-of-stay, and MDs
Support on-line inquiry of patient medical record data including diagnoses, DRG, surgeries and dates
Provide access to employer and payer certification requirements
Print list of physicians with suspended admission or clinical privileges
Print reports of cancelled surgery and radiology
Print report of patients and diagnoses for stays of less than 2 days
Print UR worksheets which show patient demographics, guarantors, insurance, diagnoses, discharge planning, and review data
Print DRG length-of-stay report of cases exceeding DRG LOS threshold, showing DRG, LOS, variance, patient name, ID, MR number, and MD
Print reports for:
Daily and cumulative summaries of surgeries
One day “pre-op” patients
Cancelled surgery and radiology
Patients and diagnoses for stays of 2 or fewer days
Patients readmitted within 30 days of last hospital stay
Statistical report of length-of-stay by diagnosis
Discharge analysis by medical service
Major procedures, including charges, LOS, and certification data
MD referral log by reason
UR summary by payer, MD, Service
Track and report on deaths
Print medical record summary report
Print list of hospital-issued denial letters
Print financial utilization reports by MD, specialty, zip code, DRG

Integration

Provides integration with the following modules:

- Admissions
- Patient Accounting
- Medical Records
- Order Management
- Reporting Tool
- Encoder/Groupers
- Quality Management
- Electronic Medical Record
- Data Warehouse

Reporting

- Compiled reports can be used to generate statistical and patient reports
- Ability to hold the compilation of a report for a later date or time
- Ability to limit the number of reports run at one time

Tracking

- Able to sign out portions of Incomplete Records

Records may be assigned to a new recipient without being physically returned
Can give users the ability to reserve patient records without the ability to actually sign them out

SCHEDULING

Scheduling

Schedules can be created for:

Physicians

Staff

Rooms

Equipment

Ability to create standard schedule templates

Ability to copy and edit templates to create new templates

Ability to establish time parameters for each appointment

Allow users to define time lengths for each type of exam (ex. Physical)

Ability to establish scheduling blocks

Physicians can determine how many appointments can be scheduled per block of time

Allow authorized personnel to overbook physicians based on physician preferences

Ability to block days when department is closed (holidays)

Can define schedules of availability for all resources

Ability to schedule multiple resources for a meeting

Ability to block equipment for maintenance

Ability to indicate which physicians and rooms are available to take certain appointment types in specified time slots

Ability for authorized users to override

Ability to place resources in groups (pediatrics)

Ability to link a resource or group of resources to a location

Ability to generate notifications of appointment availability conflicts

Ability to define appointment sets consisting of multiple appointments

Print department schedules

Providers can view their schedules online

Authorized users can edit their own schedules

Ability to predefine appointment groups for scheduling

Ability to schedule patients for next available time slot

Ability to search for appointment by:

Physician

Physician Group

Day of the week

Time of day

Other resource (equipment)

Can exclude days and/or time frames from search

Can exclude resource from search.

Can manually search for appointments

Ability to schedule multiple resources for single appointment.

Ability to schedule multiple services from a single screen (sets)

Supports scheduling of both inpatients and outpatients

Automatically incorporates demographic data from previous visits eliminating redundant data entry

Ability to schedule a sequence or set of appointments with user defined time intervals in between

Ability to view multiple provider schedules from a single screen

Provide color-coded calendar display

Provide drill-down capabilities to view details on each appointment

Ability to schedule appointment for specific date and time

Assigns a new account number upon scheduling
 Ability to update patient record with information captured during scheduling
 Ability to define specific queries and actions for appointment types
 Define patient instructions for appointment types
 Modify patient demographic information on the fly
 Ability to create a new medical record on the fly
 Give users the option of searching Admissions for a patient before creating a new patient
 Ability to determine which fields should be set as required
 Ability to attach important patient information to appear as a flag each time the patient is booked for an appointment
 Ability to search for earliest time when scheduling
 Ability to narrow the search for an appointment based on the patient's availability
 Able to book pending appointments
 Ability to assign a priority to appointments (urgent, for example)
 Provide eligibility checks upon scheduling
 Provides medical necessity checks upon scheduling
 Ability to view number of visits left on referral
 Flags for history of bad debt
 Ability to schedule appointments a year into the future
 Ability to place patient on waitlist if no appointments available
 Ability to schedule appointment from waitlist
 Waitlist includes call back number, priority and appointment type
 Ability to view number of available time slots by provider
 Provide calendar view or provider schedule
 Ability to schedule multiple patients for group appointments
 Provide user-defined warning when patient is scheduled for appointments that should not occur within a certain timeframe.
 Warn scheduler of overlapping appointment times
 Provide conflict checks for improper exam sequence
 Authorized users have the ability to override conflict checks
 Offers suggestions when scheduling
 Ability to add comments and instructions to appointment
 Provides both centralized and decentralized scheduling
 Ability to schedule walk-in patients
 Ability to assign a new medical record number for new patients
 Ability to hold on assigning medical record number for new patient until he/she presents for care.
 Automatically generate best fit schedule for multiple appointments based on appropriate sequence
 Automatically schedules recurring appointments based on user-defined schedule (ex. every Monday at 10:00AM)
 Restrict users to viewing schedules of only those providers within their facility
 Ability to drag and drop appointments
 Ability to cancel appointments
 Include reason for cancellation
 Ability to store canned reasons for cancellation
 Automatically place all appointments not attended or cancelled by the end of the day on a no show list
 Print list of all cancelled or no show appointments
 Automatically transfers cancelled or no show appointments to a waitlist

Orders can be placed upon scheduling
Capability to generate patient appointment reminder letters
Reminder letters can include patient instructions
Reminders can be faxed and emailed
Automatically generates “No show” letters.
Ability to view schedule of all appointments by patient
Generates list of patients requiring rescheduling if a resource becomes unavailable.
Can transfer case load to other physician or resource
Captures ID of person scheduling appointment
Information entered during scheduling is updated in real time
Sends chart pull request to medical records when scheduling an appointment
Print daily list of scheduled appointments by:
Provider
Provider Group
Appointment Type
Department
Tracks when patient arrives, is seen, and departs
Can define a series of appointments including:
Frequency
Day
Quantity of visits
Thru date
Provides audit trails listing user, date, time, and routine, and patient accessed.
Ability to change the display – which tabs appear
Ability to create access groups for setting up users

Integration

Provides integration with the following applications:
Admissions
Patient Accounting
Abstracting
Order Management
Electronic Medical Record
Physicians Practices
Surgical Systems
Report Writing tool

COMPUTERIZED PHYSICIAN ORDER ENTRY

Placing Orders

Support entry of orders with minimal keystrokes
Provides easy to follow screens with Graphical User Interface
Allow selection from drop down menu
Allow physicians to save favorite order sets
Ability to edit order sets
Ability to copy order sets, edit, and create new order sets
Ability to enter order sets on the fly
Define order sets by:
Diagnosis
Specialty
Patient event
Order sets can be created for facility, department, and specialty
Order sets can link to clinical pathways
Ability to define order priorities
Ability to define route of medication
Ability to define required fields
Ability to set default responses
Supports conditional ordering
Interfaces to formulary service vendors
Ability to search formulary when entering orders
Ability to add to formulary
Provides electronic signature on orders
Allows covering physician to place orders
Allows for verbal orders to be placed
Physicians can maintain list of favorite medications
Physicians can easily edit favorite medication lists on the fly
Capability to place orders over mobile devices
Orders can be placed from remote facilities
All orders stamped with date, time, and user id
Capability to include comments for nurse administering medications
Automatically updates patient's MAR
Ability to document over the counter medications
Capability to temporarily suspend orders
Provides templates for taper dosing or alternative day dosing
Ability to roll inpatient to outpatient orders easily.
Ability to roll outpatient to inpatient orders easily.
Ability to place orders throughout the enterprise (inpatient, outpatient, ER, physician's office).
Ability to enter orders upon discharge
Ability to set order expiration date
Print s drug monographs upon discharge
Ability to cancel orders
Ability to amend orders
Ability to view patient notes when placing orders
Provide medical necessity checks
Ability to create pending orders
Alerts physicians of patient in need of refill

Automatically discontinues orders upon patient discharge
Provides associated data at the time of ordering.
Ability to limit access based on user and location.

Decision Support

Checks for duplicate orders
Allows physicians to review current test results and vital signs
Warns providers of abnormal lab results
Offers a dosage calculator, which bases dosages on the following criteria:
Age
Height
Weight
Body Surface Area
Lab results
Provides allergy interaction checks
Provides drug interaction checks
Provides drug-disease interaction checks
Provides contraindication checks
Provides IV compatibility checks
Allows authorized physicians to override interaction checks
Requires reason for override
Reasons can be selected from drop down menu
Offers severity levels for interaction checks
Provides ability to override minor interaction checks but not severe ones
Warning messages are easy to understand
Provides dose limit checking
Checks for less-expensive generic alternatives
Notifies caregiver when order due to expire
Provide warnings based on patients age (child, senior citizen)
Provide automatic dosage calculator for patient with renal failure
Provide capability for physicians to create their own rules "if then"
Provides Rules based logic capabilities

Integration

CPOE is integrated with the following applications:

Pharmacy
Nursing
Physician's Office
Order Management
Medical Records
Laboratory
Radiology
Admissions
Patient Accounting

PATIENT ACCOUNTING

Account Access and Management

Multiple lookups into patient account, i.e. name, guarantor, social security, medical record number, ID number, etc.

Unique account number assigned to every visit, independent of medical record numbering.

Supports the establishment of new accounts by retrieval of MPI information.

Ability to create new accounts with minimal data.

Information from previous visits automatically populates appropriate fields.

Provides one central location where billers and collectors can access information on a single account

Provides online view of all transactions on an account

Provide complete online access to guarantor financial history

Provide capability for authorized users to make edits to account.

Provide an audit trail of all changes made to an account i.e. patient demographics, financial, and insurance information.

Allows for user defined required fields

Support central or decentralized billing office.

The Billing and Accounts Receivable application is integrated with the Registration and HMIS applications providing for a decrease of redundant data entry.

Provide the ability to purge accounts on user defined parameters.

Allow accounts to be reinstated.

Ability to merge accounts if duplicate accounts are created.

Accommodate multiple insurance payers on a single patient account.

Charge Processing

Provide a charge master file and charge numbering system for use by all facilities and locations.

Online access and updating to the charge master with appropriate audit trail and security.

Accommodate multiple prices for individual charge master file entries with effective dates for each line item price.

Support mass price changes.

Perform across the board price adjustments by department, by percentage within department.

Ability to handle multiple HCPCS/CPT codes per charge item.

Produce Medicare Advanced Beneficiary Notice and notify billing if form has been signed or not.

Automatically generate room and bed charges

Automatically generate charges from Order Entry and Nursing applications.

Automatically generate charges for standard services i.e. Admission Kit.

Provide online real-time batch charge entry.

Capture late charges and automatically bill based on user defined time cycle.

Restrict the cancellation or reversal of charges to authorized personnel.

Provide the ability to automatically transfer outpatient charges to an inpatient account based on pay or requirements when a patient is admitted within 24 or 72 hours of the initial service across facility.

Allow charges to be overridden based on access.

Patient Billing

Support billing for a variety of patient care delivery settings, including acute hospital, hospital outpatient, emergency room, clinic, surgery center etc.
Allow users to determine and have flexibility over billing cycles based on guarantor, patient, or other user-defined criteria.
Ability to edit claims online prior to submission.
If all necessary information has not been completed, bill automatically drops on a user's worklist
Allows for billing holds for incomplete data or other user-defined criteria.
The system generates reports for bills placed on hold.
Compliant with ANSI transaction sets to provide the ability to receive and process bills and remittances via EDI with or without the use of a clearinghouse.
Provide the ability to generate UB-92 claims, HCFA/AMA, 1500 and any other mandated billing forms based on insurance and or payer master.
Allow variations of each form based on payor reporting requirements.
Automatically produce interim bills.
Automatically generate final bills, as defined by user.
Produce bills upon demand.
Provide for the display of detail on patient statements.
Provide flexible statement messages and letters.
Track the number of payments, adjustments and collection activities to an individual bill.
Ability to calculate and post interest charges to a patient accounts.
Automatically produce split bills.
Determines patient deductibles and co-payment amounts.

Cashiering and Collections

Allow both online and batch posting of payment and adjustment transactions.
Support electronic remittance.
Ability to transfer payment to another account.
Support multiple cashiering sites with separate cash draws, receipts, and balancing functions.
Generate cash balancing reports.
Ability to record number and amount of payments received.
Ability to process and report on returned checks.
Allows for the creation and use of contracts for patients who enter into a payment plan with the hospital.
Provide for credit and collection notifications for problem accounts during registration.

Accounts Receivable

Automatically generates queues of accounts requiring follow-up activities.
Produce revenue reports.
Support the generation of patient refund checks.
Age the AR.
Maintain user defined aging categories.
Produce procedure count and volume reports.
Generate on-demand trial balance reports.
Ability to capture insurance pending or denial codes and messages for each patient account.
Ability to process small balances.
Ability to control the number of days that a zero-balance account remains active and automatically write off the zero-balance account based on user-defined intervals.
Provide for automated and manual recording of all collection activity.
Ability to support an unlimited number of contracts.

Ability to send revenue information to the GL.

Integration

Provides integration with the following:

Admissions

Medical Records

Order Management

Nursing

Pharmacy

Radiology

Oncology

Pharmacy

General Ledger

Materials Management

Abstracting

Account Payable

Reporting Tool

ACCOUNTS PAYABLE

Invoice Entry and Processing

Provide flexible invoice entry online and batch entry.

Prohibit duplicate entry of identical invoice.

Provide batch controls over:

Number of invoices

Dollar amount

KES amount

Account hash totals

GL code

Bring forward materials management purchase order number.

Allow entry of invoices for current accounting period before closing of last accounting period.

Accept entry of invoices for distribution in future accounting periods.

Process credit and debit memos.

Allow for default vendor data to reduce keying during invoice entry.

Support online invoice approval.

Allow entry of invoice data in summary or line-item data format.

Provide online audit trail identifying who entered or edited an invoice along with the date and time of transaction.

Allow entry of multiple invoices for one vendor on single screen.

Ability to store and retrieve invoices electronically.

Allow to specify/override for 1099 category by vendor.

Ability to include/ exclude line items for 1099.

After month end close, ability to accrue invoices to previous month until final close.

Allow for setup of separate companies/entities with differing check run schedules, bank accounts, reporting, etc.

Provide ability to automatically compute payment due dates.

Calculate discounts and discount dates automatically.

After scheduling payments, provide for manual confirmation before check generation when/if required.

Allow for online automatic matching of invoices to purchase orders and receiving documentation before payment can be authorized.

Support user-defined tolerances in invoice reconciliation process.

Target discrepancies with easy-to-read exception reports

Resolve discrepancies through exchange of cost/quantity change information with Accounts Payable

Ability to automatically hold invoice processing for a vendor.

Receive Invoice Electronically via 810.

Ability to edit invoice dollar amounts

Recurring invoices to help manage recurring vendor payments

Ability to add or remove vendor payments and invoices from any payment schedule

Automatic calculation of vendor discounts, based on payment terms

Ability to create checks within payments process screen

Immediate access to complete vendor, invoice, and transaction information

Extensive selection criteria, providing the ability to search for invoices and checks based on specific needs

Complete invoicing and check management capabilities

Produce an audit trail of all entries affecting the general ledger.

Allow ability to establish separate GL accounts for sales tax and use-tax, freight, miscellaneous, cash accounts, etc.

Online Invoice and Check Inquiry.

Support automatic check reconciliation process.

Allow for the use of credits for future purchases.

1099s - Provide for automatic generation of 1099's.

File Maintenance

Supports automatic assignment of vendor numbers

Provide the ability to inactivate vendors.

Provide the ability to establish one-time vendors.

Maintenance of all vendor information.

Support multiple billing addresses for vendors

Depending on user access, ability to change vendor information i.e. address and terms.

Allow manual updates to 1099 amounts.

Provide check number controls.

Allow multiple vendor invoices per check.

Support invoice payment based on a contract.

Ability to set up contract terms for a vendor in vendor master file.

Automatically hold invoice by vendor if over a dollar amount.

Ability to release invoice, even if over a dollar amount.

Ability to override receipt or Purchase Order matching.

Allow for inquiry of all checks and invoices by vendor number, check number, invoice number, and invoice date.

Selectively hold or pay invoices by individual, vendor or date.

Print inquiry detailing invoices to be paid.

Produce check stub or optional remittance advice

Prevent payment to a vendor when vendor owes money to the client

Prevent printing of zero balance checks

Detect duplicate payments

Segregate printed checks for special handling and approvals by dollar limit, vendor or company.

Allow payments to be made from multiple cash amounts.

Print check preview register before printing actual checks.

Print accounts payable checks and check stubs in a client-defined format on a laser printer.

Ability to generate on-demand check.

Provide for manual checks.

Maintain vendor history.

Allow checks to be voided with reinstatement of the related invoices and adjustment of the GL.

Account for voided and returned checks.

Support multiple banks and bank accounts.

Print vendor mailing labels.

Allow invoice partial payment.

Reporting

Provide for automatic generation of 1099's.

Batch Control Listing

Tax Reporting

Report all master file changes.
Vendor History reporting
Error and Exception Report
Departmental Invoice Aging Report
Cash Requirements Projection by: Day, Week, Month, Quarter, Semi-Annual
Check Register Reports (including outstanding checks)
Check reconciliation report
1099 reporting and all forms
Expense Distribution Report
Vendor history report.

Integrated with General Ledger, Materials Management, Fixed Assets, Payroll, and Decision Support System

Other

Central location for employees to organize their daily workload with customized access and viewing parameters for each individual employee or job

FIXED ASSETS

Asset Acquisition, Management, and Retirement

Assign asset number automatically

Maintain and edit the following information for each asset;

Corporate entity

Funding type

New vs. used indicator

Old and new capital for Medicare reporting

Property type

Recovery class for ACRS depreciation

Tag number

Serial number

Cost'

Location

Description

Purchase date

In-service date

GL account number

Depreciation expense account number

Depreciation method

Book life

Disposal date

Disposal method

Salvage value

Project number

Vendor number

Invoice number

PO Number

Support user-defined fields in asset master file.

Maintain historical asset data.

Support on-line inquiry of asset's purchasing, financial, depreciation, and tax information.

Ability to purge sold assets.

Provide the ability to easily copy one asset to another.

Provide the ability to transfer assets between entities and locations.

Support the tracking of leased assets.

Maintain cost of improvements to existing assets.

Support mass edit changes

Provide the ability to retire assets fully or partially.

Support reinstatement of retired assets.

Depreciation

Automatically calculate depreciation at month-end.

Support straight-line depreciation method.

Support sum of years' digits depreciation method.

Support ACRS depreciation method.

Support flat rate depreciation method.

Allocate depreciation expense to specified cost centers.

Provide the ability to calculate life-to-date depreciation for an asset.

Provide the ability to backdate assets for the purpose of catching up on depreciation.

Provide the ability to distribute depreciation across multiple accounts.
Provide ability to change assets depreciation method.
Provide the ability to use multiple depreciation schedules.
Project depreciation expenses for the current year, future year, and life of asset.

Reports

Print detailed asset master file report.
Print asset transfer report.
Print asset disposition/retirement report
Print depreciation report
Print depreciation projection report
Print tax reports
Print physical inventory report
Replacement cost reports

Construction in Progress

Ability to track construction in progress projects.
Allow for revision tracking.
Ability to track budgeted amounts over time and against project budget.

Asset/Equipment Maintenance

Have specifications, warranty and purchasing information
Able to create work orders and requisitions directly from the equipment hierarchy
Warranty management alerts users when work orders are entered
Ability to link any type of document to equipment and work orders
Ability to pre-plan work orders for Preventive Maintenance
Changes to equipment operating status (out of service/in service) starts/stops Preventive Maintenance work
Ability to easily build job plans from completed work orders
Ability to link parts from an inventory query directly to work orders
Ability to create requisitions directly from work orders
Ability to track all repair and maintenance costs
Budgets for projects can be specified at the work order, task and sub-task level
Use Work Breakdown Structure (WBS) for tasks and sub-tasks to handle complex projects

.Integration

Provides integration with the following:
Accounts Payable
General Ledger
Materials Management
Ad Hoc Reporting tool

Other

Central location for employees to organize their daily workload with customized access and viewing parameters for each individual employee or job

GENERAL LEDGER

Provides ability to maintain separate chart of accounts for multiple entities (corporations, facilities, etc.)

Maintains General Ledger for multiple types of services (acute care, ambulatory care, nursing, physicians practices, long term care)

Allows for unlimited ledgers

Allows for user-defined calendar period

Includes ability to maintain multiple fiscal calendars

Multiple users may have access to the General Ledger at a time

Allows for user defined tables

Provides online inquiry, input, and modification of ledger

Provides online inquiry into historical transaction details

Chart of Accounts includes beginning date, end date, account type, and category type.)

Allows for user-defined expense and revenue allocation rules

Ability to enter journal entries for future posting

Provides real time balancing of General Ledger

Provides detailed audit trails of all general ledger transactions

Provides user-defined account number structure

Provides ability to rename existing account numbers

Automatically flags inactive accounts to prevent further posting

Provides the capability to merge/unmerge accounts

Ability to store a data for a user-defined period of time

Allows for different coding structures for different chart of accounts

Ability to separate transactions by revenue category

Supports entry of multiple journal entries

Provides for recurring journal entries

Ability to post directly to fund balance

Ability to create financial statements

Ability to preview financial statements prior to account closing

Ability to create financial statement forecasts

Supports daily automated posting and balancing from multiple financial applications

Provides report of transactions that did not post

Ability to generate multiple transactions from a single entry

Ability to define real and adjusting accounting periods

Prevents double entry of accounts

Ability to print reports in user-defined format

Ability to print chart of accounts by account number and cost center

Provides for automatic validation of account numbers

Automatically rejects invalid entries

Supports entry of journal entries to prior and future periods

Ability to calculate accrual entries

Allows for entry of manual journal entries

Provides role-based security

Ability to support inter-company transfers

Ability to allocate amounts to user-defined accounts based on user-defined allocation rates

Ability to accommodate multiple preliminary closes at both the fiscal year level and accounting period level

Ability to summarize and total sub accounts across departments

Maintain a deleted and added account number list with activity for the current fiscal year

Provide support for accrual journal entries with automatic reversal

REPORTING

Print detailed income statements
Print detail general ledger/ chart of accounts
Print month-to-date journal entries
Generate reports by corporation, facility, department, and division
Print detail trial balance
Print detailed master log
Print account detail/summary
Print period comparison
Ability to generate and print journal vouchers
Print detailed expense report by department
Capability to generate reports on demand
Limit reporting capabilities to only authorized users
Restrict users by corporation/facility/department
Provide ad hoc report capabilities
Ability to create user-defined reports

INTEGRATION

Provides integration with:

Fixed Assets
Patient Accounting
Accounts Payable
Budgeting
Materials Management
Payroll

OTHER

Central location for employees to organize their daily workload with customized access and viewing parameters for each individual employee or job

ORDER MANAGEMENT

Order Entry

Orders are updated in real time
Allows for future orders to print on specified day
Provides the ability to suspend or cancel an order
All orders are date and time stamped and include user's ID
Capability to place orders for both inpatients and outpatients
Ability to place orders upon scheduling
Ability to copy orders from previous orders
Includes on-line help screens
Ability to define required fields for an order
Ability to enter order duration
Ability to limit order entry to authorized users based on patient
Allows users to place orders on hold
Ability for authorized personnel to modify orders
Automatically notifies appropriate staff of order modification
Ability to place charges during order entry

- Ability for ancillary staff to enter pending orders that need to be signed by authorized personnel
- Provides electronic signature capability
- Supports verbal orders
- Supports co-signer
- Automatically notifies physicians of orders requiring signature
- Ability to select items from drop down menu
- Allows users to page forward and backward between orders
- Ability to define order sets based on diagnosis or procedure
- Ability to create new order sets from existing order sets
- Physicians have the flexibility to create their own order sets
- System automatically flags duplicate orders
- Provides drug and allergy interaction checks
- Ability to create discharge orders
- Ability to view patient orders by department, facility, site, etc..
- Allows for recurring orders
- Automatically discontinues recurring orders upon patient discharge
- Ability to prioritize orders (STAT)
- Ability to scan items using bar code reader
- Automatically depletes items from stock upon order entry
- Ability to review patient information when placing orders
- Allow entry of orders for multiple departments from a single screen
- Displays previous results on order screen
- Displays patient's current and discontinued orders
- Provides audit trail of who entered, modified, or cancelled an order
- Orders are automatically sent to radiology, laboratory, pharmacy, and ancillary departments
- Provides capability to include free text comments
- Provides the capability to place orders from patient's bedside using mobile devices
- Provides ability to place orders remotely.
- Ability to print orders at nursing station or within ancillary departments
- Provide the ability to print all orders by patient
- Ability to capture organization-defined information at time of order entry
- Provides on-line help screens to assist with ordering process

Results Reporting

- Results are updated in real time
- Ability to enter and retrieve results by patient name, account number, medical record number, order number, and requisition number.
- Provides color coded display to flag new and abnormal results
- Allows providers to enter new orders when reviewing results
- Provides 24 hour summary panel to review trends
- Capability of capturing results from multiple facilities/departments
- Ability to access both inpatient and outpatient results
- Provides drill down capabilities to review sensitivities.
- Ability to review previous results
- Ability to store results for a user-defined period of time
- Restricts access to results to only those providers responsible for care
- Provides electronic signature that enables providers to sign off on results
- Provides graphical display and plotting of results
- Ability to graph temperature with WBC count to view trends

Ability to customize result display by provider
Ability to view all results from a single screen
Ability to access patient vital signs and historic information while reviewing results
Provides information on status of test procedure
Only authorized personnel have the capability to sign off on results and reports
Provides for batch verification of results
Provides ability to access results from remote locations
Prevents changes to previously reported results unless by authorized user
Allows for unlimited free text reporting of results
Allows for entry and storage of canned text to streamline reporting process
Ability to review EKG and diagnostic imaging reports
Ability to access PACS images
Ability to access input and output results
Ability to review pending and active orders from results screen
Displays entire order history for current admission
Displays order history by department
Provides specialty and monitoring panels with graphical display of trends over a user-defined period of time.
Provides history of allergies and medications
Displays status of results (new, signed, unsigned)
Ability to print reports on demand

Integration

Ability to place orders and capture results for:
Pharmacy
Laboratory
Pathology
Microbiology
Hematology
Radiology
Ability to view patient clinical data including:
Vital signs
Progress notes
Care plans
On-line MAR
Diagnostic images
Allergies
Visit History
Provides integration with report writing tool
Interfaces with voice recognition and transcription software

MATERIALS MANAGEMENT

Purchasing

Support online entry and editing of purchase orders and requisitions

Support automatic assignment of purchase order numbers
Ability to accommodate both stock and non-stock requisitions
Support inquiry of open and closed purchase orders
Ability to identify a project or reference number on a PO
For stock items, the system will create automatic purchase orders and bring PO quantities up to PAR levels
Hold purchase orders until approval for purchase
Allow for multiple purchase requisitions for one vendor into one purchase order
Allow for standing purchase orders
Allow for blanket purchase orders
Maintain audit trail for purchase orders
Allow tracking of due dates
Ability to add free text notes to PO
Ability to assign multiple vendors per item
Track back orders and print back order status report
The system supports multiple levels of sales tax
Ability to amend purchase order details
Allows user to create multiple types of standard purchase orders with pre-defined profiles
System allows for the identification of urgent orders.
Provides the capability to print purchase orders in batch mode
Allows users to copy a previous purchase order to create a new order
Automatically generates unique purchase order number by order type
Allows users the capability to create a change request
Provides capability to track change orders
Ability to track prices by facility

Receiving

Automate all receiving transactions
Purchase order data may be recalled using vendor name or PO number
Provide ability to communicate receiving problems to purchasing and/or accounts payable
Support procedures for handling stock-less or just-in-time supply items
Support the use of bar codes in receiving functions
Provide option for blind receiving (order quantities are hidden from receiver)
Provide ability to receive items in multiple units of measure
Ability to perform vendor analysis
Allows users to ship to multiple warehouses from one purchase order
Allow users to print receipts in batch or on demand
Provides online access to view receipts
Provides ability to place receipts on hold
Provides capability to return damaged goods to suppliers, adjust open quantities for stock items returned, and generate return slips.
Provide ability to generate replacement orders

Inventory Control

Support bar code technology
Support hand-held devices
Support an exchange/PAR stock supply system
Automatic ABC classification of inventoried stock
Maintain current inventory quantities in real time when items are issued, returned, received or transferred.

Track and report on separate inventories in multiple locations
Compute and report on EOQ.
Calculate inventory item cost using the average cost method
Calculate inventory item cost using the FIFO method
Support conversion from units of purchase to units of issue
Maintain inventory vital statistics (return rates, inventory on hand, number of PO's processed...)
Print bin location labels
Print bar code labels
Print pick lists
Allow departments to order supplies on-line and print requisition at inventory locations
Print stock status report
Provide audit trail of all adjustments to inventory
System calculates and suggests maximum and minimum re-order amounts
Allows authorized users the ability to edit reorder quantities (maximum and. minimum).

Contract Management

Allow for input of contracts
Alert purchasing of a contracted item
Print bid sheet
Provide contract reports

Integration

Provides integration with the following modules:

Admissions
Patient Accounting
Surgery
Order Management
Laboratory
Report Writer
General Ledger

Other

Provides Online help screens
Offers role-based security
Allows inventory management across multiple facilities.
Central location for employees to organize their daily workload with customized access and viewing parameters for each individual employee or job

PAYROLL

Applicant Tracking

Provide the ability to track and manage current and past job openings.
Ability to copy past job openings to create new openings.
Support scanning of resumes.
Provide web capabilities to allow applicants to complete job application and forward resume via web access.

Provide an applicant database containing personal data, skills, education, training, work experience, and references. Database should hold internal and external applicant information.

Allow current employees to be entered as applicants.

Allow job applicants to be considered for more than one position.

Generate letters to notify applications of status of a position and status as an applicant.

Generate offer letters.

Support scheduling of interviews and routing of resumes.

Ability to capture employee referrals.

Ability to capture and report applicant and recruitment expenses.

Track advertising associated with a job opening.

Carry forward applicant information to employee file upon hiring to avoid double data entry.

Ability to compare position requirements with applicant skills and qualifications to generate a list of potential candidates.

Employee File

Maintain an employee master file containing both payroll and personnel information.

Automatically or manually assign unique employee number.

Store employment history to track such things as jobs, employment status and salaries.

Address confidentiality/security issues regarding sensitive employee information.

Allow employee to have access to change demographic information in his or her own file.

Provide special editing capabilities to allow users to edit information while not being able to view Human Resources information (for example rate of pay.)

Ability to assign an employee to a primary position

Ability to assign an employee to multiple positions.

Ability to pay employee a different rate per position (if working more than one position.)

Ability to define an unlimited number of benefits.

Ability to define an unlimited number of classes or steps.

Track COBRA eligibility for employees and produce standard forms and letters.

Track all appropriate dates (date of hire, date of full benefits, evaluation/review dates.)

Maintain employee skills.

Ability to track and report on staff licenses and credentials.

Unlimited number of withholdings within the system and per employee.

Facility defined purge parameters.

Provide audit trails for changes made to employee files.

Ability to set up tables defining multiple accrual plans for vacation, PTO, and sick time.

Support PTO buyback

Ability to identify future changes, such as pay rate changes.

Support union tracking and employee participation.

Support workers compensation tracking.

HR Reports

Open position report

Dependents turning of age report for COBRA processing.

Complete W2 processing

Position control reports

Turnover reports

Detailed FTE reports

Printable employee file

Birthday list

Seniority list
Evaluation/review due list
Benefit usage report
EEOC reports
Printable grade, steps, and rate tables
Productive vs. nonproductive hours reporting
Skills expiring list

Payroll Processing

Deductions

Process payroll for an unlimited number of employees.
Support multiple payrolls with each potentially having their own payroll cycle.
Allow for an unlimited amount of withholdings and deductions in the system and for each employee, for example charitable contributions, association dues, insurance, cafeteria plan etc.
Provide user maintainable salary, grade, step, and pay rate tables.
Utilizes a deductions table to maintain calculations and rules for deductions.
Ability to determine if each deduction is taxable or not.
Calculate shift differentials
Monitor annual deductions
Ability to determine order in which deduction is taken.
Take partial deduction if insufficient funds in check
Provide for automatic deduction of the remaining amount in addition to the regular deduction during subsequent pay periods
Process garnishments or levies against employee, ie child support
Complies with statutory and government tax laws
Allow across the board increases.
Ability to calculate accruals

Timecard Processing

Interface to Time and Attendance Vendor
Check for duplicate timecards
Allow manual entry of timecards

Check Processing

Process direct deposit and print remittance advice
Deposit to multiple accounts per employee
Provide the ability to produce demand or special checks.
Ability to cancel and/or void a check
Print employee mailing labels
Ability to restart check run in the event of a printer malfunction.
Ability to view checks before printing
Perform retroactive calculations

Payroll Reports

Print quarterly earnings with summary totals
Print payroll registers with current and year to date information
Print exception report of employees not receiving checks
W-2 reporting
Print payroll labor distribution report with GL information

Labor variance reporting
Actual vs. budget payroll amount and hours
Annual employee benefit statements
Time card reporting
941 reporting
General ledger total

2. SERVER ROOM ACTIVE DEVICES

S/NO.	DESCRIPTION		
2	SERVER ROOM ACTIVE DEVICES		
Department	Item Code No.	Room Name/No.	Item Description
Across the Hospital		Various Rooms	User Access Stations
General Description			
These workstations will be used for access to Hospital Patient Management system at Various stations within the patient and administrative areas			
Composition			
Workstations Biometric finger print scanner IP-Phones Warranty & Support			
N.B: - Documentation of design and architecture of proposed solution			
Performance Specification			
Workstation	Thin client PoE Power At least 17-inch monitor 8GB RAM Windows 7/8/10 Standard Operating System Web Browser Appropriate client software Warranty & Support: at least 2 years		
Biometric finger print scanner	To be used with registration workstations to uniquely identify patients Optical Sensor Rugged USB compatible		
IP-Phones	To be setup with each workstation IP Telephone Handsets which offer an easy-to-use interface and provide a traditional telephony-like user experience Features Supports a minimum of two lines which are fully programmable Signalling protocol support: Session Initiation Protocol (SIP) Codec support: G.711a/μ, G.722, G.729a, iLBC Keys Line keys: a minimum of two lines which are fully programmable, Volume control toggle key, Speakerphone, headset and mute keys The phone supports IEEE 802.3af PoE (Class 1); power consumption does not exceed 3.84 watts The phone supports user-adjustable ring tones		

	<p>Quality-of-service (QoS) options: The phone supports CDP and 802.1Q/p standards, and can be configured with an 801.1Q VLAN header containing the VLAN ID overrides configured by the Admin VLAN ID</p> <p>Security: Certificates, Media encryption using Secure Real-Time Transfer Protocol (SRTP) using AES-128, Signalling encryption using Transport Layer Security (TLS) Protocol using AES-128 or AES-256</p> <p>Auto-detection of headset, Busy Lamp Field (BLF)</p> <p>Call back, Call forward, Call history, Call park, Call Pickup, Call timer, Call waiting, Caller ID</p> <p>Corporate directory, Conference, Cross Cluster Extension Mobility (EMCC), Dial from the list, Direct transfer, Do not disturb</p> <p>Group call pickup, conference</p> <p>White backlit, greyscale, 3.5” 396×162 pixel-based display</p> <p>The handset is a standard wideband-capable audio handset (connects through an RJ-9 port)</p> <p>The handset is hearing aid-compatible (HAC)</p> <p>A volume-control toggle provides easy decibel-level adjustments of the handset, monitor speaker, and ringer</p> <p>Full-duplex speakerphone allows gives you flexibility in placing and receiving calls. For added security, the audible dual tone multi-frequency (DTMF) tones are masked when the speakerphone mode is used</p> <p>Include a default black bezel (replaceable)</p>
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Department		Room Name/No.	
Item Code No.		Item Description	42U Rack & UPS
General Description			
The 42U Racks will be used to host the applications Hospital Servers and LAN Aggregation switches within the hospitals			
Composition			
42U Rack UPS			
N.B: - Documentation of design and architecture of proposed solution			
Performance Specification			
Rack	Should have Industry Standard 19-inch rack mounting rail Dimensions: Free Standing Minimum Rack Height: 42U high Minimum Rack Depth: 1,000mm Minimum Rack Width: 600mm Mesh Doors made of appropriate and secure materials		

	Should have at least two 6-way Power Distribution Unit OR strip with Type G (British 3-pin) sockets for support of BS 1363 (British 13 A/250 V earthed and fused) plugs Should have at least two overhead Low Noise Fan with Vent Guard & air filter Should have OR be supplied with an Electrical Grounding Kit
UPS	At least 5000 VA Network & Server UPS Rack mountable Enterprise grade system Warranty & Support: at least two Years

Department		Room Name/No.	
Item Code No.		Item Description	Layer 3 Device

General Description
Layer 3 device
Warranty & Support.
N.B: - Documentation of design and architecture of proposed solution

Performance Specifications
Layer 3 device
Support IP Routing & Routing protocols
Support IP Telephony
Have LAN Access ports (e.g. module); Support 12 and above ports 10/100/1000 POE+
At least three uplink ports, 1/10GE
Layer 3
Enterprise grade system
Manageable
Warranty & Support: at least two Years

Department	Item Code No.	Room Name/No.	Item Description
		Data Centre	LAN Access Switch

General Description
LAN Access Switch
Warranty & Support
N.B: - Documentation of design and architecture of proposed solution

Performance Specifications
LAN Access Switch
Between 48-port 10/100/1000 POE+
At least two uplink ports, 1GE
Layer 3
Enterprise grade system
Manageable
Warranty & Support: 5 Years

Department	Item Code No.	Room Name/No.	Item Description
			Wireless LAN Bridge
General Description Wireless LAN Bridge Warranty & Support N.B: - Documentation of design and architecture of proposed solution			
Performance Specifications Wireless LAN Bridge Enterprise grade system Controller based system IEEE 802.11AC wireless standard External Dual Band Antennae Uplink ports, 1/10GE Power: PoE+ Warranty & Support: at least two Years			
Department	Item Code No.	Room Name/No.	Item Description
			Hospital Server
General Description Hospital Server Warranty & Support N.B: - Documentation of design and architecture of proposed solution			
Performance Specifications			
Hospital Server	Rack mountable Should have Hypervisor for server virtualization Two CPUs, 8-core each Memory: Configured with 32GB Memory Support up to 1TB Memory 1GE IP Network Interface Local Disk Storage: Two 300GB SAS disks Two 1TB SAS disks Built-in Flash Memory Warranty & Support: 5 Years		
Department	Item Code No.	Room Name/No.	Item Description
		Reading Room	Diagnostic workstations

Diagnostic workstations	Two 2MP display 21” LED Monitors per workstation Dual processor Supports up to 64GB RAM 16X DVDRW drive Corresponding VGA card Keyboard and mouse Windows 7 or 10
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Department	Item Code No.	Room Name/No.	Item Description
Imaging		Data Centre	Service Desk Platform

General Description
This platform will be used to monitor the infrastructure put in place.

Composition
Network Management System
Service Desk Platform
Warranty & Support

N.B: - Documentation of design and architecture of proposed solution

Performance Specification

NOC Software	<p>Enterprise information technology (IT) infrastructure management software for managing all the IT and non IT infrastructure in the radiology network. The following are the minimum features; Should work in a Virtualized platform i.e. Monitor Virtual Machines and Hypervisors Monitor all database instances Monitor all applications Monitor all Network Equipment Monitor all servers and workstations The solution should provide the following:</p> <p>Network Performance Monitor Monitor all WAN & LAN instances and interfaces Speeds troubleshooting, resolves network outages, and reduces downtime Monitors and displays availability, and performance of network devices Improves operational efficiency with out-of-the-box, customizable dashboards, and alerts Automatically discovers and maps network devices.</p> <p>Network Analysis Monitors network bandwidth & utilization down to the interface level</p> <p>Server and Application Monitoring Application Monitoring for all components – servers, virtual layer, and 150+ applications such as Database Servers, and Active Directory Easily customize alerts, reports, and dashboards for your enterprise-wide needs</p>
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	<p>Use baseline to compare application performance and alert when apps start having issues</p> <p>Supports multiple discovery methods including</p> <p>has multiple maps</p> <p>Provide ability to automate fix action</p> <p>Ability to send alert messages via e-mail and SMS</p> <p>Ability to monitor server temperature, fan speed voltage, and disk state,</p> <p>Network Topology</p> <p>Provide diagrams of network topology</p> <p>Virtual Environment Manager</p> <p>Real-time dashboards simplify identification & troubleshooting of performance, capacity & configuration problems</p> <p>Provides complete visibility of the application stack – from app to VM to data store</p> <p>Database Performance Monitor</p> <p>Identifies the performance problems most impacting end user response time.</p> <p>Pinpoint root causes by performing the necessary analysis</p> <p>Monitor all databases availability and performance</p>
Network Operating Center Software	<p>ITIL based Help desk software with a self-service portal and asset management.</p> <p>Handle tickets efficiently, ensure timely delivery, and dramatically improve end user satisfaction</p> <p>Proactively analyse, plan, and solve your IT problems.</p> <p>Classify and prioritize problems.</p> <p>Diagnose problems. Formulate effective workarounds and solutions.</p> <p>Integrate with other ITSM processes. Link problems with incidents and changes.</p> <p>Manage changes with ease (Change Management)</p> <p>Other features supported;</p> <p>Incident Management</p> <p>Knowledge Base</p> <p>Asset Management</p> <p>Purchase Management</p> <p>Contract Management</p> <p>Service Catalogue</p> <p>Problem Management</p> <p>Change Management</p> <p>Canned and Custom Reports</p> <p>Supports 50+ technicians</p>

Department	Item Code No.	Room Name/No.	Item Description
Imaging	LOT 15-11	Data Center	Enterprise Switches
<p>General Description</p> <p>Date Center Core Switch</p> <p>Data Centre Switching</p> <p>DMZ Switches</p> <p>Network Management Switches</p>			

<p>Warranty & Support</p> <p>N.B: - Documentation of design and architecture of proposed solution</p>
<p>Performance Specifications</p> <p>Enterprise Core switches</p> <p>Support for 10 Gigabit Ethernet Ports</p> <p>Support for IP Ports</p> <p>Dual Power Supplies</p> <p>Support for 10GBASE-SR SFP transceiver modules</p> <p>Support for 1000BASE-SX SFP transceiver modules</p> <p>Support for 1000BASE-T SFP transceiver modules</p> <p>Support for 10GBASE-CU Twinax cables</p> <p>Minimum 2 sets for redundancy</p>
<p>Enterprise Datacenter Access Switches</p> <p>Support for 10 Gigabit Ethernet Ports</p> <p>Support for Unified Ports – IP, FC & FCoE</p> <p>Dual Power Supplies</p> <p>Support for 10GBASE-SR SFP transceiver modules</p> <p>Support for 1000BASE-SX SFP transceiver modules</p> <p>Support for 1000BASE-T SFP transceiver modules</p> <p>Support for 10GBASE-CU Twinax cables – both Active and Passive</p> <p>Minimum 2 sets for redundancy</p>
<p>DMZ Switches</p> <p>24-port 10/100/1000 POE+</p> <p>Layer 2</p>
<p>Network Management Switches</p> <p>24-port 10/100/1000 POE+</p> <p>Layer 2</p>

Department	Item Code No.	Room Name/No.	Item Description
Imaging	LOT 15-12	Data Center	Enterprise Router

<p>General Description</p> <p>Data Centre Routing</p> <p>Warranty & Support</p> <p>N.B: - Documentation of design and architecture of proposed solution</p>
<p>Performance Specifications</p> <p>Support for full Routing Protocols, RIP, OSPF, EIGRP, etc.</p> <p>Aggregate Throughput/Performance: 1/10 Gbps</p> <p>Total on board WAN or LAN 10/100/1000 ports: 4</p> <p>DRAM: 16GB</p> <p>Support Module Online insertion & removal (OIR)</p> <p>Support country wide unified communication – VoIP</p> <p>Provide Group Encrypted Transport (GET) VPN technology</p> <p>All data transport across the WAN should be undertaken in Group Encrypted Transport (GET) VPN link technology</p> <p>Redundant AC Power Supply</p> <p>Minimum 2 sets for redundancy</p> <p>Should NOT have End-of-Sale (EOS), End-of-Life (EOL) or End-of-Support (EOS) status</p> <p>Warranty & Support: 5 Years</p>

Department	Item Code No.	Room Name/No.	Item Description
Data Centre			Data Center Compute
General Description			
Computing servers			
Warranty & Support			
N.B: - Documentation of design and architecture of proposed solution			
Performance Specifications			
Compute	<p>Should be an integrated solution</p> <p>Should have a blade server system with N+1 chassis</p> <p>At least 2 * Switch Modules in one blade server chassis that</p> <p>Support 10GE + FC ports</p> <p>At least 12 * blades servers</p> <p>Supports multi-generation Intel processors simultaneously, such as E5 v2, E5 v3, E7 v2 and E7 v3.</p> <p>At least Haswell EX Xeon E7-4850 v3,14Core Processor Type:</p> <p>Number of Processor: Minimum 2</p> <p>Minimum 256GB RAM per blade</p> <p>Disk: At least 4 * 300 GB 10000rpm SAS 12Gb/s</p> <p>RAID Card: At least support RAID0, 1, 10, 5, 50, 6, 60, (super capacitance)</p> <p>Mezz Card : At least 2*10GE, 2*8G FC Port"</p> <p>Support PCIe SSDs</p> <p>Support standard PCIe expansion cards</p> <p>Provide a redundant solution to ensure uptime</p>		
Virtualization	<p>Hypervisor</p> <p>vMotion, Storage vMotion and X-Switch vMotion</p> <p>High Availability and Fault Tolerance</p> <p>Data Protection and Replication1</p> <p>vShield Endpoint</p> <p>Virtual Volumes and Storage-Policy Based Management</p> <p>APIs for Storage Awareness</p> <p>APIs for Array Integration, Multipathing</p> <p>Distributed Resource Scheduler and Distributed Power Management</p> <p>Big Data Extensions</p> <p>Distributed Switch</p> <p>Storage DRS</p> <p>I/O Controls (Network and Storage) and SR-IOV</p> <p>Host Profiles and Auto Deploy</p> <p>Flash Read Cache</p> <p>Cross-vCenter and Long Distance vMotion</p> <p>Content Library</p> <p>vGPU</p> <p>Monitoring</p> <p>Capacity Optimization</p> <p>Operations Visibility</p> <p>Business Continuity and Security</p> <p>vMotion: + Cross vSwitch/Cross vCenter/Long Distance</p> <p>Storage vMotion</p>		

	High Availability Data Protection Fault Tolerance: 4-vCPU vShield Endpoint Replication Hot Add Resource Prioritization and Enhanced Application Performance Virtual Volumes Storage Policy-Based Management Reliable Memory Big Data Extensions Virtual Serial Port Concentrator Distributed Resources Scheduler (DRS), Distributed Power Management (DPM) Storage DRS Storage I/O Control Network I/O Control Single Root I/O Virtualization (SR-IOV) Support NVIDIA GRID vGPU Automated Administration and Provisioning Content Library Storage APIs for Array Integration, Multipathing Distributed Switch Host Profiles and Auto Deploy Operations Management Consistent Management Intelligent Operations Operations Automation Workload Balancing
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Department	Item Code No.	Room Name/No.	Item Description
ICT		Data Centre	Data Center Storage
General Description			
Two storage platforms Production Storage Long Term Storage: Image Archival Storage Unified storage: support Block storage protocols: FC, iSCSI File Share protocols: CIFs etc. Redundancy & high availability Warranty & Support N.B: - Documentation of design and architecture			
Performance Specifications			
Production Storage - SAN Storage	Quantity 2 Unified storage support NFS,SAN CIFS & FTP Minimum 30TB useable capacity Supports Storage Tiering I/O support for FC-8Gbps, 10GE Controller: At least 2 Controllers, 48GB Cache		

	<p>Disk: At least 12 * 900GB SSD Disks</p> <p>A multi-controller SAN architecture and expansion to a maximum of eight controllers</p> <p>Support for 8 Gbit/s Fibre Channel ports, 1,10 Gbit/s iSCSI ports, FCoE ports,</p> <p>16 Gbit/s Fibre Channel ports and 56 Gbit/s InfiniBand ports</p> <p>Support QoS priority control function</p> <p>Support Data volume mirroring</p> <p>Support Cache partitioning function:</p>
Long Term Storage: Image Archival Storage	<p>File share protocols</p> <p>I/O support for 10GE</p> <p>Capacity:</p> <p>At least 400TB useable with 4TB SATA Disk</p> <p>At least 2*400GB SSD to improve the performance</p> <p>At least 48GB Memory</p> <p>At least 5 nodes in NAS storage</p> <p>Switch Module: Front 2*10GE + End 2*10GE</p> <p>Support file and object protocol</p> <p>Linearly scalable with more than 140 nodes</p> <p>Single file system capacity can scale up to Petabytes of Data;</p> <p>Support for 10GE, GE, 40Gbps InfiniBand</p> <p>Supports NFS (V3/V4), SMB (V1/V2/V3), HDFS (supporting interconnection with Cloudera), FTP, NDMP, and Amazon S3/OpenStack Swift interfaces</p>
Backup Solution	<p>Backup to tape of production servers</p> <p>At least 24 slot Tape Library</p> <p>Backup server and media software</p> <p>Safe for storing the tapes</p>

Department	Item Code No.	Room Name/No.	Item Description
ICT	LOT 15-15	Data Center	Data Center Storage Area Network (SAN)

General Description

Redundancy & high availability

Performance Specifications

Fibre Channel Protocol

8Gbps

2*FC switches with 48 ports

Warranty & Support

N.B: - Documentation of design and architecture MUST be provided

Department	Item Code No.	Room Name/No.	Item Description
ICT		Data Centre	IPABX

General Description

VOIP Call Manager supporting Unified Communications I.e. Voice Conferencing on one platform in a virtualized environment. Collaboration Applications, Customer Collaboration through converged voice management solutions. The overall solution should be optimized for 1000 to 5000 users with 3000+ devices and over 90 sites

Performance Specifications

Call Control should be based on the latest Call Control Version, with the following minimum system features;
 Automatic route selection (ARS)
 Static modelling using locations-based Call Admission Control
 Call recording for encrypted and non-encrypted calls
 Digit analysis and call treatment (digit-string insertion, deletion, stripping, dial access codes, digit-string translation
 Extension Mobility
 Inter-cluster scalability to more than 100 sites or clusters through H.323 gatekeeper
 Multi-location: Dial-plan partition
 Secure conferencing is available to all members of the conference
 Should support contact centre capabilities for up to 5 agents with the following features;
 Inbound voice
 Inbound Voice High-Availability Option
 Blended Preview Outbound Dialler
 Outbound IVR
 Agent E-Mail
 Agent Web Chat
 Remote Monitoring
 Integration with Cisco IM and Presence Server
 Cisco Unified Intelligence Centre
 Warranty & Support
N.B: - Documentation of design and architecture of proposed solution

Department	Item Code No.	Room Name/No.	Item Description
ICT		Data Centre	Enterprise Security
General Description			
Network Firewalls Network Firewall Manager Network Access Control Active Directory VPN Web Application Firewall Warranty & Support N.B: - Documentation of design and architecture of proposed solution			
Performance Specifications			
Network Firewalls	Get visibility into and control over activity across your network by gaining insight into users, apps, devices, threats, files, and vulnerabilities. Uses an integrated approach to threat defence thus reducing administrative complexity by consolidating multiple security services in a single platform. Automate security tasks to increase agility and speed remediation. Provides complete and unified management over firewalls, application control, intrusion prevention, URL filtering, and advanced malware protection Should provide		

	<p>Clustering & High Availability Next Generation IPS Network Firewall, Routing & Switching Remote VPN Identity Policy Control Advanced malware protection Full contextual awareness Application control and URL filtering Enterprise-class management Streamlined operations automation Support Integration with Snort and OpenAppID Collective Security intelligence (CSI) Stateful inspection throughput - 2 Gbps+ IPS throughput - 600Mbps 3DES/AES VPN throughput - 300Mbps+ Users/nodes - Unlimited Support IPsec VPN peers - 500+ Virtual interfaces (VLANs) – 200+ I/O Ports</p>
Network Access Control	<p>Authenticates administrators, authorizes commands, and provides an audit trail Works with VPN and other remote network access devices to enforce access policies Authenticates and authorizes wireless users and hosts and enforces wireless-specific policies Communicates with posture and audit servers to enforce admission control policies Serves as a Policy Administration Point (PAP) and Policy Decision Point (PDP) for policy-based network device access control, offering a large set of identity management capabilities, including Unique, flexible, and granular device administration in IPv4 and IPv6 networks with full auditing and reporting capabilities as required for standards compliance A powerful, attribute-driven rules-based policy model that addresses complex policy needs in a flexible manner A lightweight, web-based graphical user interface (GUI) with intuitive navigation and workflow accessible from both IPv4 and IPv6 clients Integrated advanced monitoring, reporting, and troubleshooting capabilities for maximum control and visibility Integration with external identity and policy databases, including Windows Active Directory and Lightweight Directory Access Protocol (LDAP)-accessible databases, simplifying policy configuration and maintenance A distributed deployment model that enables large-scale deployments and provides a highly available solution</p>
Active Directory	<p>Active Directory Services Domain Services Lightweight Directory Services Certificate Services</p>

	<p>Federation Services</p> <p>Rights Management Services</p> <p>Integrate with VPN services</p> <p>Integrate with Network Access Control services</p> <p>Integrate to workstations proposed</p>
VPN	<p>Extends the appropriate remote-access VPN technology, either clientless or full network (SSL/TLS, DTLS, IPsec IKEv1 or IKEv2) access, on a per-session basis, depending on the user group or endpoint accessing the network, its security posture, and administration's policies.</p> <p>Automatically connects or disconnects a user session based on the user's location and network availability, providing a transparent secure connectivity experience to the roaming worker, who in turns gains in productivity and flexibility.</p> <p>Ability to provide logging data of all sessions to a central logging mechanism</p>
Web Application Firewall	<p>Filter all ingress traffic</p> <p>Provides intrusion prevention and enables regulatory compliance for web applications</p> <p>Protect web applications from unwanted traffic and attack</p> <p>Reduce and mitigate risks associated with web applications</p> <p>Ability to provide logging data of all sessions to a central logging mechanism</p>
Intrusion Prevention System	<p>Produced by a defensible market leading vendor</p> <p>Detect known malicious attacks against network, host, and application resources</p> <p>Allow analysts to build and deploy custom signatures</p> <p>Can expose an API to allow greater system interoperability</p> <p>Produce logging data related to actions taken on all traffic traversing IPS</p> <p>Produce logging data related to all administrative interaction with IPS</p> <p>Provide a mechanism for export of logs into a centralized log aggregation system</p>

Department	Item Code No.	Room Name/No.	Item Description
ICT		Data Centre	Antivirus
General Description			
Antivirus			
Warranty & Support			
N.B: - Documentation of design and architecture of proposed solution			
Composition			
Antivirus for Virtual Machines			
Antivirus for End Points Virtualized Environment			
Antivirus for Workstations			
Performance Specification			
Antivirus for Virtual Machines	Virtual Environment Should work on a virtualised environment		

	<p>Supports VMware, Microsoft Hyper-V, Citrix XenServer, Red Hat Enterprise Virtualization (with KVM) and others</p> <p>Leverages vShield Endpoint in VMware deployments</p> <p>Eliminates single points of failure and bottlenecks while providing unparalleled availability of anti-malware protection</p> <p>Delivers protection against malware within file systems, memory, processes and registry database</p> <p>Less than 110 MB storage during runtime (including runtime cache)</p> <p>10-20 MB local memory during runtime (on-access scanning)</p> <p>Peak CPU load of 1-2%, on a single virtual CPU for on-access scanning</p> <p>Establishes connection to an available authorized Security Server (virtual appliance), allowing local access to file system, registry, memory and processes</p> <p>Switches connection to alternate Security Servers in case of slow response time or sudden unavailability.</p> <p>Manages local disinfection, quarantine and process blocking.</p> <p>Maintains local cache of scanned items for performance gains.</p> <p>Runs as a local service with all administrative privileges removed, guarding against attacks that attempt to shut-down protection locally.</p> <p>Optionally provides a User Interface inside the VM with desktop pop-up notifications.</p> <p>Deployment of Central Scan (available in both a Windows and Linux version) is simple and requires no reboot of the virtual machines, while deployment of Security Server likewise does not require a reboot of machines hosting VMs.</p> <p>Supported Guest OS (32/64 bit): Microsoft Windows 8, 7, Vista, XP (SP3), 2012, 2008 / R2, 2003 / R2 Red Hat Enterprise Linux / CentOS 6.2, 6.1, 5.7, 5.6; Ubuntu 11.04, 10.04; SUSE 11; OpenSUSE 12, 11; Fedora 16, 15</p>
<p>Antivirus for Endpoints & Virtualized Environment</p>	<p>Security for Endpoints & Virtualized Environments</p> <p>Centralized policy-based security management</p> <p>Same console as virtualization and mobile security</p> <p>Two-way firewall with intrusion detection</p> <p>Award-winning anti-malware protection</p> <p>Antiphishing</p> <p>User and web control</p> <p>Supported Operating Systems</p> <p>Workstation operating systems:</p> <p>Windows 8, 7, Vista (SP1), XP (SP3)</p> <p>Tablet and embedded operating systems: Windows Embedded Standard 7, POSReady 7, Enterprise 7,</p>

	<p>POSReady 2009, Standard 2009, XP Embedded with SP 2, XP Tablet PC Edition</p> <p>Server operating systems: Windows Server 2012, Windows Small Business Server (SBS) 2011, Windows Small Business Server (SBS) 2008, Windows Server 2008 R2, Windows Server 2008, Windows Small Business Server (SBS) 2003, Windows Server 2003 R2, Windows Server 2003 with Service Pack 1, Windows Home Server</p> <p>Antivirus for Virtualized Environments</p> <p>Integrated with VMware vCenter and Citrix XenServer management platforms</p> <p>Support for any virtualization platform: VMware, Citrix, Microsoft, Oracle, RHEV</p> <p>Protects file system, processes and memory on Windows and Linux</p> <p>Able to scan virtual machines that are not powered on (offline scanning)</p> <p>Supports High availability</p>
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Department	Item Code No.	Room Name/No.	Item Description
ICT		Data Centre	Load Balancer
<p>General Description</p> <p>Distributes network or application traffic across a number of servers</p> <p>Warranty & Support</p> <p>N.B: - Documentation of design and architecture of proposed solution</p>			
<p>Performance Specifications</p> <p>Application throughput of 7.5 Gbps /7 Gbps</p> <p>Support Advanced server load balancing (SLB) and global server load balancing (GSLB)</p> <p>Directs connections to active servers and data centres in a transparent manner</p> <p>Rapidly enable and deploy business critical applications with predefined smart templates</p> <p>SSL offload (including offload of demanding 2048- and 4096-bit key operations), HTTP compression, TCP reuse, and RAM caching</p>			

Department	Item Code No.	Room Name/No.	Item Description
ICT		Data Centre	WLAN Controller
<p>General Description</p> <p>Control of the Wireless LAN Bridges in the Hospitals</p> <p>Warranty & Support</p> <p>N.B: - Documentation of design and architecture of proposed solution</p>			
<p>Performance Specifications</p> <p>Supports IEEE 802.11AC standard</p> <p>Enterprise grade system</p> <p>Support for MESH Wireless standard</p> <p>Warranty & Support: at least 2 Years</p>			

3. OPERATIONAL ICT EQUIPMENT

S/NO.	DESCRIPTION
1	
1.1 Network Printers	
Functions	Print, copy, scan
Control panel	20 cm (8.0") colour touchscreen; Adjustable angle display with gesturing; Illuminated Home button (for quick return to the Home menu)
Print speed	Up to 59 ppm black (Landscape, A5); Up to 6 ppm black (Portrait, A5); Up to 59 ppm colour (Landscape, A5); Up to 6 ppm colour (Portrait, A5) Up to 38 ppm black (A4); Up to 38 ppm colour (A4); Up to 38 ipm black duplex (A4)
First page out from ready	As fast as 5.6 sec
First page out from sleep	As fast as 8.6 sec
Print resolution	Up to 600 x 600 dpi (normal), up to 1200 x 1200 dpi (fine lines), Pantone Calibrated or equivalent
Print technology	Laser
Print languages	PCL 6; PCL 5c; Postscript Level 3 emulation, native PDF printing (v1.7) or equivalent
Printer Smart Software Features	Print preview; Duplex printing; Print multiple pages per sheet (2, 4, 6, 9, 16); Collation; Watermarks; Store print jobs; Easy-access USB; Easy Color or equivalent
Monthly duty cycle	Up to 80,000 pages (A4); Recommended monthly page volume5: 2,000 to 7,500 (print)
Duplex printing	Automatic (also allow setting)
Connectivity Standard	2 Hi-Speed USB 2.0 Host; 1 Hi-Speed USB 2.0 Device; 1 Gigabit/Fast Ethernet 10/100/1000Base-TX network; 1 Hardware Integration Pocket
Supported network protocols	IPv4/IPv6: Apple Bonjour Compatible (Mac OS 10.2.4 or higher), SNMPv1/v2c/v3, HTTP, HTTPS, FTP, TFTP, Port 9100, LPD, WS Discovery, IPP, Secure-IPP, IPsec/Firewall; IPv6: DHCPv6, MLDv1, ICMPv6; IPv4: Auto-IP, SLP, Telnet, IGMPv2, BOOTP/DHCP, WINS, IP Direct Mode, WS Print; Other: NetWare NDS, Bindery, NDPS, ePrint; Google Cloud Print 2.0
Wireless Network	Optional, enabled with purchase of hardware accessory.
Hard disk	Standard, embedded High-Performance Secure Hard Disk,

	minimum 320 GB; AES 256 hardware encryption or greater; Secure erase capabilities (Secure File Erase-Temporary Job Files, Secure Erase-Job Data, Secure ATA Erase-Disk)	
Memory	Standard: 1.25 GB (printer), 500 MB (scanner); Maximum: 2.0 GB (printer), 500 MB (scanner)	
Copy speed	Up to 38 cpm black (A4), Up to 38 cpm colour (A4)	
Copier settings	Two-sided copying; Scalability; Image adjustments (darkness, contrast, background cleanup, sharpness); N-up; N or Z-ordering; Content orientation; Collation; Booklet; Job build; Edge-to-edge; Job storage; ID copy; Book copy; A-to-B copy (different media sizes); Maximum number of copies: Up to 9,999 copies; Copy resolution: Up to 600 x 600 dpi (flatbed), 600 x 450 dpi (ADF); Reduce/Enlarge: 25 to 400%	
Scanner Specifications	Scanner type: Flatbed, ADF (two-sided, single-pass); Scan technology: Contact Image Sensor (CIS); Duplex ADF scanning: Yes; Scan size maximum (flatbed, ADF): 216 x 356 mm; Optical scan resolution: Up to 600 dpi	
Scan file format	PDF, JPEG, TIFF, MTIFF, XPS, PDF/A	
Scan speed	Up to 43 ppm/43 ipm (monochrome), up to 38 ppm/38 ipm (colour)	
Scanner Advanced Features	Optimise text/picture; Image adjustments; Job build; Output quality setting; Selectable scan resolution 75 to 600 dpi; Auto detect colour; Edge Erase; Job notification; Blank page suppression; HP Quick Sets	
Bit depth/ Grey scale levels	24-bit / 256	
Digital sending	Standard: Scan to Email; Save-to-Network Folder; Save-to-USB drive; Send to FTP; Send to Internet Fax; Local Address Book; SMTP over SSL; Blank Page Removal; Edge Erase; Auto Colour Sense; Auto Crop To Content; Compact PDF	
Recommended monthly scan volume	4,150 to 6,900	
Paper handling: Media types	Paper (plain, light, bond, recycled, mid-weight, heavy, mid-weight glossy, heavy glossy, extra heavy, extra heavy glossy, cardstock, card glossy), colour transparency, labels, letterhead, envelope, preprinted, prepunched, coloured, rough, opaque film, user-defined	
Paper handling: Paper size	Custom metric: Tray 1: 76 x 127 to 216 x 356 mm; Tray 2: 102 x 148 to 216 x 297 mm; With Optional Trays 3:	

	102 x 148 to 216 x 356 mm	
	Supported metric: Tray 1: A4, RA4, A5, B5 (JIS), B6 (JIS), 10 x 15 cm, A6, envelopes (B5, C5 ISO, C6, DL ISO);	
	Custom: 76 x 127 to 216 x 356 mm; Tray 2: A4, A5, B5 (JIS), B6 (JIS), 10 x 15 cm, A6; Custom: 102 x 148 to 216	
	x 297 mm; Optional Tray 3: A4, RA4, A5, B5 (JIS);	
Paper handling	Standard input: 100-sheet multipurpose tray, 550-sheet input Tray 2 Standard output: 250-sheet output bin With Optional/Input: 550-sheet media input Tray 3, ADF: Standard, 100 sheets	
Paper handling :Input capacity	Tray 1: Sheets (75 g/m ² paper): 100; Transparencies, cardstock (163 g/m ²): 50; Cardstock (216 g/m ²): 30; Envelopes: 10 Tray 2: Sheets (75 g/m ² paper): 550; Labels, cardstock (163 g/m ²): 100 Tray 3: Sheets (75 g/m ² paper): 550; Labels, cardstock (163 g/m ²): 100 Maximum: Up to 2,300 sheets	
Compatible operating systems	Windows OS compatible with In-Box Driver: Windows 10 all 32-bit/64-bit editions (excluding RT OS for tablets), Windows 8/8.1 all 32-bit/64-bit editions (excluding RT OS for tablets), Windows 7 all 32-bit/64-bit editions, Windows Vista all 32-bit editions (Home Basic, Premium, Professional, etc.); Windows OS compatible with Universal Print Driver (from HP.com): Windows 10 all 32-bit/64-bit editions (excluding RT OS for tablets), Windows 8/8.1 all 32-bit/64-bit editions (excluding RT OS for tablets), Windows 7 all 32-bit/64-bit editions, Windows Vista all 32-bit/64-bit editions (Home Basic, Premium, Professional, etc.); Mac OS (HP print drivers available from HP.com and Apple Store): OS X 10.8 Mountain Lion, OS X 10.9 Mavericks, OS X 10.10 Yosemite; Mobile OS (In-OS drivers): iOS, Android, Windows 8/8.1/10 RT; Linux OS (In-OS HPLIP): SUSE Linux (12.2, 12.3, 13.1), Fedora (17, 18, 19, 20), Linux Mint (13, 14, 15, 16, 17), Boss (3.0, 5.0), Ubuntu (10.04, 11.10, 12.04, 12.10, 13.04, 13.10, 14.04, 14.10), Debian (6.0.x, 7.x); Other OS: UNIX Compatible network operating systems: Windows OS compatible with In-Box Driver: Windows Server 2008 R2 64-bit (SP1) Standard/Enterprise (+ Cluster & Terminal Services), Windows Server 2008 32-bit/64-bit (SP2) Standard/Enterprise (+ Cluster & Terminal Services), Windows Server 2003/2003 R2 32-bit (SP1/SP2) Standard/Enterprise (+ Cluster & Terminal Services); Windows OS compatible with Universal Print Driver (UPD) or product-specific drivers from HP.com: Windows Server 2012/2012 R2 64-bit	

	Standard/Foundation/Essentials/Datacenter (+ Cluster & Terminal Services), Windows Server 2008/2008 R2 32-bit/64-bit (SP1/SP2) Standard/Enterprise/Datacenter (+ Cluster & Terminal Services), Windows Server 2003/2003	
	R2 32-bit/64-bit (SP1/SP2) Standard/Enterprise/Datacenter (+ Cluster & Terminal Services); Citrix (on Windows Server 2003/2003 R2), Citrix MetaFrame Presentation Server 3.0, Citrix MetaFrame XP Presentation Server (Feature Release 1, 2, and 3), Citrix Presentation Server 4.0/4.5, Citrix XenApp 5.0 (Plus Feature Pack 2 & 3), Citrix (on Windows Server 2008/2008 R2), Citrix XenApp 5.0 (Plus Feature Pack 2 & 3), Citrix XenApp 6.0/6.5/7.5, Citrix XenDesktop 5.6/7.0/7.5, Citrix (on Windows Server 2012/2012 R2), Citrix XenApp 7.5, Citrix XenDesktop 7.0/7.5; Novell Servers (www.novell.com/iprint), Novell iPrint Appliance v1.0, Novell Open Enterprise Server 11/SP1, Novell Open Enterprise Server 2 for Linux, NetWare 6.5/SP8; Novell Clients (www.novell.com/iprint); Windows 8 (32-bit/64-bit) recommend v5.86+, Windows 8.1 recommend v5.94+, Windows 7 (32-bit/64-bit) recommend v5.82+, Windows Vista (32-bit/64-bit) recommend v5.82+	
Mobile printing capability	ePrint; Apple AirPrint™; Mopria-certified; Google Cloud Print 2.0	
Security management	Identity management: Kerberos authentication, LDAP authentication, 1,000 user PIN codes, optional HP and 3rd party advanced authentication solutions (e.g. badge readers, Trusted Platform Module); Network: IPsec/firewall with Certificate, Pre-Shared Key, and Kerberos authentication, Supports WJA-10 IPsec configuration Plug-in, 802.1X authentication (EAP-PEAP, EAP-TLS), SNMPv3, HTTPS, Certificates, Access Control List; Data: Storage Encryption, Encrypted PDF & Email (uses FIPS 140-2 validated cryptographic libraries), Secure Erase, SSL/TLS (HTTPS), Encrypted Credentials; Device: Security lock slot, USB port disablement, Hardware Integration Pocket for security solutions; Security management: Compatible with optional HP JetAdvantage Security Manager	
Printer management	Printer Administrator Resource Kit (Driver Configuration Utility, Driver Deployment Utility, Managed Printing Administrator); Web JetAdmin Software; Proxy Agent Software; JetAdvantage Security Manager	
Printer dimensions (W x D x H)1	Minimum: 482 x 504 x 583 mm Maximum: 699 x 504 x 583 mm	
Power	Input voltage: 200 to 240 VAC, 50 Hz	
Printer Weight	38.1 kg	

Warranty	One-year	
Brochure	Bidders are required to attach brochure of the proposed product.	

1.2 POS Printer

- Print Specs**
- Thermal printhead, requires no ink
 - Print speed of 300mm/sec, 576 dots/line
- Paper Specs**
- Auto-cutter (partial or complete cut)
 - Fits 80mm standard till roll
 - Print width of 72mm
 - Paper thickness of 0.06 - 0.08mm
- Cash Drawer Control**
- Connects with any RJ12 cash drawer
 - Can be set to automatically fire cash drawer on each transaction or only when requested
- Power**
- 100-240 voltage, 48W
 - power rating Power adapter included
 - Operating temperature 0 - 45 °C
- Connectivity**
- USB, Serial, Ethernet
 - USB cable included
 - Internal buzzer
 - Compatible with ESC/POS printing standards
- Brochure**
Please attach a brochure of the proposed item

1.3 Copier

Copying Speed	30 copies per minute (cpm)
Warm up time	22 sec
Continuous Copying	999
Paper Input Capacity	1,200 sheets
Bypass tray	1x100 sheets
Paper Size	A3-A5
Printing Speed	50 cpm
Scanning Speed	39 cpm
Processor	700MHz
E-filing	Required
Programmable user codes	Required
Paper output capacity	1,000 sheets
RADF (Reverse automatic document feeder)	Required
ADU (Automatic duplex unit)	Required

Printer/Scanner Kit	Required
Zoom	25-400% (in 1% steps)
Memory	1GB + 120 GB
First Copy out	3.5 seconds
Power Supply	240v, 50Hz
Interface, Ethernet	USB 2.0, 10base – T/100base TX
User Information display	Required
Stapler Finisher	Required
Fault Diagnosis System	Required
Free bundled software for network printing and scanning	Required
Duty Cycle	60,000 – 80,000 copies per month
Brochure	Please attach brochure for the proposed item.

1.4 Scanner

Throughput Speeds at 200 dpi/300 dpi (landscape, A4 size, black and white/ grayscale/color)	ADF: Up to 90 ppm
Recommended Daily Volume	ADF: Up to 20,000 pages per day Integrated A4 size flatbed: 100 pages per day
Scanning Technology	Dual CCD; Grayscale output bit depth is 256 levels (8-bit); color capture bit depth is 48 bits (16 x 3); color output bit depth is 24 bits (8 x 3)
Optical Resolution	1200 dpi
Output Resolution	100 / 150 / 200 / 240 / 250 / 300 / 400 / 500 / 600 dp
Illumination	Dual LED
Operator Control Panel	Graphical LCD display with four operator control buttons
Maximum/Minimum Document Width	Auto-feed: 305 mm (12 in.) / 63.5 mm (2.5 in.) Hand-feed: 305 mm (12 in.) / 50 mm (2 in.)
Maximum/Minimum Document Length	Auto-feed: 863.6 mm (34 in.) / 63.5 mm (2.5 in.) Hand-feed: 863.6 mm (34 in.) / 50 mm (2 in.) (rear exit only) Long document mode: 4.1 meters (160 in.) maximum length (The scanners support continuous scanning mode)

Paper Thickness and Weight	34-413 g/m2 paper
Feeder/Elevator	Up to 250 sheets of 80 g/m2 paper
Paper Path Options	Documents can exit into the front output tray, or at the rear of the scanner if the straight-through paper path option is manually selected
Multi-feed Detection	Ultrasonic multi-feed detection; Intelligent Document Protection
Connectivity	USB 2.0; USB 3.0 compatible
Software Support	Required
Barcode Reading	One per page: Interleaved 2 of 5, Code 3 of 9, Code 128, Codabar, UPC-A, UPC-E, EAN-13, EAN-8, PDF417

1.5 Large Format Printer

Print Resolution	2 400 x 1 200dpi
Printer Type	5 Colour 609.6mm (24.0in)
Nozzle Pitch	1 200dpi (2 lines)
Line Accuracy	±0.1% or less
Ink Droplet Size	Minimum 5picoliter per colour
Ink Capacity	Sales Ink: 130ml/300ml (MBK*, BK*,C*,M*, Y*) Bundled Starter Ink: 130ml (MBK*)/ 90ml (BK*,C*,M*, Y*)
Standard Interfaces (Built-in)	USB B Port: Built in (Hi-Speed USB), Full Speed (12Mbps), High Speed (480Mbps), Bulk transfer, Series B (4 pins) Gigabit Ethernet: IEEE 802.3 10base-T, IEEE 802.3u 100base-TX / Auto-Negotiation, IEEE 802.3ab 1000base-T/ Auto-Negotiation, IEEE 802.3x Full Duplex Wireless LAN: IEEE802.11n/ IEEE802.11g/ IEEE802.11b
Memory	Minimum standard Standard memory: 2GB
CAD Drawing - Plain Paper (A1 size)	0:24min (Fast Economy Mode) 0:27min (Fast) 0:42min (Standard)
CAD Drawing - Heavyweight Coated Paper HG (A1 size)	0:29min (Fast Economy Mode) 0:40min (Fast) 1:17min (Standard)
Poster - Plain Paper (A1 size)	0:25min (Fast Economy Mode) 0:25min (Fast) 0:44min (Standard)
Poster - Heavyweight Coated Paper HG (A1 size)	0:55min (Fast) 1:22min (Standard)

Physical Dimensions & Weight	Main Unit + Stand + Basket (SD-23) Basket Opened: 982 x 887 x 1 060mm Basket Closed: 982 x 757 x 1 060mm 52kg (including Roll Holder Set, excluding ink and print head)
Packaged Dimensions & Weight	Printer (Main Unit with Pallet): 1 152 x 913 x 705mm, 69kg Stand + Basket (SD-23): 1 155 x 824 x 268mm, 18kg Printer (Main Unit with Stand SD-23 and Pallet): 1 152 x 913 x 961mm, 87kg
Media Feed Method	Roll Paper: One Roll, Upper-loading, Front Output Cut Sheet: Upper-loading, Front Output (Manual feed using media locking lever)
Media Output (SD-23)	Standard Position: 1 Sheet Folding Position: 20 sheets on A1 portrait Flat Position: 20 sheets on A2 landscape
Media Width	Roll Paper/Cut Sheet: 203.2 - 610.0mm
Media Thickness	Roll Paper/Cut Sheet: 0.07 - 0.80mm
Minimum Printable Length	Roll Paper: 203.2mm Cut Sheet: 279.4mm

1.6 Thin Client/Clinical; Workstation

1.7 Laptops

Processor and Core Logic	Intel® Core™ i7-5600U with Intel HD Graphics 5500 (2.6 GHz, up to 3.2 GHz with Intel Turbo Boost Technology, 8 MB cache, 2 cores) or equivalent
System Memory	8 GB DDR3L-1600 SDRAM (4 GB (onboard) and 4 GB (1 x 4 GB))
Internal Storage Subsystem	1 TB Solid State Drive
Display/Graphics	10 - 12" diagonal HD UWVA anti-glare LED-backlit multitouch-enabled ultra slim LED-backlit (1366 x 768), Intel® HD Graphics 5500 or equivalent
Power Subsystem	6 cell, long life 44 Wh Li-ion polymer
Keyboard and Pointing Devices	Spill Resistant, full size, backlit 85-key keyboard, Built-in pointing device, 12 Function keys, 4 Cursor keys, External Wireless 2 Button optical Scroll Mouse same as brand.
Audio	DTS Studio Sound™; Integrated stereo speakers; Integrated

	microphone (dual-microphone array); Headphone/microphone combo jack; Buttons for volume up and down or equivalent
Expansion Slots	1 microSD, flash cache
Communication Interface	HSPA+ Mobile Broadband; LTE/HSPA+ Qualcomm® Gobi™ 4G Mobile Broadband; LTE/EV- DO/HSPA+ Qualcomm® Gobi™ 4G Mobile Broadband; Intel Dual Band Wireless- N 7265AN 802.11a/b/g/n WiDi (2x2) WiFi and Bluetooth® 4.0 Combo; Intel Dual Band Wireless-AC 7265 802.11a/b/g/b/ac WiDi (2x2) WiFi and Bluetooth® 4.0 Combo or equivalent, 720p HD camera
I/O Interface	1 USB 3.0; 1 USB 3.0 charging; 1 DisplayPort 1.2; 1 headphone/microphone combo; 1 side docking connector; 1 RJ-45; 1 AC power

1.8 Office Desktop Computers

Processor and Core Logic	Intel® Core™ i5-6600 with Intel HD Graphics 530 (3.3 GHz, with Intel Turbo Boost, 6 MB cache, 4 cores)
System Memory	8 GB (With an option of upgrading to 32GB), GB DDR4-2133 SDRAM
Storage Subsystem	Internal drive bays: 500 GBSATA (7200 rpm), Slim SATA SuperMulti DVD writer, One 2.5"/3.5"
Form factor	Microtower
Display/Graphics	19-22" TFT Flat Panel LCD (Branded similar to CPU), Resolution 1024x768, Integrated: Intel® HD Graphics
Power Subsystem	Input Voltage 220 – 240 VAC
Keyboard and Pointing Devices	Standard Keyboard/USB Smart Keyboard, 2 Button Optical USB Scroll Mouse

Audio	DTS Sound+™ audio management technology, HD audio with Realtek ALC221VB codec (all ports are stereo), microphone and headphone front ports (3.5 mm), line out rear port (3.5 mm), multi-streaming capable, internal speaker	
Communication Interface	LANIntegrated Realtek GbE Intel® Ethernet I210-T1 PCIe x1 GbE network interface card WLANBroadcom BCM943228Z 802.11n Wireless PCIe with Bluetooth® Broadcom BCM943228Z 802.11n Wireless PCIe Intel® 7265 802.11ac	
	Wireless PCIe with Bluetooth®Intel® 7265 802.11ac Wireless PCIe 7	
I/O Interface	Front: 2 USB 3.0 1 headphone 1 microphone 1 SD 3 card reader (optional) Back: 2USB 3.0 4 USB 2.0 1 serial 1 serial (optional) 1 parallel (optional) 2 PS/2 (keyboard and mouse) 1 VGA 1 Display Port 1 audio line in 1 audio line out 1 RJ-45 Expansion slots 1 full-height PCIe 3 x16 3 full-height PCIe 2 x1	
Operating System	Licensed Microsoft Windows 10 Professional, 64	
Preloaded	Bit Pre-loaded	
Software	Licensed Microsoft Office 2016 Home and Business	
Warranty	1 year	

Brochure	Bidders are required to attach brochure of the proposed product.
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1.9 Diagnostic Workstation

1.10 Tablets

Feature	Required Specifications
Size/dimensions (mm)	240 x 169.5 x 6.1
Weight	440 g minimum
Screen Display size(inch)	9. LED-backlit IPS LCD, capacitive touchscreen, 16M 70 colors , Multitouch, Scratch-resistant glass, oleophobic coating
Screen details	
Resolution	1536 x 2048 pixels or better
OS	Android 11.0 or , iOS 8.1, upgradable to iOS 10.3 or better
Storage	64GB or better
Chipset	A8X or better
SD Card Slot	No
Processor	Triple-core 1.5 GHz Typhoon or equivalent or better
RAM	Minimum 4GB
	WLAN: Wi-Fi 802.11 a/b/g/n/ac, dual-band, hotspot
	Bluetooth: 4.0, A2DP, EDR
	GPS: Yes
Connectivity	Primary: min. 8 MP, f/2.4, 31mm, autofocus, check quality Features: 1.12µm pixel size, geo-tagging, touch focus, face/smile detection, HDR (photo/panorama)
Camera	Video: 1080p@30fps, 720p@120fps, HDR, stereo sound rec., check quality Secondary: min. 5 MP, f/2.2, 31mm, 720p@30fps, face detection, HDR, FaceTime over Wi-Fi or Cellular
Battery	Non-removable Li-Po 7340 mAh battery (27.62 Wh) (10 hours of use)
Charger	Lightning connector or equivalent
Warranty	At least 1 Year
Brochure	Please attach brochure of your proposed item.

1.11 Patient Barcode Printer/reader

User Indicators	Good Decode LEDs, Rear View LEDs, Beeper (adjustable tone and volume), Vibration (optional and adjustable), Charge Status Indicato
Radio/Range	2.4 GHz (ISM Band) Adaptive Frequency Hopping Bluetooth v4.2;
Temperature	Operating Temperature: 0°C to 50°C (32°F to 122°F)

Dimension	Storage Temperature: -40°C to 70°C (-40°F to 158°F)
Weight	104 mm x 71 mm x 160 mm (4.1 in x 2.8 in x 6.3 in)
Scan pattern	195 g (6.9 oz)
Warranty	Area Image (1280 x 800 pixel array)
	At least 2 years

1.12 Biometric Device (access Control)

Intelligent System Controller	<p>Bi- processor Central Processing Unit With lead battery back up with four (4 hrs) hours autonomy incase of network failure. Autonomous clock/calendar chip with automatic management of regular/daylight saving time with autonomy of one hour. Management of peer to peer connection with other servers and as a consequence a high decision making capability and full operative autonomy. Up to 2500 transactions stored on a removable cartridge with a flash EPROM memory</p>
Biometric(finger) and Proximity Card	<p>Have biometric state of the art finger print reader Be Bi-directional and meets requirements for HID Proximity cards (standard ISO/ABA 125 KHz, up to 4cm of distance). Have Alphanumeric Liquid Crystal Display (LCD), back lit, with two lines of 16 characters each, for the visualization of time data, guide messages for the user, and service messages. Should have 2 multicolor LED: Green for the access granted, Red for invalid transaction, Yellow for Echelon Service function. Variable Tones for valid/invalid transactions. Have a USB Port, RS-485 communication interface, contactless read/write smart card technology Lon Works cabling Interface should be done using unshielded twisted pair cable in free topology (Transceiver FTT10A, 78Kbps) Meets IP31 level of protection atleast 500 fingerprint user capacity atleast 500 valid cards capacity It should be able rated to operate within 0°C ÷ +50°C temperature range It should be rated to operate up to a relative humidity 95% without condensation or as otherwise specified by the engineer for special cases. Must meet all laid down international Electromagnetic Compatibility standards</p>
Proximity Card	<p>The cards shall be of a biometric type and that can accommodate a customer logo, photographs and text should they be required and they shall have a high coercively magnetic strip.</p>

1.13 IP Phones-

Digital Phone:

- (a) 3 line Backlit Display
- (b) 4 Soft keys & 24 Programmable Keys.
- (c) 100 Numbers Call Log
- (d) Hearing Aid Compatibility
- (e) 4 Level Ringer Volume Control
- (f) 6 Level Handset / Headset Volume Control
- (g) 8 Level Speaker phone Volume Control Etc;

1.14 IP TVs

Connectors	One FXO (RJ-11) One FXS (RJ-11) One Ethernet (RJ-45) One USB 1.1 (Type A) One SD (Secure Digital) Card Interface One Video RCA Analog Port One Stereo Audio RCA Analog Port Infra Red (IR) Remote Control Interface Optional WiFi/Wireless 2.4Ghz 802.11b Interface Optional Three FXO (RJ-11)
Codecs	MPEG4/SP Video MP3 Audio G.711 A-law / μ -law (56 & 64 kbps) G.711 Annex I G.729, G.729A G.726-32 Echo Canceller (G.165 / G.168) Advanced Dynamic Jitter Control Voice Activity Detection (VAD) DTMF Detection and Generation Fax/Modem Pass-Through (G.711)
Protocols	SIP DHCP NTP DNS RTP / RTCP / SRTP HTTP UDP/TCP SDP SMTP PPPoE
Device Provisioning	Via Central Content Management System Caller ID Number Assignment User/Admin Interface PPPoE

Web interface
 Power 5V, 2A - Externa
 Dimensions 6" (W) x 1.5" (H) x 3" (D)

2. PROJECT IMPLEMENTATION TEAM FURNITURE & ICT EQUIPMENT

2.1 Conference Table (20 PAX)

Material	MFC + aluminum
Size	4800W*1500D*750H 3600W*1200D*750H 4200W*1500D*750H
Color:	Brown or white or Black... optiona/
Certificate:	ISO9001, PFS
Warranty	1 Year

2.2 Laptops

Processor and Core Logic	Intel® Core™ i7-5600U with Intel HD Graphics 5500 (2.6 GHz, up to 3.2 GHz with Intel Turbo Boost Technology, 4 MB cache, 2 cores) or equivalent
System Memory	8 GB DDR3L-1600 SDRAM (4 GB (onboard) and 4 GB (1 x 4 GB))
Internal Storage Subsystem	1 TB Solid State Drive
Display/Graphics	10 - 12" diagonal HD UWVA anti-glare LED-backlit multitouch-enabled ultra slim LED-backlit (1366 x 768), Intel® HD Graphics 5500 or equivalent
Power Subsystem	6 cell, long life 44 Wh Li-ion polymer
Keyboard and Pointing Devices	Spill Resistant, full size, backlit 85-key keyboard, Built-in pointing device, 12 Function keys, 4 Cursor keys, External Wireless 2 Button optical Scroll Mouse same as brand.
Audio	DTS Studio Sound™; Integrated stereo speakers; Integrated microphone (dual-microphone array); Headphone/microphone combo jack; Buttons for volume up and down or equivalent
Expansion Slots	1 microSD, flash cache
Communication Interface	HSPA+ Mobile Broadband; LTE/HSPA+ Qualcomm® Gobi™ 4G Mobile Broadband; LTE/EV-DO/HSPA+ Qualcomm® Gobi™ 4G Mobile Broadband; Intel Dual Band Wireless-N 7265AN 802.11a/b/g/n WiDi (2x2)

	WiFi and Bluetooth® 4.0 Combo; Intel Dual Band Wireless-AC 7265 802.11a/b/g/b/ac WiDi (2x2) WiFi and Bluetooth® 4.0 Combo or equivalent, 720p HD camera
I/O Interface	1 USB 3.0; 1 USB 3.0 charging; 1 DisplayPort 1.2; 1 headphone/microphone combo; 1 side docking connector; 1 RJ-45; 1 AC power

2.3 Printer/photocopier

Functions	Print, copy, scan
Control panel	20 cm (8.0") colour touchscreen; Adjustable angle display with gesturing; Illuminated Home button (for quick return to the Home menu)
Print speed	Up to 59 ppm black (Landscape, A5); Up to 6 ppm black (Portrait, A5); Up to 59 ppm colour (Landscape, A5); Up to 6 ppm colour (Portrait, A5) Up to 38 ppm black (A4); Up to 38 ppm colour (A4); Up to 38 ipm black duplex (A4)
First page out from ready	As fast as 5.6 sec
First page out from sleep	As fast as 8.6 sec
Print resolution	Up to 600 x 600 dpi (normal), up to 1200 x 1200 dpi (fine lines), Pantone Calibrated or equivalent
Print technology	Laser
Print languages	PCL 6; PCL 5c; Postscript Level 3 emulation, native PDF printing (v1.7) or equivalent
Printer Smart Software Features	Print preview; Duplex printing; Print multiple pages per sheet (2, 4, 6, 9, 16); Collation; Watermarks; Store print jobs; Easy-access USB; Easy Color or equivalent
Monthly duty cycle	Up to 80,000 pages (A4); Recommended monthly page volume5: 2,000 to 7,500 (print)
Duplex printing	Automatic
Connectivity Standard	2 Hi-Speed USB 2.0 Host; 1 Hi-Speed USB 2.0 Device; 1 Gigabit/Fast Ethernet 10/100/1000Base-TX network; 1 Hardware Integration Pocket
Supported network protocols	IPv4/IPv6: Apple Bonjour Compatible (Mac OS 10.2.4 or higher), SNMPv1/v2c/v3, HTTP, HTTPS, FTP, TFTP, Port 9100, LPD, WS Discovery, IPP, Secure-IPP, IPsec/Firewall; IPv6: DHCPv6, MLDv1, ICMPv6; IPv4: Auto-IP, SLP, Telnet, IGMPv2, BOOTP/DHCP, WINS, IP Direct Mode, WS Print; Other: NetWare NDS, Bindery, NDPS, ePrint; Google Cloud Print 2.0
Wireless Network	Optional, enabled with purchase of hardware accessory.

Hard disk	Standard, embedded High-Performance Secure Hard Disk, minimum 320 GB; AES 256 hardware encryption or greater; Secure erase capabilities (Secure File Erase-Temporary Job Files, Secure Erase-Job Data, Secure ATA Erase-Disk)
Memory	Standard: 1.25 GB (printer), 500 MB (scanner); Maximum: 2.0 GB (printer), 500 MB (scanner)
Copy Speed	Up to 38 cpm black (A4), Up to 38 cpm colour (A4)
Copier settings	Two-sided copying; Scalability; Image adjustments (darkness, contrast, background cleanup, sharpness); N-up; N or Z-ordering; Content orientation; Collation; Booklet; Job build; Edge-to-edge; Job storage; ID copy; Book copy; A-to-B copy (different media sizes); Maximum number of copies: Up to 9,999 copies; Copy resolution: Up to 600 x 600 dpi (flatbed), 600 x 450 dpi (ADF) Reduce/Enlarge: 25 to 400%
Scanner Specification	Scanner type: Flatbed, ADF (two-sided, single-pass); Scan technology: Contact Image Sensor (CIS); Duplex ADF scanning: Yes; Scan size maximum (flatbed, ADF): 216 x 356 mm; Optical scan resolution: Up to 600 dpi
Paper handling: Media types	Paper (plain, light, bond, recycled, mid-weight, heavy, mid-weight glossy, heavy glossy, extra heavy, extra heavy glossy, cardstock, card glossy), colour transparency, labels, letterhead, envelope, preprinted, prepunched, coloured, rough, opaque film, user-defined
Paper handling:	Standard input: 100-sheet multipurpose tray, 550-sheet input Tray 2 Standard output: 250-sheet output bin With Optional/Input: 550-sheet media input Tray 3, ADF: Standard, 100 sheets
Compatible operating systems	Windows OS compatible with In-Box Driver: Windows 10 all 32-bit/64-bit editions (excluding RT OS for tablets), Windows 8/8.1 all 32-bit/64-bit editions (excluding RT OS for tablets), Windows 7 all 32-bit/64-bit editions, Windows Vista all 32-bit editions (Home Basic, Premium, Professional, etc.); Windows OS compatible with Universal Print Driver (from HP.com): Windows 10 all 32-bit/64-bit editions (excluding RT OS for tablets), Windows 8/8.1 all 32-bit/64-bit editions (excluding RT OS for tablets), Windows 7 all 32-bit/64-bit editions, Windows Vista all 32-bit/64-bit editions (Home Basic, Premium, Professional, etc.); Mac OS (HP print drivers available from HP.com and Apple Store): OS X 10.8 Mountain Lion, OS X 10.9 Mavericks, OS X 10.10 Yosemite; Mobile OS (In-OS drivers): iOS, Android, Windows 8/8.1/10 RT; Linux OS (In-OS HPLIP): SUSE Linux (12.2, 12.3, 13.1), Fedora (17, 18, 19, 20), Linux Mint (13, 14, 15, 16, 17), Boss (3.0, 5.0), Ubuntu (10.04, 11.10, 12.04, 12.10, 13.04, 13.10, 14.04, 14.10), Debian (6.0.x, 7.x); Other OS: UNIX Compatible network operating systems: Windows OS compatible with In-Box Driver: Windows

	<p>Server 2008 R2 64-bit (SP1) Standard/Enterprise (+ Cluster & Terminal Services), Windows Server 2008 32-bit/64-bit (SP2) Standard/Enterprise (+ Cluster & Terminal Services), Windows Server 2003/2003 R2 32-bit (SP1/SP2) Standard/Enterprise (+ Cluster & Terminal Services); Windows OS compatible with Universal Print Driver (UPD) or product-specific drivers from HP.com: Windows Server 2012/2012 R2 64-bit Standard/Foundation/Essentials/Datacenter (+ Cluster & Terminal Services), Windows Server 2008/2008 R2 32-bit/64-bit (SP1/SP2) Standard/Enterprise/Datacenter (+ Cluster & Terminal Services), Windows Server 2003/2003 R2 32-bit/64-bit (SP1/SP2) Standard/Enterprise/Datacenter (+ Cluster & Terminal Services); Citrix (on Windows Server 2003/2003 R2), Citrix MetaFrame Presentation Server 3.0, Citrix MetaFrame XP Presentation Server (Feature Release 1, 2, and 3), Citrix Presentation Server 4.0/4.5, Citrix XenApp 5.0 (Plus Feature Pack 2 & 3), Citrix (on Windows Server 2008/2008 R2), Citrix XenApp 5.0 (Plus Feature Pack 2 & 3), Citrix XenApp 6.0/6.5/7.5, Citrix XenDesktop 5.6/7.0/7.5, Citrix (on Windows Server 2012/2012 R2), Citrix XenApp 7.5, Citrix XenDesktop 7.0/7.5; Novell Servers (www.novell.com/iprint), Novell iPrint Appliance v1.0, Novell Open Enterprise Server 11/SP1, Novell Open Enterprise Server 2 for Linux, NetWare 6.5/SP8; Novell Clients (www.novell.com/iprint); Windows 8 (32-bit/64-bit) recommend v5.86+, Windows 8.1 recommend v5.94+, Windows 7 (32-bit/64-bit) recommend v5.82+, Windows Vista (32-bit/64-bit) recommend v5.82+</p>
Printer management	Printer Administrator Resource Kit (Driver Configuration Utility, Driver Deployment Utility, Managed Printing Administrator); Web JetAdmin Software; Proxy Agent Software; JetAdvantage Security Manager
Warranty	One year
Bronchure	Bidders are required to attach brochure of the proposed product.

3 Project Implementation Unit (PIU)

3.1 Computers

Processor and Core Logic	Intel® Core™ i5-6600 with Intel HD Graphics 530 (3.3 GHz, with Intel Turbo Boost, 6 MB cache, 4 cores)
System Memory	8 GB (With an option of upgrading to 32GB), GB DDR4-2133 SDRAM
Storage Subsystem	Internal drive bays: 500 GBSATA (7200 rpm), Slim SATA SuperMulti DVD writer, One 2.5"/3.5"
Form factor	Microtower

Display/Graphics	19-22" TFT Flat Panel LCD (Branded similar to CPU), Resolution 1024x768, Integrated: Intel® HD Graphics
Power Subsystem	Input Voltage 220 – 240 VAC
Keyboard and Pointing	Standard Keyboard/USB Smart Keyboard, 2
Devices	Button Optical USB Scroll Mouse
Audio	DTS Sound+™ audio management technology, HD audio with Realtek ALC221VB codec (all ports are stereo), microphone and headphone front ports(3.5 mm), line out rear port (3.5 mm), multi- streaming capable, internal speaker
Communication	LANIntegrated Realtek GbE Intel® Ethernet I210-
Interface	T1 PCIe x1 GbE network interface card WLANBroadcom BCM943228Z 802.11n Wireless PCIe with Bluetooth® Broadcom BCM943228Z 802.11n Wireless PCIe Intel® 7265 802.11ac Wireless PCIe with Bluetooth®Intel® 7265 802.11ac Wireless PCIe 7
I/O Interface	Front: 2 USB 3.0 1 headphone 1 microphone 1 SD 3 card reader (optional) Back: 2USB 3.0 4 USB 2.0 1 serial 1 serial (optional) 1 parallel (optional) 2 PS/2 (keyboard and mouse) 1 VGA 1 Display Port 1 audio line in 1 RJ-45 1 audio line out Expansion slots: 1 full-height PCIe 3 x16 3 full-height PCIe 2 x1
Operating System	Licensed Microsoft Windows 10 Professional, 64
Preloaded	Bit Pre-loaded
Software	Licensed Microsoft Office 2016 Home and Business
Warranty	1 year
Brochure	Bidders are required to attach brochure of the proposed product.

3.2 Printer/photocopier

Copying Speed	30 copies per minute (cpm)
Warm up time	22 sec
Continuous Copying	999
Paper Input Capacity	1,200 sheets

Bypass tray	1x100 sheets
Paper Size	A3-A5
Printing Speed	50 cpm
Scanning Speed	39 cpm
Processor	700MHz
E-filing	Required
Programmable user codes	Required
Paper output capacity	1,000 sheets
RADF (Reverse automatic document feeder)	Required
ADU (Automatic duplex unit)	Required
Printer/Scanner Kit	Required
Zoom	25-400% (in 1% steps)
Memory	1GB + 120 GB
First Copy out	3.5 seconds
Power Supply	240v, 50Hz
Interface, Ethernet	USB 2.0, 10base – T/100base TX
User Information display	Required
Stapler Finisher	Required
Fault Diagnosis System	Required
Free bundled software for network printing and scanning	Required
Duty Cycle	60,000 – 80,000 copies per month
Brochure	Please attach brochure for the proposed item.

3.3 Laptops

Processor and Core Logic	Intel® Core™ i7-5600U with Intel HD G5500 (2.6 GHz, up to 3.2 GHz with Intel Turbo Boost Technology, 4 MB cache, 2 cores) or equivalent
System Memory	8 GB DDR3L-1600 SDRAM (4 GB(online) + 4 GB (1 x 4 GB))
Internal Storage Subsystem	1 TB Solid State Drive 10 - 12" diagonal HD UWVA anti-glare LED-backlit multitouch-enabled ultra slim LED-backlit (1366 x 768),
Display/Graphics	Intel® HD Graphics 5500 or equivalent
Power Subsystem	6 cell, long life 44 Wh Li-ion polymer
Keyboard and Pointing Devices	Spill Resistant, full size, backlit 85-key keyboard, Built-in pointing device, 12 Function keys, 4 Cursor

	keys, External Wireless 2 Button optical Scroll Mouse same as brand	
Audio	DTS Studio Sound™; Integrated stereo speakers; Integrated microphone (dual-microphone array); Headphone/microphone combo jack; Buttons for volume up and down or equivalent	
Expansion Slots	1 microSD, flash cache	
Communication Interface	HSPA+ Mobile Broadband; LTE/HSPA+ Qualcomm® Gobi™ 4G Mobile Broadband; LTE/EV- DO/HSPA+ Qualcomm® Gobi™ 4G Mobile + Broadband; Intel Dual Band Wireless-N 7265AN 802.11a/b/g/n WiDi (2x2) WiFi and Bluetooth® 4.0 Combo; Intel Dual Band Wireless-AC 7265 802.11a/b/g/b/ac WiDi (2x2) WiFi and Bluetooth® 4.0 Combo or equivalent, 720p HD camera	
I/O Interface	1 USB 3.0; 1 USB 3.0 charging; 1 DisplayPort 1.2; 1 headphone/microphone combo; 1 side docking connector; 1 RJ-45; 1 AC power	

3.4 TV Sets 55" Smart TV

1.	Model	Reputable manufacturers (e.g. LG 55SJ800V or equivalent)
2.	Brand Name	<i>The bidder to state</i>
3.	Country of origin	<i>The bidder to state</i>
4.	Display	Device: LED Screen Size (55 inch) Resolution:3840*2160 Refresh Rate (Hz)T100 LED Plus (Local Dimming)
5.	Broadcasting System	Analog TV Reception Digital TV
		Reception: DVB-T2 Teletext Pages 2,000 page TOP (Table Of Page) / Flof / List
6.	Video	Natural Color Contents Optimizer Dynamic Scanning Active Noise Reduction Dynamic Clear White Picture Mode: modes

		(Vivid, Photo, Standard, Eco, Cinema, Game, Soccer, isf Expert1, isf Expert2) Aspect Ratio:8 modes (16:9, Just scan, Original, Full Wide, 4:3, 14:9, Cinema Zoom 1, Zoom) Real Cinema 24p Mono / Stereo / Dual (MTS/SAP)
7.	Audio	Dolby Digital Decoder DTS Decoder
		Speaker System 2.0Ch Speaker System Audio Output: 20W Sound System: ULTRA Surround Sound Mode (Standard, News, Music, Cinema, Soccer, Game) Sound Optimizer (Off, Stand Type, Wallmounted Type)
8.	Jack spec (Input & Output) m	TV - Side HDMI3(3G :2 / 6G : 1) USB 2.0 / 3.0 2(Side) / 1(Side)
9.	Jack spec (Input & Output)	TV - Rear RF In 1(Horizontal) Composite In 1(Component, Horizontal) Component In (Y, Pb, Pr) 1(Composite) Digital Audio Out (Optical) 1 (H) LAN 1 (H) Ext. Speaker / Headphone out 1(H) RS232C (Control / SVC) Phone Jack 1 (SVC only)
10.	Power	Power Supply (Voltage, Hz)100~240Vac 5060Hz Standby Mode:0.3W
11.	Waranty	Bidders to provide valid warranty cards for a period not less than one year
12	Maintenace	The supplier shall make provision for maintenance /service of the installed equipment and provide after sales service

PART VII BILLS OF QUANTITIES

PREAMBLE TO BILLS OF QUANTITIES

1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General and Special Conditions of Contract, Technical Specifications, and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices bid in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
3. The rates and prices bid in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract, include all Constructional Plant, labour, supervision, materials, erection, maintenance, insurance, profit, together with all general risks, liabilities, and obligations set out or implied in the Contract.
4. The rates and prices in the priced Bill of Quantities shall, be exempt of applicable local duties and taxes as the project is tax exempt.
5. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
6. The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bill of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
7. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities.
8. Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with the General Conditions of Contract.
9. The method of measurement of completed work for payment shall be in accordance with *the Standard Specifications and Special Specifications*.
10. Any arithmetic errors in computation or summation will be corrected by the Employer as follows:
 - (a) where there is a discrepancy between amounts in figures and in words, the amount in words will govern; and
 - (b) where there is a discrepancy between the unit rate and the total amount derived from the multiplication of the unit price and the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer, there is an obviously gross misplacement of the decimal point in the unit price, in which event the total

amount as quoted will govern and the unit rate will be corrected.

- (c) Bidders shall price the Bill of Quantities in United States Dollars.

PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	
<p>A</p>	<p>PRICING ITEMS FOR PRELIMINARIES Prices shall be inserted against items of ‘preliminaries’ in the tenderer’s priced Bill of Quantities. The Contractor is advised to read and understand all preliminaries. Preliminary items not priced shall be deemed to have been included in the rates of items in the Bill of Quantities.</p>	
<p>B</p>	<p>DESCRIPTION OF THE WORKS The works to be carried out under this contract comprise supply and installation of HMIS and ICT Equipment.</p>	
	<p>Carried to Collection</p>	<p>US\$</p>

ITEM	DESCRIPTION
<p>A</p> <p>B</p> <p>C</p> <p>D</p> <p>E</p> <p>F</p>	<p>MEASUREMENTS In the event of discrepancy between the Bill of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any Contract documents shall immediately be reported to the Project Manager in accordance with Clause 22 of the Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with Clause 22 of the said Conditions.</p> <p>LOCATION OF THE SITE The site is located within Kisii County, along Kisii town-Keroka Road.</p> <p>CLEARING AWAY The Contractor shall remove all temporary works, rubbish, debris and surplus materials from the site as they accumulate, upon completion of the works, remove, clear away all plants, equipment, rubbish, unused materials, stains and leave in a clean tidy state to the satisfaction of the Project Manager. The whole of the works shall be delivered up clean, complete, and perfect condition in every respect to the satisfaction of the Project Manager.</p> <p>CLAIMS It shall be a condition of this Contract that upon it becoming reasonably apparent to the Contractor that he has incurred losses and/or expenses due to any of the Contract Conditions, or by any other reason whatsoever, he shall present such claim or intent to claim notice to the Project Manager within the Contract period. No claim shall be entertained upon the expiry of the said Contract period.</p> <p>PAYMENTS Payment will be done on monthly basis by the Project Manager on application by the Contactor. All payments shall be made by Client Department upon certification by the Project Manager. Subcontractors shall be paid through the Main Contractor. The Main Contractor must confirm that they have paid subcontractors to be eligible for subsequent certificates.</p> <p>PREVENTION OF ACCIDENTS, DAMAGE OR LOSS The Contractor is notified that the works are to be carried out on a fairly busy, high security conscious site where the Client is going on with other normal activities. He/she is therefore instructed to take reasonable care in the execution of the works so as to prevent accidents, damage or loss and disruption of normal activities being carried out by the Client. The Contractor</p>

	<p>shall allow in his rates any expenses he deems necessary by taking such care within the site.</p>
	<p>Carried to Collection US\$</p>

ITEM	DESCRIPTION
A	<p>WORKING CONDITIONS The Contractor shall allow in his rates for any interference that he may encounter in the course of execution of the works.</p>
B	<p>SIGN BOARD. Allow for providing, erecting, maintaining throughout the Contract period and clearing afterwards a sign board as designed and approved by the Project Manager.</p>
C	<p>LABOUR CAMPS The Contractor shall NOT be allowed to house his labourers on site. Allow also for transporting workers to and from site during the Contract Period as may be necessary.</p>
D	<p>PROJECT MANAGER'S SITE OFFICE Allow for maintaining throughout the project period temporary site office size 8x10m long comprising 50x100mm cypress timber structure, flat roof covered with 30gauge corrugated iron sheets, 32gauge corrugated iron sheet cladded walls, 100mm thick stet floor well compacted and finished smooth with cement and sand (1:3) screed, timber doors, windows and all necessary office furniture (15no. arm chairs, table, calendar, visitors and site instruction books). The Contractor shall also allow for the Project Manager use desktop computer complete with email connecting devices as well as provision for scratch cards and payment for email or internet connectivity expenses, stationery for the duration of the contract.</p>
E	<p>PRICING NOTES The tenderer shall include for all cost in executing the whole of the works, including transport, replacing damaged items, fixing, all to comply with the said Conditions of Contract.</p>

	Carried to Collection	US\$
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ITEM	DESCRIPTION
A	<p>SECURITY OF THE WORKS</p> <p>The Contractor shall allow for providing adequate security for the works and workers during the Contract. No claim will be entertained for lack of enough security in this respect.</p>
B	<p>URGENCY OF THE WORKS</p> <p>The Contractor should note that these works are very urgent and must be completed within the agreed contract period.</p>
C	<p>PAYMENT FOR MATERIALS ON SITE</p> <p>All materials for incorporation in the works must be in the site stores before they are considered for payment, unless specifically exempted by the Project Manager. This is to include materials of the Main Contractor, Nominated Sub-Contractors and Nominated Suppliers.</p>
D	<p>EXISTING SERVICES</p> <p>Prior to the commencement of any work, the Contractor is to ascertain from the relevant authority the exact position, depth and level of all existing services in the and he/she shall make whatever provisions that may be required by the authority for support, maintenance and protection of such services.</p>
E	<p>PHASED IMPLEMENTATION AND SECTIONAL COMPLETION</p> <p>The Client based on various factors may consider sectional completion or phased implementation of the works. The Contractor will be instructed by the Project Manager to abide by such directions to suit the requirements of the Employer.</p> <p>Tenderers are also notified that no contractual claims or increase in prices will be allowed due to any Phased implementation of the works</p> <p>The last of the contract works are however to be completed within the overall Contract Completion Period.</p>

	Carried to Collection US\$

ITEM	DESCRIPTION	
<p>A</p>	<p>PERFORMANCE BOND</p> <p>A performance bond in the form of unconditional bank guarantee required is 10% of the bid price. On award of contract, no payment on account for the works executed will be made to the Contractor until he has submitted the Performance Bond to the Project Manager duly signed, sealed and stamped from an approved bank.</p>	
<p>B</p>	<p>TENDER DOCUMENT</p> <p>Tender documents are listed in the Instruction to Tenderers and all documents in connection therewith, as specified above must be delivered in the addressed envelope which should be properly sealed and deposited at the offices as specified in the letter accompanying these documents. Tenders will be opened at the time specified in the letter accompanying these documents. Tenders delivered or received later than the above time will not be opened.</p>	
<p>C</p>	<p>VALUE ADDED TAX</p> <p>The Contractor's attention is drawn to the attention that This project is V.A.T Exempted and thus contractors must not include V.A.T in their rates but Must add it only as a separate Item as provided in the Summary Page.</p>	
<p>D</p>	<p>FORM OF CONTRACT</p> <p>The form of Contract shall be as stipulated in the Standard Procurement Document for works (FIDIC July, 2019) included under this Proposal. The Conditions of Contract are also included herein (Part 2: Conditions of Contract) Particulars of insertion to be made in the Appendix to the Contract Agreement will be found in Section IV Part II.</p>	
	<p>Carried to Collection</p>	<p>US\$</p>

ITEM	DESCRIPTION	
	<p data-bbox="376 349 596 383">COLLECTION</p> <p data-bbox="376 472 868 506">Brought Forward from Page 152</p> <p data-bbox="376 595 868 629">Brought Forward from Page 153</p> <p data-bbox="376 719 868 752">Brought Forward from Page 154</p> <p data-bbox="376 842 868 875">Brought Forward from Page 159</p> <p data-bbox="376 965 868 999">Brought Forward from Page 160</p>	

	TOTAL FOR PARTICULAR PRELIMINARIES CARRIED TO MAIN SUMMARY US\$	
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GENERAL PRELIMINARIES

ITEM	DESCRIPTION	US\$
	GENERAL PRELIMINARIES	
A	<p>PRICING OF ITEMS OF PRELIMINARIES AND PREAMBLES</p> <p>Prices shall be inserted against items of preliminaries in the Contractor's priced Bills of Quantities and Specifications.</p> <p>The Contractor shall be deemed to have included in his prices or rates for various items in the Bills of Quantities of Specifications for all costs involved in complying with all the requirements for the proper execution of the whole of the works in the Contract.</p>	

B	<p>Throughout these bills, units of measurement and terms are abbreviated and shall be interpreted as follows</p> <p>CM Shall mean cubic metre</p> <p>SM Shall mean square metre</p> <p>LM Shall mean linear metre</p> <p>MM Shall mean millimeter</p> <p>KG Shall mean kilogram</p> <p>NO Shall mean numbers</p> <p>PRS Shall mean pairs</p> <p>BS Shall mean the British Specification published by the British Standard Institution , 2 Park Street, London W.I England</p> <p>DITTO Shall mean the whole of the preceding description except as qualified in the description in which it occurs.</p> <p>M.S Shall mean measured separately</p> <p>a.b.d Shall mean as above described.</p>	
	Carried to Collection	US\$

ITEM	DESCRIPTION	USS
A	<p>EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT</p> <p>Attendance;</p> <p>Clause B19(a) of the Standard Method of Measurement is deleted and the following Clause is substituted:-</p> <p>Attendance on nominated Sub-Contractors shall be given as an item in each case and shall be deemed to include: allowing use of standing scaffolding, mesh rooms, sanitary accommodation and welfare facilities; provision of special scaffolding where necessary, providing space for office accommodation, and for storage of plant and materials; providing light and water for the works; clearing away rubbish; unloading checking providing electric power and removing and replacing duct covers, pipe chasings and the like necessary for the execution and testing of Sub-Contractor's work and being responsible for the accuracy of the same.</p> <p>Fix Only;</p> <p>"Fix Only" Shall mean take delivery on site where necessary, distribute to position, hoist and fix only.</p>	
B	<p>THE EMPLOYER</p> <p>The term "Employer" and "Client" wherever used in the Contract Document shall be synonymous.</p>	
C	<p>PROJECT MANAGER</p> <p>The term "PM" wherever used in this Bills of Quantities shall be deemed to imply the Project Manager as defined in Conditions of Contract or such person or persons as may be duly authorized to represent him on behalf of the Employer. The Project Manager shall be deemed to mean Messrs Schon and Associates P.O. Box 38601-00100, Nairobi Tel: +254 (0) 726842259/ +254 (0) 722874576 Email: schonassociates2019@gmail.com</p>	
D	<p>ARCHITECT</p> <p>The term Architect shall be deemed to mean Messrs Schon and Associates P.O. Box 38601-00100, Nairobi Tel: +254 (0) 726842259/ +254 (0) 722874576 Email: schonassociates2019@gmail.com</p>	

E	<p>QUANTITY SURVEYOR</p> <p>The term "Quantity Surveyor" shall be deemed to mean the firm of Messrs Schon and Associates P.O. Box 38601-00100, Nairobi Tel: +254 (0) 726842259/ +254 (0) 722874576 Email: schonassociates2019@gmail.com</p>	
	Carried to Collection	US\$

ITEM	DESCRIPTION	US\$
A	<p>SERVICES ENGINEER</p> <p>The term "Electrical Engineer" shall be deemed to mean Messrs Schon and Associates P.O. Box 38601-00100, Nairobi Tel: +254 (0) 726842259/ +254 (0) 722874576 Email: schonassociates2019@gmail.com</p>	
B	<p>STRUCTURAL & CIVIL ENGINEER</p> <p>The term "Structural & Civil Engineer" shall be deemed to mean the Firm of Messrs Schon and Associates P.O. Box 38601-00100, Nairobi Tel: +254 (0) 726842259/ +254 (0) 722874576 Email: schonassociates2019@gmail.com</p>	
	Carried to Collection	US\$

ITEM	DESCRIPTION	US\$
A	<p>PLANT, TOOLS AND VEHICLES</p> <p>Allow for providing all scaffolding, plants, tools and vehicles required for the works except in so far as may be stated otherwise herein and except for such items specifically and only required for use of nominated Sub-Contractors as described herein. No timber used for scaffolding, formwork, or temporary works of any kind should be afterwards in the permanent works.</p>	
B	<p>TRANSPORT</p> <p>Allow for transport of workmen, materials, etc. to and from the site at such hours and by such routes as may be permitted by competent Authorities in liaison with the PROJECT MANAGER.</p>	
C	<p>MATERIALS AND WORKMANSHIP</p> <p>All materials and workmanship used in the execution of the works shall be of the best quality and description unless otherwise stated. The Contractor shall order all materials to be obtained from overseas immediately after the contract is signed and shall also order for materials to be obtained from local sources as early as necessary to ensure that they are onsite when required for use in the works. The Bills of Quantities shall not be used for the purposes of ordering materials.</p>	
D	<p>SIGN FOR MATERIALS SUPPLIED</p> <p>The Contractor shall be required to sign receipts for all articles and materials supplied by the Project Manager at the time of taking delivery thereof, as having received them in good order and condition, and will thereafter be responsible for any such loss or damage and for replacement of such any loss with articles and/or materials which shall be supplied by the Project Manager at the current market prices including Customs Duty and VAT, all at the Contractors own cost and expenses, to the satisfaction of the PROJECT MANAGER.</p>	

<p>E</p>	<p>STORAGE OF MATERIALS</p> <p>The Contractor shall provide at his own risk and cost where directed on the site weather proof lock-up sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the PROJECT MANAGER. NOMINATED SUB-CONTRACTORS are to be made liable for the cost of any storage accommodation provided specifically for their use.</p>	
	<p>Carried to Collection</p>	<p>US\$</p>

ITEM	DESCRIPTION	US\$
A	<p>SAMPLES</p> <p>The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the PROJECT MANAGER for his approval. The PROJECT MANAGER may reject any materials or workmanship in his opinion not to the approved sample. The PROJECT MANAGER shall arrange for testing of such materials as he/she may at his/her discretion deem desirable, but the testing shall be made at the expense of the Contractor and not at the expense of the PROJECT MANAGER. The Contractor shall pay for the testing in accordance with the current scale of testing charges laid down by Ministry of Public Works</p> <p>The procedure for submitting samples of materials for testing and the method of marking for identification shall be laid down by the PROJECT MANAGER. The Contractor shall allow in his tender for such samples and tests except for those in connection with nominated subcontractor's work.</p>	
B	<p>GOVERNMENT ACT REGARDING WORK PEOPLE ETC.</p> <p>Allow for complying with Government Acts, order and Regulations in connection with the employment of Labor and other matters related to the execution of the works. In particular, the Contractor's attention is drawn to the provisions of the Factory Act of 1950 and the tenderer must include for all costs arising or resulting from compliance with any Act Order or Regulation relating to insurance, pensions, and holidays for work people or so the safety and welfare of the work people. The Contractor must make himself fully acquainted with current Acts and Regulations including police regulations regarding movements, housing, security and control of labor, labor camps, passes for transport etc. It is important that the Contractor before tendering obtain information regarding all such regulations and/or restrictions which may affect the organization of the works, supply and control of labor etc: and allow accordingly in his tender. No claim shall be entertained for lack of knowledge in this respect.</p>	

<p>C</p>	<p>SECURITY OF WORKS, ETC.</p> <p>The Contractor shall be entirely responsible for the security of the works, materials, plant, personnel etc, both his own and subcontractor's and must provide all necessary watching, lighting and precautions necessary to ensure security against theft, loss or damage and the protection of the public.</p>	
	<p>Carried to Collection</p>	<p>US\$</p>

ITEM	DESCRIPTION	US\$
A	<p>PUBLIC AND PRIVATE ROADS</p> <p>Maintain as required throughout the execution of the works and make good any damage to Public or Private roads arising from or subsequent upon the execution of the works to the satisfaction of the local and other competent authority and the Project Manager.</p>	
B	<p>EXISTING PROPERTY</p> <p>The Contractor shall take every precaution to avoid damage to existing property including roads, cables, drains and other services and he will be held responsible for and shall make good all such damages arising from the execution of this Contract at his own expense at his own cost to the satisfaction of the Project Manager.</p>	
C	<p>VISIT THE SITE AND EXAMINE DRAWINGS</p> <p>The Contractor is advised to examine the drawings and visit the site location of which is described in the Particular Preliminaries hereof in liaison with PROJECT MANAGER. He shall be deemed to have acquainted him/ herself therewith as to its nature, position, means of access or any other matter which may affect his tender. No claim arising from his failure to comply with this advice shall be entertained.</p>	
D	<p>ACCESS TO SITE AND TEMPORARY ROADS</p> <p>Means of accessing the site shall be agreed with the PROJECT MANAGER prior to commencement of the works and the Contractor must allow for building any necessary temporary access road for the transport of materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossings or any other means of accessing the site. Upon completing the works, the Contractor shall remove temporary access roads, temporary culverts etc; and make good, reinstate all works and surfaces disturbed to the satisfaction of the PROJECT MANAGER.</p>	

<p>E</p>	<p>AREA TO BE OCCUPIED BY THE CONTRACTOR</p> <p>The area of the site which may be occupied by the Contractor for site office, storage and for the purpose of erecting workshops etc; shall be defined on site by the PROJECT MANAGER.</p>	
	<p>Carried to Collection</p>	<p>US\$</p>

ITEM	DESCRIPTION	US\$
A	<p>OFFICE FOR THE PROJECT MANAGER</p> <p>The Contractor shall erect and maintain where directed on site and afterwards dismantle the site office of the type noted in Particular Preliminaries, complete with furniture. He shall also provide strong metal trunk complete with strong hasp and staple fastening and two keys. He shall provide and maintain a lock-up type water or bucket closet for the sole use of the PROJECT MANAGER including connections to the drain where applicable in conformity with Public Health Authorities and shall provide services of a cleaner and pay all conservancy charges and keep both office and closet in a clean and sanitary condition from commencement to completion of the works and thereafter dismantle and make good disturbed surfaces. The office and the closet shall be erected before the contractor is permitted to commence the works. The Contractor shall make available on site as and when required by the PROJECT MANAGER a modern and accurate level together with leveling staff, ranging rods and 50 metre metallic or linen tape measure.</p>	
B	<p>WATER AND ELECTRICITY SUPPLY</p> <p>The Contractor shall provide at his own risk all necessary water, electric light and power required for use in the works. The Contractor must make his own arrangement for connection to the nearest suitable water mains available and for metering the water used. He must also provide temporary water tank and meters as required at his own cost and clear away when no longer required and make good on completion to the entire satisfaction of the PROJECT MANAGER. The Contractor shall pay all charges in connection herewith. No guarantee is given or implied that sufficient water will be available from mains and the Contractor must make his own arrangement for augmenting this supply at his own cost.</p>	

<p>C</p>	<p>SANITATION</p> <p>The sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the PROJECT MANAGER.</p>	
	<p>Carried to Collection</p>	<p>US\$</p>

ITEM	DESCRIPTION	US\$
A	<p>PRIME COST OR PC SUMS</p> <p>The term "Prime Cost or PC Sum" whenever used in these Bills of Quantities shall be expended upon the authority of the Project Manager.</p>	
B	<p>PROGRESS CHART</p> <p>The Contractor shall provide within two weeks of Possession of Site and in Agreement with the PROJECT MANAGER a Progress Chart for the whole of the works including the works of Nominated Subcontractors; one copy to be handed to the PROJECT MANAGER and a further copy to be retained on site. Progress to be recorded and chart to be amended as necessary as the work proceeds.</p>	

<p>C</p>	<p>ADJUSTMENT OF PC SUMS</p> <p>In the final account, all P.C Sums shall be deducted and the amount properly expended upon the PROJECT MANAGER'S order in respect of each of them added to the Contract Sum. The Contractor shall produce to the PROJECT MANAGER such quotations, invoices or bills, properly receipted as may be necessary to show the actual details of the sums paid by the Contractor. Items of profit upon P.C Sums shall be adjusted in the final account pro-rata to the amount paid. Items of attendance (as previously described) following P.C Sums shall be adjusted to the physical extent of the work executed (not pro-rata to the amount paid) and shall apply even though the Contractors Priced Bills shows a percentage in the rate column in respect of them.</p> <p>Should the Contractor be permitted to tender and his tender be accepted of any work for which a P.C Sum is included in the Bills of Quantities, profit and attendance will be allowed as it would be if the work were executed by a Nominated Sub-contractor.</p>	
	<p>Carried to Collection</p>	<p>US\$</p>

ITEM	DESCRIPTION	US\$
A	<p>ADJUSTMENT OF PROVISIONAL SUMS</p> <p>In the final account all Provisional Sums shall be deducted and the amount properly executed in respect of them upon the PROJECT MANAGER's order added to the Contract Sum. Such works shall be valued as described for Variations in Condition No.22 of the Conditions of Contract, but the value of such work or articles for the work to be supplied by a Nominated Subcontractor, the value of such work or article to be supplied by a Nominated Supplier, the value of such work or article shall be treated as a P.C Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.</p>	
B	<p>NOMINATED SUB-CONTRACTORS</p> <p>When any work is ordered by the PROJECT MANAGER to be executed by nominated Sub- contractors, the Main Contractor shall enter into a Sub-contract as described in Condition No.7 of the Conditions of Contract and shall thereafter be responsible for such sub-contractors in every respect. Unless otherwise described, the Contractor is to provide for such Sub-contractors any or all the facilities in these Preliminaries. They should price for these with the nominated Subcontract Contractor's work concerned in the P.C Sums under the description "Add for Attendance".</p>	
C	<p>DIRECT CONTRACTS</p> <p>Notwithstanding the foregoing conditions, the Employer reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C Sum in the Bills of Quantities and to pay for the same direct. In any such instances, profit relative to the P.C Sum the priced Bills of Quantities will be adjusted as described for P.C Sums and allowed.</p>	

D	<p>ATTENDANCE UPON OTHER TRADESMEN ETC.</p> <p>The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or any other persons employed for the execution of any work not included in this Contract every facility for carrying out the work and for use in his ordinary scaffolding. The Contractor, however, shall perform such carting away for and making good after the work of such tradesmen or persons as may be ordered by the PROJECT MANAGER and the work will be measured and paid for to the extent executed at rates provided in these bills.</p>	
	Carried to Collection	US\$

ITEM	DESCRIPTION	US\$
A	<p>INSURANCE</p> <p>The Contractor shall insure as required and as outlined in the Appendix to the Conditions of Contract. No payment on account in respect of the works shall be made to the Contractor unless he/she has satisfied the PROJECT MANAGER either by production of an Insurance Policy certificate that the foregoing Insurance Clauses have been complied within all respects. Thereafter the PROJECT MANAGER shall from time to time ascertain that premiums are duly paid up by the Contractor who shall if called upon to do so, produce receipted premium renewals for the PROJECT MANAGER's inspection.</p>	
B	<p>PROVISIONAL WORK</p> <p>All work described as "Provisional" in these Bills of Quantities is subject to re-measurement in order to ascertain the actual quantity executed for which payment will be made. All "Provisional" and other work liable to adjustment under this Contract be left uncovered for a reasonable period of time to enable all measurements needed to be taken by the PROJECT MANAGER. Immediately the work is ready for measuring, the Contractor shall give notice to the PROJECT MANAGER. If the Contractor makes default in these respects he/she shall if the PROJECT MANAGER so directs uncover the work to enable all measurements to be taken afterwards reinstate at his own expense.</p>	
C	<p>ALTERATION TO BILLS, PRICING ETC.</p> <p>Any unauthorized alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and in any case be ignored. The Contractor shall be deemed to have made allowance in his/her prices generally to cover any items against which no price has been inserted in the Priced Bills of Quantities. All items of measured work shall be priced in detail and the Tenders containing Lump Sums to cover trades or groups of work must be broken down to show the prices of each item before they will be accepted.</p>	

D	<p>BLASTING OPERATIONS</p> <p>Blasting shall only be allowed with the express permission of the PROJECT MANAGER in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost in accordance with any Government regulations in force for the time being and any special regulations laid down by the PROJECT MANAGER governing the use and storage of explosives.</p>	
	<p>Carried to Collection</p>	<p>US\$</p>

ITEM	DESCRIPTION	US\$
A	<p>MATERIALS ARISING FROM EXCAVATIONS</p> <p>Materials of any kind obtained from excavations shall be the property of the Client. Unless the PROJECT MANAGER directs otherwise such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution for materials which the Contractor will otherwise have had to supply with the written permission of the PROJECT MANAGER. Should such permission be given, the Contractor shall make due allowance for materials so used at a price to be agreed.</p>	
B	<p>PROTECTION OF THE WORKS</p> <p>Provide protection of the whole of the works contained in the Bills of Quantities, including casing, casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the PROJECT MANAGER and remove such protection when no longer required and make good any damage which nevertheless have been done at completion free of cost to the to Government.</p>	
C	<p>REMOVAL OF RUBBISH ETC.</p> <p>Removal of rubbish and debris from the buildings and site as it accumulates and at the completion of the works and remove all plant, scaffolding and unused materials at completion.</p>	

D	<p>WORKS TO BE DELIVERED UP CLEAN</p> <p>Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works and remove all marks, blemishes, stains and defects from joinery, fittings and decorated surfaces generally, polish door furniture and bright parts of metal work and leave the whole of the buildings water tight, clean, perfect and fit for occupation to the approval of the PROJECT MANAGER.</p>	
	<p>Carried to Collection</p>	<p>US\$</p>

ITEM	DESCRIPTION	USS
A	<p>GENERAL SPECIFICATION.</p> <p>For the full description of materials and workmanship, method of execution of the works and notes for pricing, the Contractor is referred to Ministry of Public Works and Housing General Specification dated 1976 or any subsequent revision thereof, and which shall be allowed for in all respects unless it conflicts with the General Preliminaries, Trade Preambles or other items in these Bills of Quantities.</p>	
B	<p>TRAINING LEVY</p> <p>The Contractor's attention is drawn to legal notice No. 237 of October, 1971 which requires payment by Contractor of a Training levy at the rate of 1/4% of the Contract Sum on all Contracts of more than US\$ 500,000.00 in value.</p>	
C	<p>MATERIALS ON SITE</p> <p>All materials for incorporation into the works must be stored on or adjacent to the site before payment is effected unless specifically exempted by the PROJECT MANAGER. This includes the materials of the Main Contractor, Nominated Subcontractors and Nominated Suppliers.</p>	
D	<p>HOARDING</p> <p>The Contractor shall enclose the site of the works under construction with a hoarding 2400mm high consisting of iron sheets on 100x50mm timber posts firmly secured at 1800mm centres with two 75x50mm timber rails. The Contractor is in addition required to take precautions necessary for the safe custody of the works, materials, plant, public and Employer's property on the site.</p>	

<p>E</p>	<p>CONTRACTOR'S SUPERINTENDENCE/ SITE AGENT</p> <p>The Contractor shall constantly keep on the works a literate English and Kiswahili speaking Agent Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the works. Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the PROJECT MANAGER and such directions shall be deemed to have been given to the Contractor in accordance with the Conditions of Contract.</p>	
	<p>Carried to Collection</p>	<p>US\$</p>

ITEM	DESCRIPTION	
	<p>COLLECTION</p> <p>Brought Forward from Page 165</p> <p>Brought Forward from Page 166</p> <p>Brought Forward from Page 167</p> <p>Brought Forward from Page 168</p> <p>Brought Forward from Page 169</p> <p>Brought Forward from Page 170</p> <p>Brought Forward from Page 171</p> <p>Brought Forward from Page 172</p> <p>Brought Forward from Page 173</p> <p>Brought Forward from Page 174</p>	
	<p>TOTAL GENERAL PRELIMINARIES CARRIED TO MAIN SUMMARY</p> <p>US\$</p>	

1. HIMS SOFTWARE

S/NO.	DESCRIPTION	QTY	UNIT PRICE (USD)	TOTAL PRICE (USD)
1	Queue Management System (QMS)	1		
2	Health Information System (HIS)	1		
3	• Patient Management			
4	• Patient Admission			
5	• Nursing Management			
6	• Electronic Medical Records			
7	• Laboratory Information System			
8	• Radiology Information System			
9	• Pharmacy Information system			
10	• Surgery			
11	• Abstracting			
12	• Fixed Assets			
13	• Patient Accounting			
14	• Computerized physician order entry			
15	• Accounts Payable			
16	• General Ledger			
17	• Stock Management			
18	• Material Management			
19	• Payroll			
20	• Other Medical Modules			
21	• Hospital Support Services			
22	• Oncology Information system			
23	• Integration with Payment gateways			
Sub-Total Carried to Summary Page				

2. SERVER ROOM ACTIVE DEVICES

S/NO.	DESCRIPTION	QTY	UNIT PRICE (USD)	TOTAL PRICE (USD)
1	Internet Routers	1		
2	Active Firewall Layer 3	1		
3	DC Core Switches	2		
4	DC Firewall Layer 2	1		
5	DC LAN Switches	6		
6	HIS Application Server (Proposed blade servers based on the budget)	1		
7	Storage	1		
8	Backup Server	2		
9	ICT Monitor Server	1		
10	Mail Server (Propose to be outsourced)	1		
11	IDS/IPS Server (To be configured in the Firewall)	1		
12	Voip IPBX solution instance	1		
13	Active Directory	1		
14	Database Server	1		
15	DC Fibre Patch panels	12		
16	Tape Library	10		
17	Server Rack (42U)	1		
18	IPCCTV NVR	1		
19	IPCCTV Storage	2		
Sub-Total Carried to Summary Page				

3. OPERATIONAL ICT EQUIPMENT

S/NO.	DESCRIPTION	QTY	UNIT PRICE (USD)	TOTAL PRICE (USD)
1.	Network Printer	2		
2.	POS printers	10		
3.	Copiers	3		
4.	Scanners	2		
5.	Thin Clients / Clinical Workstations	60		
6.	Laptops	10		
7.	Office Desktop Computers	20		
8.	Diagnostic Workstations	10		
9.	Tablets	20		
10.	Patient Barcode Printer \ reader	5		
11.	Biometric devices (access control)	20		
12.	Standard IP Phones	100		
13.	Ultra-Elegant Gigabit IP Phone	10		
14.	55" Smart TV + roof mounting brackets or wall mount brackets	15		
Sub-Total Carried to Summary Page				

HMIS & ICT EQUIPMENT – COST SUMMARY

NO.	DESCRIPTION	AMOUNT (USD)
1.	PARTICULAR PRELIMINARIES	
2.	GENERAL PRELIMINARIES	
3.	HIMS SOFTWARE	
4.	SERVER ROOM ACTIVE DEVICES	
5.	OPERATIONAL ICT EQUIPMENT	
6.	TOTAL CARRIED TO FORM OF TENDER	