

**EXPRESSION OF INTEREST DOCUMENT  
FOR  
EMPANELMENT OF TECHNOLOGY SERVICE  
PROVIDERS TO IMPLEMENT HOSPITAL  
MANAGEMENT INFORMATION SYSTEM PROJECTS**

**EOI Reference Number: HLL/HCS/EOI/2024-25/01 Dated: 27-05-2024**



**HLL LIFECARE LIMITED**

(A Govt. Of India Enterprise)

**CIN: U25193KL1966GOI002621**

**HLL Bhavan, Poojappura, Thiruvananthapuram -695012, Kerala, India**

**Tel: 0471 2354949, 2775500**

**Web – [www.lifecarehll.com](http://www.lifecarehll.com), Email – [hincaretenders@lifecarehll.com](mailto:hincaretenders@lifecarehll.com)**

## DISCLAIMER

The information contained in this EOI document is confidential in nature. The bidders shall not share this information with any other party not connected with responding to this EOI Document. All information contained in this EOI provided / clarified are of good interest and faith. This is not an agreement and is not an offer or invitation to enter into an agreement of any kind with any party.

The information contained in this Tender Document or subsequently provided to Bidder(s) whether verbally or in writing by or on behalf of HLL Lifecare Limited (HLL) shall be subject to the terms and conditions set out in this EOI Document and any other terms and conditions subject to which such information is provided. Though adequate care has been taken in the preparation of this EOI document, the interested firms shall satisfy themselves that the document is complete in all respects. The information is not intended to be exhaustive.

Interested Bidders are required to make their own enquiries and assumptions wherever required. Intimation of discrepancy, if any, should be given to the specified office immediately. If no intimation is received by this office by the date mentioned in the document, it shall be deemed that the EOI document is complete in all respects and firms submitting their bids are satisfied that the EOI document is complete in all respects. If a bidder needs more information than has been provided, the potential bidder is solely responsible for seeking the information required from HLL.

HLL reserves the right to provide such additional information at its sole discretion. In order to respond to the Bid, if required, and with the prior permission of HLL, each bidder may conduct his own study and analysis, as may be necessary.

HLL Lifecare limited (HLL), Thiruvananthapuram reserves the right to reject any or all of the applications submitted in response to this EOI document at any stage without assigning any reasons whatsoever. HLL also reserves the right to withhold or withdraw the process at any stage with intimation to all who submitted the EOI Application.

HLL reserves the right to change/modify/amend any or all of the provisions of this NIT document. Such changes would be posted on the website of HLL ([www.lifecarehll.com](http://www.lifecarehll.com)) and the CPP portal. Neither HLL nor their employees and associates will have any liability to any prospective respondent interested to apply or any other person under the law of contract, to the principles of restitution for unjust enrichment or otherwise for any loss, expense or damage which may arise from or be incurred or suffered in connection with anything contained in this NIT document, any matter deemed to form part of this NIT document, the award of the Assignment, the information and any other information supplied by or on behalf of HLL or their employees and Bidder or otherwise arising in any way from the selection process for the Assignment.

**HLL LIFECARE LIMITED**  
(A Government of India Enterprise)  
Healthcare Services Division  
HLL Bhavan, Poojappura,  
Thiruvananthapuram – 695012, Kerala, India,

**NOTICE INVITING EXPRESSION OF INTEREST**

EOI No: HLL/ HCS/EOI/2024-25/01

Dated: 27.05.2024

HLL Lifecare Limited (HLL), a Government of India Enterprise, invites Expression of Interest (EOI) from interested parties for the Empanelment of Technology Service Providers to Collaborate with HLL for Implementation of Hospital Management Information System Projects.

Sl No	Particulars	Description
1	Name of EOI	Empanelment of Technology Service Providers for Implementation of Hospital Management Information System Projects
2	EOI Number	HLL/ HCS/EOI/2024-25/01 Dated: 27-05-2024
3	Date of floating of EOI	<b>27-05-2024</b>
4	Pre EOI-Meeting	<b>04-06-2024, 11.00 AM</b> Google Meet link: <a href="https://meet.google.com/hft-zsix-pvy">https://meet.google.com/hft-zsix-pvy</a>
5	Last date and time for online submission of online EOIs	<b>17-06-2024, 02.00 PM</b>
6	Date and time of opening of EOI	<b>18-06-2024, 02.00 PM</b>
7	EOI document fee	<b>INR. 5,000/-</b>
8	EMD	<b>INR. 5,00,000/-</b>
9	Eligibility criteria for Participants	As per EOI document
10	Address for Communication at HLL regarding the EOI	Associate Vice President (HCS)i/c Healthcare Services Division HLL Lifecare Limited Corporate & Regd Office HLL Bhavan, Poojappura, Thiruvananthapuram-695 012. E-mail: <a href="mailto:hincaretenders@lifecarehll.com">hincaretenders@lifecarehll.com</a> Contact: <b>0471 2775500, 235 4949</b>

## **GENERAL INSTRUCTIONS TO PARTICIPANTS**

1. This EOI is an e-Tender and is being published online in Government eProcurement portal, <https://etenders.gov.in/e procure/app>
2. EOI documents can be downloaded free of cost from the Central Public Procurement Portal of Government of India (e-portal). All Corrigendum/extension regarding this e-tender shall be uploaded on this website i.e. <https://etenders.gov.in/e procure/app>.
3. The EOI and its corrigendum/extension will also be published in our company website, URL address: <http://www.lifecarehll.com/tender>.
4. The tendering process is done online only at Government eProcurement portal (URL address: <https://etenders.gov.in/e procure/app>). Aspiring Participants may download and go through the tender document.
5. All EOI documents are to be submitted online only and in the designated cover(s)/envelope(s) on the Government eProcurement website. Tenders/EOIs shall be accepted only through online mode on the Government eProcurement website and no manual submission of the same shall be entertained. Late tenders will not be accepted.
6. The complete EOI process is online. Participants should be in possession of valid Digital Signature Certificate (DSC) of class II or above for online submission of EOIs. Prior to EOI DSC need to be registered on the website mentioned above. If the envelope is not digitally signed & encrypted the Purchaser shall not accept such open EOIs for evaluation purpose and shall be treated as non-responsive and shall be rejected.
7. Participants are advised to go through “Bidder Manual Kit”, “System Settings” & “FAQ” links available on the login page of the e-Tender portal for guidelines, procedures & system requirements. In case of any technical difficulty, Participants may contact the help desk numbers & email ids mentioned at the e-tender portal.
8. Participants are advised to visit CPPP website <https://etenders.gov.in> regularly to keep themselves updated, for any changes/modifications/any corrigendum in the Tender Enquiry Document.

9. The Participants are required to submit soft copies of their EOIs electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the Participants in registering on the CPP Portal, prepare their EOIs in accordance with the requirements and submitting their EOIs online on the Government eProcurement Portal.

### **Registration**

- a) Participants are required to register in the Government e-procurement portal, obtain 'Login ID' & 'Password' and go through the instructions available in the Home page after log in to the CPP Portal (URL: <https://etenders.gov.in/eprocure/app>), by clicking on the link "Online bidder Enrolment" on the CPP Portal which is free of charge.
- b) As part of the enrolment process, the Participants will be required to choose a unique username and assign a password for their accounts.
- c) Participants are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- d) They should also obtain Digital Signature Certificate (DSC) in parallel which is essentially required for submission of their application. The process normally takes 03 days' time. The Participants are required to have Class II or above digital certificate or above with both signing and encryption from the authorized digital signature Issuance Company. Please refer online portal i.e. - <https://etenders.gov.in/eprocure/app> for more details.
- e) Upon enrolment, the Participants will be required to register their valid Digital Signature Certificate (Class II or above Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify /nCode / eMudhra etc.), with their profile.
- f) Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.
- g) The Participant intending to participate in the EOI is required to register in the e-tenders portal using his/her Login ID and attach his/her valid Digital Signature Certificate (DSC) to his/her unique Login ID. He/She have to submit the relevant information as asked for about the firm/contractor. The Participants, who submit their EOIs for this tender after digitally signing using their Digital Signature Certificate (DSC), accept that they have clearly understood and agreed the terms and conditions including all the Forms/Annexure of this tender.
- h) Only those Participants having a valid and active registration, on the date of EOI submission, shall submit EOIs online on the e-procurement portal.

Only one valid DSC should be registered by a participant. Please note that the Participants are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.

- j) Ineligible participant or Participants who do not possess valid & active registration, on the date of EOI submission, are strictly advised to refrain themselves from participating in this tender.

### **Searching for Tender Documents**

- a) There are various search options built in the CPP Portal, to facilitate Participants to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Form of Contract, Location, Date, Value etc. There is also an option of advanced search for tenders, wherein the Participants may combine a number of search parameters such as Organization.
- b) Once the Participants have selected the tenders they are interested in, they may download the required documents/tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the Participants through SMS/e-mail in case there is any corrigendum issued to the tender document.
- c) The participant should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification/help from the Helpdesk

### **Preparation of EOI**

- a) Participant should take into account any corrigendum published on the tender document before submitting their EOIs.
- b) Please go through the tender document carefully to understand the documents required to be submitted as part of the EOI. Please note the number of covers in which the EOI documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the EOI.
- c) Participant, in advance, should get ready the EOI documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR /DWF/JPG

formats. EOI documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

- d) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every EOI, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the Participants. Participants can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting an EOI and need not be uploaded again and again. This will lead to a reduction in the time required for the EOI submission process.
- e) Note: My Documents space is only a repository given to the Participants to ease the uploading process. If Participant has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical EOI.

**10.** More information useful for submitting online EOIs on the CPP Portal may be obtained at <https://etenders.gov.in/e procure/app>

**11.** Tenderers are required to upload the digitally signed file of scanned documents. EOI documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document. Uploading application in location other than specified above shall not be considered. Hard copy of application shall not be entertained.

**12.** Any general queries relating to the process of online EOI submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The 24x7 Help Desk details are as below: -

For any technical related queries please call at 24 x 7 Help Desk Number:  
0120-4001 062, 0120-4001 002, 0120-4001 005, 0120-6277 787

Note: - International Participants are requested to prefix +91 as country code

E-Mail Support: For any Issues or Clarifications relating to the published tenders, Participants are requested to contact the respective Tender Inviting Authority

Technical - [support-eproc@nic.in](mailto:support-eproc@nic.in), Policy Related - [cphp-doe@nic.in](mailto:cphp-doe@nic.in)

**13.** Participants are requested to kindly mention the URL of the portal and Tender ID in the subject while emailing any issue along with the contact details.

**14.** Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender. Address for communication and place of opening of EOIs:



**Associate Vice President (HCS)i/c  
Healthcare Services Division  
HLL Lifecare Limited  
HLL Bhavan, Poojappura,  
Thiruvananthapuram - 695012, Kerala, India  
Tel: +91 471 2775500 , 235 4949  
Email – [hincaretenders@lifecarehll.com](mailto:hincaretenders@lifecarehll.com)**

15. The EOIs shall be opened online at the **Office of the Associate Vice President (HCS)** in the presence of the Participants/their authorized representatives who wish to attend at the above address. If the tender opening date happens to be on a holiday or non-working day due to any other valid reason, the tender opening process will be done on the next working day at the same time and place.
16. More details can be had from the Office of the Associate Vice President (HCS)i/c during working hours. The Tender Inviting Authority shall not be responsible for any failure, malfunction or breakdown of the electronic system while downloading or uploading the documents by the Participant during the e-procurement process.
17. A firm/participant shall submit only one EOI in the same bidding process. A Participant (either as a firm or as an individual or as a partner of a firm) who submits or participates in more than one EOI will cause all the proposals in which the Participant has participated to be disqualified.

#### **18. Online EOI Process:**

The tender process shall consist of the following stages:

- i. Downloading of tender document: Tender document will be available for free download on Government e-procurement portal (URL: <https://etenders.gov.in/eprocure/app>).
- ii. Pre-bid meeting: **04-06-2024 , 11.00 AM**
- iii. Publishing of Corrigendum: All corrigenda shall be published on Government e-procurement portal (URL: <https://etenders.gov.in/eprocure/app>) and HLL website (URL address: <http://www.lifecarehll.com/tender>) and shall not be available elsewhere.
- iv. EOI submission: Participants have to submit their EOIs along with supporting documents to support their eligibility, as required in this tender document on Government e-procurement



portal. No manual submission of EOI is allowed and manual EOIs shall not be accepted under any circumstances.

- v. Opening of Technical EOI and Participant short-listing: The technical EOIs will be opened, evaluated and empaneled as per the eligibility and technical qualifications. All documents in support of technical qualifications shall be submitted (online). Failure to submit the documents online will attract disqualification. All the Participants who meet the technical evaluation criteria will be empanelled. After empanelment, as and when requirement arises, HLL will invite RFQ from the empanelled Participants, based on the specific nature of requirement.
- 19.** HLL Lifecare Limited does not bind themselves to accept the lowest or any EOI or to give any reasons for their decisions which shall be final and binding on the Participants.
- 20.** HLL Lifecare Limited reserves themselves the right to accept the whole or any part of the tender and the participant shall be bound to perform the same at his quoted rates.
- 21.** In case, it is found during the evaluation or at any time before placing of PO or after its execution and during the period of subsistence thereof, that one or more of the eligibility conditions have not been met by the participant or the applicant has made material misrepresentation or has given any materially incorrect or false information, appropriate legal/penal etc., action shall be taken by HLL Lifecare as deemed fit.
- 22.** Conditional EOIs and EOIs not uploaded with appropriate/desired documents may be rejected rightly and the decision of HLL Lifecare Limited in this regard shall be final and binding.
- 23.** HLL Lifecare Limited Ltd. reserves the right to verify the claims made by the Participants and to carry out the capability assessment of the Participants and HLL Lifecare Limited's decision shall be final in this regard.
- 24.** HLL Lifecare Limited Ltd reserves the right to amend or withdraw any of the terms and conditions contained in the EOI document including scope of work or reject any or all EOIs without giving any notice or assigning any reasons.
- 25. Submission Process:**  
For submission of EOIs, all interested Participants have to register online as explained above in this document. After registration, Participants shall submit their EOI online on Government e-procurement portal (URL: <https://etenders.gov.in/eprocure/app>).

**Note:- It is necessary to click on “Freeze bid” link/ icon to complete the process of EOI submission otherwise the EOI will not get submitted online and the same shall not be available for viewing/ opening during EOI opening process.**

**Associate Vice President (HCS)i/c**

## **Section-1**

### **INSTRUCTIONS TO THE PARTICIPANTS (ITP)**

#### **1. INTRODUCTION:**

##### **I. About HLL Lifecare Limited**

HLL Lifecare Limited (HLL) is a public sector undertaking under the administrative control of the Ministry of Health & Family Welfare, Government of India. HLL's purpose of business is "to be a globally respected organization focusing on inclusiveness by providing affordable and quality healthcare solutions through continuous innovations". In its quest to become a comprehensive healthcare solutions provider, HLL diversified into hospital products and healthcare services, while nurturing its core business of providing quality contraceptives.

The Healthcare Services Division of HLL provides Medical Diagnostic Services (Laboratory and Imaging) and other facilities like Polyclinic. Our first center in association with CGHS started in February 2008 in New Delhi. HLL is one of the few organizations who are capable of delivering medical diagnostic services in a partnership model on a national level. HLL through this division endeavors to strengthen the diagnostic service delivery capability of partner institutions and bring high quality & precise diagnostic services to users at affordable costs.

HINDLABS – "Providing Affordable and Reliable Solutions for quality Healthcare"

The changing attitudes towards healthcare and growing lifestyle diseases are increasing the need for reliable, affordable and quality diagnostic services. Effectiveness of healthcare delivery organizations are enhanced by focusing on medical care delivery and outsourcing services like Medical Laboratory Diagnostics, Medical Imaging Diagnostics etc to a specialist agency. The Healthcare Services Division through its brand HINDLABS offers outsourcing partnerships to partnering institutions in the areas of Diagnostic services and Health screening services.

The entire environment in which healthcare services are provided has altered as a result of the COVID-19 epidemic. A lot of the obstacles to digitalization have been removed, which has sped up the adoption of digital solutions and changed how people work and receive services. There are numerous advantages for patients, healthcare providers, the government, and citizens alike because of the recent boom in digital transformation. Digital technologies provide great promise for strengthening the continuum of care by connecting the primary, secondary, and tertiary layers and delivering actionable insights using advanced analytics and data. HLL hopes to use digitization to enhance the way healthcare is delivered by bolstering the digital health ecosystem, forming alliances with tech companies, and facilitating the needs of various government and non-government institutions across the country. Now, HLL plans to expand

its business by taking up projects of delivering and implementing Hospital Management Information System (HMIS) at different health care facilities in adherence with Ayushman Bharat Digital Mission (ABDM) guidelines. HLL is planning to support the State Governments and other government bodies to establish an end to end IT enabled services in the district hospitals, primary health centers, medical colleges, even at the micro level. The HMIS services intended to be provided to the hospitals as per the ABDM guidelines. For successful execution and implementation of these projects, HLL invites Expression of Interest (EOI) from eligible parties to get empanelled as a Technology service provider as per the Scope of Work described in this EOI. The participants who get qualified as per the criteria mentioned in this document will be empaneled for 05 years. Post empanelment empaneled firms will be associating with HLL in a supporting role for execution of its HMIS projects/ similar services. As this is a purely technology driven activity, HLL wants to engage with the best of the service providers who could associate with HLL to execute the project. As and when requirement arises, based on the scope of each project, a separate Request for Quote (RFQ) will be invited from the empaneled parties for submission of financial offer and a TSP will be finalized for that project.

## **2. GENERAL INFORMATION TO THE PARTICIPANTS**

- Participants may please go through the EOI document carefully to understand the documents required to be submitted as part of the EOI. Any deviations from these may lead to rejection of the EOI.
- Participants should consider any corrigendum published on the EOI before submitting their EOIs.
- In case, it is found during the evaluation or at any time before signing of the contract or after its execution and during the period of subsistence thereof, that one or more of the eligibility conditions have not been met by the participant or the applicant has made material misrepresentation or has given any materially incorrect or false information, appropriate legal/penal etc., action shall be taken by the Buyer including black listing.
- The buyer reserves the right to verify the claims made by the Participants and to carry out the capability assessment of the Participants and the Buyer's decision shall be final in this regard.

## **3. SCOPE OF THE EOI**

HLL Lifecare Limited (HLL), a Government of India Enterprise, invites EOI from eligible, competent, and experienced bidders to get empaneled as technology service providers for Implementation of Hospital Management Information System Projects (As specified in Section-2). The HMIS solution is intended for internal and external projects of HLL to provide technological support to healthcare facilities that need IT enabled solutions in a progressive mode. The TSP shall provide end to end HMIS solution (as HLL white labeled product with specified brand name of HLL) and ancillary services as per the requirement of HLL's clients.

The provided solution should be unbranded to HLL. TSP shall customize it as per HLL's requirement and the same will be rebranded as HLL own product for onward offering to its clients. The required infrastructure and services should support the beneficiary health care facility to develop itself into an e-enabled facility and be part of ABDM compliant health ecosystem.

Qualified Participants will be empaneled as Technology Service Providers (TSP) after finalization of EOI. A separate Request for Quote will be issued to empaneled firms as and when requirement arises for finalization of TSP for future projects.

HLL will arrange business and work orders for HMIS Projects through their own marketing effort and participating in tenders. HLL plans to entrust the execution of these orders / contracts to the TSP in coordination with HLL.

TSP shall analyze the tender/ work order and do the necessary study and survey in order to prepare a cost analysis for execution of the project. HLL will scrutiny the cost analysis submitted by the TSP and quote a competitive offer in tenders. In the case of project award through HLL's marketing efforts/Nomination basis to HLL without tender, TSP shall analyze the workorder and financial offer has to be submitted to HLL.

The selected TSP will be responsible for the execution of project in its entirety incurring all costs involved. After receipt of payment from clients, HLL will release payment to TSP as per the financial offer submitted through request for quote. Period of engagement will be for Five (05) years from the date of Notification of Award (NOA)

### **SCOPE OF TECHNOLOGY SERVICE PROVIDER**

- Detailed Scope of work is given at Section-3
- End to end execution of HMIS projects as required by HLL.
- Incur all capital expenses of such projects as per the requirement of HLL as and when the projects are assigned by the principals.
- Meet all the operational and recurring expenses during the day-to-day execution of the project. Any Operational expense incurred by HLL will be deducted from TSP.
- Undertake all client requirements and customizations and incorporate on the proposed solution- project wise during the entire project period based on mutual understanding.
- Maintain the quality standards and the SOP's as decided and agreed at the commencement of the Project
- Meet all statutory and regulatory guidance and requirements or as advised by HLL.
- Business development in public and private sectors.

### **SCOPE OF HLL**

- The complete Strategic Design, Planning, and execution of the project
- Obtain the regulatory compliances in the name of HLL.

- Maintain the quality standards and the SOP's as decided and agreed at the commencement of the Project
- Business development in public and private sectors.
- Routine Reports and Coordination with all stakeholders.

#### 4. **ELIGIBLE PARTICIPANTS**

- A participant should have eligibility criteria as mentioned in the EOI document to submit EOIs.
- A firm/participant shall submit only one EOI in the same bidding process. A Participant (either as a firm or as an individual or as a partner of a firm) who submits or participates in more than one EOI will cause all the proposals in which the Participant has participated to be disqualified.

#### 5. **SUBMISSION OF EOI**

- The Interested participant shall submit their EOI online only through the Government eProcurement portal (URL: <https://etenders.gov.in/eprocure/app>) as per the procedure laid down for e-submission as detailed in the web site. For e-tenders, the Interested Participants shall download from the portal. The Participant shall fill up the documents and submit the same online using their Digital Signature Certificate. On successful submission of EOIs, a system generated receipt can be downloaded by the participant for future reference. Copies of all certificates and documents shall be uploaded while submitting the EOI online.
- The EOI is invited in 2 Envelope system from the registered and eligible firms at CPP Portal.

##### a) **Envelope - I (EOI document Fee and EMD):**

EOI Document fee (Non-refundable) and EMD as per the EOI conditions shall be paid separately, thru RTGS/NEFT transfer in the following HLL A/c details:

Beneficiary name	:	HLL Lifecare Limited
Account No	:	00630330000563
IFSC Code	:	HDFC0000063
Bank Name	:	HDFC BANK
Branch Name	:	Vazhuthacaud

Document of the above transactions completed successfully by the participant, shall be uploaded separately while submitting the EOIs online.

##### NOTE

- SSI/MSME units interested in availing exemption from payment of EOI document Fee and EMD should submit a valid copy of their registration certificate issued by the

concerned DIC or NSIC / Udyog Aadhaar.

- If the participant is an MSME, it shall declare in the bid document the Udyog Aadhar Memorandum Number issued to it under the MSMED Act, 2006.
- If an MSME participant does not furnish the UAM Number along with bid documents, such MSME unit will not be eligible for the benefits available under Public Procurement Policy for MSEs Order 2012.
- The Party has to provide Performance Security/Security Deposit if EOI is awarded to them. **If required HLL may ask Participants for conversion of EMD to Performance Security/Security Deposit post empanelment.**

**b) Envelope -II (Technical EOI):**

Technical EOI should contain dully filled, signed and scanned soft copy documents as mentioned in SECTION 2 - SELECTION PROCESS- Documents to be submitted along with the EOI (clause -6) and other required documents specified in this EOI document.

**Note: -**

1. HLL Lifecare Limited reserves the right to verify the credential submitted by the agency at any stage (before or after the award the work). If at any stage, any information / documents submitted by the applicant is found to be incorrect / false or have some discrepancy which disqualifies the firm then HLL shall take the following action:
  - a) The agency shall be liable for debarment from tendering in HLL Lifecare Limited, apart from any other appropriate contractual /legal action.
2. On demand of the EOI Inviting Authority, this whole set of certificates and documents shall be sent to the EOI Inviting Authority's office address (as given in the NIT) by registered post/Speed post of India Post in such a way that it shall be delivered to the EOI Inviting Authority before the deadline mentioned. The EOI Inviting Authority reserves the right to reject any EOI, for which the above details are not received before the deadline.
3. The EOI Inviting Authority shall not be responsible for any failure, malfunction or breakdown of the electronic system while downloading or uploading the documents by the Participant during the e-procurement process.

**6. DEADLINE FOR SUBMISSION OF THE EOI FOR INTERESTED PARTICIPANTS**

6.1 EOI shall be received only online on or before the date and time as notified in EOI.

6.2 The EOI Inviting Authority, in exceptional circumstances and at its own discretion, may extend the last date for submission of EOIs, in which case all rights and obligations previously subject to the original date will then be subject to the new date of submission. The Participant will not



be able to submit his EOI after expiry of the date and time of submission of EOI (server time).

### 6.3 Modification, Resubmission and Withdrawal of EOIs

Resubmission or modification of EOI by the Participants for any number of times before the date and time of submission is allowed. Resubmission of EOI shall require uploading of all documents.

6.4 If the participant fails to submit his modified EOIs within the pre-defined time of receipt, the system shall consider only the last EOI submitted.

6.5 The Participant can withdraw his/her EOI before the date and time of receipt of the EOI. The system shall not allow any withdrawal after the date and time of submission.

## 7. EOI OPENING

EOIs of Interested Participants shall be opened on the specified date & time, by the EOI inviting authority or his authorized representative in the presence of Participants or their designated representatives who choose to attend. Opening of EOIs shall be carried out in the same order as it is occurring in invitation of EOIs or as in order of receipt of EOIs in the portal. The Participants & guest users can view the summary of opening of EOIs from any system. Participants are not required to be present during the EOI opening at the opening location if they so desire.

## 8. EXAMINATION OF EOI AND DETERMINATION OF RESPONSES

- During the EOI opening, the EOI Inviting Authority will determine for each EOI whether it meets the required eligibility as specified in the note inviting EOI.
- A substantially responsive EOI is one which conforms to all the terms, conditions, and requirements of the EOI documents, without any deviation or reservation only will be considered.
- Non submission of legible or required documents or evidence may render the EOI non-responsive.
- If an EOI is not substantially responsive, it may be rejected by the EOI Inviting Authority, and may not subsequently be made responsive by correction or withdrawal of the nonconforming material deviation or reservation.
- Participant can witness the principal activities and view the documents/summary reports for that particular work by logging on to the portal with his DSC from anywhere.
- In case only a single EOI is received, then the purchaser reserves the right to accept/reject the EOI as per prevailing norms of GFR and CPP portal, or to go for retender.

## 9. CLARIFICATION OF EOI

- To assist in the examination, evaluation, and comparison of EOIs, the EOI Inviting Authority may ask the participant for required clarification on the information submitted with the EOI. The request for clarification and the response shall be in writing or by e-mail.

- No Participant shall contact the EOI Inviting Authority on any matter relating to the submitted EOI from the time of the EOI opening to the time the contract is awarded. If the Participant wishes to bring additional information to the notice of the EOI Inviting Authority, he shall do so in writing.

#### **10. CONFIDENTIALITY**

- Information relating to the examination, clarification, evaluation, and comparison of EOIs and recommendations for the award of a contract shall not be disclosed to Participants or any other persons not officially concerned with such process until the award has been announced in favour of the successful participant.
- Any effort by a Participant to influence the Purchaser during processing of EOIs, evaluation, EOI comparison or award decisions shall be treated as Corrupt & Fraudulent Practices and may result in the rejection of the Participants' EOI.

#### **11. EOI VALIDITY**

- EOIs shall remain valid for the entire period of empanelment. A EOI valid for a shorter period shall be rejected by HLL as non-responsive.
- In exceptional circumstances, prior to expiry of the original EOI validity period, the Tendering Authority may request the Participants to extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing or by email. A participant may refuse the request without forfeiting its bid security (if applicable). A participant agreeing to the request will not be required or permitted to modify its EOI but will be required to extend the validity of its bid security (if applicable) for the period of the extension.

#### **12. EOI DOCUMENT FEE AND BID SECURITY (EMD)**

The EOI Document fee (Non-refundable) and EMD as per the EOI conditions shall be paid separately, thru RTGS/NEFT transfer in the following HLL A/c details:

Beneficiary : HLL LIFECARE LIMITED  
Account No : 00630330000563  
IFSC Code : HDFC0000063  
Bank Name : HDFC BANK  
Branch Name : Vazhuthacaud

- Documents of the above transactions (UTR NUMBER and DATE OF UTR) completed successfully by the participant, shall be uploaded at the locations separately while submitting the EOIs online.
- Note: Any transaction charges levied while using any of the above modes of payment has to be borne by the participant. The supplier / contractor's EOI will be evaluated only if payment is effective on the date and time of EOI opening.

- The Participants who failed to submit the EOI document fee and EMD before the submission deadline will be considered as technically nonresponsive.
- Each EOI must be accompanied by EMD. Any EOI not accompanied by an acceptable Bid Security (EMD) shall be rejected as non-responsive.
- The Bid Security (EMD) of the unsuccessful Participant shall become refundable as promptly as possible after finalization of the EOI.
- The Bid Security (EMD) of the successful Participant will be discharged when the Participant has furnished the required Security Deposit and acceptance of LOI/Work order.

The Bid Security may be forfeited:

(a) If a Participant:

- Changes its offer/EOI during the period of EOI validity or during the validity of the contract.
- Does not accept the correction of errors

(b) In the case of the successful Participant, if the Participant fails:

- To sign the Agreement
- To deliver the material within stipulated time frame as per PO.
- To accept the Notification of award/Letter of Indent/ Purchase order and/or submit the security deposit.
- To acknowledge the Notification of award/Letter of Indent/ Purchase order within 5 days from the date of issue by sending the signed copy of the same.
- In such cases the work shall be rearranged at the risk and cost of the selected participant
- SSI/MSME units interested in availing exemption from payment of Bid Security should submit a valid copy of their registration certificate issued by the concerned DIC or NSIC/Udyog Aadhaar. But the Party has to provide Security Deposit, if work is awarded to them.
- The Bid Security deposited will not carry any interest.

### **13. ALTERATIONS AND ADDITIONS**

- The EOI shall contain no alterations or additions, except those to comply with instructions, or as necessary to correct errors made by the participant, in which case such corrections shall be initialled by the person or persons signing the EOI.
- The Interested participant shall not attach any conditions of his own to the EOI. Any participant who fails to comply with this clause will be disqualified.

### **14. NOTIFICATION OF EMPANELMENT (NOE)**

- Prior to the expiration of the period of EOI validity, the HLL will notify the successful participants in writing by registered letter or by email, to be confirmed, that its EOI has been accepted.
- The notification of Empanelment will constitute the formation of the Contract. The supplier shall give acceptance of the Notification of Empanelment within 15 days from the date of

issue by sending the signed copy of the same failing which, the purchaser shall have the right to cancel the NOE. The conditions mentioned in the Notification of Empanelment will be mutually binding for both the parties and the bidder and the purchaser shall abide by the same. In case of any default in any of the conditions of the Notification of Empanelment, the purchaser reserves the right to invoke Bid Securing clause.

- The NOE is liable to be cancelled, if the participant is unable to comply with or violates any of the terms and conditions laid down in the this EOI document/NOE.

## **15. EMPANELMENT:**

- Qualified parties will be empanelled from the date of Notification of Empanelment.
- The EOI Inviting Authority reserves the right to accept or reject any EOI and to cancel the EOI process and reject all EOIs at any time prior to the empanelment, without thereby incurring any liability to the affected Participant or Participants.
- Empanelment will be initially valid for a period of 60 months from the date of Notification of Empanelment and the same can be extended after reviewing the performance.
- During the tenure of empanelment, as and when requirement arises, based on the specific nature of the project HLL will invite separate financial quotes from eligible empanelled TSP.
- Performance of the empanelled firms will be evaluated periodically and HLL will have the right to terminate the empanelment based on such evaluation.
- HLL will have the right to expand or reduce the panel of TSPs by adding/removing firms at any time during the empanelment.

## **16. CONFLICT OF INTEREST.**

The selected TSP shall not engage in activities that are in conflict with interest of the client (HLL) under the assignment and they would not engage in any contract that would be in conflict of interest with their current obligations. The selected TSP that has a business of family relationship with such members of HLL staff who are directly or indirectly involved in this assignment will not be awarded the assignment.

## **17. TERMINATION**

Empanelment will be terminated on completion of the period mentioned in the agreement and upon completion of all obligations by the parties. HLL reserves the right to terminate/ cancel the Notification of award/ agreement/empanelment at any time for any reason without any liability on HLL. HLL may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, terminate the Contract in whole or part; if the TSP fails to perform any obligation(s) under the empanelment. In such an event TSP will be liable for all the consequent losses to HLL.

## **18. COURT JURISDICTION:**

In the event of any dispute arising out of this agreement, the parties agree that the courts of Thiruvananthapuram, Kerala alone will have exclusive jurisdiction.

## **19. INDEMNITY**

The Interested Participant shall indemnify, defend and hold harmless Government of India and HLL, its Affiliates, officers, directors, employees, agents, and their respective successors and assigns, from and against any and all loss, damage, claim, injury, cost or expenses (including without limitation reasonable attorney's fees), incurred in connection with third Party claims of any kind that arise out of or are attributable to (i) Manufacturer's/Participants/service providers breach of any of its warranties, representations, covenants or obligations set forth herein or (ii) the negligent act or omission of the Manufacturer /Participants/Service Providers.(iii) any product/service liability claim arising from the gross negligence or bad faith of, or intentional misconduct or intentional breach of this Contract by participant or its affiliate.

## **20. HLL'S RIGHT TO ACCEPT OR REJECT ANY OR ALL EOIs**

- HLL reserves the right to accept or reject any EOI, and to annul the EOI process and reject all EOIs at any time prior to award Contract award, without thereby incurring any liability to the affected participant or Participants.
- HLL does not bind itself to accept the submitted EOIs and reserves the right to reject any or all EOIs at any point of time prior to the issuance of the Notice of award/Letter of intent/Purchase order without reason whatsoever.
- HLL reserves the right to resort to retendering without providing any reasons whatsoever. The purchaser shall not incur any liability on account of such rejection. The purchaser reserves the right to modify any terms, conditions or specifications for submission of offer and to obtain revised EOIs from the Participants due to such changes, if any.
- Canvassing of any kind will be a disqualification and the purchaser may decide to cancel the participant from its empanelment.
- HLL reserves the right to accept or reject any EOI and annul the EOI process and reject all EOIs at any time prior to award of contract without thereby incurring any liability to the affected participant or Participants or any obligation to inform the affected participant or Participants of the ground for the purchaser's action.

## **21. CONTACTING HLL**

- From the time of bid opening to the time of Contract award, if any Bidder wishes to contact HLL on any matter related to the bid, he shall do so in writing by sending email to [hincaretenders@lifecarehll.com](mailto:hincaretenders@lifecarehll.com).
- If a Bidder tries to influence HLL directly or otherwise interfere in the EOI evaluation process and the Contract award decision, his EOI will be rejected.

## **22. GOVERNING LANGUAGE**

The contract shall be written in English language. English language version of the Contract shall

govern its interpretation. All correspondence and documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

### **23. TERMINATION**

HLL reserve right to terminate/ cancel the Notification of Empanelment/ Letter of Indent/ Purchase order at any time for any reason without any liability on HLL.

### **24. LICENSE AND PERMITS**

The Participant shall acquire in its name all permits, approvals, and/or licenses from all local, state, or national government authorities or public service undertakings that are necessary for the performance of the scope of work and assignments awarded by HLL. The participant shall comply with all laws in force in India. The laws will include all national, provincial, municipal, or other laws that affect the performance of the Contract and are binding upon the participant. The participant shall indemnify and hold harmless HLL from and against any and all liabilities, damages, claims, fines, penalties, and expenses of whatever nature arising or resulting from the violation of such laws by the participant or its personnel.

### **25. EMPLOYEES OF HLL NOT INDIVIDUALLY LIABLE**

No Director or official or employee of HLL shall in any way be personally bound or liable for the acts or obligations of HLL under the contract/empanelment or answerable for any default or omission in the observance or performance of the acts, matters or things which are herein contained. The Bidder shall not be entitled to any increase on the scheduled rates or any other rights or claims whatsoever by reason of any representation, explanation, statement or alleged understanding, promise or guarantees given or to have been given to him by any person.

### **26. INTEGRITY PACT**

Pre-Contract Integrity Pact and Independent External Monitor

The Integrity pact annexed shall be part and parcel of this document and has to be signed by participant(s) at the pre-tendering stage itself, as a pre EOI obligation and should be submitted along with the financial and technical EOIs. All the Participants are bound to comply with the Integrity Pact clauses. EOIs submitted without signing Integrity Pact will be ab initio rejected without assigning any reason.

The Integrity pact annexed shall be part and parcel of this document and has to be signed by participant(s) at the pre-tendering stage itself, as a pre-EOI obligation and should be submitted along with the financial and technical EOIs. All the Participants are bound to comply with the Integrity Pact clauses. EOIs submitted without signing Integrity Pact will be ab initio rejected without assigning any reason.

The email id of the Independent External Monitor for HLL is given below.

Email id: [iemhll@lifecarehll.com](mailto:iemhll@lifecarehll.com)



**27. RESTRICTIONS UNDER RULE 144 (XI) OF GFR 2017 FOR PARTICIPANTS FROM A COUNTRY SHARING LAND BORDER WITH INDIA.**

Any participant from a country which shares a land border with India will be eligible to EOI in this tender only if the participant is registered with Competent Authority, as per order no F.No.6/18/2019-PPD dated 23-July-2020 (Rule 144 (xi) of GFR) inclusive of the latest amendments issued by Ministry of Finance, GOI at Appendix of this EOI document. The participant must comply with all provisions mentioned in this order. A self-declaration (as per format provided in Annexure 2) with respect to this order must be submitted.

**28. PROVISIONS OF PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA) ORDER 2017**

MSE - Statutory exemptions as per relevant guidelines shall be applicable for MSE and startup vendors. However, the preferences with respect to MSME shall not be applicable to those who are only involved the trading of the product under the scope of this tender.

PPP MII - Preferences for Make in India products / services shall be applicable in line with Government Order No.P-45021/12/2017PP (BE-II), 2017 (published by Department for Promotion of Industry and Internal Trade) inclusive of the latest amendments. Self-declaration to be submitted to claim MAKE IN INDIA preference as per Annexure 3.

**29. PREFERENCE TO MAKE IN INDIA PRODUCTS (FOR BIDS < 200 CRORE):**

Preference shall be given to Class 1 local supplier as defined in Public Procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier will be as defined in Public Procurement (Preference to Make in India), Order 2017.

If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor and if the OEM is a company then by a practicing cost accountant or a chartered accountant for OEM's other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 16.09.2020. Only Class-I and Class-II Local suppliers as per MII order dated 16.9.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 16.09.2020 is not eligible to participate. However, eligible micro and small enterprises will be allowed to participate. In case Buyer has selected Purchase preference to Micro and Small Enterprises clause in the bid, the same will get precedence over this clause.



## SECTION 2- SELECTION PROCESS

The evaluation committee, appointed by the HLL will evaluate the proposals on the basis of their responsiveness. During technical evaluation, conformity to the eligibility criteria (clause no.1) and qualification as per evaluation parameter (clause no.2) will be assessed. MSEs and startups (recognized by DPIIT) are eligible for statutory exemptions as per statutory guidelines and norms.

### **1. PRE-QUALIFICATION CRITERIA FOR PARTICIPANTS**

The participant should be fulfilling the following preconditions and must also upload/submit documentary evidence in support of fulfillment of these conditions while submitting the EOI.

<b>a.</b>	The Participant shall be a sole provider/ Company which could be a Partnership Co/ LLP/ Private Ltd / Public Ltd by shares.
<b>b.</b>	Participant should have a minimum average Annual Turnover of Rs 30 Crores or above for the last 3 financial years (i.e.2020-21, 2021-22 and 2022-23).
<b>c.</b>	The participant should have positive net worth during the last three financial years
<b>d.</b>	The participant should have been engaged in minimum 3 large ICT communication projects of consolidated value Rs.10 Crores involving services to Govt./PSU/ Private/ International institutions, during the last five financial years. In such cases client satisfactory certificate / work order shall be submitted.
<b>e.</b>	The Participant should have experience in implementing/ ongoing projects of at least three (3) projects involving HMIS solution/ EMR implementation/ Healthcare Software System in last 5 Years from the date of issuance of EOI of which one (1) project must have been implemented/ongoing for hospital with minimum 300 bedded and other two must have been implemented/ongoing for hospitals with minimum 100 bedded hospitals.
<b>f.</b>	The participant should have experience in the projects involving mobilization of adequate team members (75- technical personnel) on ground and providing implementation support in Infrastructure/ HMIS / IT/ ITES projects in any Government / Private / International institutions in the last five years.
<b>g.</b>	The participant should make sure that all applications defined in scope of work are ABDM compliant. The participant should offer solutions that adheres to ABDM guidelines & successfully integrated with ABDM sandbox environment for all applications in the scope of work. (M1, M2, M3).
<b>h.</b>	The firm who has been de-recognized/debarred/banned/blacklisted by any State Government / Central Govt. Organization /State Medical Corporations/ Director Health Services and or convicted by any court of law can't participate in this EOI during the period of de-recognition / debarment/ Banned/blacklisted.
<b>i.</b>	The firm/directors shall not have any criminal record or should not have been convicted by any court of law in India or abroad. Parties shall give a declaration to this effect.

- |    |  |
|----|--|
| j. | The firm or the owner should declare all the pending legal disputes' whether official or personal. |
|----|--|

## 2. Evaluation Methodology

### Methodology of evaluation of Service provider

The proposal shall be evaluated as per following procedure:

- MSEs and Startups will get relaxations as per statutory guidelines.
- The Technical Evaluation Committee (TEC) appointed by HLL will screen the parties based on the Eligibility Criteria and submitted documents. The firms that fulfill Eligibility Criteria will be technically evaluated based on a methodology as detailed below.

## 3. Technical Evaluation Methodology

- Eligible participants as per clause no. 1 above (with satisfactory submission of documents as per clause no.3), will be asked to do a presentation/demonstration before the evaluation committee. Technical comparison of the bidders will be done, and marks will be awarded as per the criteria detailed below in Table-1. Bidders must secure a minimum of 70 marks to qualify for the technical evaluation. All the participants who meet the eligibility criteria and secure minimum 70 marks as mentioned above will be empanelled as Technology Service provider.

SNo	Evaluation Parameter	Criteria	Max. Marks	Supporting Documents
1	The participant should have an average financial turnover of Rs. 30.00 Cr.	Minimum 30.00 Cr - 6 Marks	10	Certificate issued by Statutory Auditor/CA for Turnover with Unique Document Identifier Number (UDIN).
		30.00 Cr to 50.00 Cr - 8 Marks		
		>100 Cr - 10 Marks- 10 Marks		
2	Experience in ongoing or completed projects of total value Rs. 10 Cr, in design, development, implementation of projects in IT Transformational project / ICT Components / E-Governance/ Digital Solution projects with any Government / State Government / PSUs / private/ International Institutions in last Five (5) financial years	Minimum 10.00 Cr - 6 Marks	10	Copy of Work order/ Client certificate/ Contract copy AND with Client project completion certificate specifying the project details and value vis a vis the criteria stated in the EOI. In case of an on-going project phased completion certificate (provided by client) should be submitted.
		10.00-25.00 Cr - 8 Marks		

		>25.00 Cr - 10 Marks		Consolidated CA certificate regarding contract price from each project executed in past 5 years as per Annexure-6 to be submitted.
3	Experience in implementing/ongoing projects involving HMIS solution/ EMR implementation/ Healthcare Software System in last 5 Years from the date of issuance of EOI in minimum one 300 bedded hospital and two 100 bedded hospitals.	At least One 300 bedded and Two 100 bedded hospitals - 6 Marks	10	Copy of Work order/ Client certificate/ Contract copy AND with Client project completion certificate specifying the project details and number of beds in the hospitals served vis a vis the criteria stated in the EOI. In case of an on-going project phase completion certificate (provided by client)/ Go Live should be submitted.
		Two 300 bedded and Four 100 bedded hospitals - 8 Marks		
		More than Two 300 bedded and Four 100 bedded hospitals - 10 Marks		
4	Experience in the projects involving mobilization of adequate team members on ground and providing implementation support in Infrastructure/ HMIS / IT/ ITES projects in any Government / Private / International institutions in the last Five years	Minimum 75 members in team - 6 Marks	10	Certificate from HR mentioning the resources deployed for different projects supported by their offer letters and qualification details
		75-100 team members - 8 Marks		
		>100 team members - 10 Marks		
5	Adherence to ABDM guidelines & Integration with ABDM sandbox	M1, M2 & M3 compliance - 10 Marks	10	Certification from NHA / specific mail communication mentioning the firm's solution is ABDM integrated in the sandbox environment.
6	Participant should possess relevant ISO Certifications: • ISO 9001 • ISO 27001 • ISO 20000 • ISO 22301 • ISO 27002	Any 1 Certificate - 5 Mark	10	Copy of Valid Certificates to be submitted.
		Any 2 Certificates - 8 Marks		
		All Certificates- 10 Marks		
7	The Participant should present one of their	• Understanding of the Project	15	

	executed projects <b>as a case study.</b>	<ul style="list-style-type: none"> <li>• Solution Architecture, Design, Scalability</li> <li>• Project Management Methodology</li> <li>• Solution components and Output</li> <li>• Human Resources Deployment Plan and Delivery Timeline</li> <li>• Training Methodology</li> <li>• Adoption strategy</li> <li>• Rollout Strategy</li> <li>• Handholding strategy</li> <li>• Location wise on boarding and support</li> <li>• SLA management strategy</li> <li>• Strategy for achieving outcomes</li> <li>• Risk Mitigation Plan</li> <li>• O&amp;M Methodology</li> </ul>		Case study to be signed and submitted in Technical EOI.
8	Technical Presentation and live demonstration of offered solution	All Modules	25	
<b>Maximum Marks</b>			<b>100</b>	

#### 4. DOCUMENTS TO BE SUBMITTED WITH EOI

- Signed copy of EoI Document (**all pages of Bid documents to be signed & stamped**) by the Bidder as token of acceptance of the Terms & Conditions.
- EOI document fee & EMD Payment details
- Bid form as per Annexure-1
- Profile of the Organization (emphasis to implement HMIS/ Hospital based Projects) as per the format provided in Annexure -4.
- Performance statement as per Annexure-6 attested by Chartered Accountant
- Details of the solution being ABDM compliant. Certification from NHA / specific mail communication mentioning the firm's solution is ABDM integrated in the sandbox environment is to be submitted.
- Authenticated copy of the certificates of incorporation/registration of the organization
- Copy of GST registration certificate
- Copy of PAN Card / Exemption certificate from Income Tax Department
- Certificate issued by Statutory Auditor/CA for Turnover for last three financial years with Unique Document Identifier Number (UDIN).

- Audited balance sheet and Profit and Loss statement for last three years signed by CA.
- Positive net worth statements from Chartered accountant.
- Power of attorney for signatory of EOI in Rs.200 stamp paper duly notarized.
- Certificate from HR mentioning resources deployed on the previous projects project to establish eligibility as per Section 2, clause no. 1.f.
- Work orders copies and satisfactory implementation certificates to establish execution of ICT contracts worth minimum Rs. 10 Crores as per Section 2, clause no. 1.d. In case of an on-going project phased completion certificate (issued by client) should be submitted.
- Work orders copies and satisfactory implementation certificates to establish execution of projects involving HMIS solution/ EMR implementation/ Healthcare Software System as per Section 2, clause no. 1.e. Client project completion certificate is to be submitted detailing the hospital details including number of beds. In case of an on-going project phased completion certificate (issued by client) should be submitted.
- Case study detailing one of the HMIS projects executed by bidder as per Section 2, Clause no. 2, Evaluation Methodology, Point no.5.
- Declaration stating that firm is not de-recognized/debarred/banned/blacklisted by any State Government / Central Govt. Organization /State Medical Corporations/ Director Health Services and firm/Directors are not convicted by any court of law for any illegal activities.
- Declaration regarding pending legal disputes.
- Udyam registration details for MSE Vendors.
- DPIIT Certificate for Startups.
- ANNEXURE-2 - SELF DECLARATION – COMPLIANCE TO RULE 144 (XI) OF GFR 2017
- ANNEXURE-3 - SELF DECLARATION – MAKE IN INDIA PREFERENCE
- Signed Integrity pact Agreement As per Annexure-5
- Other Documents mentioned in technical qualification criteria.

## 5. DEBARMENT

The Participant should not be debarred for fraudulent and corrupt practices by any Government entity in India as on the date of EOI. Participant shall submit an Affidavit in this regard.

## 6. PERIOD OF SERVICE

The empanelment is initially for a period of 05 years which may further be extended based on requirement. The service provider should be able to provide the solution in any health care facility within this period as required by HLL and should provide necessary customizations as and when required by the contract holder. The Service provider has to provide all the services as per the agreement between HLL and its client and provide on the site, offline support, AMC for a period as per terms and conditions stipulated in it. If a project is awarded during the end of the empanelment term, the service provider is bound to provide the service till the end of the project duration.

## 7. POST EMPANELMENT PROCESS

- a) The tentative Technology Service Providers (TSP), who meets the terms and conditions of this EOI shall be evaluated and empanelled after scrutiny as per the criteria detailed in Section 02, Selection process.
- b) As and when requirement arises, based on the specific nature of the planned business project, HLL will invite separate financial quotes from eligible empanelled TSPs. HLL reserves the right to decide whether its requirement for service provider is to be finalized from empanelled TSPs.
- c) Empanelled TSPs shall make independent assessment of proposed project and submit their financial quotes and QCBS method will be adopted for selection of TSP for that particular project.

## 8. QCBS Method:

On Case-to-case basis whenever requirement arises, financial offers will be invited from the technically qualified firms. Final selection will be done based on the weightage as detailed below.

S.No	Overall Criteria	Weightage
1	Technical-Commercial Evaluation (based on marks awarded as per clause no.2, Evaluation Methodology)	70%
2	Price Bid Evaluation (based on the financial bids submitted)	30%

Detailed description of QCBS method with illustration is given at Annexure- 7.

- d) HLL will have the right to reject proposals if they are found to be unacceptable.
- e) HLL reserves right to expand or reduce the panel of TSPs at its discretion at any time.

### Note:

- 1) Conditional offers are liable for rejection.
- 2) The Participants should give clause by clause compliance of EOI with references to supporting documents; otherwise, the offers are liable for rejection.
- 3) The Participant to indemnify the Buyer from any claims / penalties / statutory charges, liquidated damages, with legal expenses etc as charged by the customer.
- 4) While the Expression of Interest has been prepared in good faith, the Buyer does not make any commitment or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statement or omission herein, or the accuracy, completeness or reliability of information contained herein, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this request, even if any loss or damage is caused by any act or omission on its part.
- 5) Organizations are requested to keep the information and details strictly confidential. We are looking for your support and co-operation in getting fully responsive Expression of interest.

- 6) The Buyer shall not be responsible for any expense incurred by Parties in connection with the preparation and delivery of their EOI and other expenses.
- 7) The Buyer reserves the right to reject any or all the Expressions of Interest without assigning any reason thereof.
- 8) The process of inviting EOI is for ascertaining various options available to the Buyer. After evaluation / examination of the offers, the Buyer may at its sole discretion decide further course of action.
- 9) The Buyer reserves the right to deal with the proposal in any manner without assigning any reasons for the same. The decision of the Buyer in this regard shall be final.

## 9. Penalty Clause

1. Any false submissions/falsification of details and enclosures will lead to disqualification of the interested participant.
2. Any disagreement regarding the scope of work after opening technical EOIs will lead to disqualification of the participant.



## SECTION-3

### 1. DETAILED SCOPE OF WORK FOR THE TECHNOLOGY SERVICE PROVIDER

HLL is planning to associate with various Govt. all well as other health care organizations to support the establishment of an end-to-end IT enabled services. The HMIS services intended to be enabled in the healthcare organizations is as per the ABDM guidelines. The tentative Technology Service Provider has to associate with HLL for implementation of these projects by providing an end-to-end HMIS solution white labeled under HLL's brand name. Technology Service Provider (TSP) will also be responsible for successful roll-out and implementation of HMIS for respective clients. Scope of work includes, but not limited, to verifying and study of requirement, conceptualizing, configuring and customization of the solution to meet the requirement of HLL/Client, compliance of audit recommendations, performance testing, roll out, stabilization, provision of services during engagement period and post go-live support etc. This includes, but not limited to, Design, development, customization, testing, operation and maintenance of below mentioned modules:

### 2. Hospital Management Information System (HMIS) – Core Application and Modules

HMIS core application caters to the functional modules below to achieve the key objective of maintaining the health data across multiple public health facilities.

Patient Management	General Management
Helpdesk & Enquiry Management Module	<b>General Store Management-Features</b>
Patient Registration & Visit Marking Module	Re-Order Level Wise Purchase Order Preparation
Appointment Scheduling Module	Provision To Process Internal Intends:
Multiple OPD Management Module	Preparation
Queue Management System Module	Authorization
MLC Reporting Module	Quotation Linking
Admission Discharge Transfer Module (ADT)	Purchase Order Request Authorisation
Bed Management Module	Conversion
Casualty/Er Management Module	Provision To Generate:
Admission-Discharge-Transfer (ADT) Module	Temporary GRN (Goods Receipt Note)
Automated SMS & E-Mail Module	Provision For Medicine Production
Customer Mailer Wallet (CMV) Module	Vendor evaluation
Medical Record Management Module	Provision To Make Quotation Entry
MRD Diagnosis Code Marking Module	Feature For Approving Outlet Wise Store Requisition
Wards Management Module	Automated Purchase Order in Pdf Format
Operation Theatre Module	Purchase Order Wise GRN (Goods Receipt Note) Entry

Transfers & Referrals Module	Provision To Generate Purchase Return Claim
Emergency and Casualty Management Module	Return Statements
IPD Management Module	Damage/Expiry Medicine Returns
Patient Feedback Module	Feature For Direct Stock Entry
Enquiry Desk Module	Multi-Mode Recorder Level for Stock Monitoring
Document Imaging Solution Module	Feature For Automatic Tax Calculation
	Feature To Handle Generic Combination Wise Medicines
<b>Clinical Management</b>	Feature For Multi-Mode Tax Calculation
Doctors Workbench Module	Detailed Medicine Master Entry Linked with Category, Manufacture, Medicine Type, Unit of Measure, Supplier,
Prescription Module	Rack And Doctor
Nursing Workbench Module	
Multiple Surgery/Procedure Management	<b>Diagnostics Management System</b>
Labour Room	Radiology Information System
Cancer – Radiotherapy Management	Laboratory Information System
Cancer – Chemotherapy Management	Asset Management & Maintenance
Cancer – TNM & Group Staging	Human Resource Management
Care Plan Management	
Cath Lab	
Anesthesia Management	<b>Insurance &amp; Corporate Desk</b>
CPOE & SOAP	Pre-Approval and Enhancement
	E-Prescription Engine
<b>Backend Modules</b>	Insurance & Services Management
Store & Inventory Management Module	E-Claim Submission/Resubmission
Purchase Management	E-Claim Receipt- Rejection
Medical records Department (MRD)	Credit Claims Settlement Management
Linen & laundry	Scheme - Coverage- Tariff Setting
Housekeeping Module	Payer Portal Connection Management
Equipment Maintenance Module	Corporate & Payer's Agreement Management
Pharmacy Module	
Indent Management	<b>Enquiry Desk - Features</b>
	Provision For Patient Search and Their Status
<b>General Management</b>	Quick Time/Token Based Appointment Feature
General Store Management	Provision To View Hospital Holidays
Pharmacy Store Management	Provision To View Doctor's Visit Status

Pharmacy Billing	
Lab, Radiology & Procedure Billing	
Forensic Medicine & Toxicology	<b>Casualty Management Module</b>
Pay-outs Manager	Emergency Registration with ER Marking
Finance Reporting	Provision For Procedure Requisition/Billing
Business Analytics	Provision For Medicine Requisition/Billing
Eye Bank	Provision For Procedure Refund
Blood Bank	Provision For Medicine Return
Organ Donation	
Telephone Management	<b>Finance Management- Features</b>
Canteen Management	Provision Multi Level Grouping of Account Heads
Housekeeping	Customizable Cost Centre Grouping Provision
Linen & Laundry Management	Profit Analysis Feature:
CSSD Management	Cost Centre Wise
Barcode Read & Write Module	Cost Point Wise
Diet, Kitchen & Canteen Management	Provision For Bookkeeping with Online Cheque Printing
Document Management System	Feature For Easy Bank Reconciliation
Roster Management	Provision For Bill Matching/Un Matching
HR and Payroll Module	Post Dated Voucher Entry
Static & Automatic SMS & Emailing Module	Multi-Level Verification of Vouchers
Ticket & Complaint Management	Provision To Print Online Receipt/Voucher
Autopsy	Provision For Budget Preparation
Accounting Interface	Customizable Ageing for Debtors/Creditors
Birth & Death Registration	
Hemodialysis Information Management	<b>Integrated Payroll Management- Features</b>
Report Template Generation & Reporting Module	Provision To Categorise Employee Type., Employee Grade, Designation & Dept
	Index Point Calculation Feature
<b>Business Management Solutions</b>	Provision To Enter P F Details
	Provision To Handle Monthly Allowance/Deduction:
<b>Front Office Management</b>	Individual
<b>Appointment System Module</b>	Employee Wise
Provision To Manage an Appointment	Department Wise
Calendar View Of Appointment	Provision To Manage:
Provision To Know the Appointment's Current Status	Loan Advances/Loan Repay

Provision To Know the Previous and Future Appointment Status	LIC Repay
While Taking an Appointment Doctor/Date/Specialty Wise Appointment Listing Feature	Daily Wage/ Over Time
Provision To Block/Unblock Doctor's Appointment Slot	Provision To Process Gratuity Details
Specialty Based Appointment Filtering	Provision For Attendance Marking/ Leave Encashment, Employee Data Bank with Transfer History, Feature for Duty Planning pay Slip Generation, Punch Card Device/Biometric Interface, Provision to View Detailed Employee Information
Cut, Copy & Paste Feature for Appointments	
Provision To Set Default Doctors for A User	<b>Asset Management and Maintenance-Features</b>
Patient Log of Activities	Purchase Conversion of Asset Items from Store
Appointment Search by Patient Demography	Handling Purchase Order/Item Requisition
Automated SMS & E-Mail Alert to Patient	Department To Department Transfer
Provision To Add Additional Time Slots for An Appointment	Scheduling Preventive Maintenance
Provision To View Doctor Wise No Show & Cancelled Appointments	Generate Stock Receipt
Provision To Add Remarks Against an Appointment	Service Contract
Appointment View - Day/Week/Month	Internal Maintenance Request & Tracking
Administration Module	Provision For Asset Tracking
Masters & Configurations	Scrapping Of Asset
EDP Roles & Rights	Depreciation Calculation
Corporate Accounts Management	Provision To Set Alerts for AMC/Insurance/ Tax Payment
MIS Reports	Automatic Unique Asset Code Generation
<b>Billing</b>	<b>HR Management Module</b>
OPD Billing	Resume / Curriculum Vitae Entry Provision
IPD Billing (Cash/Credit/Sponsored)	Feature For Preparation
Diagnostic & Departmental Billing	Feature To Set/Schedule Interview
IPD Enquiry & Billing Estimate	Priority Setting
Package Billing	Management Selection
Self-Registration Kiosk	Medical Check Up
	Joining Letter Preparation Provision

<b>Master Patient Index Module</b>	Selection Of Department/Designation
Patient remote registration	Selection Of Basic, Allowance/ Deduction
Patient Registration	Employee History Viewing and Updating: Personal Details, Qualification, Experience, Passport, Visa, Labour Card, Health Card, License Etc
Patient's Electronic Signature & Photo Capturing	Tracking Option for Documents Submitted / Taken Back by employee
Bar Code Integration Provision	Tracking Option for Documents Given to Employee family members
Patient's Document Attachments (Insurance Card, Id Proof, Etc)	Maintain Annual Leave Details
Patient Revisit Entry	Provision To Store Scanned Images of Passport, Visa and Labour Card Etc
Appointment To Visit Conversion	Manage Training Schedule with the Addition of Faculty and Training session name, Scheduling of Training (Training Period, Faculty and Staff), Marking Option for Employees Who Attend The Training, Statement For Training Schedule, Statement For Training Attended Employee List.
Cross Consultation Processing	Manage Appraisals of employee with Appraisal Category, Competency (Criteria to Appraise an Employee), Alert Option To Personnel Officer For Employees Who Need Appraisal, Marking By HOD, Approval By Director, Recommendation Of Director To HR/PO Against Appraisal.
Reference Request Conversion	Manage Employee Leaves with Leave Request by Employee and Mobile Alert To HOD, Leave Approval by Director /HOD, Approval By HR/PO
Multi Payment Selection Feature	Leave Status View (Employee, Hod And HR//PO), Balance Leave View (HR//PO), Monthly Leave Updating to Payroll.
Automated SMS To Patient	Duty Planning by HOD, Provision to Amend Duty Plan Up to Pay Slip Generation, Pay Slip Mailing Feature, Dynamic Report Generation
Automatic Generation of Consultation Fee	
Patient Type/Scheme Wise Consultation Fee	<b>Insurance And Corporate Desk</b>
MLC Entry/Marking Feature in The New Registration Screen	<b>Pre-Approval and Enhancement-Features</b>
Electronic Health Record	Pending List View for Pre-Approval Required Procedure/Bills

	Approval Marking with Approval Code
<b>Outpatient Billing Module</b>	
Patient Insurance Details Adding/Changing	<b>E-Prescription Engine- Features</b>
Feature To Attach Patient's Document	Automatically Sends the Request to The Respective Authority for Approval
Advance Collection & Refunding	Provision For the Clinician to View the Respective Approval Number/Id and Can Be Sent to The Patient
Multi Payment Type Selection and Entry	Provision For the Pharmacy to Download Prescription with Approval Number/Id
View Doctor's Comments in Consolidate Billing	Information Uploading Provision to The Authority for The Pharmacy after Dispensing
Op Bill Split Up on Cash & Credit in Consolidate Billing	
Automated SMS Generation After Consolidated Billing	<b>E-Claim Submission/Resubmission- Features</b>
Collection Mode Selection Feature on The Basis Of Payment Type	Insurance/TPA Based Xml File Generation and Information Uploading
Doctor's Visit Status/Leave Entry	Provision To the Respective Authority
Zero Amount Bill Generation for Insurance Claim Submission	Provision To Mark Diagnosis Against Bills For OP/IP
Approval Generation Provision for Those Exceeding Limit	Provision To Change Drug/CPT Code Against A Bill
	Provision To Edit Insurance Details of The Bill Against the Patient
<b>Admission-Discharge-Transfer (AT) Module</b>	Provision For Attaching Patient's Document
Insurance/Scheme Wise Patient Admission	
Feature To Set Company Wise Credit Limit	<b>E-Claim Receipt-Rejection- Features</b>
Ip Package Feature for Surgery, Admission, Etc	Provision To Download Remittance File Against Submission
Feature For Advance Room Booking	Classification Of Remittance to Fully Paid & Denial Item
Advance Collection	
Discount Voucher Entry	<b>E-Settlement/Collection-Features</b>
Provision To Enter ECHS Details in IP Admission Screen	Collection Against Payment Made by The Customer/Insurance Company
Monitoring Ip Patient Outstanding- Approximation Calculation	Individual Item Wise Settlement- Internal
Provision For EPABX Interface	Individual Bill Wise Settlement-Outsourced
Provision For Automatic Doctor Wise Visit Fee Generation	Automated Settlement Against E-Claim Remittance
Provision To Set Room Category Wise Service Rates	



Feature To Indicate Discharge Status	Scheme-Coverage-Tariff Setting- Features
Direct Telephone Line Enabled	Scheme Master Creation
Provision To Update/Recalculate Rate Charges In Procedures &	Setting Up Scheme Rate (Tariff & Co-Payment)
Surgery Based on Room Category	Binding Of Policy Against Scheme
Provision To Transfer Doctor for Single Patient	Relates Insurance Company With TPA
Provision To Transfer Doctor for Multiple Patient	Provision To Add/Remove Scheme Items
Bed Status Updates	
Provision For Bed Allocation	<b>Op- Dietitian's Desk- Features</b>
Provision For Bed Reservation	Captures Nutritional Assessment Features Like Diagnosis & Lifestyle Assessment, Dietary Assessment, 24 Hour Dietary Recall, Food Exchange
Provision For Bed Shifting	
Feature To Add/Change/Remove Insurance/Scheme	<b>OP- Physiotherapist's Desk Module</b>
Provision For Entering Birth/Death Details	Pending List View
Birth/Death Register	Physiotherapy Request Handling/Result Entry
	Physiotherapy Session Re-Scheduling
<b>College Management</b>	Result Printing
Student Management	
Admission Process Management	<b>Nurse's Station &amp; Ward Management Module</b>
Employee Management	Provision To Input Visit Entry/ Cross Visit Entry
Library Management	Provision To Make Service Entry
College Store & Inventory	Requisition Feature for Discharge, Procedure, Medicine, Surgery
Hostel & Dormitory Management	Feature For Store Return
Examination Module	Feature For Issue to Patients / Return from Patients
E Learning Management System	Vital Signs Entry, Ntake Output Entry
	Provision For Entering Nursing Notes
<b>Kiosk - Features</b>	Drug Schedule Provision
Self-Registration Kiosk	Nursing Procedure Schedule
Multi Language Support	Provision For Dietary Booking
Quick Information Access on A Touch	Diet Change Entry
Hospital Health packages display	Department Issue
Patient Education Feature by Multimedia Presentations	Provision To Transfer Doctor



Provision To View the Hospital Website	Bed Allocation Handling
In-Patient Room Search with Location Map	Bed Release & Shifting Handling
OP Booking Status of Appointment	Provision For Approximate Bill Calculation
Doctor's Leave Status	Lab Summary Report Requisition
View Department /Nursing Station/Room Wise Hospital Map	Complaint Register
Visiting/Consulting Time of Doctors	Provision To View Outpatient/In Patient List
Available Treatment/Facilities of The Hospital	Provision To View & Request Pending Immunization/Procedure Requisition
Hospital News & Events Display in A Scheduled Time	Provision To View the Treatment Summary Of The Patient
	Nurse Assessment Feature
<b>Operation Theatre Management Module</b>	Provision To Attach File/Upload DICOM Image
Surgery Requisition Feature	Provision To Generate General Consent, Patient Confidentiality Form, Education Check Record
Provision To Schedule Surgery	
Theatre Blocking and Releasing Provision	<b>IP &amp; OP Doctor's Desk Module</b>
Provision For Entering Surgery Details	Provision To View the Patient List/Appointment List
Feature For Medicine & Procedure Requisition Against Surgery.	Complaints & Examination Entry with Supporting Templates
Surgery Calendar Feature to Show the Number of Scheduled	Quick View Feature for Getting the Patient's
Surgeries For a Doctor	Last Consultation Details/Treatment Summary in Brief
Equipment utilization In Surgery	Treatment Summary Details Including Lab Results
Feature For Store Return	Medicine/Procedure Requisition with Hard Copy Provision
	Allergy Alert in Medicine Entry
<b>Automated SMS &amp; Email Module</b>	Duplicate Medicine Alert in Medicine Entry
SMS On Appointment Booking/Cancellation	ICD 10 Based Diagnosis Entry
SMS On Patient Registration	Surgery Scheduling & Provision to View Scheduled Details
SMS On Consolidated Bill Generation	Patient Education Feature
Lab Results Ready SMS For Selected Tests	Radiology Images with DICOM Supporting
Panic/Abnormal Level Result Alert SMS For Admitted Patients	Image Capturing from Web Cam
To The Assigned Doctors	Hard Copy of Visit Details
Daily Activities Flash Report to Directors/Top Management	Investigation Scheduling Feature

Customized SMS To Directors/Top Management	Provision For Chart Requisition
Daily Flash E-Mails to Directors/Top Management	Provision For Attaching Any Remarks for The Patient
	From The Patient List Screen
<b>Customer Mailer Wallet (CMW)-Features</b>	Provision To View the Personal Information of The Patient
Customized Mass E-Mailing Provision	From The Patient List Screen
Customized Mass SMS Messaging – Adhering to TRAI regulation.	Provision To View the Patient's Treatment in Brief
Easy And Fast HTML Editing GUI	From The Patient List Screen
Html Source Code Editing	Provision For Sending Consultation Requests / References
Supports Both Plain Text & HTML Messages	Provision For Attaching/Viewing Physical Files
E-Mail Provision for Hospital Staff and Administrators	Consent Generation Feature
Stores E-Mail Communication Documents Locally	Provision For Sending Physiotherapy Requests
Merged E-Mail View & SMS View	Provision For Radiology Ordering with Marking Feature
E-Mail Attachment Feature	Provision To Give Tele Advise Notes
Automated SMS To the Patient Regarding the Appointment	Provision To Generate Lab/Radiology/Procedures Requests
Customized SMS To Staff and Management	CPT Code Wise Searching Feature for Investigations
	Provision For Generating Radiology/MRI Requests
<b>Medical Record Management - Features</b>	Provision For Generating/Issuing: Outside Reference Letter, Medical Certificate (Fitness/Sickness)
Bar Code Integration Provision with Chart-In And Chart-Out Process	Provision For Entering: Operation Notes/ Operative Procedures, Post OP events, Anaesthesia Details, PCI/Perfusion Details
Chart Request Feature	Provision For Viewing All the Pending Investigations Against the Patient
Direct/Requested Chart Issue Provision	Provision For Viewing the Consultation Details of The Patient from All Doctors
Managing Of Medical Records:	Investigation Tabular View Feature
Chart Out	Signature Authorization Feature for Prescriptions and Investigation Requests
Chart In	Vitals Entering Provision
Issued Files	Provision For Viewing All Investigations/Prescription Details of The Patient

Record Requisition	Irrespective Of the Other Consulted Doctors
Missing Charts	
Provision For Requesting Pending Record	<b>IP- Dietitian's Desk- Features</b>
Provision To View Patient Wise Chart Status	Provision For Diet Booking, Diet Approval
	Provision To Cancel Diet Booking
<b>MRD Diagnosis Code Marking - Features</b>	Provision For Diet Marking
Provision To Mark Diagnosis/ICD Against Visit/Admission	Provision For Billing
ICD-10(International Coding for Diseases)	Credit Bill Collection Feature
	Tariff Setting Feature For: General Room Category Wise, Staff Category Wise
<b>Document Imaging Solution (DIS) - Features</b>	
Sorted/Unsorted MRD File Scanning	<b>Lab &amp; Radiology Information System Modules</b>
Provision To Scan & Attach Files into Folder Assigned For	Lab Results- Features
The Patient	Multi-Mode Sample Number Generation
Provision To Process from Pending Scanned Chart List	Templates For Result Entry
Feature For Viewing Physical Files	Age Group Wise Normal Values
Provision To Attach Single/Multiple Files	Result Entry Checking
	Test Wise Item Consumption Calculation
<b>Cath lab Management- Features</b>	Procedure Group Wise Result Entry and Printing
Provision For Entering: Pre-Cath Details, PCI Details, Pre-OP Evaluation Details, Anaesthesia Details, Operative Procedure Details, Perfusion Details, Post OP events	Automated Result in PDF Format
<b>Dialysis- Features</b>	Automatic E-Mailing Provision
Setting Of Frequency & Therapy	Outside Test Indication and Marking In Lab Result Entry
Patient List View	Formula Calculation in Lab Result
	Panic Message with Result Status Indication of Result Entry Screen
<b>MT- Discharge Summary- Features</b>	Electronic Signature Feature Incorporated in Lab Result Module
Provision To View/Enter: Patient Wise Discharge Summary, Admitted Dates, Status Of The Patient, Provision For Discharge Summary Preview/Print, Admitted Date Wise /Admitted Doctor Wise/ Discharged	Provision To Set Profit Share in Percentage for The Selected Doctor

Date Wise Provision to Add: Diagnosis, Clinical Summary, Present Illness, Investigation, Course In Hospital/ Treatment, Preoperative Course & Treatment, Post OP Course	Provision For Viewing Clinic Wise Bill Detailed Report
Prescription/Advise	Quick Bill View Feature
Surgical Details	Online Lab Result Retrieval- Patient-Wise & Bill-Wise
Diet & Review Details	Feature To Set Normal & Panic Values for Tests
Provision To Specify Different Reasons of Death Like	
Immediate Cause, Antecedent Cause and Underlying Cause	<b>Blood Bank Modules</b>
	Opening Stock View
<b>Pharmacy Store Management- Features</b>	Provision To Enter Blood Donor Details
Re-Order Level Wise Purchase Order Preparation	Provision To Capture Blood Donor Group Details
Provision To Process Internal Intends: Preparation, Authorization, Quotation Linking	Screening Test
Purchase Order Request authorization	Cross Match Worksheet
Conversion	Provision To Make Blood Issue Details
Provision To Generate: Temporary GRN (Goods Receipt Note)	Provision To Input Blood Bag Return Details
Provision For Medicine Production	Replacement Marking
Vendor evaluation	Expiry Marking Feature
Provision To Make Quotation Entry	Provision To Make Voluntary Donor's Details
Feature For Approving Outlet Wise Store Requisition	Op Result Entry & Result Checking
Automated Purchase Order in Pdf Format	
Purchase Order Wise GRN (Goods Receipt Note) Entry	<b>Radiology Appointment Modules</b>
Provision To Generate Purchase Return Claim	Appointment Features:
Return Statements	Take/Edit/Cancel Appointment
Damage/Expiry Medicine Returns	DNA/Arrived Marking & Unmarking
Feature For Direct Stock Entry	Completed Marking
Multi-Mode Recorder Level for Stock Monitoring	Appointment Slot Blocking
Feature For Automatic Tax Calculation	Appointment Status Change Indications
Feature To Handle Generic/Combination Wise Medicines	Equipment Blocking Provision
	Appointment Date Changer Provision
	Slot Details Feature (To Show the Appointment Details and Patient Information with The Appointment Status)

Feature For Multi-Mode Tax Calculation	Remarks Feature (To Help the Users to Remind the Instructions Before Giving Appointments)
Detailed Medicine Master Entry Linked with Category, Manufacture,	
Medicine Type, Unit of Measure, Supplier, Rack And Doctor	<b>Integrated DICOM Viewer Modules</b>
	Preview Any DICOM Files
<b>Pharmacy Billing - Features</b>	Create DICOM Directory and Files
Bar Code Based Billing Provision Enabled	Convert Any Format Image to DICOM
Integrated Token Dispensing System (TDS) Provision	Export And Import Data to DICOM Directory
Input / Output Tax Management System for Medicines & Consumables	Open Any Kind of External Files
Recorder Level Wise Stock Requisitions	Store All Images of a Patient
Provision To Handle CPOE	Zoom, Annotate, Process, Colour and Transform Images
Medicine Return Provision	
Damage/Expiry Medicine Returns	<b>DICOM Server</b>
Multi-Mode Re-Order Level Provision for Stock Monitoring	Teleradiology Connectivity
Feature To Handle Multi- Payment Mode	Radiologist Workstation Modules
Bill Serial Generation Feature Based on The Payment Mode	Patient Browser
Generic/Combination Wise Medicines	Search Window
Feature For Grouping Common Medicine in Billing	Image Viewer
Loose Quantity Wise Stock Issue Provision	3d Viewer
	Reporting
<b>Canteen Management Module</b>	Workbench Creation and Sharing
Medicine Type, Unit of Measure, Supplier, Rack And Doctor	Event Board and Calendar
Provision To Handle Sales/ Opening Stock	
Provision To Process	<b>HMIS Integration with Telephone Module</b>
Advance Collection	Provision To Capture On-Line Call
Cash Receipts	Incoming Call Capturing Provision
Purchase Order	Multi Tariff Tasking Provision
Provision To Generate Purchase Invoice	Dialling Enable/Disable Link To In-Patient Module
Provision For Handling:	
Requisition From Store & Kitchen	<b>Lab, Radiology &amp; Procedure Billing-Features</b>

Issue To Kitchen & Shop	Advance Collection Provision
Provision To Transfer Stock	Feature To Handle Multi- Payment Mode
Production	Vision For Scheme & Package Based Billing
Requisition Write Off Feature	Request Based Billing (Request from Doctor's Desk Or Ward)
Provision To Handle:	Provision To Set Patient Type Wise Discount Amount Limit Against Cash Bill
Damaged Goods (Store & Kitchen)	Provision To Settle Bill Amount Settlement Against Advance
Purchase Return	Refund On Billing Screen
Feature For Physical Stock Adjustment	
<b>IP-Physiotherapist's Desk - Features</b>	<b>Clinical Management Solutions</b>
Pending List View	
Physiotherapy Request Handling/Result Entry	<b>EMR Module</b>
Physiotherapy Session Re-Scheduling	OP- Nurse's Care Desk, Doctor's Desk, Dietitian's Desk, Physiotherapist's Desk
Result Printing	Theatre Management
	Nurse's Station & Ward Management
<b>Linen &amp; Laundry Management - Features</b>	IP- Doctor's Desk, Dietitian's Desk, Physiotherapist's Desk
Stock Conversion from General Store into Linen Store	Critical Care
Intend Requisition	Cathelab Management
Item Conversion & Production	Dialysis
Stock Updation & Issue	MT - Discharge Summary
Issue Of Linen Items to Department/Employee	Lab Results
Collection Of Washable Items from Multiple Departments	Lab Equipment Interface
Issues Collected Washable Items for Washing To Outside	Blood Bank
Vendor/In-House Team	Radiology Appointment
Reverting The Washed Items to Respective Dept	HL-7 Interface
Rewashing Requisition Option	Radiology Reports
	Modality Work List (MWL)
<b>Housekeeping Features</b>	Document Scan Module
Provision To Generate and Fulfil Periodical Cleaning/Maintenance	MIP/MPR
Related Requests	DICOM Archiving Module-Features



Feature To Process the Cleaning Request from Nursing Station	Online/Offline Archiving
Handles Cleaning Request from Nursing Station	San/Nas Based Storage
Shows The Discharge Status for Room Cleaning	On Demand Image Distribution
Blocks Room for Maintenance	Off The Shelf Technology Enabled
	Scalable & Fast Architecture
<b>CSSD Management-Features</b>	Clustering Compliant
Sterilization Machine Definition with Time Duration	
Sterilization Machine Allocation/Booking	<b>Picture Archiving &amp; Communication System (PACS)</b>
Item Issue to CSSD Department for Sterilization	Zero Footprint Viewer
Issue To Nursing Station/ Theatre After Sterilization	3D DICOM Workstation
Batch/ Label Printing After Sterilization	PACS and DICOM Server
Return Of Reusable Items After Usage for Sterilization	Endoscopy Viewer & Recorder
Consumption Entry for Consumable Items	Reporting Template Management
Statement For Different Stages of Sterilization (Unsterile, Under Process, Ready to Use)	AI Based Teleradiology Reporting.
	Integrated DICOM Viewer
	Teleradiology Connectivity with full workflow.
<b>General Management</b>	Radiology Workstation
<b>Management Information System</b>	Modality Work List
Top Management	Document Scan Module
Automated Flash Report as E-Mail	DICOM Archiving Module
Daily Summary As SMS	Image Library & CME
Directors Report	Telemedicine Interface
Income/Expense Report	Multimodality Connectivity
Daily/Monthly Performance - Dashboard	Equipped With Image Processing Tools Like: Pan & Zoom, Flip, Rotate, Invert, Crop & Cine, Cross Reference Lines
Visit & Bill Count Based	Measurement: Linear, Angular, Cobb's Angle
Amount Based	Image Linking
Dept Wise Performance Analysis (With Graph): Current Year, Previous Year	Spine Labelling Tool
Dept Wise Doctor Wise Revenue	Multi-Monitor Support
OP/IP Visit Count	Template Based Reporting



Credit Company Wise Details	Film & Paper Print
Collection Report (Module Wise)	Fast, Secure and Reliable Storage of Studies
Middle Management	Secured Authentication for Viewing Studies
Pharmacy Sales- Counter Wise	Real Time Backup Enhances the Reliability
Module Wise Counter Sales	Advanced Search Engine
Billing – Category Wise Sales	Quick Retrieval of Studies to Workstations
OP/IP-Category Wise Sales	Flexible Report Generation
Billing-Category Wise Share	File Attachment Support for Reports
Customer Wise Date Wise Bill Summary	Notification For Scheduled Studies
Dept Wise Op Consultation	Work Bench Creation, Storage and Sharing Support
Doctor's Daily	SQL Server, Oracle & My SQL Database Support
User Wise Collection	Connectivity To Any Modality
Hospital Income Statement	MWL Download Support
Patient Waiting Time Analysis	HIS/RIS Integration Benefits
Doctor's Pay Summary / Doctor Wise Income	Full Integration with Non DICOM Modalities Like Endoscopy, Carm, Pathology Microscopes
Pharmacy Performance	Full Integration with Terarecon Advanced Visualization Tool
Purchase Summary	Full Integration with Voice Recognition software's
Execution Vs Actual Against:	Radiology Report Modules
Prescription	Multi-Level Validation Support
Lab Request	Provision To Export Reports To PDF
Radiology Request	File Attachment Support for Reports
Procedure Request	Print And Search Provision for Reports
Cancelled Appointment List	
Nursing Station Wise Bed Status	<b>Remote patient monitoring system</b>
Cash Close Report	Quality Management System
Pharmacy Manager	GIS based attendance management system
Bill Wise- Pharmacy Sales/Pharmacy-Return	CMS based Business Intelligence Module
Customer Wise Pending Bill Register	
Category Wise Share/Profit	<b>Hospital Mobility</b>
MRP/Price Based Item Sales	Phlebotomy Mobile Application
Bill Wise Credit Sales	Pathologist Mobile Application
Complementary/Cancelled Bills	Doctors & Nursing Mobile Application
Pharmacy Sales - Counter Wise	Radiologist's Mobile Application

Pharmacy Sales Summary	
Item Wise Performance	<b>Electronic Medical/ Health Record</b>
Profitability:	General/Physician/Medicine
Doctor Wise/ Dept Wise	Oncology
Stock ageing/ Stock Adjustment	Infertility & Assisted Reproductive Techniques
Stock Report for A Period/Day	Dental
MRP Range Based Stock	Pediatrics& Neo Natal (Pre & Post)
Drug Study & Package Details	Orthopedics
Tax Report (Sales/Purchase)	Skin & Cosmetology
Doctor Wise/Supplier Wise Expiry Medicines	Gastroenterology
Registration - Consultation In-Charge	GYNAC & OBS
Dept Wise Op Consultation	ENT
Specialty Wise Patient's Count	Neurology
Category Wise Sales - Billing/OP	Nephrology
Op Cash Close Statement	Ophthalmology
Doctor's Daily Report	Cardiology
Date Wise OP/IP Visit Count	
Admission-Discharge In-Charge	<b>Document Digitization</b>
Bed Occupancy /Analysis for The Day/Hourly	Metadata stores information related to the scanned images.
Ward Wise Date Wise Bed Occupancy	Accurate metadata should be captured for all scanned images, as that becomes the base for all future search and transactions.
Cash Close Statement	Metadata entry is done by adding appropriate tags to each scanned document as per the parameters defined by the client.
Bed Type Wise Occupancy for A Year	<b>Patient Engagement Platform</b>
Category Wise Sales (IP)	Medicine intake/Exercise/Appointment Reminder
Doctor Wise Visit Count	Patient Calendar
Finance Manager	Immunization Reminders
Age Wise Receivable Summary	Patient education module
Age Wise Receivable Detail	Patient Calling E Consultation Provision
Creditors Ageing	
Collection Report	<b>Patient Navigation</b>
Credit Company Wise Details	Patient indoor navigation system
Cash Close Report	IOT based Employee Tracking System

<b>Document Management System (DMS)</b>	<b>Paperless system enabling</b>
Integrated system for scanning and digitization of data	Patients to move to any institution without carrying anything
OCR (Optical Character Recognition) enabled capture component	Automation of all the processes.
Manage business critical documents with comprehensive security, access control, multilingual metadata categorization, version control and full audit trail	Digitization of workflows
Full search and navigation functionalities o Simple, user-friendly smart UI with customizable, role-based, workspace-oriented views	Enable a paperless system.
Option for Scanning / Digitizing / Archiving of Medical records.	
Smart document editor to users for seamless editing experience both online and offline.	<b>Patient Infotainment System</b>
HTML /Latest/Advanced document viewer	<b>Document Vault</b>
Records management features including managing classification, retention schedule	<b>Integrated Inventory Management System</b>
To index and categories documents for easy access	<b>IGE Library &amp; CME</b>
Managing multiple user accounts for document access control	<b>Telemedicine Interface</b>

The above list is indicative. The TSP will propose the modules and functionalities to meet the client requirements. The proposed HMIS application must be web and Handheld device enabled, built on enterprise application platforms with sufficient flexibility for customization based on the need of each and listed healthcare facility. The proposed HMIS must use a standard relational database and must ensure full consistency, security and availability of data for reporting and analytics requirements. The solution must be capable of communicating with any external devices/biomedical equipment's within a secured interface.

It is mandatory that the proposed HMIS should align with all the provisions and guidelines provided in “National Digital Health Blueprint (NHDB)” final report published by Ministry of Health and Family Welfare, Government of India. The proposed HMIS should comply with the guidelines and provisions of “Ayushman Bharat Digital Mission” released by National Health Authority (NHA).

The proposed HMIS should comply with all the applicable health and Information Technology (IT) standards as well as protocols, unless otherwise mandated by the Government. The Solution should be based on and compliant with relevant industry standards (their latest versions as on date) wherever applicable. This will apply to all the aspects of the solution including but not limited to design,

development, security, testing and implementation. The system shall adhere to all the IT standards published by the Government of India and other applicable medical standards.

### **3. AYUSHMAN BHARAT DIGITAL MISSION (ABDM)**

The solution proposed by the TSP should bring the citizens, beneficiaries, hospitals, health institutions, Government and other stakeholders in a common platform in the health system through ABDM which will go with the building blocks of ABDM including.

1. Creation of unique health ID for the citizens
2. Healthcare Professional Registry (HPR)
3. Healthcare facility registry
4. ABHA Mobile App (PHR)
5. Unified Health Interface

### **4. COMPLIANCE WITH ABDM**

Following are the core requirements and the architectural priorities.

- a) Unique and Reliable Identification of stakeholders across the whole eco-system.
- b) Trustworthiness of the information created by the entities in the eco-system
- c) Capability for creation of a longitudinal health record for every individual from information held in diverse systems.
- d) Managing the consents for collection and/or use of personal/ health data, to ensure privacy and confidentiality, in conformance to the laws of the land. Proposed solution should be compliant with Ayushman Bharat Digital Mission’s (ABDM) policy defined for State health ecosystem implementation.

#### ***COMPLIANCE TO HEALTH STANDARDS***

<b>S.No.</b>	<b>Category</b>	<b>Description of Suggested Compliance Standards</b>
<b>1</b>	International Classification of Disease (ICD) – 10 or higher	Classify and code all diagnoses, symptoms and procedures recorded in the system
<b>2</b>	Systemized Nomenclature of Medicine – Clinical Terms (SNOMED CT)	Systematically organized computer process able collection of medical terms providing codes, terms, synonyms, and definitions used in clinical documentation and reporting
<b>3</b>	Logical Observation Identifiers Names and Codes (LOINC)	Database and universal standard for identifying medical laboratory observations
<b>4</b>	Current Procedural Terminology (CPT)	Medical code set to report medical, surgical, and diagnostic procedures and services to entities
<b>5</b>	Health Level (HL7)	Set of international standards for transfer of clinical and administrative data between software

		applications & focuses on application "layer 7" in the OSI model
6	Digital Imaging and Communication (DICOM) 3.0	Standard for the communication and management of medical imaging information and related data enabling the transfer of medical images in across systems through Picture Archiving & Communications System (PACS), including Web Access to DICOM Persistent Objects (WADO)
7	Picture archiving and communication system (PACS)	Digital storage, transmission and retrieval of radiology image
8	Health Insurance Portability & Accountability Act (HIPAA)	National standards to protect individuals' medical records and other protected health information
9	Fast Healthcare Interoperability Resources (FHIR)	Interoperability standard for electronic exchange of healthcare information

### COMPLIANCE TO IT STANDARDS

S.No.	Category	Description of Suggested Compliance Standards
1	Platform Flexibility	Web-centric, multi-tier architecture XML / XBRL/ JSON based standards wherever applicable Compliance to SOA and Web-services.
2	Interoperability	Open Standards and Web Services Usage of standard APIs and messaging protocol Service-oriented architecture (SOA) Support multiple industry standard databases with ODBC, JDBC and Unicode compliance.
3	Usability	Guidelines defined for Websites / Portals by Government of India Language Support: Bilingual support i.e., in English and Hindi language with Unicode support for text editing, file name, data storage. Dates: All functionalities MUST properly display, calculate, and transmit date data, in 21st-Century date data (DDMMYYYY) format.
4	Information access / transfer protocols	SOAP, HTTP/HTTPS.
5	Information Security	ISO 27001 Data transfer over internet should be encrypted with TLS 1.3 security protocol along with appropriate encryption mechanism
6	Operational integrity & security management	ISO 17799

7	Service Management	ISO 20000
8	Business Continuity Management Systems	ISO 22301
9	IT Infrastructure management	ITIL / EITM
10	Internet Protocol Suite	TCP / IP, IPv6
11	Communication Suite	SMTP / POP
12	Network Protocol	SFTP / FTP
13	Data Elements	MDDS / XML / XBRL
14	World Wide Web	W3C
15	Mobile	OWASP
16	Documentation	IEEE / ISO

## 5. TECHNICAL SPECIFICATIONS

The platform shall leverage combinations of technologies and cloud agnostic solution framework. Ecosystem should be following multi-tenant system approach to cater to the requirement of accessibility of the applications across various health facilities for seamless and interdependent usage.

## 6. DESIGN GUIDELINES AND POLICY STANDARDS

TSP shall comply with all the policies and guidelines relating to Integrated Digital Health Solution ecosystem, including but not limited to

- Aligned with National Digital Health Blueprint and strategy overview.
- Health data management policy and notifications
- Security and Data privacy policy
- Guidelines for health information provider, health repository providers
- MeitY guidelines relating to all aspect of Integrated Digital Health Solution ecosystem.
- Any other policy, rules provided by NHA.

Solution component design considerations should be follows as applicable -

- Pluggable and scalable architecture
- Technology enabler and easy adoption of new technology products
- Open-sources software products
- Platform as digital health enabler
- Quality health services
- Platform security.

## 7. APPLICATION LAYER

This layer represents the entire functional boundary of different functional modules (core, ancillary and backend administration) of Integrated Digital Health Solution.



- a) Web services Interface - A Web service interface should allow third-party applications to call functions using standard web services interfaces. TSP must follow best practices for designing APIs.
  - a. Open API Specifications (recommended 3.0)
  - b. Interface to access and tryout defined APIs.
  - c. Documentation of APIs Should follow publisher / subscriber mechanism for better control.
  - d. Segregation of resources and collections
  - e. Provide examples for API resources.
- b) User authentication and authorization - Global authentication and service authorization should be the most suitable as per requirement when application subcomponents are designed as separate service in a decoupled micro service-based architecture. Key aspects need to be considered –
  - a. Fine-grained object permissions
  - b. Global authentication to manage the lighter load.
  - c. Authorization should be controlled by the respective micro service to reduce network latency.
  - d. No centralized failure for authorization

## 8. SCALABILITY

HMIS should have the capability to upscale and downscale based on load to ensure service delivery and better resource utilization. All the application components of the solution must support both horizontal and vertical scalability to provide continuous growth to meet the requirements and demand of healthcare ecosystem. Whereas transactional database systems should be designed to support high availability to eliminate the risk of system failures. The system can handle an increasing number of requests without adversely affecting the response time and throughput of the system.

## 9. PLATFORM SECURITY

TSP should take a holistic approach while defining an Enterprise Information Security Architecture and wherever required sensitive data should be secured and provide fixation of STQC testing issues reported by CERT-In emplaned security auditor. Also, must provide all infra related requirements considering application, data, network and infra security. To ensure application security, system should comply to the following –

- System should not allow any unauthorized access.
- All fields should be validated at client and server side on submission.
- All end points should be secured using strong authentication methodology to avoid security breaches.
- Session management should be implemented.



- Standard code practices should be followed to avoid memory leaks, not reachable code, unhandled exception, and duplicated code.
- Distributed logging to diagnose any issue related to the performance, security breach or system failure.

#### **10. INTEGRATION WITH SMS / E-MAIL/WHATSAPP GATEWAY**

SMS / e-Mail/ WhatsApp gateway should act as common communication service, integrated as part of HMIS, and should be used to deliver SMS/e-Mail/ WhatsApp-based services to all end users/patients and other stakeholders as well as healthcare staffs. The gateway should support both push and pull services. It should also support bulk notification services so that common information can be pushed to a group of people or general citizen as per requirement based on defined criteria. A citizen / patient or healthcare staff should also be able to request for specific set of information / services at the individual level.

#### **11. INTERFACE WITH DICOM COMPLIANT RIS (RADIOLOGY INFORMATION SYSTEM):**

- DICOM Compliant files/reports
- DICOM compliant PACS interface, if separate RIS (optional)

#### **12. INTERFACE WITH LOINC COMPLIANT LIS (LABORATORY INFORMATION SYSTEM), IF SEPARATE LIS:**

- HL7 v2.x-based order management and reporting (optional)

- LOINC codes for tests and observations

#### **13. PRIVACY AND SECURITY STANDARDS:**

- Alignment with Health data Management policy
- Access Control (ISO 22600:2014)
- Transport encryption.
- Data encryption (at rest) (optional – with safeguard)
- Audio Trial
- Digital Certificate, TLS/SSL, SHA 256, AES-256 – for security

#### **14. GENERAL GUIDELINES**

- The system architecture should be based on open industry standards and protocols.
- The system will be centrally deployed and globally accessed. Access should not be restricted locally.
- Role based access shall be planned to ensure high granularity without compromising on security needs of the application.
- The system shall be designed to be scalable and extensible.

## **15. INFORMATION SECURITY POLICY**

TSP have to prepare information security policy in-line with the requirements of ISO 27001:2005. The TSP will have to incorporate these policies into the network and application design etc, as appropriate. The information security provisioning may be audited either by HLL/ an external auditor authorized by HLL. The agency is expected to provide the following documents prepared in-line with the requirements of ISO 27001:2005 models:

- Information Security Policy
- Risk Assessment Methodology
- Organization of Information Security Policy (internal and external)
- Information Assets Management Policy.
- Human Resource Security Policy to ensure that employees of HLL have a common understanding of security requirements, vulnerabilities, and threats, and they understand and accept their own security responsibilities.
- Physical and Environmental Security Policy
- Communications and Operations Management Policy
- Access Control Policy
- Information System acquisition, development and maintenance Policy
- Information Security Incident Management Policy
- Business Continuity Policy
- Disaster Recovery Policy

TSP will implement any modification in the IT Security Policy desired by HLL and also suggest security provisioning based on incidents during operations to plug security loopholes.

## **16. DEFINE POLICIES**

- Define Policies regarding the archiving, retention, and destruction of records in consultation with HLL. Customize the procedures for these activities as automatic activity or as alerts/reminders etc.
- Define Policies for backup, disaster recovery, mirror backups etc.
- Define Policies for downtime and server maintenance/updates.
- Define Policies for support related which includes escalation matrix.
- Define Policies for the timeline to new customizations based on each requirement.

## **17. OTHER COMPLIANCES:**

- EHR architecture compliance (ISO 18308:2011) (optional)
- Compliance with ISO/HL7 for Health Informatics (ISO/HL7 10781:2015) (optional)
- Compliance with set of consent manager and ABDM APIs

## **18. INNOVATIVE SOLUTIONS**

HLL also looks forward to innovative solutions from the Vendor. These solutions should be such as to make the system easy to handle for the user or inclusion of value-added solutions to the system. Some of the solutions may be given for

- Configuration of mirror backup of central cloud space.
- Generating multiple client bases effortlessly.
- Integration of third-party innovative solutions like QMS, Kiosk etc. with existing solutions.
- Generation of APIs on secured environments to pass data on multiple clients like NHM, CGHS, Client institutions and government dashboards etc.
- Generation/Use of smart cards for patients based on projects like ABHA card.
- Integration and testing with ABDM sandbox environment.

## **19. BACKUP SOLUTION**

The vendor shall propose backup server specification for the Image storage solution. The Backup server should be able to take-over if the Primary Server fails (in case of server crash, disaster/fire, etc.). As and when the Primary Server becomes live again, it should automatically synchronize with the data on the Secondary Server. This is to prevent the end users on all modes LIS, RIS, HIS, Teleradiology, Telemedicine etc. from being stranded without access to patient images at any point of time for any hospital that comes across the HLL software brand. The backup Server should consist of RAID-5 storage.

- The software shall be configured on multiple sites/multi-project mode.
- The software shall be configurable from a single VM multiple instances/location.
- The software shall enable the administrator to configure real-time mirror backup on DR server/external servers.
- Central Short-Term and Long-Term Image Storage as NAS Archive.

## **20. ENABLING CENTRALIZED PROCUREMENT**

HLL expects the HMIS to facilitate system-driven consolidation of purchase requisitions raised across units / departments into centralized purchase orders. In other words, different units could raise purchase requisition for the same item or on the same vendor which should get consolidated into a single Purchase Order. The HMIS should also enable recording of rate contracts with specific vendors for specific items such as and when purchase orders are raised on those vendors for those items, the rate will default automatically. The vendor shall provide support for Integration with government E Procurement portals as per statutory guidelines.

## **21. DATA ARCHIVAL**

In order to meet statutory requirements, archiving and easy retrieval of data is important for HLL. The successful bidder must ensure that the required HMIS Solution provides a user-driven data

archiving capability, with support for flexible archiving periods and select tables. The system should also be able to restore archived data for on-line inquiry and reporting as and when required. The successful bidder will also provide a data archiving procedure based on best practices.

## **22. OTHER TERMS AND CONDITIONS**

The Bidder is required to enter into an agreement after submission of Performance Guarantee.

Should HLL at any time require the Bidder to do any work beyond what is provided under this agreement, the Bidder shall undertake to do such additional work for an additional remuneration to be mutually agreed upon.

HLL may make modifications/revisions/changes/deletions in the scope of work from time to time and the same shall be complied with by the Bidder on mutually agreed terms and conditions.

The Bidder has to deploy a specialized and trained team for the successful and timely completion of the Project. It is therefore desirable that the key personnel in the team have the following minimum qualification and work experience.

- **Project Manager:** Minimum Three (3) HMIS implementation full cycle experience which includes at least one Implementation experience as project manager in healthcare facilities.
- **Change Management Lead:** Minimum two (2) project experience in HMIS led Change management.
- **Functional Integration Lead:** Minimum two (2) HMIS implementation full cycle experience on different modules of the offered product suite which includes implementation experience in healthcare facilities.
- **Functional Leads:** Minimum two (2) HMIS implementation full cycle experience on the offered product suite which includes India localization experience in the relevant modules.
- **Technical Leads – Interfaces:** Minimum One (1) HMIS implementation cycle experience for the offered product which includes experience with implementing interfaces to legacy applications.
- **Technical Leads – Database Management:** Minimum two (2) full cycle experience with the same HMIS product suite and localization requirements.

The TSP shall submit the details of experience and the profile of any personnel be not acceptable to HLL, HLL will require the TSP to suitably replace such personnel. They are to be assigned to the project on a full-time basis. The key personnel as deployed for the project by the bidder will in no case claim any regular employment in HLL, and their PF, Gratuity and statutory liabilities will be borne by the Bidders. The staffing and reporting hierarchy within the team should be clearly defined and communicated to HLL.

If the TSP, in the judgment of HLL, has engaged in corrupt or fraudulent practices in competing for or in executing the contract, including but not limited to willful misrepresentation of facts concerning the experience of the proposed team members of the project, then, HLL may, without

prejudice to any other rights it may possess under the contract, give a notice to the Bidder stating the nature of the default and requiring the Bidder to remedy the same. If the Bidder fails to remedy or to take steps to remedy the same within fourteen (14) days of its receipt of such notice, then HLL may terminate the contract forthwith by giving a notice of termination to the Bidder.

HLL reserves the right to:

- (1) Have a formal / informal interview of the candidates to ascertain their suitability.
- (2) To ask for replacement of a candidate if he is found to be unsatisfactory in his work during implementation

**Note:**

- (1) The service provider may be required to provide all the solutions as a single package or in parts (standalone modules) on requirement basis as instructed by the HLL or its client.
- (2) The Service provider/participant shall not be in a tie-up or association with any other private or Government entity presently for implementation of the solution being offered.
- (3) In cases where the contract provider/ holder requires their own HMIS (totally or individual modules) to be implemented the service provider/participant should be willing to act as an implementing partner and channelize his resources and services as per the terms of the agreement between the HLL and its client for that project.
- (4) Technology Service provider's obligations include Periodical maintenance, upgrade, version upgrades, customization of the solution and services during the total contract period free of cost.
- (5) Technology Service provider shall provide onsite/Online support at client locations during implementation/ Post Implementation support during the contract tenure as per requirement of HLL.
- (6) The Technology Service Provider must ensure that any new developments made to the base product, as required by government or health authorities time to time, are incorporated into all HLL projects/implementations within three months of official intimation. This integration should not disrupt existing business or product operations. The rollout must be done with the written concurrence of the IT Manager of the Hincare Division.

### 23. Schedule of Services

The TSP under this project would be engaged for implementing various Digital Health solutions projects and providing complete support in its functioning for the stipulated time-period.

The successful implementation of this project requires the TSP to provide quality and timely services. All the activities performed by the TSP during different phases of each project shall be closely monitored. The TSP is strongly advised to carefully read the Schedule of Services and quote accordingly.

The broad schedule of services (but not limited to) for the TSP during the period of contract/ engagement would include and any other scope item to satisfy all the requirement of this EOI for each project awarded to the bidder:

- a) Perform a requirement study and prepare business blueprint document along with Design Documents, Solution overview, solution architecture and deployment architecture.
- b) Configuration and Implementation of applications (including development of bespoke functionalities/ modules/ sub-modules/ applications/ Customization of COTS)/ Open source software based on the requirement.
- c) Integration of existing applications/Portals based on the project and further discussions with the client to understand and streamline procedures.
- d) Design and development of Mobile Application for Citizen and admin based on the project requirement.
- e) Design and development of 'Web Portal and Citizen Portal': During Implementation Phase, TSP shall develop a dedicated Web Page for displaying all implementation related information, progress reports, related documents, tutorials, user training materials etc.
- f) The responsibility for establishing cloud services lies with the TSP. If the cloud infrastructure is provided by HLL, it must be from either State Cloud Services or cloud service providers approved by MeitY.
- g) Data migration from existing (legacy) applications to the proposed (new) applications.
- h) Application testing i.e. unit testing, integration testing, system testing, regression, load, stress, and performance testing
- i) User Acceptance Testing (UAT) of Digital Health solutions.
- j) During development, both the UAT and Production servers shall fall under the jurisdiction of the TSP, regardless of whether the cloud services are provided by HLL or



the TSP.

- k) Provide Support in Third Party Security Audit of the Applications, Portal and associated Certifications & address findings (Third party auditor will be appointed by MSP in coordination and approval with relevant stakeholders)
- l) Go-Live of application, portal, and mobile application
- m) Training and capacity building

Operations and Maintenance (AMC) of application. ATS from OEM should be made available till the expiry of the project

## FUNCTION REQUIREMENT SPECIFICATION

SL. No	REQUIREMENTS
<b>1</b>	<b><u>HMIS (Hospital Management Information System)</u></b>
<b>1.1</b>	<b>Functional Requirements</b>
	The functional scope as described in the document may be increased based on project requirements.
<b>1.1.1</b>	<b>Clinical:</b>
	The clinical services take care of all system critical clinical information that has a patient context and ensures that proper care is delivered to the right patient at the right time by the right people.
	<b>1) Electronic Medical Records (EMR)- IP/OP:</b>
	This module is an integrated patient viewer that provides a cross-disciplinary approach where a patient focused view of clinical information resident in the Clinical data Repository is provided. This would constitute the view to the Electronic Medical Record (EMR). The EMR will provide access to information in the form of result data, text documents, scanned documents, images and waveforms from interfaced external systems and medical devices, as well as integrated or external clinical systems. external data, or pointers to data stored in external systems, will be resident in the EMR.
	The information will be displayed within tabs and sub-tabs for different types of data groups like clinical summary, history, observations, etc.
	The EMR will enable the physician access to all other applications relevant to their role through this application. For example, physicians would be able to:
	- View patient demographics
	- Perform appointment scheduling of patients
	- View appointment schedule lists
	- Manage patient lists
	- Manage problem lists
	- E-prescription facility with provision to view medicine stock and send prescriptions to different pharmacy outlets. Physicians can also set the priority for the prescription, enter remarks and review dates
	- Facility to view prescriptions during previous visits, nursing assessments, etc., and record/store A to Z information about patient treatment summary with details such as significant vital alerts, drug allergies, patient files, social history, and so on.
	- Schedule the procedures on a future date, enter the remarks and set priority for the tests.
	- Provision to view the list of in-patients, including their statuses such as referred/transferred patient, insured/non-insured, contagious disease, vulnerable, etc.
	- Manage allergy information

- Managed care plans for a diagnosis and document the care outcomes
  - Manage orders from within the EMR Module
  - Alert for already prescribed medicines, set multiple frequencies for dosage, etc.
  - Provision to issue certificates for MLC cases, medical certificates, reference certificates, etc.
  - View the summary of inpatients such as number of admitted patients, transferred patients, discharged patients and reference patients
  - Provision to view complete patient demographic information, enter tentative discharge date, attach the soft copies of patient files.
  - Provision to raise reference request to different departments and multiple doctors
  - Provision to record vital signs from anesthesia machine (only if the equipment is interfaced) and monitor the signs on a real-time basis
  - Provision to view the OP treatment summary, nurses' assessment summary, previous visits and previous discharge summary
  - Provision to view and enter patient-wise discharge summary, admission details, status of the patient
  - Provision to search patient admission date/doctor-wise/discharge date-wise and preview and print the discharge summary
  - Provision to add details such as diagnosis, clinical summary, present illness, investigation, course in hospital, treatment summary, preoperative course and treatment, post-operative course, prescriptions, advice, surgical details, diet and review details
  - Facility to specify different reasons of death, in case of death entry
  - Send reference requests for consultation, admission, advance booking, etc. Send requests to multiple locations/connected clinics or to different departments.
  - Availability of templates for various purposes such as Investigation templates and provision to create dynamic forms
  - Provision to record data specialty-wise such as gynecology, infertility, etc.
  - Perform results review with ability to interface with LIS, RIS & PACS
  - Enter and view the discharge investigations, discharge prescriptions, discharge summary, etc. Provision to approve the discharge summary
  - View patient bill including settled and outstanding values
- The module will have the following capabilities:
- Ability to capture SOAP (Subject Objective Assessment & Plan)
  - Ability to capture diagnosis with codes and status
  - Ability to automatically generate and present treatment and discharge summaries
  - Ability to capture outcomes
  - Ability to make entries that are classified as being Critical Care Data (CCD) that may be visible to anyone – this information must be deemed to be critical for the survival of the patient and the lack of which may contribute directly towards fatal consequences for the patient

- Ability to generate, preview and print treatment summaries in OPD and discharge summaries in IPD/A&E settings

- As part of CPOE – the system should have the following options

- Option to Order Brand wise and Generic Wise Medication
- Option to integrate with third party drug database for the following alerts.
  - a. Drug to Drug Alerts
  - b. Drug to Food alerts.
  - c. Drug to Allergy alerts.
  - d. Drug Details
  - e. Drug to disease.
- Option to discontinue drugs.
- Option to Repeat the already prescribed drugs.
- Option to create a diet request.

Option to create blood request

## 2) Nursing Management System

The Nurse Management System assists the nurses in the care provided to patients throughout the hospital. The application will also maintain the basic personal data about nurses including their qualification, training and experience to facilitate resource scheduling and workload planning.

The system will also provide for analysis of nursing load patterns.

The various services under the Nursing Management System module are given below:

- Nurses Duty Scheduling.

- Provision to enter and track the details of the visits, services provided, vital signs of the patient, intake-output entry, cross visit entry, diet changes, drug schedules, etc.

- Facility to record the bed allocation, bed release, bed shifting, update bed census

- Provision to generate reports on procedure status, cancellations, patient service entry, unusual incidents and bed transfers.

- Provision to request a patient's chart, enter death and births in the wards.

- Provision to manage the laundry issue, returns, call logs and emergency calls.

- The system is capable to view a surgery request, schedule surgeries, view reschedule dates, handle theater release requests, request medicines from the pharmacy, check the status of the raised request, take the delivery and handle the returns, handle the procedure requests, check the status of the pending procedures, check lab test requests and handle the lab bill refunds

- Provision to view the summary of vital information such as beds occupied, discharge requests, vulnerable patients who need special attention, etc.

- Provision to view requests such as discharge, procedure, medicine, surgery, lab summary, etc.

	<ul style="list-style-type: none"> <li>- Provision to enter the nursing notes, calculate approximate bill amount, handle store returns, issue to departments.</li> <li>- Patient Assessment &amp; Classification.</li> <li>- System should have nursing assessment for OPD and IP as per the NABH Standards.</li> <li>- The nurse should be able to record the nursing diagnosis based on NANDA Standards</li> <li>- The nurses should be able to administer the drugs based on the prescription created by the clinician.</li> <li>- There should be option to do co-sign while administering the Scheduled and Narcotic Drugs.</li> <li>- Nursing module should have standard checklists (WHO Approved) for patient safety, surgical safety etc.</li> </ul>
	<b>3) Order Management</b>
	<p>The Order Management application addresses order entries, order review and/or validation, interdepartmental communication, order inquiry, and reporting of order entries of the hospital. Any authorized user in the hospital will be able to place treatment orders. Similarly, authorized users will be able to view current order status and results.</p> <p>The various services under the Order Management module are given below:</p> <p><u>Services</u></p> <ul style="list-style-type: none"> <li>- Manage Order Entry</li> <li>- Medication Orders</li> <li>- Order Tracking</li> <li>- Results Reporting</li> <li>- Charging</li> </ul>
	<b>4) OT Management</b>
	<p>The Operation Theatre will be managed as an isolated operational area that has its own scheduling, resource allocation, raising of appropriate alerts (non-availability of appointment slot, resource), ability to enter procedure notes, manage inventory control both for the area as well as during procedures (instruments and gauze counts), etc.</p> <p>The various services under the OT Management module are given below:</p> <ul style="list-style-type: none"> <li>- OT Scheduling- Facility to block/book/cancel theater for surgeries.</li> <li>- Procedure Order sets- Facility to raise requests for medicines and items for theater, accept/deliver/return them.</li> <li>- Documentation - Facility to view daily/weekly/monthly operation theater booking or cancellation.</li> <li>- Facility to create reports about operation theater status and surgery list.</li> <li>- Track the activities in the operation theater, record medicine and inventory consumption, sterilization details, postoperative charts, etc.</li> <li>- Option to Reschedule the OT</li> <li>- Option to Differ the OT</li> </ul>

	<ul style="list-style-type: none"> <li>- Pre-Anastasia Check list and associated workflows.</li> <li>- Dossier Definition and attaching the same to surgery</li> <li>- OT Billing and recording the actuals vs dossier.</li> <li>- Direct patient billing feature for OT Biller.</li> <li>- % Wise OT Charges calculation</li> <li>- Facility to view surgeries doctor-wise, diagnosis-wise, or top 10 for the day, week, or month</li> </ul>
	<b>5) Anesthesia Management System</b>
	The anesthesia management system will take care of all the anesthesia related activities including Pre-Anesthetic Check-up, Pre-Induction, Induction, Post-Induction and Recovery Stages along with post-surgery order management.
	The various services under the Anesthesia Management System module are given below:
	<u>Services</u>
	<ul style="list-style-type: none"> <li>- Pre-Anesthetic Check-up</li> <li>- Pre-operation Management</li> <li>- Post-operation Management</li> </ul>
	<b>6) Dietary Management Module</b>
	The dietary module will assist the hospital kitchen in providing meals to inpatients as per the instructions of the dietician. The module facilitates the dietician to prescribe a diet as instructed by the physician to any given patient. The module also allows the maintenance of meal scheduling, customizing meals as per patient needs and recording of individual meal orders.
	<ul style="list-style-type: none"> <li>- Module allows dietician to book, approve, schedule, cancel the diets for the patients</li> <li>- Allows the generation of the diet chart (food description report of the patients), item-wise sales between specific dates, patient-wise sales between a tenure, diet type report, food category-wise report, diet indent reports.</li> <li>- Provision to view the daily/weekly/monthly summary of information such as diet booking status, top 10 diet types, top five diet booking departments and supply time</li> </ul>
<b>1.1.2</b>	<b>Administration Services</b>
	Administrative Services: The administration services take care of all system critical non-clinical information that has a patient context and ensures that proper and timely care is provided to the patients.
	<b>1) Patient Admission, Discharge and Transfer (ADT)</b>



	<p>The patient administration module handles all functions like registrations, admissions, discharges, transfers and patient appointment scheduling for visits, admissions and investigations etc. It permits comprehensive registration for most patients while allowing quick registration for rapid attention in the accidents &amp; emergency (A&amp;E) department. The system is additionally able to handle bed management of all beds within the hospital thereby enabling the reception clerks to locate available beds within a department or location and assign beds during the admission process at the registration counter itself. Although bill payments can also be accepted simultaneously, the Billing functionality is explained in the Patient Billing sub-module.</p>
	<p><b>2) Centralized Appointment &amp; Admission Management System</b></p>
	<ul style="list-style-type: none"> <li>- Make/Edit/cancel appointments for any number of doctors of different departments</li> </ul>
	<ul style="list-style-type: none"> <li>- Mark the status of appointments as confirmed, reserved, standby, blocked, break, etc.</li> </ul>
	<ul style="list-style-type: none"> <li>- New patient registration with facility to capture patient photo, insurance details, foreigner information, medico-legal cases, etc.</li> </ul>
	<ul style="list-style-type: none"> <li>- Block/unblock the slot for doctors' appointment</li> </ul>
	<ul style="list-style-type: none"> <li>- Facility to view appointments daily/weekly/monthly, the summary of appointments for the day</li> </ul>
	<ul style="list-style-type: none"> <li>- Facility to search patients and view appointments, details of outpatients, admitted patients, bed status, search employee, hospital holidays etc.</li> </ul>
	<ul style="list-style-type: none"> <li>- Facility to view general information such as room tariff, package rate, procedure rate, surgery rate, doctor's list, details such as leave etc.</li> </ul>
	<ul style="list-style-type: none"> <li>- Facility to handle contacts of the surgical suppliers, ambulance providers, police stations, implementation engineers, doctors, etc.</li> </ul>
	<p><u>Services</u></p>
	<ul style="list-style-type: none"> <li>- Admission</li> </ul>
	<ul style="list-style-type: none"> <li>- Discharge</li> </ul>
	<ul style="list-style-type: none"> <li>- Transfer</li> </ul>
	<ul style="list-style-type: none"> <li>- Pre-admissions &amp; Waitlists</li> </ul>
	<ul style="list-style-type: none"> <li>- Bed Management</li> </ul>
	<ul style="list-style-type: none"> <li>- Bed charges</li> </ul>
	<p><b>3) Kiosk based patient self-registration</b></p>
	<p>Patient Self-service Kiosk Application is an interactive touchscreen kiosk software solution that allows the patients/bystanders to initiate or conduct a set of automated activities via kiosk(s) without any assistance from the hospital staff. The system increases the convenience of the patients, allowing them to perform the tasks at their convenience and pace. For hospitals, the implementation of the Patient Self Service Kiosk System will help in reducing the long queues at the counters for patient registration and bill payments, and also result in reducing the time, cost, and resources required to conduct the tasks.</p>
	<p><b>4) Master Patient Index</b></p>

	<p>The Master Patient Index module manages the records of all patients registered in the hospital through a unique patient identification number (UPIN) and is generally demographic with some clinical and financial details. This centralized reference information is accessible from any patient-related modules via HL7 interfaces by authorized users. Typical locations where this module is to be used are the Receptions for Outpatients / Inpatients / Accident &amp; Emergency, Appointment and Booking Desks and other departments for purposes of patient identification.</p>
	<p><b>5) Appointment Scheduling</b></p>
	<p>There needs to be an efficient, user-friendly appointments system to enable new and follow-up appointments to be made rapidly for consultations and receiving services like investigations etc. Additionally, there is a requirement to allow for any other hospital-wide resource scheduling to be carried out, like appointments for use of equipment or certain rooms or Operating Theatres etc. To build health history, the system shall link the patient registration with ABHA which will enhance healthcare facilities designed to enable faster exchange of information and help build health history. The system will allow appointment scheduling to be performed at any point of care within the hospital apart from reception.</p>
	<p>All appointment related activities such as new appointments, cancellations, re-scheduling, waitlists, etc. must be possible.</p>
	<p>The various services under the Appointment Scheduling module are given below:</p>
	<p><u>Services</u></p>
	<ul style="list-style-type: none"> <li>- Appointments Management</li> </ul>
	<ul style="list-style-type: none"> <li>- Patient Tracking</li> </ul>
	<p><b>6) Outpatient Management</b></p>
	<ul style="list-style-type: none"> <li>- Facility to make the appointments, search for patients, assign consultation room and book revisits</li> </ul>
	<ul style="list-style-type: none"> <li>- Facility to view doctor-wise appointment lists, mark their status with various parameters</li> </ul>
	<ul style="list-style-type: none"> <li>- Facility to view summary of pending outpatients, consulted patients, completed outpatients, visited patients, ongoing consultation details, etc.</li> </ul>
	<ul style="list-style-type: none"> <li>- Facility to handle the outpatient billing including the details such as advance entry, consolidated billing (from all departments), individual billing (from one department), refunds, batch-wise cash entry, petty cash, multiple money collection modes, etc.</li> </ul>
	<ul style="list-style-type: none"> <li>- Facility to view day-to-day OP credit bills, cash bills, total bills, visit closing, visit re-opening, etc.</li> </ul>
	<ul style="list-style-type: none"> <li>- Facility to handle package billing list, search revisiting patients, attach the documents/reports patients bring.</li> </ul>
	<p><b>7) Inpatient Management</b></p>
	<ul style="list-style-type: none"> <li>- This module shall handle the growing workload of inpatient departments, the hospitals can seamlessly manage all the processes in the department, capitalize on greater efficiency and do more</li> </ul>

- This module shall have option to allocate beds for the patients, streamline the surgical procedures, diligently enter every interaction with patients during the time of admission
- Facility to manage all inpatient processes at admission counter and discharge counter
- Facility to create inpatient admissions and booking including the details such as personal specifications, nationality, insurance, medical documents available, etc.
- Facility to enter the advance payments, generate receipts, manage discounts, monitor outstanding bill, and petty cash in inpatient department
- Facility to create discharge entry with details such as pharmacy, procedure and surgery requisitions, any canceled procedures, etc.
- Facility to update/recalculate rate charges in procedures and surgery
- Facility to generate reports such as date-wise cash statement; IP registrations department wise, patient type-wise, insurance wise; sales reports doctor/department/category-wise; etc.
<b>8) Insurance Desk Module</b>
- Request approvals, reimbursements, auditing, etc.
- Facility to set individual rates and discounts for various insurance companies / TPAs
- Collection module provides a comprehensive financial management solution for the complex dealings of hospitals with outside companies such as insurance.
- Facility to maintain the records of pending claims and resubmissions, rejected claims
- Facility to update claim status, maintain insurance receivables register, maintain the record of resubmitted claims that got rejected.
- Collection module provides a comprehensive financial management solution for the complex dealings of hospitals with outside companies such as insurance.
- It also addresses critical financial functions within the hospital, such as the counter-wise or day-wise transactions of a user, cash closings during the shift allocation, etc. Collection dramatically increases the efficiency of the hospital's finance department by streamlining and automating transaction processing and reporting functions.
- Manage the transactions during shift allocation
<b>9) Email &amp; SMS service</b>
- HLL will provide the messaging template based on the project requirement.
- HLL will register on TRAI and provide credentials/ message templates. A provision shall be made available through API for integration with all necessary modules on application.
- The system shall provide facility to send customized bulk emails and SMS during the appointment, confirmation, cancellation, reminders, messages during bill generation such as Thank You SMS, during lab sample collection, test result generation, insurance approvals
- E-mail facility for hospital staff and administrators with E-mail attachment feature based on the email client.
<b>10) Patient and Hospital Portal</b>
Public portal for accessing patient medical lab and imaging reports enabling the patients to access this from anywhere, anytime.

	This module can be linked to the hospital website and act as a one stop solution for the patients who are visiting the hospital website and book appointments for themselves and their family members, view prescriptions, test results, etc., without the help of a hospital staff.
	<b>11) Integration with Third Party websites</b>
	Incase required, the patient report access, appointment module etc. shall be made available to third party sites as per project needs through API integration or any alternate needs.
<b>1.1.3</b>	<b>Diagnostic Investigation Services</b>
	Investigation Services: The investigation services take care of all system critical information related to investigations that have a patient context. It ensures that proper care is delivered to the right patient by the right people after proper evaluation and assessment of the patient's condition that can only be ascertained through investigations carried out in specialized laboratories and units and reporting them to the care provider to as high degree of accuracy as is possible under the current circumstances.
	<b>1) Pathology - Microbiology, Biochemistry, Hematology &amp; Serology</b>
	The Lab Result module shall have a complete and integrated set of tools to help the hospital manage the laboratory investigations and processes. Automating the core diagnostic processes such as the inpatient and outpatient medical testing, specimen processing, and result entry, increases efficiency and ensures accuracy in the diagnosis. With embedded integration to the doctor's module, Lab Result sends the test results to the physicians as soon as they are processed, quickening the diagnosis and prescription procedures. Significantly, the integrated SMS provision in the module gives alerts to the doctors in case if the patient's specimen shows an alarming range of variables.
	The Pathology module of the Laboratory Information System module is to be used in the Pathology Department, serving the needs of the Inpatients, Outpatients, Emergency Departments and Operation Theatres. The various services under the Pathology Information System module are given below which shall be made available to the entire hospital HMIS as for easy access.
	- Ordering & Collection Lists
	- Specimen Registration & work lists
	- Results Entry, Verification & Reporting
	- Facility to generate monthly/daily sales report, sample collection reports, pending results, test movement details, doctor-wise investigation details, claim requests
	- Facility to establish connection with testing equipment and devices without additional costing.
	- Facility to calculate item consumption per test
	- Facility to run QC
	- Facility to integrate electronic signature in the results & generate results in PDF formats and e-mail

	<p>- Facility to schedule and cancel the lab tests with information such as total items for tests, emergency requests, high priority requests, VIP/VVIP requests, in-patient/outpatient results, etc.</p>
	<p><b>2) Radio-Diagnostic Information System</b></p>
	<p>The Radiology system shall cater to all the requirements of the Radiology Department: it provides for scheduling of appointments for examinations, examination registration, results reporting, entry of post examination information, and film tracking. It brings all major components of the radiology testing process to a single unit. The module is compatible with all the imaging technologies used by the radiologists and the available machines.</p>
	<p>Time-based and machine-wise booking of appointments</p>
	<p>Booking, reschedule and cancellation options</p>
	<p>Blocking of time slots, marking the slots as free, reserved, break time, confirmed, emergency, arrived, etc.</p>
	<p>Facility to view the waiting list and completed list.</p>
	<p>Facility to view the summary of appointments such as new patients, confirmed and cancelled.</p>
	<p>Provision to view the requests in different methods such as machine-wise, technology-wise, and top radiologists or orders.</p>
	<p>Provision for result entry, verification, printing and delivery</p>
	<p>Facility to manage the refund request, result cancellation, lab/IP bill refunds, and reports</p>
	<p>Provision to search for bills and check the status of the radiology test</p>
	<p>Provision to view the tests for the week based on various equipment</p>
	<p>The system would interface to the Pharmacy Management and Inventory Control applications to update the consumption details directly.</p>
	<p>The system should provide a facility so that this module will interface with the Picture Archiving &amp; Communications Systems (PACS).</p>
	<p>The system will be able to seamlessly handle inbound and outbound HL7 messages from any system that has similar capabilities.</p>
	<p>The system will be DICOM 3.0 compliant.</p>
	<p>The system should provide facility so that the application is to be web-enabled</p>
	<p>The various services under the Radio-Diagnostic Information System module are given below:</p>
	<p>The system shall enable radiology departments to do reporting through teleradiology reporting systems.</p>
	<p><u>Services</u></p>
	<p>- Radio-diagnostic Setup</p>
	<p>- Appointments</p>
	<p>- Investigations</p>
	<p>- Results Reporting</p>
	<p>- Post-investigation</p>

	<ul style="list-style-type: none"> <li>- Management</li> <li>- Film Tracking</li> <li>- Charging</li> <li>- Queries &amp; Reports</li> <li>- Tele reporting using teleradiology PACS with unlimited licensed ZFP 3D Viewer for radiologist access</li> </ul>
	<b>3) Blood Bank Management System</b>
	The Blood Bank Management System module will cater for the management of all donor records, bloodstock, laboratory, inventory and patient-related operations for Blood Bank.
	The system would interface with the Inventory Control, Patient Billing, Order Management, and Nursing Information System applications to update the consumption details directly.
	The various services under the Blood Bank Management System module are given below:
	<u>Services</u>
	Facility to enter the opening stock of the blood
	Facility to enter the blood donor details, donor screening and approvals
	Facility to schedule the screening tests
	Facility to create the crossmatch worksheet and marking
	Facilities to record blood transfusions and patient's reactions
	Facility to manage and view the blood issues, blood bag returns, mark the replacements, expiry
	Facility to maintain the voluntary donor details
	Facility for Donor, Blood Stock, Local inventory Management
	Provision to search patients, blood bags
	Provision to generate stock report, monthly inputs, and component statistics
<b>1.1.4</b>	<b>Inventory Control</b>
	Inventory Control: The inventory control services take care of all system critical information that ensure that all medication and materials required for properly treating a patient are adequately stocked and maintained. All equipment and buildings are in a status of readiness, and all instruments are constantly at the disposal of the care providers in a state that allows no injury to be sustained by the patient during the course of receiving care.
	<b>1) Pharmacy Management</b>
	The Pharmacy Management System will take care of all drugs-related and other disposable items that have a definite expiry date. This Module shall help the hospitals to handle the billing with ease inclusive of insurance tracking and tax modes. It can store the drugs, maintain the record, and track their expiry.
	<u>Requirements</u>
-	Handle the billing to the patients with multiple modes of payment (cash/credit card/debit card/UPI)
-	Integrated barcode system for the prescriptions and track, record and maintain the stock of the drugs, and manage the expiry of the drugs



-	Provision to set the current stock status, enabling the availability of a list for the physicians to choose from
-	The system will maintain balances and a transaction history for each medication item including cost and suppliers.
-	Movements will be input manually and automatically from the sales/purchase order processing systems and transfer requests would automatically update stock balances. Stock would be valued on any of the following basis FIFO, weighted average and LIFO When a stock line is created the standard cost will be input. An issue note would optionally be printed for all issues. There would be no restriction on the number of stores held on the system. There would be no restriction on the number of bin locations held on the system.
-	Summarized monthly stock movements would be retained on the system for 3 years and be available for enquiries.
-	The system would interface with the purchase order processing system so as to produce purchase order recommendations.
-	A list of available and authorized medications with their suppliers will be maintained.
-	A list of suppliers/rate contractors will be maintained.
-	The various services under the Pharmacy Management System module are given below:
-	Provision to list generic medicines and drug combinations
-	Availability and update of re-order of levels
	Services - Demand
	- Management/Indenting
	- Drug Dispensing
	- Drug Receipts
	- Process Monitoring
	- Interfacing
	<b>2) Central /Hospital Sterile Supplies Department (CSSD)</b>
	The Central Sterile Supplies Department (CSSD) application manages information pertaining to loans, exchanges of sets of sterile supplies to any department in the hospital that requires sterile supplies. The CSSD Module provides facilities to enter details of drums, packs and trolleys. Packs can be assembled or broken down into components as required. The assembly operation will automatically decrease the stock of the components and increase the stock of the pack. Similarly, dismantling the pack will do the reverse.
	i) The system will be linked to the OT Scheduling system to enable required trays to be prepared and sent to the OTs based on the schedule of surgeries
	ii) The system will be linked to the Patient Billing System to enable automatic charging based on items used
	The service under the CSSD module is given below:
	<u>Services</u>
	- Issue Tray Sets
	- Receive Tray Sets



	- Facility to enter the consumptions and returns
	- Facility to track laundry issue or receipts
	- Facility to track the issue of kits to patients
	- Facility to manage the requests from pharmacy for kits
	- Quality Control etc.
	<b>3) Laundry Department</b>
	Laundry service is responsible for providing an adequate, clean and constant supply of linen to all users. The basic tasks include sorting, washing, extracting, drying, ironing, folding, mending and delivery. A reliable laundry service is of utmost importance to the hospital. In today's medical care facilities, patients expect linen to be changed daily.
	An adequate supply of clean linen is sufficient for the comfort and safety of the patient thus becoming essential.
	The term 'hospital linen' includes all textiles used in the hospital including mattresses, pillows, covers, blankets, bed sheets, towels, screens, curtains, doctor's coats, theatre cloth and tablecloths. Cotton is the most preferred and frequently used material. The hospital receives all these materials from different areas like Operation Theatres, wards, outpatient departments and office areas. The OT linen materials need special care since it has to be washed & sterilized carefully. So, if possible, the hospital can go for a separate laundry process for OT linen materials alone. The hospital can either purchase washing machine or engage a washer man (dhobi) to manually wash the clothes
	- The system should be able to maintain a Linen database
	- The system should maintain the following registers and provide reports for the same
	• Linen stock register
	• Daily transaction register for wards
	• Daily transaction register for other areas
	<b>4) Housekeeping Management</b>
	- Facility to manage the cleaning requests from various departments and mark their statuses
	- Facility to enter the cleaning material consumption and damage entries found in the rooms
	- Facility to generate stock report, duty register, view duty schedules and location status
	<b>5) Medical Records Department (MRD)</b>
	Medical Records Department module assists hospitals to enforce a centralized record management for patient file storage, bar coding, retrieving data and printing them in any formats. This module streamlines the processes and automates manual record management activities throughout a hospital's life cycle. In addition to offering a secure single digital storage facility, this module avoids unwanted record duplication and offers valuable insights that are inaccessible in a fragmented environment.
	- Facility to create, unify and manage the medical records (charts) of the patients including their chart-in and chart-out process; records of issued files; missing charts, etc.
	- Facility integrate barcodes with chart-in and chart-out process
	- Facility to mark diagnosis/ICD against visit/admission

	- Facility to generate chart-in/chart-out reports, missing chart reports, specialty/region/ICD based disease analysis report, date/category-wise reports and manage EMR requests
	<b>6) Equipment Management System</b>
	There are two different aspects of this system, machinery and equipment management and planned preventive maintenance.
	<b>7) Dialysis Management Department</b>
	- Facility to make appointments for dialysis machine-wise, with details such as the number of sessions required, the name of the consultant handling the dialysis, etc.
	- Facility to view the summary of appointments, new patients for dialysis, confirmed patients and canceled patients
	- Facility to generate weekly report of the dialysis happening in the hospital
	<b>i) Machinery and Equipment Management</b>
	This system shall serve the purpose of regulation, monitoring the Preventive Maintenance, Break Down and Overhaul works of the Components/Machines and costing thereof. The system envisages maintenance of equipment in a multi-location environment. The Individual Unit History card will be maintained.
	<b>ii) Planned Preventive Maintenance</b>
	The system will maintain a database of all equipment types by the preventive maintenance required, procedures they perform, spares required by them, services required by them, time duration of service (downtime of equipment during servicing), details of maintenance performed (in-house and through external agency), and services rendered by them.
	The various services under the Equipment Management System module are given below:
	- Maintenance Schedules
	- Project Management
	- Work Order Maintenance
	<b>8) Inventory Management</b>
	Inventory Management primarily deals with the optimization of inventory and the supply chain processes for all non-pharmacy related items. (All assets – IT, Medical equipment and other).
	The various services under the Inventory Management System module are given below:
	- Purchase Order Processing
	- Connect with the main inventory module
	- Stock Control
	<b>9) Hospital Canteen Module</b>
	This module intended to streamline the operations of canteens, coffee shops and restaurants in hospitals. This shall have the detailed accounts of the food served at the hospital canteens and enables speedy and secure transactions, reducing the waiting time for the visitors.
	This module shall be a part of HMIS, and inpatient environment facilitates order taking directly from the inpatient rooms

	Restaurant billing shall interface with the discharge bills of the patients, making it a complete solution that serves the needs of hospital canteens.
	This shall support Touch screen Kiosk interface
	Advance Order from Rooms – Orders can be taken in advance based on different sessions (breakfast, lunch, dinner, etc.). This will be added to the bulk production request in the kitchen.
	Current Order from Rooms – The current order from rooms will be directly passed to the kitchen and KOT will be generated immediately. The bill will be generated on dispatching the item.
	The summary and total of F&B/canteen bills credited to the respective rooms will be available to the cashier for settling the same at the time of discharge. The total bill can be printed, and payment can be collected then and there itself without any manual calculations.
<b>1.1.5</b>	<b>Accounting and Billing</b>
	Accounting and Billing: This module is to be customized as per the requirements of Accounts and billing department of the implementing client hospitals. The common Accounting and billing procedure shall be available in the entire solution.
	The financial services take care of all system critical money-related information and ensure that the care provider is continuously maintained in a financially secure state. It permits the organization to take care of its current financial needs while being able to plan for future plans in order to provide better care on a sustained basis. This module also covers the insurance requirements for private ward patients.
<b>1.1.6</b>	<b>Human Resource Management</b>
	The Human Resources Management Department application captures information pertaining to various departments and the various human resources available. It maintains the records of recruitment, training, and severance records across the organization. This application monitors the training details after receiving feedback from the departments; the system would be linked to the various departments to monitor data and details.
	The various services under the Human Resource Management module are given below:
	- Duty Roster & Workforce Management
	- Training and Employee Performance Management
	- Employee Self-service
	- Centralized Employee Database
	- End-to-end training & Development Management
	- Automated Recruitment Management System
	- Analytics and Reporting
	- Payroll and Grievance Redressal Management
	- Integration with the SAP main attendance management system (If requires).
	- Holiday, Time Tracking, Attendance and Leave Management
<b>1.1.7</b>	<b>E-MLC- Electronic ‘Medico Legal Case Sheet’</b>

	An electronic medical record system to be developed and implemented with the objective of creating a tamper – proof eMLC that would be printed in a format mandated by law thereby satisfying all legal requirements. This system simplifies the work of doctors so that they no longer have to waste time entering demographics of patients because all medical details in eMLC are easy to enter as they are template driven. Images of patients and injuries shall also be incorporated in the e-MLC.
<b>1.1.8</b>	<b>Electronic Patient Waiting List System &amp; OT Display Information</b>
	This will simplify the process for admitting a patient or scheduling for routine/priority surgery. The current waiting list shall be viewed, and patients will call for surgery according to their waiting number. Patients are called only by the number allotted in the waiting list. All the relevant information shall be displayed publicly online in a real time manner on the LED TV.
<b>1.1.9</b>	<b>Electronic Medical and Fitness Certificates</b>
	This system will be used for creating and printing medical/fitness certificates as compared to the certificates made manually. For accessing this system, the senior resident would be required to login with a unique ID and password provided by Nursing Informatics. After logging in, it will show the name of the doctor issuing the certificate. Patient details will automatically be updated entering the Patient Registration No. Various fields would be made available for filling the certificates like issuing department, diagnosis, number of days of leave required and the EHS No for staff.
<b>1.1.10</b>	<b>Real Time Dashboard for Each Hospital/Facility to Publicly display patient demographics</b>
	Following information to be displayed in consultation with hospital administration:
	i) Number of patients coming to the hospital.
	ii) Number of patients being admitted and discharged.
	iii) Total No of patients seen till date at hospital/facility.
	iv) No of Patients seen today.
	v) On the statistics page of e-portal, department wise admission and discharges for the previous day as well as patients seen in OPD.
	vi) Clinical Audit for all departments in the hospital, Karnal evaluating the performance on various clinical and administrative measures.
	vii) An integrated CRM on Homepage (login required) which displays personalized data for each clinician like patients admitted under him/her, patients scheduled for OPD and departmental data.
<b>1.1.11</b>	<b>OPD Mobile Application</b>

Keeping pace with the tradition of using cutting edge technology for patient care. Implementation of the relevant software with functioning of the tablets for doctors would be required. Application software should be as per the requirement, scalable, integrated, secure, patient centered and interoperable environments to cater the entire functional requirement at OPD. It initiates a high performing healthcare system where all those engaged in the care of patients are linked together in secure and interoperable environments, and where the flow of clinical data directly enable the most comprehensive patient centered, safe, efficient and effective delivery of where and when is its needed most – at the point of care.

Salient Features:

Appointments at single screen view.

Simple Patient search, Patient Appointment / Reminders.

Easy capturing of Past History/ Vital Signs/ Clinical Parameters.

Patient Medical Records Retrieval

Current visit Complaints/Diagnosis entry

Lab orders entry

Medical advice entry

Lab tests review

Lab Image / Video/ Document retrieval.

Advice and Plans entry.

Image Management

Teleradiology Image viewer & Reporting

Image comparison option

Diagnosis entry

Prescribing medicine

Test results uploading provisions to Lab as Text/Image/Video including PACS

OPD visits are now less grueling for the patients due to this amazing software where all is available at one touch.

**1.1.12 Patient Care Mobile Application –iOS & Android - Project wise**

Book/Cancel appointment in a hospital & its connected clinics/medical centers

Mark as arrived on arrival to the hospital

Check variations in test results conducted over a period of time

Check consultation history &review a doctor facility

Access treatment summary of any consultations taken in the past

Access the previous prescriptions, Lab results with previous history

Provide feedback for the services of the hospital

Visit hospital website

Contact Emergency services of the hospital

Check the locations of hospital and its connected clinics/medical centers

<b>1.1.13</b>	<b>SMS Triggering System</b>
	In this system SMS will be sent automatically by the system to the doctor/patient whenever a predefined event triggered for emergency and OPD. Additional SMS can be sent anytime if a need arises by the department. We expect software vendors to configure the HMIS application to generate SMS alerts for 5 different events (e.g., patient admission, lab result receipt etc.) Procurement of SMS gateway is the responsibility of the hospital.
<b>1.1.14</b>	<b>Electronic Blood Request</b>
	This is an electronic system through which requisition for blood will become a simpler and easier process as only one form needs to be filled electronically. Demographic details of patients will be automatically updated by just entering the Patient Registration No. Lab details and the components requirement will then be sent to the blood bank. All the requisitions made from any patient till date will be easily obtained through this system.
<b>1.1.15</b>	<b>Online Duty Roster</b>
	This is a biometric system which describes the details of staff's duty. This will be provided with a login id and password to make and change the duties. It will help to keep an accurate track on the punctuality of employees and ensure 100% compliance in biometric attendance. It also gives a report which shows the shift, leaves etc. and calculates the number of people available on the shift. So, the duty roster to be created online which is to be integrated with the biometric attendance system.
<b>1.1.16</b>	<b>Vehicle and Transport Management</b>
	Ambulances management
	Vehicle deployment handling
	Time management
	Drivers and employee details
	Billing calculations
<b>1.1.17</b>	<b>Public/Customer Feedback Module</b>
	The module assists the hospital to measure how the services provided surpass patient's expectations. By developing metrics about the satisfaction of the patients visiting, the hospital can manage and improve the quality of the care delivery.
<b>1.1.18</b>	<b>Back Office MIS</b>
	- This module enables the hospital administrators to track the revenues, costs, the status of operations, generate summary of daily transactions at the hospital (number of admissions and discharges, percentage of bed occupancy, birth & death rates, pharmacy sales report, number of surgeries performed, purchase and closing of stocks in stores, report of expired and near expiry medicines, etc.). -
	- Create collection reports at counters and billing sections and calculate the revenue incentives per doctor
	- Generate reports to support accreditations such as NABH and NABL.
	- Analyze the patient waiting time or bed occupancy details.
<b>1.1.19</b>	<b>Finance</b>



<p>The Financial module boasts General Accounting, Cost Accounting, Budgetary Control, Project Management, Treasury, Accounts Collections, Accounts Payable and Fixed Assets, which allows it to have a complete accounting and financial management application, integrated with the hospital's back-office system and completely adapted to sector-specific needs.</p>
<p><b>1) General Accounting</b></p>
<p>Analyze the revenue and costs by location, service lines, departments and other criteria</p>
<p>Provision for bill matching, TDS marking, online receipts and voucher printing</p>
<p>Provision for debtor/creditor grouping</p>
<p>Multi-company and multi-hospital.</p>
<p>Allows you to work with several fiscal years at once online.</p>
<p>Aggregation and consolidation of companies and hospital groups.</p>
<p>2) Cost accounting according to cost center</p>
<p>3) Tax management</p>
<p>4) Budgetary control of income, expenses, investment by cost center and account</p>
<p>5) Accounts receivable and accounts payable</p>
<p>Implementation of any kind of charge or payment.</p>
<p>Management of payment authorization circuits.</p>
<p>Partial payments and advances made to providers.</p>
<p>Generate aging reports</p>
<p>Facility for bookkeeping with online cheque printing</p>
<p>Risk control of parameterizable customers, which allows you to define a point in the sales cycle or provision of service from which you wish to establish control.</p>
<p>An accounts receivable management assistant which facilitates the automatized sending of payment claims.</p>
<p><b>6) Project Management</b></p>
<p>A budgetary control system and financial tracking of projects.</p>
<p>Control at the budgetary level and the structuring of budget allocations.</p>
<p>Allows users to record income and expenses derived from medium and long-term investment projects.</p>
<p>Direct allocation, differentiating between the level projected and the level applied.</p>
<p>Monitoring the degree of execution of the project.</p>
<p>Freezing of documents if budgetary entries assigned to each project are surpassed.</p>
<p><b>7) Cash Management</b></p>
<p>Record cash movements and control cash flow.</p>
<p>Prepare budgets and integrate with sales journal and purchase journal</p>
<p>Processing of cash vouchers (cash withdrawals to be justified).</p>
<p><b>8) Integration with patient billing</b></p>



	Allows communication with the billing-to-patients application (insurers, mutual societies, private entities).
	Integration with the general accounting module for the accounting entries generated from the invoices sent at the patient's/entity's cost.
	Integration with the accounting module of the value of allocations by cost center, derived from the invoices sent.
	Integration with the tax module and with the module for receivables, based on the entries corresponding to invoices sent.
	Integration with the Inventory management system.
<b>1.2</b>	<b>Technical Requirements</b>
	In addition to the functional requirement elaborated in the SRS document, any other functionality to be added & customized as per the requirements from client hospital needs to be integrated.
	WhatsApp & SMS interface
	Lab equipment interface (All Departments- Biomedical Equipment)
	Tablet/Mobile (Single App - Roles and responsibilities customized for Admin. Office Staffs, Doctors & Public report access).
	Offline Registration by using PC and Mobile application. (SMS text shall be converted into data for registration in required cases) when and where internet is unavailable.
	Multiple level Security
	Graphical User Interface
	Online Help & User Manual - <i>Both Text and video Format (Video for Critical Support)</i>
	Web enabled - <i>Both Web, Stand-alone &amp; Hybrid model Required</i>
	Voice transcription in PACS
	The system uptime will be 98% in non-critical areas - The system uptime will be 100% in critical areas - The system will support ICD-10/ICD-9 CM.
	The system should be able to generate turnaround time (TAT) reports for OPD consultation and lab and radiology result reporting, patient discharge timing and also should generate average length of stay report.
	The system should facilitate creation of templates for capturing clinical assessment.
	The system should facilitate creation of requirement specific discharge summary templates.
	The system should store all data within 5 second of request - <i>Ensure high response rate</i>
	The system shall adhere to Ayushman Bharat Digital Mission (ABDM) HMIS requirements.
	The system shall adhere to Ayushman Bharat Digital Mission (ABDM) Sandbox testing enabling framework.
	The system should complete the process of Registration, Discharge, Admission, OPD billing in not more than 5 seconds.
	The system shall support NABH, NABL & ICMR requirements

	The system shall support EMR/EHR guidelines and other guidelines etc. provided by the Ministry of Health and Family Welfare, New Delhi.
	The application should have online updation of the transaction into the Back-office Finance/Inventory
	The application should have a highly secure web interface for doctors and radiologists & secure Application should protect the patient data.
	The application should have the Ability to create workflow (like forward for approval)
	The System Integrator Information Technology firm shall adhere to all relevant e-governance standards defined by Government of India (GOI) from time to time.
	<b><u>Essential Standards</u></b>
	The required HMIS shall adhere to, but shall not be limited to, the following international healthcare standards:
	<b>American Society for Testing &amp; Materials (ASTM)</b> - For interfaces to laboratory equipment complying with ASTM
	<b>Digital Imaging &amp; Communication in Medicine (DICOM)</b> - For images
	<b>Health Level 7 (HL7)</b> - For messaging & communicating with HL7 compliant systems
	<b>Audit Trail</b> – the data once entered cannot be changed without proper permissions. If any changes are made, then full audit trail information related to the date and time of user login and logout, data entered, data modified, data viewed etc. has to be kept keeping track of what changes are made by whom and when. Provision to modify/cancel all transactions (with their transaction details in audit trail) by only authorized officials should also be there.
	<b>Alerts</b> – Provision to define configurable alerts for every critical event should be available along with capability to send these alerts to the concerned officials on their mobile phones (including SMS) / e-mails should be available. In-built automatic alerts, wherever appropriate, shall be incorporated.
	<b>Reports</b> – All reports should be available for downloading in Excel and PDF format to authorized users.
	<b>Validation</b> – Each input field shall be properly validated before the acceptance of input according to the type and range of the input. In-built validation checks for each field should be available to avoid invalid data entry. Enable EQAS
	<b>Realtime Dashboard</b> - The party shall design and develop a real time Dashboard as per HLL requirement and host on a domain which HLL provides.
	Easy and customized data backup and retrieval facility.
	General purpose workflow features such as document management, time office functions, time sheet, tracking and archiving, change priority of works etc.
	Provision for workflow status monitoring, authentication and security, distributed user administration so that each manager can be responsible for the administration of his or her subordinates.
	Patient's episode-based record creation along with tracking.

	Regular onsite training to be provided to respective users of all modules during implementation till handing over of the system to Client.
	Helpdesk services to be provided. Helpdesk services should include problem resolution to the level of the end user's desk. Application/Solution to be provided for managing Helpdesk.
	Provide support and enable switching over from existing system to the new system without any data loss or corruption
	<b>Documentation</b> -Documentation in respect of all sub-modules (general user manuals and admin user manuals) is to be provided after implementation/acceptance of each of the sub-module and implementation of amendments in the sub-module. The manuals should also include instruction manuals, User manuals, Administration manuals detailing all HMIS administrative activities from the point of view of HMIS's Installation procedure, Configuration, Backup and Recovery, Security policy, Access policy etc.
	Easy and Fast HTML Editing GUI
	Supports both plain text, HTML messages & Source Code Editing while SMS projection
	<b>IT Admin module</b> - It is assigned to the IT department of the hospital. This module handles the settings for all other modules in Ellíder. Hence, this is the back-end module mandatory for the working of all other modules.
	- User setting allows the administration staff to create user groups, allocate the access rights to hospital staff, create users and their rights, module rights, query settings, etc.
	- It has a master list and reports grouping aspects of the hospital.
<b>2</b>	<b><u>LIS (Laboratory Information System)</u></b>
<b>2.1</b>	<b><u>General Requirements</u></b>
<b>2.1.1</b>	Pre -Bid demonstration of HIS to be arranged by prospective bidders
<b>2.1.2</b>	Web Reporting – Availability of reports online through the official Website of Hindlabs.
<b>2.1.3</b>	Capability to send reports by Email from HIS
<b>2.1.4</b>	Lab reports and bills shall be viewed from the website for 7 days. Reports for 5 years or as per document retention policy of Hindlabs
<b>2.1.5</b>	Providing connectivity from HIS to website of Hindlabs
<b>2.1.6</b>	As up gradation of website will be essential, it shall be done free and included in CMC
<b>2.1.7</b>	Modules in the software
	1) Patient Registration
	2) Patient sampling
	3) Billing
	i) Cash
	ii) Credit
	iii) Partial Cash-Credit
	iv) Scheme based Cash & credit
	v) Scheme based Partial Cash-credit.
	4) Polyclinics (Listed in detail below)

	5) Medical Records Module
	6) Laboratory Module
	7) Equipment interfacing in required lab equipment.
	8) Compatibility, integration with Third party reference lab's software to which Hindlabs outsources tests. (optional)
	9) System security Features.
	10) Is Alteration of Lab report possible? New report to be released with addendum without deleting the old report, because both will be needed for NABL records.
	11) Indication of barcode generation time date and place, Fasting / PP), etc. Bar coding to be done for all samples coming from collection centers with specific codes.
	12) Printing for billing
	13) Authentication of report with Digital signature of doctor
	14) Facility to generate report with patient data, Report time, etc.
	15) Different templates for result entry
	16) Age Group wise Normal values
	17) Test wise Item consumption Calculation
	18) Procedure group wise result entry and printing.
	19) Automatic emailing facility
	20) Outside Test Indication and Marking in Lab Result Entry.
	21) Formula Calculation in Lab Result.
	22) Electronic Signature feature in Lab Result Module.
	23) Facility for viewing Bill wise detailed Report
	24) Feature to set Normal and Panic values for Tests.
	25) TAT Management Report
	26) Pending Test report.
	27) Outsourced test pending and test detailed report.
	28) Outsourced test report import option.
	29) Camp patients upload option.
	30) QR Code feature needs to be incorporated in Billing and Report.
	31) Bi-directional machine interfacing with software.
	32) Vacutainer calculation against sample collection.
	33) Department wise test and test wise patient count report.
	34) Emergency patient flagging and TAT management.
	35) Sample rejection and resampling.
	36) HL7 Interface
	37) Multi-Level report validation
	38) Provision to export reports to Pdf.
<b>2.2</b>	
<b>2.2.1</b>	Investigation Master with complete parameter addressed

<b>2.2.2</b>	Customer Master
<b>2.2.3</b>	Consultant Master
<b>2.2.4</b>	Reference Doctor/Marketing Executive Master
<b>2.2.5</b>	Material Master
<b>2.2.6</b>	Pharma item Master
<b>2.2.7</b>	Sample Master
<b>2.2.8</b>	Test Limits Master
<b>2.2.9</b>	Health Camp (Bulk Data) Master
<b>2.2.10</b>	Department Master
<b>2.2.11</b>	Medical Records Module
<b>2.2.12</b>	Scheme Master
<b>2.3.</b>	<u>Patient registration</u>
<b>2.3.1</b>	Individual Registration to be possible taking into account all details and to give user ID and Password (Preferably Patient's mobile Number).
<b>2.3.2</b>	Bulk upload of (1) Health package schemes from Institutes & (2) outsourcing Institutions possible at client end
<b>2.3.3</b>	Registration at Collection Centers shall get reflected at Main Centre
<b>2.3.4</b>	Bar Code generation at registration which shall be active for 3 years during which traceability of patient is needed
<b>2.3.5</b>	Registration at any one of the Main Lab/satellite lab/collection Centre shall give access to the other Centers.
<b>2.3.6</b>	Schemes (with logic) defined as Master data shall be captured at the time of registration.
<b>2.3.7</b>	Age & contact Number of patients to be made mandatory at Registration.
<b>2.3.8</b>	Registration information shall support finance aspects and pass it to finance Module reports
<b>2.3.9</b>	The registered patients while booking for follow-up shall have a dependency on the availability of the original consultant Doctor. For this the doctor's duty schedule and appointment issue shall have a link which shall be updated based on doctor's availability.
<b>2.3.10</b>	There shall be an option for the patient to choose a Consultant different from the initially registered one if required.
<b>2.3.11</b>	The patient/patients registered will make the payment and go to the next step. In the case of a health package, individual payment or credit facility to be available.
<b>2.3.12</b>	Patient Registration shall capture reference Doctor's data (for computing doctor wise business) and consultant data
<b>2.3.13</b>	Shall accommodate card payment /UPI/wallet and other existing payment methods
<b>2.3.14</b>	Online booking for registration.
<b>2.3.15</b>	SMS & E-mail alert facility required when the investigation report is ready.
<b>2.3.16</b>	Facility to upload investigation report in Hindlabs Website accessible to patients using a user ID & Password

<b>2.3.17</b>	Facility to download investigation reports through mobile application to patients using user ID & Password in their handheld device.
<b>2.3.18</b>	Provision for database search with Name, Surname, Card no., Cell no. etc.
<b>2.4</b>	<u>Routing</u>
<b>2.4.1</b>	Poly Clinic Consultation
	1) Consultants Examination & clinical observation recording in the system
	2) Data entry against a format (fixed Master as well as a text field for examination details
	3) Patient previous history capture, prescription, suggested any solution for patient.
	4) Consultant will direct the patient (through system) to the Diagnostic Labs or Imaging Labs
	5) In case of Institute Health Package, the group in the package shall be scheduled for Appointment & investigations (divided into date wise groups and assigned (By registration counter staff/ Centre- in charge) timewise to doctors on duty in the Clinic.
	6) Patient will be directed to any one or none/ all of the following
	i) Sample collection room. The data (parameter list) for testing will be sent through system
	ii) CT Lab [via PROCEDURE ROOM]
	iii) MRI Lab [via PROCEDURE ROOM]
	iv) ECG or TMT room [via PROCEDURE ROOM]
	v) US scan room
	vi) X-ray room [via PROCEDURE ROOM]
	vii) Pharma retail outlet
	ix) ECHO
	x) Endoscopy
<b>2.4.2</b>	With/without external prescription – Direct to Diagnostic Lab
	1) After Registration, the patient can go directly to any one or all of the Diagnostic Modules. Upon consultation, entry of the required investigations and /or medicines by the consultant shall be possible in the software based on which patient can make payments at the registration counter. The requirements are also to be conveyed to the concerned lab and/or pharma retail outlet through the system tracking the same using bar code of the patient's identity.
	2) Laboratory (either one or all of Biochemistry Lab/Hematology Lab/ Histopathology/ Immunodiagnostic / Microbiology)
	3) Data capturing by interfacing (Uni & Bidirectional) with equipment in the case of automated investigations.
	4) Manual entry of results also to be permitted in non-interfaced equipment.
	5) Entry in the case of triplicate estimation to be allowed per parameter and the statistical computation to be performed by the system.
	6) Retest to be allowed only upon approval by second level authorized person and the details to be captured by the system



	7) Value authenticated by doctor / authorized person only shall be captured in the investigation report output (Result).
	8) Sub Department required for the capturing of consumption of lab reagents or materials
	9) UOM conversion factor to be applied wherever required.
	10) Provision for mentioning Ranges for different age groups/genders as required in Lab report
	11) Provision for Modification / Retention of ranges after change of reagent
	12) Provision for Critical values alerts & Absurd value detection.
	13) Details of hardware/bandwidth/security Requirement and software if any, which needs to be provided by HLL for Installing and running the system at main lab and Collection centers.
	14) Is the HIS compatible with the latest operating systems?
	15) Specify whether the software has to be loaded at computers in each location or the connectivity is through the web to the main server.
	16) Department wise data capturing required
	17) Equipment interfacing (both unidirectional & Bidirectional) required.
	18) Test wise reagent consumption with quality and calibration test wise reagent consumption is to be captured.
	19) At month end unused consumables need to be carried over to next Month.
	20) CT Scanning Lab
	21) MRI Lab
	22) ECG/TMT
	23) X ray Lab
	24) The patient will be directed to go & wait for report / given a date of reporting (which is available online also
<b>2.4.3</b>	<b>Samples from Collection Centre</b>
	1) The receipt of all samples (of the samples registered at Collection Centre) ensured & system generated bar code against which test assignment, report printing & follow up shall be assigned (shall be made available in e-mail address of patient).
	2) The routing of samples after routing shall be as mentioned in B (2).
<b>2.4.4</b>	<b>Satellite labs (located remote)</b>
	1) Patient registration – Procedure as per 1.0. but from Satellite Lab location all data shall get reflected at Main Lab and respective Investigation reports shall be generated anywhere in the network
	2) Sampling: Same as B (2)
	3) Testing and remaining procedures: Same as Main Lab
	4) Test result Report shall be reflected in all outlets. Check point - the report generation happens only if payment is completed (in Non-credit schemes)
	5) Financial & Business reports of all transactions required at corporate level & main lab
<b>2.4.5</b>	<b>Private Hospitals/Labs (Outsourcing Units)</b>



	1) Registration: as in 1.0.. (Bulk upload also required)
	2) Sampling: Same as B (2)
	3) Test Result Reporting: Same as D (3).
	4) Business report consolidating Hospital or Outsourcing unit wise financial data shall be captured and given as output
<b>2.4.6</b>	<b>Retail Pharma /Dispensary</b>
	1) Goods Receipt through system
	2) Billing needed (either separately or as a joint billing with the remaining departments) as Credit and cash methods and health package schemes.
	3) Inventory maintenance
	4) Suppliers return option.
	5) Sales return option.
	6) Shall have a facility to track goods nearing expiry or short expiry.
	7) Capturing of Financial data or transactions required locally & at Corporate.
	8) Reports for all transactions required.
	9) Indent of goods needed through software.
<b>2.4.7</b>	<b>Material Store Module</b>
	1) Shall have functionality in the main Lab, Satellite Lab, Collection Centers, Procedure room & sample collection room.
	2) All Laboratories shall have sub-store module
	3) Machine-wise consumption capturing and Test wise consumption capturing shall be possible.
	4) In the case of partially consumed re-agents' system shall allow carry over to the next month (Test KITs)
	5) Shall have a facility to track goods nearing expiry.
<b>2.4.8</b>	<b>Finance Module</b>
	Shall cover Main Centre, Satellite Lab, Collection Centre, Outsourcing and Outsourced units and Pharma retail
<b>2.4.9</b>	<b>Reports:</b>
	1) Sales register with all taxation details
	2) Purchase register
	3) Cash purchase register.
	4) Registration Register.
	5) Stock transfer register
	6) Pending Indents
	7) Day to day hand over of collection reports
	8) Shift hand over reports (sales closing and cash handover)
	9) Stock report
	10) Stock expiry details

	11) Discount given reports
	12) Statutory reports required by the state and central governments
	13) Report on pending result reporting
	14) Daily sales report with gross margin generated for the day
	15) Stock flow statements
	16) Scheduling of physical verification
	17) Business reports (Collection Centre wise & Outsourcing & Hospital wise & Satellite lab wise & Consultant wise & Marketing Executive wise & Referring Doctor wise reports required)
	18) Test wise cost report
	19) Advance collected (Patient wise/Institution wise)
	20) Margin Report
	21) Inventory ageing report
	22) VAT report
	23) Open Transaction report
	24) Business report to capture quantity of business canvassed by various institutes/Marketing person/Consultant Doctor.
	25) Consultant's payment billing option based on hours of duty or number of patients attended is required.
	26) Provision of Work list from Collection centers department wise
	27) Information of Pending Reports and Pending report detail center wise/department wise
	28) SAP interface for required data needed for decision making process
	29) Reports of tests- patient wise, date wise etc.
	30) Calculation of amount payable to Outsourced lab
	31) All investigation results in the report specific format required.
<b>3</b>	<b><u>RIS (Radiology Information System)</u></b>
<b>3.1</b>	<b>Schedule Appointment - Convert appointment to Registration</b>
	- In case, of HMIS integrated product, patient details required for registration shall fetch to HMIS along with doctor prescription.
	- Patient registration shall be taken along with the UID on RIS.
	- In case of Walk-inpatient, the patient details need to be entered as per the following:
	- Cash, Credit, Cash + Credit, Partial Scheme based payments, Hospital Client based discount /credit-based billing
	- Patient list management and patient tracking
	- Access to prior images to enhance patient care
	- Report fetching to HMIS in case if the PACS is not standalone.
	- Automated result distribution to referring physicians to save time and increase efficiency
<b>3.2</b>	<b>RIS to Console Server Interface</b>

	The system shall interface with console machine automatically and transfer requisite data for console for scanning
<b>3.3</b>	<b>Radiology Department and PACS workflow management</b>
	- Open & display all medical images, produced by medical equipment: CT, MRI, US, XA, RX, PET-CT, SPECT-CT etc.
	- Inhouse radiologist viewer and reporting module
	- Desktop application for installation on PCs, laptops, and tablets running Windows & MAC systems.
	- Windows 7/8/8.1/10/11 and Mac OS X 10.9+ or above supported
	- No additional dependencies (.NET, Java, etc.)
	- Lightweight application with 32- and 64-bit versions compatibility.
	- Advanced memory management system that facilitates the concurrent opening of studies that contain thousands of images
	- HIPAA-compliant and FDA 510(k) cleared medical imaging management solutions
	- Document and report viewer
	- Feature-rich diagnostic tools
	- Open ZIP archives (unencrypted/encrypted) with DICOM files
	- Search and download DICOM studies (or selected series) from PACS locations (servers, workstations, cloud, modalities etc.)
	- Accept and display studies pushed from other PACS locations
	- Import DICOM studies from CD/DVD/Blu-ray discs, local and network folders, USB drives and PACS locations
	- Export list of studies to CSV file
	- Export DICOM files in original format and to JPEG/BMP images, MP4/WMV/AVI movies.
	- All Basic Tools which includes Perform fluid zooming, panning, brightness and contrast (window level/window width), Negative mode
	- Fluid zooming, rotating, panning and scrolling in large series
	- Rotate (90 CW, 90 CCW, 180) and Flip (horizontal, vertical) features
	- Apply image filters (sharpen, smooth, edge, emboss)
	- Display dynamic series/sequences (CINE) with option to adjust frames per second
	- Display DICOM overlays (annotations or graphic overlays included in the file)
	- Display DICOM file structure with searchable DICOM tags, their descriptions and values
	- Measurement of area and perimeter of a closed polygon, open polygon length, angle value, Cobb angle value, deviation distance etc.
	- Arrow and pencil tool for annotations
	- Support multi-monitors configuration, including high resolution medical grade monitors
	- Auto Query & Retrieve studies from any DICOM compatible software / server

	<ul style="list-style-type: none"> <li>- A complete set of Region-Of-Interests tools are available to measure angles, surfaces, distances, densities, SUV, Cobb angle, volumes etc.</li> <li>- Create DICOM compliant screen captures</li> <li>- 4D support for Cardiac-CT &amp; Cardiac-MR</li> <li>- Image tracking and available on entire HIMS Intranet network</li> <li>- Stores images obtained from RIS imaging devices and any other relevant patient information on the database.</li> <li>- Database and files management</li> <li>- DICOM based automatic order generation</li> <li>- Single-click radiologist's worklist management</li> <li>- Advanced diagnostic image/information routing engine.</li> <li>- Integrated Nuance Dragon Speech Recognition/ Top Voice recognition Software available in market.</li> <li>- Voice-driven report generation via templates</li> </ul>
<b>3.4</b>	<b>Inventory management</b>
	Centralized inventory control
	<b>Sharing</b> – Enables distribution of medical images and patient data. Collaboration between physicians is facilitated by enabling access to documents to anyone within the computer network when RIS is integrated with a local software solution, or to anyone with internet access when RIS is integrated with a cloud-based solution such as Post DICOM.
	<b>Patient Management</b> – Significantly facilitates patient management as processes such as patient registration and scheduling are digitized. The amount of time needed for patient registration and organizing schedules is greatly reduced by eliminating the need for paper-based documentation. Booking appointments is made much simpler and much less time-consuming.
	<b>Patient Tracking</b> – Keeping track of the patient’s treatment through the system is made available. The patient’s complete medical history can be accessed, and the patient’s information can be checked for any updates throughout the diagnostic process by logging into the system whenever is necessary. As a result, workflow management is greatly improved.
	<b>Interactive Documents</b> – RIS systems enable the creation of interactive documents which enhances communication between physicians and facilitates diagnosis.
	<b>Results Entry and Distribution</b> – Results are reported digitally but functions for paper-based exporting are included. Medical reports can be swiftly and easily emailed or faxed. The RIS system can create statistical reports for specific procedures, individual patients, or patient groups.
	<b>Procedure Billing</b> – The system can store financial records, process electronic payments, and automate billing.

	<p><b>Resource Management</b> – The management of materials is facilitated as information on supply requirements is readily accessible and organized for a more efficient way of managing the budget allocated for supply demand.</p>
3.5	<p><b>Common Process Flow:</b> Patients should get registered for the test. For our patients the bill amount should be collected, and the Order Number should be generated. For In Patients payments are not necessary during that time. The service amount should be accumulated against the In-Patient Registration number.</p>
3.6	<p><b>Project Process flow:</b> Patients with Test Requisition form (TRF) can walk into the Hindlabs Scan center and register themselves and schedule the appointment. Usually there will be Cash, Cash + Credit, Credit based billing followed based on the project/ center.</p>
	<p>With the Order number the patient goes to the Radiology Department /Scan area and to the particular lab where the test has to be done, where a registration is done for that test which generates a registration number. Registration Number should keep track of the patient’s request status. A very few users, who have the authorization for that, should be able to do the cancellation of the test requisition. After the patient gets registered, the patient will proceed to the respective room (facility) to avail the services.</p>
3.7	<p><b>Result Entry for hospital type:</b> After taking the radiology test, the in-house radiologist will enter the report of the test. The system shall enable the concerned authority to verify the result before generating the report. However, even before the report is generated by the radiologist, the unreported image should be available for viewing at any terminal by the physician, for rapid patient service. By default, films shall not be provided to the patient, until specifically asked for by the treating physician.</p>
3.8	<p><b>Result Entry through teleradiology:</b> After taking the radiology test, all the images will be transferred to the local server through LAN, Once the image receives the same shall upload to the PACS for teleporting. Once a remote radiologist signs off the report, the same will be synched back to the local server and the authorized personnel at the scan center will take printout and provide it to patients along with film.</p>
4	<p><b><u>PACS (Picture Archiving and Communication System)</u></b></p> <p>The Picture Archiving and Communications System (PACS) is intended to set up a film-less system in Hospital Block for performing radiology services within the institution. Anticipated benefits of implementation of the system include significant reduction in the costs associated with film and its processing, handling, and storage, improved operational efficiency and enhanced patient care within the hospital. The function of the PACS is to acquire, distribute, display and archive imaging data and related information used by the institution. This data will be incorporated into and stored in the PACS at the full contrast and spatial resolution originally obtained by the acquisition devices. Access to the data will be limited to the authorized person. The system shall be interfaced to HMIS to support display of HMIS diagnostic reports alongside medical images on user-friendly, high performance, applications-oriented workstations, and automated image management and distribution. The PACS image storage and management subsystem must allow the rules for image management to be determined by the customer.</p>

4.1	<b>System and Technical Requirements for PACS</b>
	The system shall be web-enabled
	The system shall be able to seamlessly handle inbound and outbound HL7 messages and HIPAA from any system that has similar capabilities
	The system should store all data within 5 second of request
	The system should populate and should make the pre-set/pre-formatted reports/data within 5 second of request
	The system should allow all DICOM digital images to be available for viewing and manipulation within 5 seconds of request
	PACS for radiology and radiotherapy should be integrated and DICOM enabled
	PACS images should be 3D accessible through the internet for tele reporting purpose with ZFP Viewer.
	Unlimited licenses should be provided – we can add the no of users as per the requirement of hospital in future without any financial implication
	The system should be enabled for teleradiology (PACS server should have static IP)
	System should be truly web based and it should be compatible with all web-browsers and mobile applications for viewing and tele reporting as well.
	Any image can be seen anywhere within a hospital through Intranet & Internet.
	The system uptime will be 100% in critical areas & 98% in non-critical areas
	Fully integrated RIS and PACS.
	Easily Deployable with simple web-based and modern interface.
	Multimodality connectivity, advanced work list, image processing tools - Archiving, Reports.
	Teleradiology module allowing access of images remotely with all tools using low internet bandwidth.
	CD /DVD writing support with embedded DICOM viewer - Advanced and Intelligent worklist.
	Stat reads highlighted and automatically take priority.
	Search criteria on various parameters like Patient ID, Name, Accession No, Date Hospital Name, AE TITLE, Referring Physicians etc. - Auto refresh and Page size settings.
	The application should have Streaming technology for facilitating faster viewing of the images over the net (for PACS)
	Web based image viewer operated directly from the browser.
	Compressed image support for faster downloads.
	Prefetch option to download priors automatically reducing waiting time for the radiologists.
	Ability to load different studies, side by side for comparison.
	Multiple monitor support allowing the radiologist to review images, Worklist and reports together.



	PACS Solution should be Truly web based with all features like CD/DVD Writing, Film printing, Image viewer and Reporting module available through browser from any station. No installable software should be required to use these functions from any station.
	It should be possible to import images from external CDs/DVD directly into the system without any external software/workstation.
	PACS Solution should support image viewing from handheld devices
	Report text search engine should be available
	Should support DICOM MWL integration with all modalities.
	Roaming profile – user definable settings
	Should be possible to edit the DICOM information of images
	It should be possible to create an image library of interesting cases with keywords - It should support scanning of documents and attach as DICOM files - IT dashboard should be available.
	The system should be able to take voice response while processing diagnostics reports and convert the same into word format.
	The PACS software should be advanced and technically capable for image capturing of various digital imaging modalities like Digital X-ray (CR or DR), Mammographic images, Angiographic procedure data, Ultrasound, CT Scanners, MRI Scanners, Gamma cameras, SPECT & PET Scanners, etc. In case of non-digital/analog locations conversion of JPEG to DICOM protocols is necessary. Documentation such as prior requests, lab reports, requisition, etc. be digitized and converted to DICOM, so they are available to the Radiologists along with the image reading.
	All images from the current study as well as any relevant prior examination to be made available to the reading radiologist at the shortest possible time. The DICOM view should provide Advanced features like MPR, 3D reconstruction, volume rendering, etc. and can be integrated with CAD/AI tools.
<b>5</b>	<b><u>TELERADIOLOGY</u></b>
<b>5.1</b>	<b>AI - Powered Teleradiology Solutions</b>
	Teleradiology is the transmission of radiological patient images, such as x-rays and cross-sectional scans (CTs, and MRIs), from one location to another for the purposes of sharing studies with other radiologists and physicians.
	Teleradiology is a very viable and useful telemedicine method today as a radiologist does not need to physically see the patient to give an accurate diagnosis. The relevant scans and basic patient details & history are sufficient for a radiologist to understand a case and give his consultation. This property of the subject inherently allows radiologists to be in remote locations. Given that imaging procedures are growing approximately 15% annually against an increase of only 2% in the radiologist population, Teleradiology is a growth technology.



Artificial intelligence (AI) algorithms, particularly deep learning, have demonstrated remarkable progress in image-recognition tasks. Methods ranging from convolutional neural networks to variational autoencoders have found myriad applications in the medical image analysis field, propelling it forward at a rapid pace. Historically, in radiology practice, trained physicians visually assessed medical images for the detection, characterization and monitoring of diseases. AI methods excel at automatically recognizing complex patterns in imaging data and providing quantitative, rather than qualitative, assessments of radiographic characteristics. A seamlessly integrated AI component within the imaging workflow would increase efficiency, reduce errors and achieve objectives with minimal manual input by providing trained radiologists with pre-screened images and identified features.

## 5.2 System Specification

The Teleradiology software should be advanced and technically capable for image capturing various digital imaging modalities like Digital X-ray (CR or DR), Mammographic data, Angiographic procedure data, Ultrasound, CT Scanners, MRI Scanners, Gamma cameras, SPECT & PET Scanners, etc. which are forwarded to Digital PACS systems. In the case of non-digital / analog locations conversion of JPEG to DICOM protocols is needed. Documentation such as prior requests, lab reports, requisition, etc. be digitized and converted to DICOM, so they are available to the Radiologists along with the image reading. All images from the current study as well as any relevant prior examination to be made available to the reading radiologist at the shortest possible time. The DICOM viewer should provide Advanced features like MPR, 3D/4D image reconstruction, volume rendering, etc. and can be integrated with CAD/AI tools.

Advanced Teleradiology Viewing and Reporting Capabilities: Teleradiology software should be designed with Advanced Rich Internet Application which can be accessed just on any browser (No client-side installation required). Flexible, HIPAA-compliant report delivery options, including secure Email, FAX, HL-7, and DICOM. Automated in-bound FAX workflow for attachments, Customized reports with facility logos, Automated referring physician report notification as needed, Monthly, Quarterly, or Yearly QA reporting facility. Monthly turnaround time (TAT) reporting facility. Advanced critical finding and stroke protocol workflows. Advanced Artificial Intelligence (AI) throughout the reporting process to increase Radiologist efficiency and accuracy. The Teleradiology software should be FDA approved.

Security and Disaster management: Teleradiology software should be incorporated with an advanced level of security that falls under the HIPAA complaint framework. Teleradiology software should be enabled on a 128-bit SSL security for the data transmission over the internet / intranet. Teleradiology software should be an FDA certified system. Advanced HIPAA-compliant IT infrastructure which has more than 99.8% uptime with 24/7/365 IT support. Need Advanced Security keys for locking all patient data.

	<p>Teleradiology software should be based on DICOM 3.0 &amp; HL-7 standards and encompass the advanced IHE profiles like WADO (Web Access to DICOM object). Should provide Fast image transfer over the internet for anywhere, anytime diagnostics, should support multi-hospital connectivity</p> <p>Platform Features: Advanced, reliable HIPAA compliant IT infrastructure. Rapid study transmission and Report generation. The Platform can be accessed on any browser, no client-side installation needed. Teleradiology software should allow simultaneous access to images from multiple diagnostic and investigation systems</p> <p>It should support Filmless diagnosis across multiple locations including remote radiology consultation across the world.</p> <p>The required PACS-cum-Teleradiology platform, on the cloud and as specified by the detailed specification that is to follow. The platform, which is to be AI-powered and mobile access enabled, must conform to the following standards: DICOM, HL7, FHIR</p> <p>The platform will consist of the following components:</p> <ul style="list-style-type: none"> <li>- Remote DICOM component to integrate with machines</li> <li>- DICOM receiver, storage and retrieval component</li> <li>- DICOM image viewer component</li> <li>- Radiology reporting module</li> <li>- Mobile App access component</li> </ul>
<b>5.3</b>	<p>The technical specification of each component / module is further as below:</p> <ul style="list-style-type: none"> <li>- Remote DICOM component to integrate with machines</li> <li>- Fast error free and transparent compression (&gt;2x) of image data on disk with NKI private, JPEG or JPEG2000 compression.</li> <li>- A database browser and slice viewer integrated in the PACS system with options for: viewing DICOM header, creating BMP files (ideal for slides), sending selected images, printing, database fix tools such as changing patient IDs, deleting and anonymizing studies and series, and splitting and merging series.</li> <li>- Ability to Use drag and drop to load ZIP, DICOM and HL7 files.</li> <li>- A simple query/move user interface for diagnostic purposes, to improve your knowledge of DICOM, and to grab missing data from another server.</li> <li>- Elementary DICOM print server and client - prints to the default printer.</li> <li>- JPEG, JPEG2000 compression and decompression and RLE decompression supported.</li> <li>- Flexible configuration of JPEG and NKI private compression with optional (de)compression of incoming, dropped, transmitted and archived files.</li> <li>- A simple DICOM Modality Worklist implementation with HL7 import with configurable translation. -</li> <li>- A CGI WEB interface with several possible viewers (also on the Linux version which does not have a GUI).</li> <li>- The server can act as an advanced (Lua) scriptable DICOM image forwarder, processor and/or DICOM image cache.</li> </ul>

	- The server integrates a small web client that also acts as a viewer.
	- The server and its web server operation can be scripted in Lua for any type of processing and extension.
<b>5.4</b>	<b>DICOM Receiver Component</b> -This component should be DICOM and HL7 compliant and can be deployed on several different operating system platforms:
	i) Microsoft Windows
	ii) Various Linux brands
	iii) Apple OSX
	The DICOM Receiver uses a database to store information from the DICOM headers, index information for locating objects on the file system, and other pertinent system and clinical data. It must comply with supporting the following Databases (PostgreSQL/MySQL/SQL/Server/DB2/Firebird)
	- PACS entHMISrise Web - DICOM image server
	- Modality acquisition
	- DICOM communication
	- Advanced compression engine
	- Unlimited concurrent web licenses
	- SSL configuration (128 Bit)
<b>5.5</b>	HIS –RIS –PACS HL-7 integration (Broker less)
	Seamless integration with any HIS
	HIS clients can directly access images from PACS (PACS-Web)
<b>5.6</b>	PACS Insight 2D Clinical Workstations
	PACS 2D with advanced 2D image manipulation tools
	Template based Reporting Module
<b>5.7</b>	PACS – web based diagnostic viewer
	Any image, Anywhere, anytime
	Advanced Web based diagnostic quality image viewer
	2D image manipulation
	Unlimited user licenses
<b>5.8</b>	PACS Workflow Manager
	Integrated workflow manager
	Rule based image pre-fetching, compression & forwarding.
	PACS Audit logger PACS Task logger
<b>5.9</b>	PACS: Radiology Order Processing
	Registering the order in the radiology department
	General Purpose Worklist
<b>5.10</b>	PACS: Radiology Order Scheduling
	Scheduler for the Radiologist, Technician & Modality
	Scheduling a specific order at a specific time and date

<b>5.11</b>	<b>PACS: Modality Worklist &amp; MPPS update</b>
	Modality Worklist for the technician
	Automatic update of the status of the ordered procedure
<b>5.12</b>	<b>PACS: MIS Reports module</b>
	Comprehensive statistical reports for user configurable parameters
<b>5.13</b>	<b>General Requirement for teleradiology</b>
	System administration via WEB interface;
	User identification by username and password, user rights;
	Ability to save image viewing settings;
	Secure data transfer (SSL support);
	Ability to open more than one study at a time:
	Zoom in or out;
	Image inversion and rotation;
	Control over uploading cases from client location (Under One PID, there should be one part, if multiple parts are uploading, the same shall reflect on radiologist and hospital invoice).
	Intensity (density of the point) measurement;
	Changing the Level/Window values;
	Image zooming;
	Distance & Angle measurement;
	Tools for localization of the images in intersecting planes.
	Possibility to view ophthalmic images from retinal devices such as retinal/fundus cameras, etc. allowing the use of ophthalmology PACS server as a retinal imaging archive. For retinal imaging, ophthalmic photography or other visual spectrum images, the DICOM Viewer must have a color channels tool to digitally apply monochromatic filters for the primary colors as well as for the secondary colors to enhance the visual contrast of anatomical details.
	The DICOM Viewer's MPR (multi-planar reconstruction) features must include:
	Orthogonal MPR. 2D multi-planar reconstruction with Axial, Coronal, Sagittal projections;
	Axial MPR. Axial multi-planar reconstruction;
	Coronal MPR. Coronal multi-planar reconstruction;
	Sagittal MPR. Sagittal multi – planar reconstruction;
	Features of 2D. Window leveling, pan, zoom, measurements, scroll, crosshair, etc. (except image flip/rotate);
	Cine. Users can cine through a batch of MIP/MPR images for quick review of anatomy within a user-defined range.
	In addition, the DICOM viewer must be FDA compliant, and must be completely 0-footprint enabled, i.e., the DICOM viewer need not have any local installations in order to function effectively. It must open on any browser.
<b>5.14</b>	<b>Radiology Reporting Module:</b>

	The Radiology reporting module must have the following technical specifications:
	Standard reporting format to be made available for every type of Radiology case
	Ability for reporting module to generate reports in .docx, .pdf and .json, apart from being able to transmit report in HL7 format if required
	Ability to generate impression on the top of the report or the bottom depending on user choice
	Minimal report selection, i.e., the correct report format must be available to the radiologist prior to him/her starting reporting
	Reporting editor must have all basic editing features – Bold, italics, underlining, bullet points, numbering etc.
	Reporting editor must have capability to appear on the reporting screen so that Radiologist time is not spent toggling tabs
	Reporting editor must be Voice-to-text enabled.
	Reporting and viewing module must allow for key images along with annotations to be inserted as a part of the report to improve physician understanding of the report
	Mobile access component.
	All functionalities of the platform that are available on the web should be reflected on the mobile app for easy access. Mobile apps should be available on both apple and android app stores.
<b>5.15</b>	<b>AI components</b>
	It is expected that the platform has the ability to generate preliminary AI results for the most common type of scans – X Rays, CT, MRI scans. The AI component must pre-fill AI reports for the Radiologists, to refer
	The system shall enable HLL to interface third party AI solutions with existing Teleradiology Reporting solution
	Overall, the particular requirements of the SOFTWARE solution are as follows:
	Single integrated SOFTWARE module
	Multi-Nodal support and customizability for each location
	Easy consolidation and segregation of data from each node.
	Active directory interface for structured operations
	Intelligent distribution of incoming scans based on load handled by individual radiologists
	Compatibility through web interface or otherwise, with all systems
	Single One-Time implementation effort and thereon dynamic expandability
	Ability to store DICOM and non-DICOM images
	Single window, or multi-window multi session capability
<b>5.16</b>	The software should provide better informed diagnosis with current and stored image comparisons
<b>5.17</b>	The solution shall strictly adhere to the data privacy terms and conditions followed by HLL.
<b>5.18</b>	Capable for integration with HIS/RIS
<b>5.19</b>	Capable of import studies from CD, USB, etc.

5.2	Export images to CD/USB, etc. option available
5.21	Should be able to generate custom reports and statics like: -
5.22	Daily, Weekly, and Monthly Studies performed
5.23	Unreported and unassigned Studies
5.24	Storage Utilization
5.25	Turnaround time calculators on both uploading and reporting modules.
5.26	Radiologist reporting statistics by modality and procedure
5.27	Technologist statistics
5.28	Advanced Dashboard
5.29	Performance and KPI dashboards
5.3	Advanced functions like MPR, 3D / 4D, image reconstruction, volume rendering, etc. should be available.
5.31	<b>Onboarding Clinics, Hospital or Imaging Center for Teleradiology</b>
	In case of the onboarding process of a new client into HLL panel, the system should be as quick and simple and incur less than 1 hour to configure the entire package on client location. Ideally the process flow will start with the implementation team connecting with the imaging unit and accessing the local area network using a team viewer and installing a gateway app. Following this, the center can share images for teleradiology.
	A small video presentation tutorial for the client to understand the process flow about the methodology to upload history and clinical documentation shall be made available on the system window itself.
5.32	<b>Invoicing</b>
	Radiologist wise invoice - Monthly, Fortnight
	Hospital Wise invoice - Monthly, Fortnight
6	<b><u>TELEMEDICINE</u></b>
	<b><u>Functional Requirement Specifications</u></b>
	- The tele medicine solution should be a self-sufficient system capable of acquisition, storage, display and transmission (over a communication link) of patient information including but not limited to registration, consultation/diagnosis, results, prescription details etc. This shall be a hybrid model which supports store-and-forward and real-time based telemedicine consultation creating a complete technological base of all types of services / modalities.
	- The telemedicine solution should be able to maintain EMR data based on "Electronic Health Record (EHR) Standards for India" guidelines by Ministry of Health & Family Welfare
	- The solution should be able to maintain and store information including but not limited to patient registration, consultation/diagnosis, results, prescription details etc. based on the Minimum Data Set (MDS) recommended for an EMR under "Electronic Health Record Standards for India" guidelines by the Ministry of Health & Family Welfare. Here,



	Minimum Data Set refers to “The minimum set of data elements that must be captured, stored, made available for retrieval, presentation, relay and sharing by an EHR system.”
	- There should be a provision to maintain data using unique identifiers for lead hospital, PHCs, lead doctors, PHC level health worker/operator/doctor etc.
	- The tele medicine solution should provide for a software-based video conferencing/video chat feature to enable live video sessions between the doctor and the patient.
	- Provision at PHC level for choosing/selecting a doctor from the available master list of lead doctors for Tele-consultation.
	- The telemedicine solution should support using 'Unique Health Identifier' (complying with "Electronic Health Record Standards for India" guidelines by Ministry of Health & Family Welfare) as a patient id to uniquely identify the patient across the service delivery points.
	- Patient queuing features should be available.
	- The doctor at the lead hospital should be able to feed in information in the telemedicine system related to consultation/diagnosis, prescription note etc. ((based on “Electronic Health Record Standards for India" guidelines by Ministry of Health & Family Welfare) details of which may include but are not limited to medication name, drug dose, strength, frequency and duration for which the dosage needs to be taken etc. Similarly, information on follows up visits or referrals details may also be fed into the system.
	- The e-prescription should include details which shall include but not limited to patient details, lead doctor details, telemedicine consultation note along with date timestamp, medication and prescription details including drugs, dosage etc. complying with standard guidelines as applicable
	- The lead doctor should be able to confirm and authorize the e-prescription through digital signature Once authorized and submitted by the lead doctor, the e-prescription should be available for view and print at both ends i.e. at the lead doctor and at the PHC level
	- The doctor at lead hospital should be able to view the list of all patients referred to him/her along with the patient data records, upon login and their status
	- The telemedicine solution should be able to track the status of the patient right from registration till the final consultation by the lead doctor
	- Medical record history for patients with multiple visits at the PHC - Functionality to view health/clinical records summary along with date timestamp in a chronological order from the very first visit till recent consultation
	- The solution should provide high resolution visible light images for patient education and medical records It should be possible to view the images in real time or save them for later review or consultation
	- The medical images produced (if any) by the medical devices should be DICOM compatible

	- The solution should be able to ensure that data exchange is performed in a secure manner to ensure data validity and non-repudiability
	- Modification/Alteration/Deletion of patient clinical data and images should not be allowed post consultation
	- The solution should be able to support privacy, secrecy and audit trail
	- The service provider should ensure data protection and backup for recovery, for the pilot duration i.e., 25 years from the date of go-live
	- The solution should support report generation based on EMR data, downloadable in excel and pdf formats both at lead doctor end and at PHC level
	- The telemedicine solution should easily be integratable with external systems for EMR data exchange complying with standards such as HL7
	- There should be at least 2 free USB ports on the offered solution for connecting additional medical devices in future 24 Scalable Architecture: The telemedicine solution along with telemedicine software should be of open architecture and module-based covering functionality including but not limited to maintaining EMR data, MIS Reports etc., and may be scaled in future to incorporate other functionalities such as SMS communication to patients etc.
	- The service provider should ensure compliance with "Electronic Health Record (EHR) Standards for India" guidelines by Ministry of Health & Family Welfare
	- Service provider should ensure supply of equipment, installation, integration, testing, Commissioning and maintenance/support of fully functional telemedicine system along with the collaborative tools, materials and consumables and services at all sites
	- Responsible for supply, testing, commissioning, test run, operation and maintenance of the telemedicine system, all those things and accessories deemed necessary & explicitly not covered in Bill of quantities (BOQ)
	- Service Provider will be responsible to maintain tele medicine system at PHCs and lead hospital, for a period of 25 years from go-live the make & model of the product supplied by service provider for the project should not come to end of life and end of support in next 5 years from the date of commissioning (OEM Certificate should be submitted by service provider)
	- All Equipment should be covered under comprehensive on-site warranty/ Maintenance for 25 years from go-live by the service provider from the date of commissioning and acceptance of the system
	Service Provider should ensure clear pick up of audio, video and live streaming of telemedicine session between lead doctor and patient at PHC level
	- Service provider should ensure that telemedicine solution should support audio, video and data collaboration at all sites
	- Service provider should ensure work through all firewalls using the Secure HTTP (HTTPS) protocol

	- Service provider should manage Configuration management of telemedicine system through GUI based software utility and using interfaces and maintain information of system history logging functions
	- The service provider should ensure that appropriate class of digital signature certificates for lead doctors are provisioned for, implemented and required support is provided at the sites for smooth operations and validation of e-prescription, complying with standard guidelines issued by Controller of Certifying Authorities (CCA)
	- The service provider should maintain audit logs of the telemedicine system which may include but not limited to parameters such as number of patients administered per hour or per day, video chat/conference session login and logout timestamp, utilization of medical devices per day, lead doctor login and logout time etc. Service provider should ensure these audit logs to be push / pull to central cloud MIS application
	- Service provider should ensure EMR data (complying with EHR guidelines document by MoHFW as mentioned above) to be push/pull to respective State Health Information System (HIS)
	- Service provider should ensure support wire rate throughput for L2, traffic with QoS and Security features for all interfaces
	- Service Provider must observe proper circuit polarity No cables shall be wired with polarity reversal between connectors with respect to either end Special care shall be taken while wiring cables, to ensure that constant polarity is maintained
	- The service provider must provide adequate protection to install equipment against electrical surges
	- The service provider should be responsible for providing connectivity from the terminating point of internet connection at Gram Panchayat to the PHC
	- Service provider should provide cabling of LAN connection at all sites
	- Service provider should provide adequate power backup for minimum 2 hours at the sites
	- Service provider should be responsible for renovating /repairing any electrical work at the sites
	- Training for knowledge transfer to engineers/operators and support personnel will also be the responsibility of the Service provider
	- Service Provider must furnish components, wires, connectors, materials and parts, equipment for the complete installation of the system, in accordance with recommendations of the equipment manufacturer
	- The service provider shall provide on-call support including assistance with operation and maintenance of the system at respective location(s) all free of cost for a period of 25 years from the date of go-live
	- Operators deployed by the service provider at sites will be responsible for operating the entire telemedicine system K48 Patient Safety Norms as per Industry standards and best practices should be followed by the service provider

	- Patient Safety Norms as per Industry standards and best practices should be followed by the service provider.
<b>7</b>	<b><u>INVENTORY</u></b>
	Inventory module deals with the management of Equipment's, Materials, Consumables, and Medicines & Asset items in different centers and multiple centers will be connected through a central warehouse. Requisitions for different items/equipment are sent to this warehouse from different Scan centers and accordingly the warehouse issues items/equipment to various centers or if the stock is below the minimum order level, Warehouse will be raising indent for the same to the corporate purchase department and they generate purchase orders for purchases. This also maintains records of purchases, stock, and supplier list, rate contracts, item/equipment/material master tables etc.
	- The inventory system shall work as a hybrid (Web& Standalone) architecture.
	- Local Server transactions shall proceed even if internet connection is not available.
	- As and when the internet reinstates, all data shall synchronize with the central server and update the web-based purchase system.
	- A regular synchronization trigger time of 15- 20 minutes can be configured in all local servers for updating the data to the central server.
	The following are the common terminologies and process flow which the integrated inventory system works.
<b>7.1</b>	Item Master
<b>7.2</b>	User Master
<b>7.3</b>	Supplier Master
<b>7.4</b>	Manufacturer Master
<b>7.5</b>	Material Requisition Note (MRN)
<b>7.6</b>	MRN Approval by center in charge
<b>7.7</b>	Review of MRN's
<b>7.8</b>	Indents (Purchase Request)
	Indent Number
	Indent Date
	Indent Type
	Created By
	Item Code
	SKU
	Current Stock
	Pending Indent Quantity
	Requested Quantity (Centre in Charge)
	Requested Quantity (WH)
<b>7.9</b>	Stock Transfer
	Stock Transfer Order No

	Stock Transfer Order Date:
	Created By:
	Item Code
	SKU
	Current Stock
	Transferring Center
	Batch No
	Transferring Quantity
<b>7.10</b>	Purchase Order Processing
	PO Processing No
<b>7.11</b>	Purchase order
	Purchase Order No
	Purchase Order Date
	Purchase order Type
	Created By
<b>7.12</b>	Purchase order Approval
<b>7.13</b>	Purchase Order Amendment
<b>7.14</b>	Goods Receipt Note (GRN)
	GRN against Purchase Order
	GRN against Stock Transfer Order
	GRN without Purchase order (Local Purchase)- Stock update against approval as per delegation of power.
	Goods Receipt Note No
	GRN Date
	Created By
	Partial GRN
<b>7.15</b>	Payment Release Note (PRN)
	Once the GRN procedure initiates against generated PO, the vendor payment releasing is the next step. Here the payment can be released as per the user authorizations. It can be either a full payment or partial payment release. The payment approving user will authorize, review, and approve invoices for payment based on signed agreements, contract terms, and purchase orders. The payment authorization user list as per the DOP is as follows;
	First Level Auth. user: Centre in charge.
	Second Level Auth. user: State Inventory Manager.
	Third Level Auth. User: Project Manager.
	Fourth Level Auth. User: Operations Manager.
	Fifth Level Auth. User: State Finance Manager.

	<p>If the Fourth level auth. If the user approves the payment release note, it will be visible to the state finance department for final verification. After the fifth level approval the payment release note needs to be generated (Format will be shared at later stage) and the same with digital signatory will be visible to the central finance department for payment processing. Once the payment is processed the system shall give a provision to the central finance department user to enter the payment acknowledgement on the system. Once it is entered all the users who all are part of the particular PRN generating procedure should get intimated with the details.</p>
<b>7.16</b>	Delegation of power - Multi level approval based on the user for each module (MRN, PI, PO and Local Purchase). A proper release strategy in place with date of start and date of end for a particular user.
<b>7.17</b>	Integration of PRN with SAP system
<b>7.18</b>	Maintains the details of all items, its suppliers and purchase details.
<b>7.19</b>	Option to categorize items in different groups.
<b>7.20</b>	Generate Purchase order linked with warehouse indents.
<b>7.21</b>	Maintain Separate Stock of Central Store & Multiple Sub Stores.
<b>7.22</b>	A particular store can indent items from all other stores.
<b>7.23</b>	Maintain vendor details from whom Items are being purchased.
<b>7.24</b>	The Central Store can acknowledge the return of the purchased item.
<b>7.25</b>	Option to return stock from various center stores that are not required by them back to the Central Store.
<b>7.26</b>	Different stores can issue Items to other Stores, Department.
<b>7.27</b>	Strict Check on the Expiry Date of Medicines & Consumables.
<b>7.28</b>	Items can be issued according to FIFO & LIFO check.
<b>7.29</b>	Maintain Reorder Level of Items and warn accordingly.
<b>7.30</b>	Shall have facility to track goods nearing expiry
<b>7.31</b>	Option to enter Item/Material consumption of items sub department wise.
	The following MIS reports can be generated as part of this module:
	i) Report of all items according to their group.
	ii) Stock in Hand Report (Group & Batch Wise).
	iii) Stock Valuation on Purchase Rate & M.R.P.
	iv) Report on Stock Movement as when & from where Item was issued and to whom it was issued.
	v) Items Expiry list & warning.
	vi) Reorder Level of Items.
	vii) Purchase & Issue Registers.
<b>8</b>	<b><u>General Terms and Condition</u></b>
<b>8.1</b>	HMIS infrastructure shall be provided for all existing projects and upcoming projects. HLL shall be free to use any modules/services/packages as and when required license free.



<b>8.2</b>	The bidder shall understand the initial requirements of HLL and suggest the cloud requirements (In writing) to HLL. To ensure the data ownership and security, HLL will host the entire application on our own cloud premises and will provide limited access to support/Development team for implementation
<b>8.3</b>	The entire HMIS and hardware (Token, OMS) supplied by the vendor shall be provided with 5 years onsite maintenance support. For all Hardware, System Software, Networking, 5 years onsite comprehensive support (labor and parts) will be provided.
<b>8.4</b>	System should run 24x7.
<b>8.5</b>	All the latest hardware and software should be provided with latest Technology, maximum up to six months old. Beyond that it will not be acceptable.
<b>8.6</b>	All the licenses for the software will be provided in the name of the client. HLL can completely customize the package and use/supply the HMIS solution to another hospital with full customization rights.
<b>8.7</b>	The Lead bidder shall provide training to staff recruited by HLL from the source code level and make a team ready for future support, development and implementation within 1 year of first implementation.
<b>8.8</b>	Training for all users as per the requirement of the client hospitals shall be provided by Lead bidder for HMIS Solution for the period of 1 year till the HLL team is ready to take over the implementation charge.
<b>8.9</b>	In case after completion of 1st session of training, if additional session is required for any existing user or new staff joining the organization (KCGMC), then a separate training program shall be organized without any extra charges. This is applicable for one year (duration of the project) or till completion of the project.
<b>8.10</b>	For the entire Application software (HMIS, RIS, PACS, QMS, EMS, LIMS, Telemedicine, Teleradiology) - Up-gradation of the application, new requirement of the user like new report preparation, new patches/bugs up-gradation, new versions etc. to be covered free of cost for 5 years.
<b>8.11</b>	<p><b>Backup Server:</b></p> <p>The Bidder needs to propose backup server configuration for the entire HMIS and Image storage solution after understanding the requirements of HLL. HLL will provide the same to the lead bidder and the bidder shall configure the system in such a way that the Backup server should be able to take-over if the Primary Server fails (in case of server crash, disaster/fire, etc.). As and when the Primary Server becomes live again, it should automatically synchronize with the data on the Secondary Server. This is to avoid users from being stranded without access to patient data at any point of time. The bidder shall ensure the real time mirror backup of the primary server to the Backup/secondary Server. The backup Server should be able to be used as a Primary Archive also.</p>
<b>8.12</b>	In case of collection points/ Franchisee labs synchronization of the offline registered data (through Mobile Application/Web Application) required upon restoration of internet or upon reaching the Lab where internet is available.

<b>8.13</b>	Offline functionality that allows users to keep working in the event that the internet goes down. Once the internet connection is regained, all the data entered is synchronized to the corporate cloud. Eventually real-time Dashboard data also shall get updated.
<b>8.14</b>	Capability to send reports by Email, WhatsApp from HMIS (Lab Module).
<b>8.15</b>	Preprinted Bar-coding facility. Entry of details shall be possible offline, upon scanning this barcode on the site of sample collection, using mobile application of the software.
<b>8.16</b>	An application shall be made available for the users to generate preprinted barcode labels - location wise.
<b>8.17</b>	Real time Dashboard: Web based
	1) The party shall design and develop Administrative Realtime Dashboard which cover all the projects run by HLL-Healthcare services division.
	2) The Administrative dashboard shall provide the system administrator with the ability to manage users. This shall include functionality to add, view, edit, and delete users from the system. In addition, the system shall provide the system administrator with the ability to manage user's roles (add, view, edit, and delete). Once the user roles have been defined, the system administrator shall be able to assign users to a selected role(s). The user roles are defined by permissions and will dictate what level of dashboard the user will view and/or perform tasks on.
	3) The System Configuration shall be managed from databases of all projects. The system shall be able to interface with all available data resources/projects that are required to retrieve, store and display the data according to the respective functional areas.
	4) As per HLL requirement and host on a domain which HLL provides.
	5) The system shall provide users with the ability to visualize data in a Dashboard.
	6) The system shall provide the system administrator with the ability to manage the level of Dashboard visibility for each user (Operator, Manager, System Admin, Public). The dashboard view for each user will be determined by which role each user is assigned.
	7) The system shall be able to interface with future systems and data sources once they are bought online and made available
	8) The administration module shall provide the system administrator the capability to manage user access to any of the projects including the assignment of roles and permissions associated with assigned roles.
	9) The Main dashboard shall enable the restricted users to visit the connected public dashboard of various projects through their login page.
	10) All the public dashboards pertaining to projects shall have public and user restricted views. In case of user restricted view, the in-depth analysis, detailed and administrative report generation shall be made available for both HLL and client.
	11) Each project shall be hosted on a different domain based on the client requirement.
	12) The party shall change the design/pattern/look & feel of the project dashboard as and when required by the client.

<b>8.18</b>	HLL shall have Full rights to rename the entire software package as per the needs and necessity and have full rights to remove the bidder/original software name from the entire software package. HLL have complete rights to display the disclaimers, copyright, word mark, trademark and product warranties.
<b>8.19</b>	HLL holds rights to generate an unlimited number of licenses for the entire HMIS product. The bidder shall not have any rights to restrict the licensing or usage of the product.
<b>8.20</b>	<b>Software Interfaces</b>
	i) The HMIS shall communicate with SAP systems.
	ii) The HMIS shall communicate with third party dashboards/software through API for restricted and secure data transfer.
	iii) The HMIS shall communicate with Ayushman Bharat Digital Mission (ABDM) or related platform to integrate for UID.
	iv) The HMIS shall communicate with Verisign, Razor pays like software which shall allow the users to complete secured transactions. This usually shall be the third-party software system which is widely used for internet transaction.
<b>8.21</b>	<b>Disaster Recovery</b>
	i) The cloud provider should enable an alternate DB as part of DR alternative
	ii) There should be a mock drill conducted every quarter at least as part of validation check of the DR system
	iii) The DR should enable the link and data within maximum 2 to 5 minutes duration without any loss of data to the last minute of stop of operation
	iv) Stop gap analysis should be done periodically and graph and reports submitted for retention and documentation
	v) The DR should have the same operation capacity of that of the original DB
<b>9</b>	<b><u>QMS (Queue Management System)</u></b>
<b>9.1</b>	<b>System Process Flow</b>
	Queue Management System essentially comprises Token Dispenser Unit with touch screen, Master Display (LED TVs), Computer desktops (each with a different client operator software) installed at the registration counter connected through LAN, Counter Display, and Server with Manager Console server software.
	The location of these would, however, depend upon the OPD setup for the hospital/Diagnostic/Polyclinic center.
	The visiting patients could be categorized as – General, Ladies, Hospital Staff, Senior Citizens/Handicapped.
	Complete infrastructure for Queue Management System for all the OPD and Doctor/Consultant’s rooms in the entire hospital/Diagnostic/Polyclinic center to be provided and this is to be linked with the Hospital Management Information System through Appointment module. All the customization and integration shall be done in the Application Software of the QMS as per the requirement of the HLL as per the hospital patient management structure.

<b>9.2</b>	<b>Functional and Technical Requirements</b>
	<p>Queue Management System shall be required for the OPD for waiting of the patient at OPD area and further required in each Consultant’s room for waiting of the doctor/consultant in the hospital/Polyclinic.</p> <p>Technology should be the latest for all the equipment.</p> <p>QMS shall also be linked with the OPD/Registration appointment module of the HMIS to cater all the patients who have already taken the appointment (online through web-portal, Telephone, walk-in etc.) for a particular consultant and visit to the OPD.</p> <p>The QMS system will be used for both visiting patients and those who have taken the prior appointment.</p>
<b>9.3</b>	<b>Technical Requirements</b>
<b>9.3.1</b>	<b><u>System - Based on Controller/Server with latest technology</u></b>
	<p>The system should have capability of integrating with the HMIS application.</p> <p>Ability to invoke an idle counter by calling the next customer on the counter through administrator access.</p> <p>Ability to service a customer out of turn.</p> <p>Admin can view patient details such as arrival time, patient details, amount of time waited, expected wait time</p> <p>Admin should be able to add or reduce counters or change counter definitions on the fly and token dispensations should change accordingly.</p> <p>Admin should be able to change some, or the entire algorithm parameters based on the dynamic situation in his station.</p> <p>Admin should be able to change the promotional messages and edit the list of services and customer types displayed in the input module.</p> <p>Admin should be able to define counters, i.e., which counters will do what services and what are the timings of each counter</p> <p>Built-in Information Kiosk in the touch screen-based user panel. Not only does it provide additional information about listed services, but a customer can also use it to obtain detailed information about various services offered by the OPD. Facility for user configurable form-based data collection against each token · Touch screens should use the latest SAW based technology.</p> <p>Central Monitoring Software: Central Monitoring software installed at the Central office provides three major functions.</p> <p>Delay alerts Manager gets a pop up with a Beeper showing details of a token where the benchmark has exceeded (wait time, transaction time). In reports, all transaction times and waiting times exceeding preset Benchmark times are shown in red.</p> <p>OT Display Module allows the OT staff to update the status of the patient in the OT in real-time and facilitates the broadcast of this real-time information to an external display. This saves the time of the OT staff from the hurdles of coming out from theatre to manually update the patient status to people.</p>

Facility to add remarks for each token. The remarks are visible to every successive operator to whom this token is forwarded. Next operator can add his own remarks. Each remark carries the ID of the counter where the remark is added. Token wise remarks are also shown in the reports

Forward-back a token. An operator can forward-back a token to another service. On completion at forward service, the token is returned back to the sender counter on priority.

Generate Employee efficiency statistics

Generate Statistical data on patient wait times and transaction times

Group calling: During the rush hours (configurable for each branch), 2, 3 or 4 successive token tickets carry the same token numbers and separate subscripts. Customers carrying token tickets of same token numbers are called together to a counter and are served as per their respective subscripts.

In nested services/ multiple services, the system should automatically move as the next service to the next counter immediately once the customer has finished with the previous Service at the previous counter.

In the absence of the PC at the counter the system should have the capability, through some other gadget, to include that counter in the QMS system.

Internal Services: Two types of internal services are available. The first types are not available on the Operator panel for selection. For the second type, associated counters are not shown on the Master Display. Both services are independently selectable.

Map services to multiple Operator counters

Max wait & transaction time. Operator report shows maximum waiting time and maximum transaction time.

Multi-counter services: Some services may require the customer to go to multiple counters to complete the process. Our system supports such functions. If a service is configured, then after getting served at one counter, he will automatically be queued up at the next counter listed for that service. This feature can be used in addition to or in place of multi-service selection by the customer.

Operators should be able to stop or pause operations. On pausing, the counter should not be available to the scheduler for allocating a customer during this time

Operator should be able to view the services aligned against his counter, upcoming token no., past token nos. serviced, tokens missed.

Optimize staffing models on basis of workforce efficiencies

Priority Customer: Facility for Manager to give priority to a particular customer

Reports on breaks taken. Whenever an operator takes a break, he is required to enter the reason. An operator wise report of breaks taken with Reason is available.

Selective Master Displays: Facility to have multiple master displays each one showing different counter groups.

Should have Built-in digital signage, so that in addition to displaying Token Number-counter tables, it can display promotional video/images and multilingual scrolling text as configured.

Single click to complete current token and call next

Skipped tokens: Detailed Report of skipped tokens

System administrator should have the permission to modify the text on the LED scrolling display.

The software should also be capable of running on thin clients.

The status of the token should be displayed on the LED screen tokens and in an easy format.

The system GUI should have multi-lingual Support (English & Hindi).

The system should allow system administrators to activate / deactivate services across the counters.

The system should allow system administrators to monitor the workload across the counters.

The system should allow system administrators to view the services available at any counter.

The system should allow text chat between operators and between manager & operators

The System should allow the administrator to modify the details to be printed on the token.

The system should be able to print the token in the language selected by the customer. · The QMS system should flash promotional / compliance messages while idle.

The system should be able to provide a non-interactive live view of real time statistics for all the stations remotely from a central location.

The system should be able to redirect / reassign between service to service,

The system should be able to use existing PCs at the stations for the implementation

The system should generate the audio alerts (voice) and display the information on the LED.

The system should have the facility of assigning benchmark time for different services.

The system should have the facility of categorizing the customers.

The system should have the facility of displaying the token number to be serviced.

The system should have the facility of prioritizing the services for priority customers.

The system should keep information of skipped token/s

The system should provide generation of alphanumeric token numbers.

The system should provide multiple languages for voice notification.

The system should provide touch screens for selecting services.

The system should provide Web based access by the users through Station's standard web browser.

The system should support generation of unique token numbers for the day & station.

The system should support single / multiple selection of service/s at the time of dispensing the token.

The system should support the nested services under the services which can be selected by the patient/operator.



	The voice call should be in the language selected by the customer at the time of taking the token.
	Ability to view end of day and period wise MIS reports on footfalls, patient mix, transaction mix.
	Service wise break up of tokens- Day wise and Month wise
	The system should be able to connect to 2 or more Separate token display units.
	The system should be able to provide configuration like adding /deleting services, change the token machine display properties (color, width, fonts, etc.), language, change LED display unit properties (fonts, logo, token no & counter no. layout, etc.), change elements in token (logo, waiting customer count, promotional message, etc.) · The system should be able to generate following reports with facility to drill down:
	The system should be able to provide a real time floor view to the admin and enable the manager to send messages to the HMIS performing counter.
	The system should manage the queue in real time and integrate with speakers.
<b>9.4</b>	<b>Software Application</b>
	Web and client/server-based application
	Database – as per the requirements
	Software Application to be integrated with the HMIS application if required or as per the requirement of the hospital.
	Desktop application – Browser based
<b>9.5</b>	<b>Special Terms</b>
	After HLL Engineer's initial site visit, the bidder provided the plan, design and site preparation as per requirement and as directed to the satisfaction of the hospital authorities/center requirement and as per terms of the technical and functional requirements of the hospital/Polyclinic. If required, Software application for Queue Management System to be customized as per the requirements of the hospital.
	The software shall be compatible with all the latest equipment. Technology of all the equipment including LED TV should not be more than six months old at the time of implementation of the Queue Management System
	The bidder shall provide training on all QMS aspects from the licensing to the implementation and post implementation support shall be given to HLL deputed engineer within 1 year of warranty period.
	The Queue Management System solution provided should have been implemented in a large hospital which caters at-least 1000-2000 patients per day in OPD and the system should use multiple token dispenser units (at least 2 or more) for printing of tokens simultaneously. The service provider also has experience in implementation of the QMS for the consultant's room. The documented proof shall enclose along with the bid.
	All the licenses of the software will be provided in the name of the HLL.
<b>9.6</b>	<b>Technical Specification for the Queue Management system Kiosk</b>
	Kiosk should be Floor Mount with Touch Screen comprising of the following

	Switch, multiple Services and multiple counters support
	Additional VGA port and VGA amplifier to drive Master LED displays
	Thermal Printer with auto-cutter (Token Dispenser Unit)
	Required interfaces and power supply
	Support multiple services and multiple counters as per the requirements.
	General Paper width – 58mm, Paper Roll size – 50 meter or as per the requirements.
	Dispenser machine minimum capacity holding capacity of 50 meters to generate at least 500 tickets without a refill or as per the requirements.
	Support multiple Dispenser connectivity.
	The system should have the capability of generating alerts to the administrator for events like device fault, printer out of paper, paper jam etc.
	The system should be able to connect to 2 or more separate token display units as per the requirements.
	Shall be Integrated PC with Windows 10/11 OS or latest Windows OS
<b>10</b>	<b><u>TICKETING/HELPDESK MODULE</u></b>
	Objective: Helpdesk Module is to provide an end-to-end Ticketing solution for locations/partners/diagnostic centers/projects which comes under HLL, a full-fledged Ticket management solution for HMIS Helpdesk. This module will computerize the operations of Hospital/Centre/Polyclinic/Institution, thereby improving the operational efficiency and ensuring better management of resources and timely support. The basic objective of a help desk is to resolve IT related issues and provide IT related services and deliverables on time. This module will help users (or requesters) to issue tickets or service requests and manage them throughout their lifecycle.
	The Objectives of Help Desk project are:
	i) Ability to measure the service provided to the end user.
	ii) Tracking of the issue and solution provided.
	iii) To have more transparency of the system.
	iv) To monitor the overall IT operations of a Hospital/Institution.
	Following are the required modules identified in the Helpdesk project. A Helpdesk project is required to perform multiple operations and functionalities which can be clearly classified into the following modules. A very high-level overview of all the modules is explained below and the detailed requirement of the required solution shall be addressed in the detailed requirements section.
<b>10.1</b>	<b><u>End User Module (General Public / Health Care Provider)</u></b> - Inbox, my tickets, new tickets, Open tickets, In Progress Tickets, Resolved Tickets, Closed Tickets, Reports etc.
	In the end user module, the user can register themselves to create an account, during the creation of the account the user has to choose the directorate, district, region, hospital, institution and the email id and password. Once the user is logged in to his account, he/she can create a ticket and it will be automatically assigned to the agent.
	i) Login / Registers to helpdesk system

	ii) Creation of tickets
	iii) Monitor the status of the ticket
	iv) Closes the ticket if solved or reopens the ticket
<b>10.2</b>	<b><u>Call Centre Agent Module</u> - Inbox, my tickets, Open tickets, In Progress Tickets, Resolved Tickets, Closed Tickets, Reports etc.</b>
	The Call Centre agents are the helpdesk agents who will be checking the tickets created by the user and they will be routing the ticket to the appropriate institution or hospital from which they have received a ticket from the user.
	i) View of tickets created by user
	ii) Creation of tickets
	iii) Updates the status of the ticket
	iv) Set the priority of the ticket
	v) Assign/Routes the tickets to the Institution POC
	vi) Create User Roles (Field Agent, External Stakeholders)
<b>10.3</b>	<b><u>Institution POC Module</u> - Inbox, mytickets, Open tickets, In Progress Tickets, Resolved Tickets, Closed Tickets, Reports etc.</b>
	The Institution POC are the one who is the system admin or the main IT Team, who is responsible to solve the technical issues. If the institution POC can solve the ticket he/she closes the ticket and updates the agent as the ticket status is resolved, if he/she is not able to solve the ticket, he/she assigns the ticket to the field agent.
	i) Views the ticket
	ii) Updates the status of the tickets
	iii) Set the priority of the ticket
	iv) Assign / route to Field Agent
	v) Create User Roles (User, Field Agent, External stakeholders)
<b>10.4</b>	<b><u>External/software Agent Module</u> - Inbox, my tickets, Open tickets, In Progress Tickets, Resolved Tickets, Closed Tickets, Reports etc.</b>
	The external/software agent is the one who is responsible for solving the technical issues. This includes the development and operation team leader. If the Agent can solve the ticket, he/she closes the ticket and updates the Institution POC as the ticket status is resolved, if he/she not able to solve the ticket, he/she assigns the ticket to HLL management/Admin module
	i) View the ticket
	ii) Works on the ticket / issue
	iii) Updates the status of the ticket
	iv) Create User Role (External Stakeholders)
<b>10.5</b>	<b><u>Admin Module</u></b>
	Admin is the only one who controls the users, agents, institutions, field agents, External Stakeholders. Admin can create and manage the group / individual who is using the help desk.

	Escalation Metrics involved in the ticket: Having complete control over ticket resolution is essential to deliver flawless customer service. Based on the ticket critically, the help desk can provide automatic escalation management from the lower level right up to the higher-level management in the institution.
	Priority based Escalation Management: Assign critical tickets to the right staff by using custom ticket statuses defined based on priorities. Create statuses like ‘Low’ or ‘High Priority’ so that a low ticket will be addressed after 2 days or after closing the high priority tickets whichever is earlier, high priority tickets will be closed immediately.
	There are three levels Ticket Priority:
	1. Low – Ticket to be closed in 2-4 days of time
	2. Medium – Ticket to be closed within 1-2 days of time
	3. High – Ticket to be closed in 1 day
	4. Extreme High - Ticket to be closed in 12 hours
<b>10.6</b>	Who sets the priority of the ticket?
	The priority of the ticket can be assigned by the user when creating the ticket.
	This priority can be altered or modified by the agent who routes the tickets to the concerned person.
<b>10.7</b>	What will happen if the high priority ticket is not closed by the given time?
	In the admin panel, when a login is created for the Agent, Institution or Field Agent, we will take input of email id to whom the escalated email should be sent.
	The Ticket will be escalated to the higher official in the Institution.
<b>10.8</b>	<b><u>Training &amp; Capacity Building</u></b>
	Training (including technical training, Functional training etc.) of end-users is essential for ensuring that the implementation is actually put to use and drive adoption sustainably. Therefore, the TSP shall also ensure proper training to the designated end-users on the system to make them well conversant with the functionalities, features and processes built in the proposed system.
	a) Training could have multiple sessions as per the need and requirement of the project/ application. Hence, the TSP shall conduct a Training Needs Analysis of all the concerned staff and chalk out a systematic training plan. There should be sufficient number of trainers in every training session for conducting the training program.
	b) The selected bidder shall provide comprehensive and detailed training plan describing the proposed approach and methodology, calendar/ timelines, course contents, course duration, training materials, training tools, training logistics, etc.
	c) The content of the training plan and schedule shall be prepared by the TSP in consultation with client at an appropriate time. The TSP shall submit the final document for approval to the client before initiating the training activity.
	d) The selected bidder shall arrange for training sessions for all end users on individual basis or TOT (Training of Trainers) model.

	e) For each software application/ module. The venue and timing for the training shall be decided jointly by the client and the selected Bidder.
	f) Re-training of the above staffs is required whenever significant changes are implemented in the application and/ or personnel.
	g) Evaluate effectiveness of training programs and workshops by obtaining formal feedback from each participant after completion of each training program/ workshop. The TSP will be responsible for re-conducting the training of the whole batch in case the average score is less than 70% and the additional cost of such re-training sessions shall be borne by the selected bidder himself.
	h) The requisite training infrastructure like space, seats etc. shall be provided by the client in consultation with TSP.
	i) The training shall be organized by the TSP wherein specialized logistics and supportive facilities (if any), apart from the above-mentioned facilities, should be arranged by the TSP only, and all associated cost shall be borne by the TSP.
	j) The TSP shall provide training material like handouts, user manual (role based) etc. for all modules, portal, mobile app.
	k) Training material should be provided in hard and soft copies both. The TSP shall ensure that all the training documentation in Hardcopy and Softcopy is in place and approved by the client (user training, operation procedures, visual help-kit etc.).
	l) The cost incurred on carrying out the training at client's prescribed location(s) shall be borne by the TSP which includes trainer's and other support team member's fees/ salary along with all incidental expenses like travelling, lodging-boarding, local conveyance etc.
	m) The client will bear its own expenses related to travel and lodging of its personnel.

**ANNEXURE-01**  
**EOI FORM**

Ref:

Date:

To,

Associate Vice President (HCS)i/c  
HLL Lifecare Limited,  
HLL Bhavan, Poojappura,  
Thiruvananthapuram -695012 Kerala, India  
Tel: +0471 2354949  
Website – [www.lifecarehll.com](http://www.lifecarehll.com)

Dear Sir,

**EOI: EMPANELMENT OF TECHNOLOGY SERVICE PROVIDERS FOR IMPLEMENTATION OF HOSPITAL MANAGEMENT INFORMATION SYSTEM PROJECTS**

EOI No. : HLL/HCS/EOI/2024-25/01 Dated: 27.05.2024

Having examined the Bidding Documents, including Addenda Nos. [insert numbers], the receipt of which is hereby acknowledged, we, the undersigned, offer our services in full conformity with the Bidding Documents for the total amount against the Product as indicated in the price Schedule.

We undertake that in case our EOI is accepted, we shall Commence work and shall make all reasonable endeavour to achieve contract acceptance.

We agree to abide by this EOI, which, in accordance with consists of this letter, the Price Schedule, letter of authorization, documents establishing conformity, and Attachments through [specify: the number of attachments] to this Bid Form, up to the period mentioned in the EOI document EOIs and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

We declare that the above quoted price for services is firm and shall not be subject to any variation for the entire period of the assignment. We further declare that the above quoted prices include all taxes as on the date of EOI submission, duties and levies payable by us under aforesaid assignment.

The costs of withdrawals of these deviations / exclusions are enclosed with the Price Schedule. In case a formal final Contract is not prepared and executed between us, this EOI, together with your written acceptance of the EOI and your notification of award, shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any EOI you may receive.

We, the Participant shall indemnify, defend and hold harmless Government of India, HLL, its



Affiliates, officers, directors, employees, agents, and their respective successors and assigns, from and against any and all loss, damage, claim, injury, cost or expenses (including without limitation reasonable attorney's fees), incurred in connection with third Party claims of any kind that arise out of or are attributable to (i) Manufacturer's/Participants breach of any of its warranties, representations, covenants or obligations set forth herein or (ii) the negligent act or omission of the Manufacturer/Participants. (iii) any product liability claim arising from the gross negligence or bad faith of, or intentional misconduct or intentional breach of this Contract by participant or any affiliate.

We agree to all terms and conditions of the EOI Document and subsequent amendments.

Dated this [insert: number] day of [insert: month], [insert: year].

Signature.....

Name.....

Full Address with contact person Name, Phone number and Email  
Designation and Common Seal...

**ANNEXURE-02**

**SELF DECLARATION – COMPLIANCE TO RULE 144 (XI) OF GFR 2017**

We,

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

**(Include name and address of the bidder)**

Hereby declare that we are eligible to bid for the EOI: .....

**(Include tender number and date)**

As per the eligibility stipulated by Government Order no F.No.6/18/2019-PPD dated 23-July-2020 inclusive of the latest amendments regarding insertion of rule 144(Xi) in the General Financial Rules (GFR) 2017, issued by Ministry of Finance, Government of India.

We are aware that any bidder indenting to participate in this EOI who is from a country which shares a land border with India will be eligible to bid in this EOI only if the bidder is registered with Competent Authority as per the GO.

Date:

Signature of the Bidder:

Place:

Name with seal:

Designation:

Address:

**ANNEXURE-03**

**SELF DECLARATION – MAKE IN INDIA PREFERENCE**

In line with Government Public Procurement Order No. P-45021/2/2017-BE-II dt. 15.06.2017, as amended from time to time and as applicable on the date of submission of EOI, we hereby certify that we M/s \_\_\_\_\_ (supplier name) are local supplier meeting the requirement of minimum Local content (50%) as defined in above orders for the material against EOINo \_\_\_\_\_ Details of location at which local value addition will be made is as follows: -----

----- We also understand, false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rule for which for which a bidder or its successors can be debarred for up two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

Seal and Signature of Authorized Signatory

**ANNEXURE-04**  
**Participant's Profile**

1	Name and address of the company			
2	Contact Details of the Participant (Contact person name with designation, Telephone Number, FAX, E-mail and Web site)			
3	Area of business			
4	Annual Turnover for 3 financial years (Rs in Cr)	2020-21	2021-22	2022-23
5	Date of Incorporation			
6	GST Registration number			
7	PAN Number			
8	Number of technical manpower on company's rolls			

\*Relaxations are provided for startups and MSMEs as per Government norms

**ANNEXURE -05**  
**PRE-CONTRACT INTEGRITY PACT**

**GENERAL**

This pre-bid pre-contract agreement (hereinafter called the Integrity Pact) is made on day of ..... the month of ..... , between, **HLL Lifecare Limited**., <Address> India, (hereinafter called the "BUYER", which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Part and M/s ..... (Address of the Bidder) (Hereinafter called the "BIDDER" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the BUYER proposes to invite Expression of Interest (EoI) for selection/empanelment of technology and logistics partner for a Collaboration with HLL for providing services for ..... and the BIDDER is willing to participate in the EoI as per the terms and conditions mentioned thereon;

WHEREAS the BIDDER is a private company/public company/Government undertaking/partnership company (strike off whichever is not applicable), constituted in accordance with the relevant law in the matter and the BUYER is a PSU, a Government of India-owned corporation.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to :-

Enabling the BUYER to select/ empanel partner for providing services for..... (Name of the product) through the EoI in a transparent and corruption free manner, and  
Enabling BIDDERS to abstain from bribing or Indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the BUYER will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

1. **Commitments of the BUYER**

1.1 The BUYER undertakes that no official of the BUYER, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through

intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, 'organisation or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

1.2 The BUYER will during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.

1.3 All the officials of the BUYER will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the BUYER with full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the BUYER the proceedings under the contract would not be stalled.

### 3. Commitments of BIDDER

3.1 The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-

- a) The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
- b) The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or, execution of the contractor any other contract with the Government for showing or forbearing to



show favor or disfavor to any person in relation to the contract or any other contract with the Government.

- c) BIDDERS shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.
- d) BIDDERS shall disclose the payments to be made by them to agents/ brokers or any other intermediary, in connection with this bid/contract.
- e) The BIDDER further confirms and declares to the BUYER that the BIDDER is the original manufacturer/ integrator and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such, intercession, facilitation or recommendation.
- f) The BIDDER either while presenting the bid or during pre-contract negotiations or before signing the contract, shall 'disclose any payments he has made, is committed to or intends to make to officials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
- g) The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- h) The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- i) The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- j) The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- k) The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

- l) If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the Buyer, or alternatively, if any relative of an officer of the BUYER has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filing of EOI. The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.
- m) The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER.
- n) In the event of the BIDDER being acquired by or getting collaborated with another company as part of a merger, acquisition, buy out, sell out or take over the interest of the BUYER should not be affected and the terms and conditions shall be the same as in the contract until the term of the contract expires or the completion of the project.
- o) The BIDDER shall be responsible for providing the necessary AMC for a period of ten years starting from the second year of the completion of the project.
- p) The BIDDER in event of inability to provide support shall provide necessary knowledge transfer to the BUYER and the source code wherever necessary.
- q) The BIDDER should be able to automatically update the software in accordance with the upgrades that happen from time to time in ABDM.
- r) The Bidder should have applications which are required to be developed, customized, implemented and integrated as per ABDM guidelines is expected not to limit scope to below mentioned applications only. Bidder may offer to implement additional applications (if required) to achieve proposed outcomes.

#### 4. Previous Transgression

4.1 The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any 'corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify Bidder's exclusion from the EOI process.

4.2 The BIDDER agrees that if it makes incorrect statement on this subject, BIDDER can be disqualified from the EOI process or the contract, if already awarded, can be terminated for such reason.

## 5. Sanctions for Violations

5.1 Any breach of the aforesaid provisions by the BIDDER or anyone employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the BUYER to take all or any one of the following actions, wherever required:

- a) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.
- b) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.
- c) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/rescission.
- d) To recover all sums paid in violation of this Pact by the BIDDER(s) to any middleman or agent or broker with a view to securing the contract.

5.2 The BUYER will be entitled to take all or any of the actions mentioned above, also on the Commission by the BIDDER or anyone employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

5.3 The decision of the BUYER to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent Monitor(s) appointed for the purposes of this Pact.

## 6. Independent Monitors

6.1 The BUYER appoints Independent Monitor (hereinafter referred to as Monitor) for this Pact in consultation with the Central Vigilance Commission.

6.2 The task of the Monitor shall be to review independently and objectively whether and to what extent the parties comply with the obligations under this Pact.

6.3 The Monitor shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

6.4 Both the parties accept that the Monitor have the right to access all the documents relating to the project/procurement, including minutes of meetings.

- 6.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.
- 6.6 The BIDDER(s) accept(s) that the Monitor has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER with confidentiality.
- 6.7 The BUYER will provide the Monitor with sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer the Monitor the option to participate in such meetings.
- 6.8 The Monitor will submit a written report to the designated Authority of BUYER within 8 to 10 weeks from the date of reference or intimation to him by the BUYER I Bidder and, should the occasion arise, submit proposals for correcting problematic situations.

## 7. Facilitation of Investigation

- 7.1 In case of any allegation of violation of any provisions of this Pact or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

## 8. Law and Place of Jurisdiction

- 8.1 This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BUYER.

## 9. Other Legal Actions

- 9.1 The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

## 10. Validity

10.1 The validity of this Integrity Pact shall be from the date of its signing and extend up to the contract period with the BUYER in case a contract is signed. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

10.2 Should one or several provisions of this Pact turn out to be invalid, the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

11. The parties hereby sign this Integrity Pact.

**BUYER**

Name of the Officer:

Designation:

HLL Lifecare Limited (address)

**BIDDER**

Name of the Officer:

Designation:

M/s

Place:

Date:

Place:

Date:

**Witness:**

1. ....

2. ....

1. ....

2. ....

**ANNEXURE 06-**

**Performance statement**

This is to certify that M/s ..... has successfully and satisfactorily completed the following assignments.

Sr. No	Assignment Contract No & Date	Description of work / services provided	Contract price of assignment	Address of Hospital with Phone No. where assignment is done	Number of Beds in Hospital where assignment is done	Date of commencement	Date of completion	Was assignment satisfactorily completed
1								
2								
3								

Place:

Signature with Office Stamp

Attested

Date:

Name & Designation

Sign and Seal of CA



## ANNEXURE- 07

### Quality Cost Based System (QCBS)

Each EOI will be scrutinized and evaluated against the parameters mentioned under Table of clause no. 5.B, Evaluation criteria and the total marks scored will be the respective technical score.

$$St = 100 \times T/Tm$$

Where St is the technical score, Tm is the highest marks scored and T is the marks obtained by the proposal under consideration

As and when required, bidders will be asked to submit financial offers and Financial score (Sf) of other bidders will be calculated on the basis of the following formula:

$$Sf = 100 \times Fm/F$$

Where Sf is the financial score, Fm is the lowest price and F the price of the proposal under consideration. *(In case of selection is for H1 bidder this will be modified accordingly)*

Proposals will be ranked according to their combined technical (St) and financial (Sf) scores using the weights (TP = the weight given to the Technical Proposal; FP = the weight given to the Financial Proposal; TP + FP = 1).

The weights given to the technical and Financial Proposals are:

$$TP= 0.70 \text{ and } FP= 0.30$$

Total score of the bidding party will be determined based on the following formula:

$$S= St \times TP\% + Sf \times FP\%$$

The bidder achieving the highest total score will be considered for placement of order.

Illustration of QCBS ranking methodology is given below.

#### STAGE1: TECHNICAL BIDS EVALUATION

Bidder details	Technical Mark
Bidder1	92
Bidder2	85
Bidder3	55
Bidder4	75

Highest marks scored by Bidder 1 (92 marks) which will be **Tm**

#### STAGE 2: CONVERSION OF TECHNICAL MARKS TO TECHNICAL SCORE

Bidder details	Technical Score $S_t = 100 \times T / T_{max}$
Bidder1	$100 \times 92/92 = 100$
Bidder2	$100 \times 85/92 = 92.39$
Bidder3	$100 \times 55/92 = 59.78$
Bidder4	$100 \times 75/92 = 81.52$

### STAGE3: FINANCIAL BID EVALUATION\*

Bidder details	Amount quoted through Financial Bid
Bidder1	1,15,000
Bidder2	1,20,000
Bidder 3	1,10,000
Bidder4	1,00,000

Lowest price quoted by Bidder 4 (Fm)

### STAGE 4: CONVERSION OF FINANCIAL BID AMOUNT TO SCORE

BidderDetails	Financial Bid Amount	Financial Score $S_f = 100 \times F_m / F$
Bidder1	1,15,000	$100000/115000 \times 100 = 86.95$
Bidder2	1,20,000	$100000/120000 \times 100 = 83.33$
Bidder3	1,10,000	$100000/110000 \times 100 = 90.90$
Bidder4	1,00,000	<b>100</b>

### CONSOLIDATED TECHNICAL & FINANCIAL SCORE

Bidder Details	Technical Score	Financial Score
Bidder1	<b>100</b>	<b>86.95</b>
Bidder2	<b>92.39</b>	<b>83.33</b>
Bidder3	<b>59.78</b>	<b>90.90</b>
Bidder4	<b>81.52</b>	<b>100</b>

### STAGE 5: COMBINED TECHNICAL AND FINANCIAL SCORE (CTFS) WITH WEIGHTAGE 70:30

Bidder Details	Applying weights for the Technical Score & Financial Score	CTFS	Rank of the Bidder
Bidder1	$100 \times (70/100) + 86.95 \times (30/100)$	<b>96.08</b> (70+26.08)	<b>L1</b>
Bidder2	$92.39 \times (70/100) + 83.33 \times (30/100)$	<b>89.67</b> (64.67+ 24.99)	<b>L2</b>
Bidder3	$59.78 \times (70/100) + 90.90 \times (30/100)$	<b>69.12</b> (41.85+27.27)	<b>L4</b>
Bidder4	$81.52 \times (70/100) + 100 \times (30/100)$	<b>87.06</b> (57.06+30)	<b>L3</b>

*\*Presentation is shown for selection on basis of lowest financial quote. If selection is on basis of highest financial quote then this will be accordingly modified.*

**ANNEXURE-08**  
**SELF-DECLARATION -NON-BLACK LISTED**

(To be submitted in the letter pad of the firm indicating full name and address, telephone & fax numbers etc.)

To,

**Associate Vice President (HCS)i/c**  
**HLL Lifecare Limited**  
**(A Government of India Enterprise),**  
**HLL Bhavan, Poojappura, Thiruvananthapuram -695012, Kerala, India**  
**Tel: 0471 2354949 , 2775500**  
**Website – www.lifecarehll.com**

I/we hereby confirm that I/we have not been blacklisted/de-recognized/debarred/banned by any State Government / Central Govt. Organization /State Medical Corporations/ Director Health Services.

I/we hereby confirm that our firm/directors do not have any criminal record or not have been convicted by any court of law in India or abroad.

I/we have not any record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

We hereby declare our pending legal disputes as below

- 1.....
2. ....
3. ....

If, at any stage, it is found to be incorrect, I / we understand that we will be disqualified from the tender.

**SIGNATURE OF THE BIDDER WITH SEAL**