GOVERNMENT OF TRIPURA
HEALTH & FAMILY WELFARE DEPARTMENT

Selection of MSP for Supply, Installation, Testing, Commissioning, Operations & Maintenance of Integrated Health Management Information System (IHMIS) for Tripura

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All costs associated with the preparation and submission of the bid, including but not limited to preparation, copying, postage, delivery, and expenses related to demonstrations or presentations, shall be borne solely by the Bidder, with no liability to the Authority.

Bidders are strictly prohibited from engaging in any form of collusion or unlawful arrangement intended to influence the bid selection or award process. Any attempt to offer gifts, bribes, or inducements to any official, employee, or representative of the Authority will result in penalties, including but not limited to the rejection of the bid, forfeiture of proposal security, and possible disqualification from future projects.

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1. Introduction

The Health & Family Welfare Department, Government of Tripura invites proposals for implementation of an Integrated Healthcare Management Information System (IHMIS) in the state of Tripura.

The Government of Tripura has been actively implementing the National Health Mission (NHM) to achieve the State's health objectives outlined in the Vision 2018 Plan. This Vision aims to establish a dynamic, community-owned, and managed healthcare system supported by the government to empower communities to meet their health needs effectively.

To promote community ownership of the mission and health programs, action plans have been developed through a decentralized, participatory approach. This process involves planning at every level, from village and Gram Panchayat to block, sub-division, district, and state, ensuring a bottom-up approach in decision-making and implementation.

1.1 Project Background and Objectives

The purpose of this project is to deploy a comprehensive Integrated Health management System for the successful implementation and enhancement of healthcare services within the National Health Mission (NHM) framework.

1.2 Contact Person

Contact Person Name: Rahul Chanda
Designation: Project Manager
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2. General Information

2.1 Objective of Bid

The Bidder shall be responsible to design, develop and implement the IHMIS including all the components such as HIMS, LIMS, Mobile Apps for HSC's, State Health Dashboards, ABDM Dashboard, Health Training Management System and Citizen Portal amongst others, integrate with existing State and National run Health program apps.

The IHMIS to be developed must be accessible through web browsers on Computers, Tablet Devices and Mobile Phones. The specific components of the IHMIS that will be developed as mobile apps must be available for Android and/or iOS devices, according to the scope defined for each component.

The bidder will additionally be responsible for assisting the training and adoption of the IHMIS amongst the various stakeholders at the hospitals, health centers and institutions within the scope of the Health Department of Tripura. The Bidder staff shall also be responsible for interacting directly with the end users and with third party vendor(s) as may be required for integration and customization required within the IHMIS.

For this purpose, the Health Department, Tripura invites bids from organizations for providing, implementing IHMIS solutions.

2.2 Important Dates

Schedule of Critical Dates to be observed with respect to Notice inviting e- Bids for Supply, Installation, Testing, Commissioning, Operations & Maintenance of Integrated Health Management Information System (IHMIS) for Tripura.

Sl.No.	Description	Date/Place
1	Date of publication of Tender Enquiry Documents	06/12/2024 at 18:50 Hrs.
2	Downloading date & time	06/12/2024at 18:50 Hrs.
3	Clarification submission start date & time	06/12/2024at 18:50 Hrs.
4	Last date & time of receiving clarification	13/12/2024 at 17:00 Hrs.
5	Pre-Bid Meeting (Date & Time)	17/12/2024at 16:00 Hrs.
6	Pre-Bid Meeting Venue	Conference Hall-I, NHM Office
7	Bid submission start date	20/12/2024 at 11:00 Hrs.
8	Bid submission end date	06/01/2025 up to 17:00 Hrs.
9	Opening of Technical Bid	08/01/2025 at 16:00 Hrs., if possible

2.3 Purchase Conditions

No	Item	Condition
1.	Tender Fee	Rs.10,000+18% GST is to bedeposited online through e-procurement portal (Non-Refundable and Non exempted)
2.	Earnest Money Deposit (EMD)	The total EMD amount is Rs.1,65,00,000 (Rs. One croresixty-five lakh) only to be deposited online through the e-procurement portal. *Exemption:* *The bidder seeking EMD exemption must submit the valid supporting document for the relevant category as per the e-procurement portal with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD.* *No MSE benefit shall be given to MSEs registered as Trading for PSL lending.*
3	Performance Security	3% of the contract value valid for the entire contract period has to be paid within 30 days from the date of the award of the contract. Bank Guarantee format provided in the **Annexure 9**.

3. Bidding Process

The bidding process will include the following steps. The vendors will have to offer proof

3.1 Evaluation Process

The evaluation process for selecting the Managed Service Provider (MSP) for the Supply, Installation, Testing, Commissioning, Operations, and Maintenance of the Integrated Health Management Information System (IHMIS) for Tripura aims to ensure a fair, transparent, and systematic. approach.

This process will involve a comprehensive assessment of the bidders based on pre-defined criteria, including technical expertise, financial capability, project experience, and compliance with the requirements outlined in the Request for Proposal (RFP). The goal is to identify a qualified MSP capable of delivering a robust, scalable, and sustainable IHMIS solution that meets the state's healthcare needs effectively.

3.1.1 Step 1 – Pre –Qualification Eligibility Criteria

S.No	Pre-Qualification Eligibility Criteria
1	General
	a. A single bidder is only allowed where complete ownership of the base HMIS is registered with approval from the National Health Authority and ABDM certification in their name. – ABDM Certificate and self-certification on the product or platform name. b. Ten years of operational experience in India – Certificate of Incorporation c. No Blacklisting – Self Certification as per Annexure 2
2.	Financial
	a. Revenue Average last three years: i. INR 10 Crore Average (21-22/22-23/23-24) – Audited Financials to be submitted ii. Positive Net Worth – CA certificate from Statutory Auditor iii. Profitable in last three financial years – CA certificate from Statutory Auditor
3	Project Experience: All documents to be signed by the Statutory Auditor
	a. 1 Government Project (India) - More than 50,000 daily OPD average / 1000 monthly admissions – Self Certification and proof during a live demo of Dashboard OR Letter from Client. b. Two health IT projects - government or private (India or abroad)- have billed more

	than INR 3 Crores in the last seven years. - CA Certificate on Billing Receipts along with PO / Agreement or Client go live letter. c. 1 health IT and HMIS project with any State Government / PSUs (India) with 100 locations and 1,000 beds covered. The PO or Agreement must be submitted along with the work completion certificate or Go-Live confirmation letter. The RFP confirmation number of locations is part of the go-live coverage. d. 1 Health IT and HMIS project with any State Government / PSUs (India) with a total value of more than INR 20 Crores and at least INR 10 Crores is paid - PO or Agreement to be submitted along with work completion certificate or Go Live confirmation letter. A certificate from the Statutory Auditor/CA of the Bidder stating the project value and total payment received is over INR 10 Crore. e. Five hospitals (Government, Private, or PSU) in India or abroad with a minimum of 400 Beds—live with OPD/IPD/Pharmacy/Billing/LIS/RIS modules—PO or Agreement along with Client Attestation for go-live. f. Digital health Project Experience with at least 100 staff on roll/contract for at least six months. Self–Self-certification by the company director on letterhead. g. At least 500 HFR sites are registered on the ABDM bridge, and Scan and Share is active—Certification or Letter from NHA. h. ABDM Record linking is done for at least 1,00,000 records - Snapshot of the ABDM Dashboard from National Health Authority.
4.	Certifications:
	a. ABDM M1/M2/M3 – Certificate Copy b. CMMI Level 3– Certificate Copy c. ISO 9001 - – Certificate Copy d. MVP 2.0 for HMIS (NHA) and above – Website Proof on NHA website

3.1.2 Step 2 – Technical Bid Evaluation

The Technical Bid Evaluation process aims to assess the bidders' technical capabilities and ensure they meet the requirements specified in the RFP. Each bidder's proposal will be evaluated based on predefined criteria, and scores will be assigned accordingly. Only those bidders who achieve a score of more than 75 marks will qualify to proceed to the next stage of the selection process. This threshold ensures that only technically competent bidders advance, maintaining a high standard for the project's execution.

Criteria: **Those scoring Marks > 75 will progress to next stage**

S.NO.	Criterion	Max. Marks	Supporting Document
1	Financial Capability: The bidder has a minimum average turnover of INR 10 Crore for the last 3 years from IT/ITeS/ICT/Consulting services a. Minimum INR 10: 03 marks b. More than Rs. 10 Crore: 05 Marks	5	Certificate issued by Statutory Auditor/CA with registration number or seal for Turnover with Unique Document Identifier Number (UDIN). Audited Financials to be submitted
2	Bidder's Government Healthcare Experience: The applicant must have experience in ongoing or completed projects, Health IT Transformation projects / HMIS projects with any Government / State Government / PSUs in the last five (5) years. a. If Project Cost is more than INR 10 Cr.– 01 Marks or a. If Project Cost is more than INR 20 Cr.– 03 Marks or b. If Project cost shall be more than INR 30 Cr. - 05 Marks	5	Copy of Work order/ Client certification (stating go live dates) / Contract or Agreement Copy specifying the project details and value vis a vis the criteria stated in the RFP. or A certificate from the Statutory Auditor/CA of the Bidder stating the project details vis a vis the criteria stated in the RFP stating value of the Project. and (only in case the bidder is a part of a consortium or a JV towards such HMIS projects which proves the government healthcare experience) in case the bidder is a part of a project as a part of a consortium, then a consortium agreement specifying the part of the bidder should be submitted.

S.NO.	Criterion	Max. Marks	Supporting Document
3	Bidder's HMIS Experience: The applicant must have experience in ongoing or completed at least one (1) HMIS/HIS/EMR project in India which should be a Multi-Location Project with min 100 Locations covering 1,000 beds with OPD, IPD,Pharmacy,for all users. Experience points will be awarded as follows: a. Minimum 100 Locations and upto1000 beds- 01 Marks b. Between 100 and 1000locations and between 1000 and 2000 Beds: 03 Marks c. More than1000 Locations and 5000 Beds: 05 Marks	5	Copy of Work order/ Client certificate (stating go live dates) / Contract copy AND with Client project completion certificate specifying the project details or Copy of Work order/ Client certificate (stating go live dates) / Contract copy AND interim completion letter from the client which stated to be on the client letterhead with stamp and signature attesting to the go live of said part of the project vis a vis the criteria stated in the RFP. (Thus, in case of an on-going project phased completion certificate provided by client can be submitted.)
4	Bidder's Health IT Experience: The applicant must have experience in ongoing or completed at least two (2) Health IT projects (HMIS / LIMS / EMR) in India or abroad which should be a minimum value of INR 3 Crores in a 7 year period. a. 2 projects each of value INR 3 Crore- 03 Marks b. More than 2 projects of value INR 3 Crore- 05 marks	5	Copy of Work order/ Client certificate (stating go live dates) / Contract copy AND with Client project completion certificate specifying the project details and value vis a vis the criteria stated in the RFP. In case of an on-going project phased completion certificate (provided by client) should be submitted. and A certificate from the Statutory Auditor/CA of the Bidder stating the project details vis a vis the criteria stated in the RFP stating value of the Project.

S.NO.	Criterion	Max. Marks	Supporting Document
5	The bidder should have a minimum75 technical employees on its payroll as on the last date of bid submission. a. between 75and 100 staff: 03 marks b. more than 100 staff: 5 marks	5	Certificate from Director / HR Head/Company Secretary clearly specifying the number of resources as on the date of the bid submission on its roll.
6	Bidder Certification – Bidder must be a CMMi Level 3 or above Certified Company. a. CMMi Level 3- 03 Marks b. CMMi Level 5- 05 Marks	5	Copy of Valid Certificate.
7	Other Relevant Certification: The bidder shall have a certification pertaining to ISO 9001: 2015, ISO/IEC 27001:2013 and ISO/IEC 20000-1:2011 a. Any one certification mentioned from above: 02 mark b. In case of all certifications available – 05 marks	5	Copy of Valid Certificates
8	Average Number of patients handled by HMIS system in a solution **A.OPD (05 marks)** a. between 50,000 and 75,000 OPD patient per month: 01 marks b. between 75,000 and 100,000 OPD patient per month: 03 marks c. more than 100,000 OPD patient per month: 05 marks **B**. **IPD (05 marks)** a. between 1,000 and 2,000 IPD admissions per month: 03 marks b. more than 2,000 IPD admissions per month: 05 marks	10	Self-Declaration on bidder's letter head and valid proof to be submitted along with statistics. Or Copy of certificate from client indicating the number of medical OPD and IPD per day managed by the application. Or Dashboard on a relevant government website provided as a screenshot (duly attested by a government official) and a live URL
9	The vendor should have installed ABDM-compliant software in more than 500 locations with the Bridge connected and active Scan and Share a. between 500 and 1000 locations= 03 Marks b. between 1000 and 5000 locations =	10	Certification or Letter from NHA for number of linked sites on the ABDM bridge Or Dashboard on the ABDM insights website provided as a screenshot

S.NO.	Criterion	Max. Marks	Supporting Document
	05 Marks c. more than 5000 Hospitals = 10 Marks		(duly attested by a government official) and a live URL
10	ABDM Record linking is successfully done a. between1,00,000 and < 5,00,000 ABDM Record Linking: 02 marks b. between 500,000 and15,00,000 ABDM Record Linking: 05 marks c. more than 15,00,000 ABDM Record Linking: 10 marks	10	Dashboard on the ABDM insights website provided as a screenshot (duly attested by a government official) and a live URL
11	Bidder must be complaint with MVP listing from NHA/QCI a. MVP 2.0= 05 marks b.MVP 4.0= 10 Marks	10	Snapshot of the ABDM Website from National Health Authority specifying that the bidder complies with the MVP listing or Certification letter from NHA
12	Approach and Methodology: The Bidder should propose the Approach & Methodology to be covered in the technical proposal, detailing: • Understanding of the Project • Solution Architecture, Design, Scalability • Project Management Methodology • Solution components and Output • Human Resources Deployment Plan and Delivery Timeline • Training Methodology • Adoption strategy • Rollout Strategy • Hand Holding strategy • Location wise onboarding and support • SLA management strategy • Governance Mechanism • ABDM enablement strategy • Strategy for achieving outcomes • Risk Mitigation Plan	10	The approach and methodology as required in this criterion should be documented as part of the tech bid as a chapter or a separate document as a response to this RFP. This should be signed, stamped and submitted in Technical Bid.

S.NO.	Criterion	Max. Marks	Supporting Document
	• O&M Methodology		
13	Technical Presentation and Functional Demonstration: The eligible bidders will be asked to give a presentation on the proposed solution. Date, time and venue of the presentation will be communicated to bidders after opening of technical proposal.	15	Technical presentation cum demonstration to be given by the Bidders
Total		100	

3.1.3 Step 3 — Financial Bid Evaluation

Based on overall technical evaluation, all bidders scoring over 75 marks will be shortlisted. The Financial bids of only these bidders will be opened and the final evaluation will be based on the lowest bidder.

RTM (Right to match) Clause.
In case the Technical evaluation score of the winning bidder is lesser than any of the other bidders whose financial bids were opened, by 10 marks or more, such bidders with the higher score of more than 10 marks will be offered an option to lower their financial bid to be lesser than that of the lower scoring bidder. In case 2 or more bidders score more than 10 marks, the bidder with the highest score out of these will be first offered the RTM. In case the bidder with the highest score of these matches the price using the RTM clause, they will qualify. In case the bidder with the highest score of these does not wish to match using the RTM, the bidder with the next highest score of these bidders (whose score is more than 10 marks than the lowest qualifying bid), will then be offered to match the lowest bid using the RTM clause.

3.1.4 Step 4 — Final Evaluation

The final winner will be decided in favor of the final lowest financial bidder of these. This is post consideration of the RTM clause.

For Final Evaluation, the total cost of the financial proposal will be considered. This however, does not include GST which is separately reimbursable. The Evaluation Committee will determine whether financial proposals are complete, and qualified. The cost indicated in the financial proposal is deemed final and reflects the total cost of services.

Omissions, if any, in costing any item shall not entitle the firm to be compensated and the liability to fulfill its obligations as per the Terms of Reference within the total quoted price shall be that of the MSP. The committee will correct the computational errors if any.

3.2. Code of Integrity

The Health Department is committed to upholding its core values, beliefs, and business practices to ensure that all companies and suppliers providing goods, materials, or services adhere to these principles.

1. **Bribery and Corruption:** Bidders are strictly prohibited from offering any form of bribe or undue gratification, whether directly or indirectly through intermediaries or subcontractors, to any person or entity. Engaging in any corrupt practices to secure or retain business or contracts is forbidden.

2. **Integrity, Indemnity, and Limitation:** Bidders must maintain a high degree of integrity throughout the bidding process. The successful bidder is expected to uphold this integrity during their contractual relationship with the Health Department.

   Should it be discovered at any stage that a business or contract was secured through fraudulent means, misrepresentation, or the suppression of material facts, the contract shall be voidable at the sole discretion of the competent authority of the Health Department.

   To clarify, no rights shall accrue to the successful bidder in respect of such a business or contract. The Health Department or any associated entity shall not have or incur any obligation related to it.

3. **Reporting Misconduct:** Bidders are required to report any instances of misconduct, violations, or improper demands by Health Department employees to the Health Secretary. Communication on such matters should not be directed to any other authority.

This Code of Integrity forms a crucial part of the tender process, ensuring fairness, transparency, and adherence to ethical standards. Compliance with these principles is mandatory for all participating bidders.

4. Introduction to Tripura's Health System

The health system in Tripura is designed to ensure accessible and affordable healthcare for all its residents. It is structured to provide comprehensive healthcare services through a multi-tiered approach, ensuring coverage from community to tertiary levels.

Here's an overview of the key components and programs that constitute the health system in the state:

4.1 Current Health Infrastructure

1. **Primary Health Centers (PHCs) and Community Health Centers (CHCs):**

   o Tripura has numerous PHCs and CHCs that serve as the first point of contact in rural and semi-urban areas. These centers provide basic health services, maternal and child health care, and treatment for common ailments.

2. **District and General Hospitals:**

   o Each district in Tripura has hospitals equipped with comprehensive medical facilities. There are also specialized hospitals like the Agartala Government Medical College, which offers super-specialty services (Health Tripura Gov) (Tripura Times).

3. **Sub-Centers:**

   o These are the most peripheral and first contact points between the primary health care system and the community. They play a crucial role in implementing national health programs at the grassroots level.

4. **Ambulance Services:**

   o The state operates a robust ambulance service network, including the Rapid Emergency Response Service, General Ambulance Service, and Special Cardiac Care Ambulance Service (Health Tripura Gov).

Tripura Health

Pop: ~3 Lacs
DH 1, SDH 1, CHC 1, PHC 7, AYUSH 5

Pop: ~8.2 Lacs
DH 1, SDH 2, CHC 3, PHC 13, AYUSH 2

Pop: ~26000
DH 1, SDH 1, CHC 2, PHC 7, AYUSH 4

Unokoti

Khowai

North Tripura

Pop: ~19.5 Lacs | ABHA : ~4.6 Lacs
MCTH 2, PHC 11, CHC 2, AYUSH: 22
+ 6 State Hospitals

W.Tripura

Dhalai

Pop: ~4.7 Lacs
DH 1, SDH 3, CHC 2, PHC 15, AYUSH 3

Sipahijala

Gomati

Pop: ~5.42 Lacs | ABHA : ~2.4 Lacs
SDH 2, CHC 4, PHC 12, AYUSH 14

Pop: ~5 Lacs
DH 1, SDH 3, CHC 3, PHC 10, AYUSH 10

South Tripura

Pop: ~10 Lacs
DH 1, SDH 2, CHC 5, PHC 18, AYUSH 11

Population : ~ 42.3 Lakh
Area: 10,491 km²
Districts : 8 | Blocks : 58
Villages: 854 | Panchayats: 589

DPR : ~1:900
Public Care 850+ Doctors

Tertiary : MCTH, DH, SDH
Primary Care: CHC, PHC
Community Care: HSC, ASHA

Programs
Maternal Care, TB, AIDS, IDSP, NCD, Ambulance, Dialysis,

ABDM
HPR: 2793
HFR: 1771
Scan & Share:
ABHA : 16.33 Lacs+

4.2 State Hospitals

Tripura has six major state hospitals located in Agartala, the capital city:

S. No	Hospital Name
1	Agartala Govt. Medical College & G. B. Pant Hospital
2	Atal Bihari Vajpayee Regional Cancer Centre
3	I.G.M. Hospital
4	Netaji Subhash State Homeopathic Hospital
5	State Ayurvedic Hospital
6	Modern Psychiatric Hospital at Narasingha

4.3 District Hospitals

There are six district hospitals spread across the state, each providing essential medical services to their respective regions:

S. No	Hospital Name
1	District Hospital, North at Dharmanagar
2	District Hospital, Unakoti at Kailashahar
3	District Hospital, Dhalai at Kulai
4	District Hospital, Khowai at Khowai
5	District Hospital, Gomati at Udaipur
6	District Hospital South, Santirbazar

4.4 Sub-divisional Hospitals

The state is further divided into 15 sub-divisional hospitals that cater to more localized areas:

S. No	Hospital Name
1	Kanchanpur Sub-divisional Hospital
2	Panisagar Sub-divisional Hospital
3	R. G. M. Sub-divisional Hospital
4	Kumarghat Sub-divisional Hospital
5	Longtarai Valley Sub-divisional Hospital
6	BSM (Kamalpur) Sub-divisional Hospital
7	Gandacherra Sub-divisional Hospital
8	Teliamura Sub-divisional Hospital
9	Bishalgarh Sub-divisional Hospital
10	Melaghar Sub-divisional Hospital
11	T. S. Sub-divisional Hospital
12	Karbook Sub-divisional Hospital

13	Amarpur Sub-divisional Hospital
14	Belonia Sub-divisional Hospital
15	Sabroom Sub-divisional Hospital

4.5 Specialized Wings

Tripura also offers alternative medicine systems through 70 homeopathic and 36 Ayurvedic dispensaries spread across its districts. There are also three satellite Ayurvedic dispensaries, ensuring holistic healthcare options.

4.6 Drug Control and Administration

The Directorate of Health Services oversees drug control in the state, operating a state-level drug testing laboratory to ensure the quality and safety of medications.

4.7 Major Health Programs and Initiatives

1. **Chief Minister Jan Arogya Yojana (CM-JAY)**: Provides health insurance coverage up to Rs. 5 lakh per annum for around 4.15 lakh families, ensuring cashless treatment at empaneled hospitals.

2. **Pradhan Mantri Jan Arogya Yojana (PM-JAY)**: A nationwide scheme covering approximately 5 lakh families in Tripura, offering cashless health benefits for secondary and tertiary care.

3. **National Health Programs**: These include the National Vector Borne Disease Control Programme (NVBDCP), Integrated Disease Surveillance Programme (IDSP), and the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS), among others.

4. **Ayushman Bharat Health and Wellness Centers:** These centers aim to provide comprehensive primary healthcare services, including maternal and child health services, non-communicable diseases management, and essential medicines and diagnostics.

5. **MukhyamantriSusthaShaishab, SusthaKaishor Abhiyan:** This initiative focuses on the health and nutrition of children and adolescents, implemented with the support of ASHA and healthcare workers.

4.8 Health Administration

The Health and Family Welfare Department, under the leadership of the Chief Minister and supported by various health officials, ensures the implementation and monitoring of health policies and programs across the state.

This comprehensive setup aims to provide equitable and quality healthcare services to all residents of Tripura, reflecting the state's commitment to improving health outcomes and accessibility.

Health and Family Welfare Department:

- o Led by the Chief Minister and other key officials, this department oversees the implementation of health policies, programs, and infrastructure development across the state.

National Health Mission (NHM) - Tripura:

- o NHM Tripura focuses on improving healthcare infrastructure, ensuring the availability of essential medicines, and implementing health programs efficiently. The Mission Director oversees the execution of these initiatives.

Civil Registration System:

- o This system ensures the registration of births and deaths across the state, vital for planning and implementing health policies.

4.9 Infrastructure Development

The Tripura government is actively enhancing healthcare infrastructure, with significant investments in district hospitals, super-specialty services, and maternal and child health facilities.

The National Health Mission (NHM) Tripura is committed to improving healthcare delivery across the state through continuous infrastructure development initiatives. The recent upgrades include the inauguration of trauma care centers and the introduction of high-end medical technologies such as CT scans and MRIs.The focus is on enhancing the physical and technological infrastructure to support quality healthcare services, making them accessible to all communities. Key aspects of infrastructure development include:

Health Facility Upgradation:

NHM Tripura has been upgrading existing healthcare facilities, including) state hospitals which have presence in Agartala, the state capital city, district Hospitals and sub-divisional hospitals to improve service delivery. This includes renovation, expansion, and modernization of medical facilities to meet the growing healthcare needs of the population.

Technological Infrastructure:

Investments are being made in modernizing health facilities with advanced medical equipment, diagnostic tools, and digital health systems. The adoption of technology aims to improve patient care, streamline healthcare management, and enable better data-driven decision-making.

Telemedicine and eHealth Centers:

Setting up telemedicine centers in rural and remote areas to ensure access to specialist consultations and healthcare services. eHealth centers are being integrated to provide a range of digital health services, enhancing the overall healthcare infrastructure.

Capacity Building:

The NHM Tripura emphasizes the development of a robust health workforce through infrastructure that supports training, capacity building, and continuous education of healthcare professionals. Establishing training centers and equipping them with modern learning tools is a part of this initiative.

Ambulance and Emergency Services Infrastructure:

Strengthening the emergency response system by deploying a fleet of well-equipped ambulances and setting up emergency services infrastructure across the state, ensuring timely and accessible emergency medical care.

Public Health Infrastructure:

The state is enhancing public health infrastructure to support programs related to maternal and child health, communicable diseases, and non-communicable diseases, ensuring comprehensive healthcare coverage.

4.10 Pro Active Use and Adoption of Technology

Tripura has made significant advancements in integrating technology into its healthcare system, setting an example for other states in India.

E-Sanjeevani for Telemedicine:

Tripura has been an active participant in the eSanjeevani initiative, the national telemedicine service aimed at bridging the healthcare gap between urban and rural areas. The state has successfully implemented both the eSanjeevaniAB-HWC (doctor-to-doctor) and eSanjeevaniOPD (patient-to-doctor) models.

E-Hospital Implementation

E-Hospital, a digital hospital management system, has been implemented in select healthcare facilities in Tripura to streamline operations and improve patient care. This has Improved patient data management and reduced errors associated with manual record-keeping.

Ekacare for ABHA Generation & Scan and Share

Tripura has been using Ekacare, a digital health platform that facilitates the generation of Ayushman Bharat Health Account (ABHA) IDs and enables the scan and share feature for easy access to health records. This has enabled the creation of unified health records for individuals, accessible across various healthcare providers.

Teleradiology

Tele Radiology services have been implemented to provide remote diagnosis and consultation for radiology images, connecting radiologists with healthcare providers in remote areas.

4.11 The Future of healthcare in Tripura

The future of healthcare in Tripura involves ongoing efforts to strengthen and expand the healthcare system. Key areas of focus include:

- **Infrastructure Development:** Continuous efforts are being made to enhance healthcare infrastructure, especially in remote and rural areas.

- **Human Resource Development:** Addressing the shortage of medical professionals through recruitment and training initiatives.

- **Health Awareness and Education:** Increasing public health awareness and promoting preventive healthcare practices.

- **Digital Transformation:** Leveraging technology to modernize healthcare delivery and improve health outcomes across the state.

5. Vision for IHMIS

Tripura's proactive adoption of technology in healthcare has led to significant improvements in access, efficiency, and quality of care. Moving forward, the state aims to build on these achievements by integrating advanced technologies, enhancing training programs, and expanding digital health initiatives. To take it multiple notches ahead, Tripura seeks to use technology and process enhancements to transform its health system. These include enhancements for emergency services, cancer services, non-communicable diseases, ASHA and community workers, and healthcare staff efficiency.

These efforts will further strengthen Tripura's healthcare system and serve as a model for other regions.

This transformations goals include to:

5.1 Create a Smart Healthcare Infrastructure for Tripura.

- Develop smart hospital infrastructure powered by technology driven innovations including Information Systems, Clinical AI, Queuing Systems, IoT devices and Real time Monitoring systems for monitoring and managing hospital facilities, ensuring optimal conditions for patient care.

   Benefit from Telemedicine and Remote Consultation

- Enhance the statewide telemedicine network by integrating current platforms for remote consultations such as to connect patients with specialists in state hospitals, reducing travel needs and ensuring timely medical advice.

5.2 Statewide Electronic Health Records (EHR) System integrated with the National ABDM system.

- Implement a state-wide EHR system to digitize patient records and ensure seamless access for healthcare providers across the state, improving patient care coordination and reducing errors.

- Replace the current e-Hospital system with more advanced software to further enhance functionality and user experience.

- Ensure this is based on the principles of ABDM and fully integrated with the ABDM infrastructure.

- Using ABDM, integrated across Public and Private Hospitals, Clinics and Diagnostic facilities within the state.

Benefit from Healthcare Automation

- Automate administrative tasks within the health infrastructure which deal with patient management, engagement, logistics for pharmaceuticals and surgery to improve operational efficiency.

- Implement automated reminder systems for patient appointments, medication adherence, and follow-up visits.

5.3 Use AI-Powered Diagnostics and Predictive Analytics

- Use AI algorithms for analyzing medical images and early detection of diseases like cancer and tuberculosis.

- Implement predictive analytics to identify trends and predict outbreaks of infectious diseases, enabling proactive measures and resource allocation.

5.4 Deploy AI-Based Screening Agents and Virtual Assistants

- Deploy AI-based chatbots to provide information on symptoms, treatment options, and preventive measures, and assist in triaging patients.

- Provide technology driven aids to create and carry out screening programs for disease detection, treatment identification and capacity building. Use AI tools for assisting health workers in screenings as well as allow self-screening via websites, apps and kiosks for diseases like Malaria, Dengue, Cancers, TB and others.

- Use virtual assistants to support healthcare providers with clinical decision-making by providing quick access to medical guidelines and patient data.

5.5 Offer Mobile Health (mHealth) Applications

- Develop mobile apps for patients to access health records, book appointments, receive health education, and conduct teleconsultations.

- Use mHealth solutions to monitor chronic diseases through connected devices for continuous health monitoring and timely interventions.

5.6 Build and Enhance Digital Health Literacy Programs

- Conduct digital health literacy programs for healthcare providers and patients to ensure effective adoption and utilization of new technologies.

- Provide training on cybersecurity best practices to protect patient data.

5.7 Integrate with National Health Programs

- Integrate state health systems with national initiatives like Ayushman Bharat, PM-JAY, IDSP, Nikshay and others for seamless data sharing and care coordination.

- Use AI and data analytics to monitor and evaluate the effectiveness of delivery and deployment of state health programs.

5.8 Improve Emergency Services

- Implement a digital ambulance management system to track and optimize ambulance deployment in real-time.

- Provide ambulance booking and tracking from within the patient mobile app.

- Ambulance tracking should be focused on Golden Hour methodology.

- Equip ambulances with telemedicine capabilities to provide immediate remote consultations and support during transit.

5.9 Ensure smooth delivery of Cancer Services

- Develop an oncology information system to streamline cancer care management, from diagnosis to treatment and follow-up.

- Use AI to identify personalized treatment plans and predict patient outcomes based on data analytics.

- Ensure that the oncology information system is based on the guidelines from NCG (National Cancer Grid)

5.10 Manage Non-Communicable Diseases (NCDs) better.

- Implement a digital registry for NCDs to monitor and manage patients with chronic conditions such as diabetes, hypertension, and cardiovascular diseases.

- Integrate with the National NCD programs app and web-based system to ensure that care continuum across the NCD ecosystem is maintained.

5.11 Empower ASHA and Community Workers

- Equip ASHA and community health workers with mobile devices apps to record patient data, access health information, and communicate with healthcare providers.

- Use digital tools for training and capacity building of ASHA workers, enabling them to deliver better care in their communities.

5.12 Improve Healthcare Staff and Infrastructure Efficiency

- While implementing a hospital management information system (HMIS) to streamline hospital operations, improve patient flow, and manage resources, ensure that staff and hospital efficiency is monitored and improved via constructive feedback via Multi-level Performance and Quality indicators and Monthly stakeholder reports.

- Use AI-powered tools for workforce management, optimizing staff schedules, and reducing burnout by balancing workloads.

By incorporating these digital transformations, Tripura will significantly enhance its healthcare system, ensuring better accessibility, efficiency, and quality of care for its population and in the process be a torchbearer of digital healthcare for the rest of India.

5.13 Objectives and expected outcomes.

The state envisages meeting the following key objectives:

i. Unique ID patients and availability of EHR across all facilities in the State
ii. Optimal utilization of infrastructure, equipment, facilities, HR, Ambulances, drugs & Consumables
iii. Reduction in patient waiting time, efficient queue management.
iv. Improve services availability to patients.
v. Improved access to Emergency Services
vi. Simplification and automation of manual processes
vii. Transparency and availability of information related to services.
viii. Efficient grievance redressal mechanism
ix. Integration with external applications, programs and schemes
x. Real-time reporting, efficient analytics, and decision support

6. Currently Used Software and Vision for Integration with IHMS

The following Health Portals and Mobile IT Applications shall be integrated at facility level with the IHMS for Bi-Directional or Uni-directional data access as may be allowed by the concerned authorities.

Some portals will be replaced and, in that case, the training on the integrated piece as well as ensuring data flow to the actual govt portal will be the responsibility of the MSP.

6.1 Health Portals

- RCH – rch.nhm.gov.in
- NCD – ncd.nhp.gov.in
- PMSMA – pmsma.nhp.gov.in
- E-Sanjeevani – esanjeevani.mohfw.gov.in
- Nikshay – nikshay.in
- Nikushth 2.0
- SCMS – scms.tripura.gov.in
- HWC - Sashakt-hwc.mohfw.gov.in
- E-Raktkosh
- IHIP - IDSP
- IHIP – Malaria
- NDHCP
- BMS (ASHA)
- SNCU
- PNDT
- NOHP

6.2 Mobile Applications

- Ambulance (102)
- PMNDP
- CRS
- CBHI
- Bio-Medical Waste Management and Maintenance Program
- ANMOL
- CPHC ASHA
- ESanjeevani
- FP-LMIS
- eWIN
- AAM

- IDSP

7. Scope of Work (Part 1) — Components within the IHMS

The potential value of modernizing core IT systems within Tripura's health system is immense. Learning from the benefits of several transformations achieved within other sectors, globally the health sector has started adopting digital techniques over the past decade, and especially after the Covid pandemic.

By incorporating digital capabilities such as advanced process automation and real-time information management across multiple channels, the government as well each of the State and National Health Programs can significantly enhance operational efficiencies and customer experiences.

Tripura aims to transform its health system using a visionary Integrated Health Management System as discussed in the previous chapter. The components of it along with all the roles that the service provider will have to provide as described in this chapter.

7.1 Components of Integrated Health Management System

Hospital Information Management System (HIMS) — Core Application and Modules

The **Hospital Information Management System (HIMS)** is envisaged to be a comprehensive, integrated information system designed to manage overall functioning of a government healthcare institution including patient care, hospital administration and the corresponding service processing.

This should cater to hospitals of different sizes as well as patient volumes.

A robust HIMS is also essential for the successful implementation of the Ayushman Bharat Digital Mission (ABDM), launched nationwide by the Hon'ble Prime Minister on 27th September 2021. ABDM aims to integrate various digital systems, including a Nationwide Health ID, Healthcare Professional Registry (HPR), Health Facility Register (HFR), Personal Health Records (PHR), and Electronic Medical Records (EMR).

To achieve this, an ABDM-compliant HMIS software is required to facilitate patient enquiry, registration, emergency registration, OPD/IPD management, laboratory/diagnostics services, blood banks, and inventory management. This software must also integrate with existing portals like e-Raktkosh, e-Aushadhi, and Mera Aspataal.

The HIMS must be completely compliant with ABDM and in its highest avatar must fulfill the requirements of MVP 2.0 as listed by the NHA (National Health Authority)

The Modules that the HIMS must contain in its complete avatar which would be used in a Medical College must contain:

S. No.	Modules
1	Registration & Appointment Management
2	ABHA Generation (ABDM M1)
3	ABHA Health Record Linking (ABDM M2, M3)
4	OPD Management
5	IPD Management
6	Emergency
7	Pharmacy Management
8	Laboratory Information System
9	Radiology Information System with PACS integration
10	Inventory Management
11	Nursing Desk
12	Operation Theatre Management
13	Medico Legal Case / Report (MLC/MLR)
14	Staff and Attendance Management System
15	Quality Management System
16	MIS Reports
17	Housekeeping, Linen and laundry
18	Bio Medical Waste Management
19	Queue Management
20	Diet Management
21	Voice to Text
22	CDSS (Clinical decision support system)

In hospitals smaller than a medical college, the number of modules will and must be in line with the services available at the hospital and this must be configurable.

As an example, in a hospital of type PHC, only the following modules shall be required as the service provision at a PHC requires a HIMS solution with only the following modules to run. Additionally, the HIMS must be distributed in nature and interconnected with other HIMS.

S. No.	Modules
1	Registration & Appointment Management
2	ABHA Generation (ABDM M1)
3	ABHA Health Record Linking (ABDM M2, M3)
4	OPD Management
5	IPD Management
6	Emergency
7	Pharmacy Management
8	Laboratory Information System
9	Inventory Management
10	Medico Legal Case / Report (MLC/MLR)
11	Staff and Attendance Management System
12	MIS Reports
13	Queue Management
14	Voice to Text
15	CDSS (Clinical decision support system)

Additionally, the HIMS must be distributed in nature and interconnected with other HIMS across the state which form part of the overall IHMS solution. These together should support Patient Record Mobility across Tripura such that any patient's complete record should be available at any hospital or health center on the IHMS network where the patient has gone for assessment or treatment. Further, this record mobility must be protected under the common consent mechanism available across the entire IHMS network.

Additionally, a module should be available to be used directly by empaneled private hospitals which treat patients under various government schemes.

Alternatively, an ABDM compliant API should be available to consume the data from 3rd party private HMIS running at private hospitals which are treating patients under various government schemes.

The distributed HMIS component of the IHMS should be able to manage a combined daily load of up to 1.5 lakh patients.

7.2 Small Facility Information Management System & App (HWC/HSC)

This is a major component of the IHMS which should support the following features

S.No	Features list
1	Offline First
2	ABDM -ABHA Creation & link
3	Integrated data flows with HIMS and FLW
4	Patient screening
5	FP and RCH Workflows as per HSC/ANM
6	NCD workflow as per HSC/ANM
7	CHO/ANM Approvals for ASHA
8	Patient Record Mobility within the IHMS

7.3 FLW/ASHA App (Community Care)

This is another major component of the IHMS which empowers Front Line worker's/ASHA workers. It should support the following features.

S. No	Features list
1	ABDM ABHA Creation & link
2	Beneficiary Creation
3	FP and RCH Workflows as per ASHA
4	NCD workflow as per ASHA / CBAC
5	Offline First
6	Management of Daily/Weekly/Monthly Worklist
7	Benefit Calculation and Approval workflows
8	Patient Record Mobility within the IHMS

7.4 ASHA Facilitator Portal

This component of the IHMS facilitates ASHA management via the ASHA facilitators.

S. No	Features list

1	Management of ASHAs as per hierarchy
2	ASHA Facilitator approvals
3	Approvals for ASHA Benefits as calculated within the IHMS

7.5 Integrations with State and National Portals

This is a critical component of the IHMS. This facilitates integrated data sets for use by the state which will help in better decision making, transparency and efficiency of the state human resources working within the health sector.

This includes integrations between the IHMS core components and

- Disease specific programs
- Govt Telemedicine Program
- Drugs
- Asset Management
- HR Management
- Supply chain management.

Among others.

A curated list is provided above in the section "Vision of IHMS". However, creating an exact list for the same will be a part of the initial GAP analysis which the winning bidder will have to perform.

7.6 Specialty HMIS Modules for Cancer Care

Given that Tripura is developing a robust health infrastructure to manage cancer care, the IHMS must cater to this specialty uniquely. This requires it to use Oncology care modules which are in line with NCG (National Cancer Grid) guidelines.

This includes:

i. NCG Empaneled Oncology Modules
ii.Specialized workflow for:

- Chemotherapy
- Radio Therapy
- Biopsy
- Surgery
- Decision Support

7.7 Specialty HMIS Modules for Mental Health Care

Given that Tripura is developing a robust health infrastructure to manage mental health care, the IHMS must cater to this specialty uniquely.

7.7.1 Screening Tools

Tripura's health workforce is both educated and modern. As such use of technology driven screening tools will help complement specialized treatment at secondary and tertiary care centers. To benefit from this the IHMS must have components which will cater to Screening for a variety of diseases or conditions as the state medical fraternity may deem fit.

This component should provide a Screening Management solution which allows creation of screening algorithms inside the IHMS and push them to other components of the IHMS such as HSC App, HMIS or the Citizen Portal for use by Health workers, Nurses or Self Screening use by Patients.

This component should also be integrated with Generative AI tools to be able to provide helpful responses or next steps depending on the screening outcomes.

7.7.2 Citizen Portal

The IHMS must include a component which serves as a comprehensive Citizen Web Portal and Mobile App to ensure the continuity of patient care. These platforms should allow patients to access their health information securely and conveniently. The key functionalities and modules of the Citizen Portal and Mobile App are detailed below but are not limited to:

1. **Appointment Scheduling:**

   - Provision for booking appointments based on the availability of doctors and their specialties.
   - Real-time updates on appointment status and reminders.

2. **Registration and Password Retrieval:**

   - Easy and secure registration process for new users.
   - Password retrieval and reset functionalities to ensure accessibility.

3. **Medical Records Access:**

   - Secure access for patients to view their medical records, including diagnoses, laboratory and radiology reports, and prescriptions.
   - Detailed Electronic Health Records (EHR) with comprehensive historical data.

4. **User Authentication:**

- Robust user login and authentication features to ensure only authorized access to EHR.
- Multi-factor authentication for enhanced security.

5. **Patient Education:**

- Information on various medical services, diagnoses, procedures, and medications.
- Educational materials to help patients understand their health conditions and treatments.

6. **Prescription Management:**

- View and manage prescriptions online.
- Notifications for prescription renewals and medication adherence.

7. **Search Functionality:**

- Basic and advanced search options to help patients quickly find relevant information.
- Filters and sorting options to refine search results.

Expectations of the Features

- User-Friendly Interface:

  - Intuitive and user-friendly interface designed to enhance the user experience for patients of all ages and technological proficiencies.

- Data Security and Privacy:

  - Adherence to data protection regulations and standards to ensure patient data security and privacy.
- Integrated with GIS systems to ensure searches of hospitals result in closest first.

By incorporating these features, the Citizen Web Portal and Mobile App will provide a robust platform for patients to manage their healthcare effectively and securely.

7.8 Learning Management System

The Learning Management System (LMS) is a critical component of the IHMS implementation, designed to provide comprehensive training to both current and future users of the IHMS. The LMS should be user-friendly, accessible, and capable of delivering a variety of training materials and resources to ensure that all users can effectively utilize the IHMS.

Key Features and Functionalities

1. **User Registration and Management:**

   o   Easy registration process for new users.
   o   Management of user profiles and training histories.
   o   Role-based access control to ensure users receive relevant training materials.

2. **Course Creation and Management:**

   o   Tools for creating and managing a wide range of training courses.
   o   Support for multimedia content including videos, presentations, and interactive modules.
   o   Course templates to facilitate quick creation of standardized training materials.

3. **Content Delivery:**

   o   Flexible delivery methods including self-paced learning, instructor-led sessions, and webinars.
   o   Mobile-friendly interface to allow access to training materials on-the-go.
   o   Offline access to selected materials for areas with limited internet connectivity.

4. **Assessment and Certification:**

   o   Integrated assessment tools including quizzes, tests, and assignments.
   o   Automated grading and feedback systems.
   o   Certification upon completion of courses to recognize user proficiency.

5. **Progress Tracking and Reporting:**

   o   Real-time tracking of user progress and course completion.
   o   Detailed reporting tools to monitor user engagement and performance.
   o   Dashboards for administrators to oversee training effectiveness and identify areas for improvement.

6. **Support and Resources:**
   o   Comprehensive help sections and FAQs to assist users with common issues.
   o   Access to a repository of additional resources including user manuals, quick guides, and troubleshooting tips.
   o   Support for multiple languages to cater to diverse user groups.

7. **Support for Live Online Instructor Driven Training**

   o   While the LMS will be available for self-paced study, Instructor led training is the prime mechanism for quality training for the IHMS. The LMS must allow for live

access to instructor-led training being carried out from time to time which will help users get access to expert trainers from time to time.

7.9 Integration with Equipment's, IoT Devices and Kiosks

To achieve a seamless and comprehensive automation of the Integrated Health Management System (IHMS), the system must be capable of exchanging data and information with various external systems and health applications. The proposed solution's integration platform framework should facilitate robust and secure integrations across a wide range of public health applications and third-party systems, including lab and diagnostic equipment and IoT devices.

Key Features and Functionalities

1. **Data Exchange and Interoperability:**

   o The system should support bidirectional data exchange with external systems to ensure seamless interoperability.
   o Compliance with industry standards such as HL7, FHIR, and DICOM to facilitate data exchange and interoperability with diverse healthcare applications and systems.

2. **Integration with Public Health Applications:**

   o **Reproductive and Child Health (RCH) Program Integration:** Ensure smooth data flow between the IHMS and RCH applications for tracking maternal and child health services.

   o **Non-Communicable Diseases (NCD) Program Integration:** Facilitate data sharing with NCD applications for managing chronic diseases such as diabetes, hypertension, and cancer.

   o **National Health Mission (NHM) Programs:** Integrate with various NHM programs to ensure comprehensive health data management and reporting.

3. **Integration with Laboratory and Diagnostic Equipment:**

   o **Automated Data Capture:** Enable automatic capture of laboratory and diagnostic test results directly from lab equipment into the IHMS.

   o **Real-time Monitoring:** Provide real-time monitoring and reporting of diagnostic results, enhancing the accuracy and efficiency of patient care.

- o **Standardized Interfaces:** Use standardized interfaces and protocols to integrate with a wide range of lab and diagnostic equipment.

4. **Security and Compliance:**

   - o **Secure Data Transmission:** Implement encryption and secure transmission protocols to protect data exchanged between the IHMS and third-party systems.

   - o **Data Privacy Compliance:** Ensure compliance with data privacy regulations and standards such as GDPR, HIPAA, and local data protection laws.

   - o **Access Control:** Implement robust access control mechanisms to restrict data access to authorized personnel only.

5. **Scalability and Flexibility:**

   - o **Modular Integration Framework:** Use a modular integration framework that can easily adapt to new third-party applications and equipment as needed.

   - o **Scalable Architecture:** Ensure the integration platform can scale to accommodate increasing data volumes and integration points without compromising performance.

By incorporating these features, the proposed solution will ensure comprehensive and seamless integration with third-party applications and equipment, enhancing the overall functionality and efficiency of the IHMS. This integration will enable real-time data sharing, improve patient care, and streamline healthcare operations across the state.

8. Scope of Work (Part 2) — Training & Capacity Building

8.1 Training of Healthcare Master Trainers and Capacity Building

Training, including technical and functional training, is essential to ensure the successful implementation and adoption of the IHMS. The Managed Service Provider (MSP) must provide comprehensive training to the State provided Master Trainers, ensuring they are proficient with the system's functionalities, features, and processes.

This includes providing quality in person training to master trainers, building a minimum viable criterion for master trainers, providing online learning modules along with a learning management system which is both web and mobile based, and finally providing a mechanism for evaluation of training which the master trainers will impart within the state.

8.1.1 Key Training Requirements

a) **Training Needs Analysis:**

- Conduct a detailed Training Needs Analysis (TNA) for all relevant staff to identify specific training requirements.
- Develop a systematic training plan based on the TNA, ensuring the training duration is sufficient for effective learning.
- Ensure the state is helped in identifying what is the adequate number of trainers they must provide.

b) **Comprehensive Training Plan:**

- The selected bidder must submit a detailed training plan that includes the proposed approach, methodology, timelines, course content, duration, materials, tools, and logistics.
- The training plan should be developed in consultation with the client and submitted for approval before initiating the training activities.

c) **Training Delivery:**

- Provide training sessions for all master-users.
- Provide a training plan which uses a Training of Trainers (TOT) model to the state to execute.
- Training should cover each software application/module, with the venue and timing decided jointly by the client and the bidder.
- Ensure retraining of master trainers whenever significant changes are made to the application or personnel.

d) **Assessment of Training Effectiveness:**

- Evaluate the effectiveness of training programs by obtaining formal feedback from participants.

e) **Training Infrastructure and Logistics:**

- The client will provide necessary training infrastructure such as space and seating, in consultation with the MSP.
- The client will organize specialized logistics and supportive facilities, bearing all associated costs.
- The MSP will provide training materials, including handouts, user manuals (role-based), in both hard and soft copies, bearing all associated costs.

f) **Cost Management:**

- The MSP will bear all costs associated with conducting training at the client's prescribed locations for the state's master trainers, including MSP trainer fees, support team salaries, and incidental expenses (travel, lodging, boarding, local conveyance).
- The client will bear its own travel and lodging expenses for its personnel including their master trainers.

g) **Online Support and Resources:**

- Provide an online help corner for users, including user manuals, FAQs, and other resources to offer system-specific technical and functional help.

9. Scope of Work (Part 3) — Adoption and Sustainability (Change Management)

Successful adoption and sustainability of the new Integrated Health Management System (IHMS) requires comprehensive change management efforts. The Managed Service Provider (MSP) is responsible for ensuring that the transition to the new system is smooth and that healthcare institutions and personnel fully support and adopt the changes. The following parameters and responsibilities outline the detailed approach for evaluating and implementing effective change management strategies.

9.1 Key Parameters for Evaluating Change Management Effectiveness

1. **Smooth Transition:**

    o   Ensure a seamless shift from old processes to the new way of working.
    o   Minimize disruptions in daily operations during the transition period.

2. **Support for Changes:**
    o   Garner support from healthcare institutions and personnel for the changes being implemented.
    o   Foster a positive attitude towards the new system and its benefits.

3. **Role Awareness:**
    o   Ensure that individuals understand how the changes affect them and their specific roles.
    o   Clearly communicate the responsibilities each person will have in the new system.

4. **Stakeholder Understanding:**
    o   Educate stakeholders about the benefits of the changes.
    o   Help stakeholders internalize the advantages and importance of the new system.

5. **Conceptual Understanding:**

- Ensure that the underlying concepts and functionalities of the new system are well understood by all users.
- Provide thorough explanations and demonstrations as needed.

6. **Monitoring and Measurement:**
   - Continuously monitor and measure the success and progress of the change program.
   - Use metrics and feedback to assess the effectiveness and make necessary adjustments.

9.2 Change Implications

The implementation of the new IHMS will bring several change implications, including:

1. **Process and Procedural Changes:**

   - Introduce new processes and systems to address core functional and information flow changes.
   - Ensure that these new processes are well documented and communicated.

2. **Technical and Technological Changes:**

   - Implement new technologies to meet unaddressed healthcare requirements.
   - Provide technical training and support to ensure smooth adoption.

3. **Organizational Changes:**

   - Transform the existing organizational structure to align with the new system.
   - Redefine roles and responsibilities to support the new workflows.

9.3 Responsibilities of the MSP

1. **Assessing and Building Staff Capability:**

   - Evaluate current staff capabilities and identify gaps.
   - Develop and execute plans to quickly and effectively build the required skills and knowledge.

2. **Implementing and Monitoring Training Plans:**

   - Execute comprehensive training plans tailored to different user groups.
   - Monitor training progress and effectiveness, and adjust as needed.

3. **Increasing Individual Skills and Knowledge:**

- o Help individuals enhance their skills and knowledge related to the new system.
- o Use a variety of training methods, including hands-on practice and interactive modules.

4. **Developing and Implementing Change Communication Plans:**

- o Create detailed communication plans to keep all stakeholders informed and engaged.
- o Use multiple channels to disseminate information effectively.

5. **Facilitating Transition to New Roles:**

- o Provide support and guidance to staff transitioning to new roles.
- o Ensure that role changes are smooth and well-managed.

9.4 Regular Adoption Analysis and Reporting

- Conduct regular analyses of adoption levels among all staff.
- Submit detailed reports to the Health Department providing individual-level information on non-compliance and proposing solutions.
- Request intervention by the Health Department when necessary to address significant issues.

9.5 Comprehensive Adoption and Sustainability Plan

- The MSP is expected to include an elaborate adoption and sustainability plan in their proposals.
- This plan should detail the strategies, timelines, resources, and methodologies for ensuring the successful adoption and long-term sustainability of the IHMS.

By addressing these detailed responsibilities and parameters, the MSP will ensure that the new IHMS is effectively adopted and sustained, leading to improved healthcare outcomes and operational efficiencies.

The IA (implementation agency) shall provide training to the application users to efficiently use the system. IA shall conduct training after implementation of the HIS Application and Training will be provided by the selected IA to the Users within each Hospital / Health institution of Tripura.

10. Scope of Work (Part 4) — Performance Management and Rating Dashboard

Effective performance management and rating are essential to ensure that the Integrated Health Management System (IHMS) is delivering the intended outcomes and driving continuous improvement across the healthcare ecosystem. The Managed Service Provider (MSP) will be responsible for developing and implementing a comprehensive performance management framework, which includes a District Health Ranking system. This system will generate rankings based on data collected through state applications and various modules of the IHMS.

10.1 Key Components of Performance Management and Rating

1. **Performance Criteria and Metrics:**
   - Define clear and measurable performance criteria that align with the healthcare objectives of the state.
   - Metrics should cover various aspects of healthcare delivery, including patient care, resource utilization, efficiency, and quality of services.

2. **Data Collection and Analysis:**

   - Collect data from all relevant modules of the IHMS in real-time.
   - Use advanced data analytics tools to process and analyze the data to generate meaningful insights.

3. **District Health Ranking:**

   - Develop a ranking system that evaluates the performance of districts based on predefined criteria and metrics.
   - Rankings should be updated in real-time or at regular intervals to reflect the most current data.

4. **Dashboard and Reporting:**

   - Implement a comprehensive dashboard to visualize performance data and rankings.
   - Provide detailed reports that highlight strengths, weaknesses, and areas for improvement for each district.

5. **Continuous Monitoring and Improvement:**

   - Establish mechanisms for continuous monitoring of performance against the defined criteria.
   - Implement feedback loops to identify gaps and drive continuous improvement initiatives.

6. **Stakeholder Engagement:**

   - o Engage with key stakeholders, including district health officials, to ensure they understand the performance metrics and rankings.
   - o Use the ranking system as a tool for motivating districts to improve their performance.

7. **Transparency and Accountability:**

   - o Ensure transparency in the data collection and ranking process to build trust among stakeholders.
   - o Use the performance management framework to hold districts accountable for their performance.

10.2 Detailed Implementation Plan

1. **Define Performance Metrics:**

   - o Collaborate with the Health & Medical Education Department/NHM, to define the specific performance metrics to be used.
   - o Metrics may include indicators such as patient satisfaction, treatment outcomes, service delivery times, and resource utilization rates.

2. **Develop Data Collection Mechanisms:**

   - o Integrate data collection mechanisms into the IHMS to ensure comprehensive and accurate data capture.
   - o Use IoT devices, electronic health records (EHR), and other digital tools to collect real-time data.

3. **Design and Implement Ranking Algorithms:**

   - o Develop algorithms that calculate district rankings based on the collected data.
   - o Ensure that the algorithms are transparent, fair, and aligned with the performance metrics.

4. **Build the Performance Dashboard:**

   - o Create an intuitive and user-friendly dashboard that displays real-time performance data and rankings.
   - o Provide customization options to allow stakeholders to view data in formats that are most relevant to them.

5. **Train and Engage Stakeholders:**

   - Conduct training sessions for district health officials and other stakeholders to help them understand the performance metrics, ranking system, and dashboard.
   - Engage stakeholders in regular review meetings to discuss performance results and improvement strategies.

6. **Implement Continuous Improvement Processes:**

   - Use the performance data to identify areas for improvement and implement targeted initiatives to address them.
   - Monitor the impact of improvement initiatives and adjust strategies as needed.

7. **Regular Reporting and Feedback:**

   - Generate regular performance reports that provide detailed insights into district performance.
   - Use these reports to provide feedback to districts and support them in their improvement efforts.

Example of Performance Criteria and Metrics

Performance Criterion	Metric	Weightage
Patient Satisfaction	Patient satisfaction survey scores	20%
Treatment Outcomes	Recovery rates, readmission rates	25%
Service Delivery Times	Average wait times for services	15%
Resource Utilization	Utilization rates of medical equipment	10%
Quality of Services	Compliance with clinical guidelines	15%
Staff Efficiency	Staff productivity and attendance	10%
Innovation and Improvement	Implementation of new practices and technologies	5%

By implementing this comprehensive performance management and rating framework, the MSP will ensure that the IHMS drives continuous improvement, enhances accountability, and ultimately improves healthcare outcomes across the state.

11. Scope of Work (Part 5) — State Health Dashboard

The State Health Dashboard (SHD) will serve as the central hub for managing and monitoring healthcare services across the state of Tripura. It will play a crucial role in responding to various healthcare operations and inconsistent conditions, ensuring the smooth functioning of the state health system. The SHD will be responsible for overseeing the overall operations, including monitoring, controlling, and commanding healthcare activities. Additionally, the SHD will provide comprehensive data analytics to support the state in monitoring and planning health policies.

11.1 Key Features and Functionalities

1. **Centralized Monitoring and Control:**

   o The SHD will act as the central point for monitoring all healthcare operations across Tripura.
   o It will enable real-time tracking of healthcare activities, resource utilization, and service delivery.

2. **Data Integration:**

   o Centralize data from various sources, including hospitals, clinics, labs, and field operations, for comprehensive oversight.

3. **Data Analytics and Reporting:**

   o Implement advanced data analytics tools to process and analyze health data.
   o Generate actionable insights and reports to aid in decision-making and policy formulation.
   o Provide real-time and historical data analytics to monitor health trends and outcomes.

4. **Dashboard and Visualization:**

   o Develop interactive dashboards to visualize key performance indicators (KPIs) and metrics.
   o Enable customizable views for different stakeholders, such as health officials, administrators, and policymakers.
   o Provide MIS dash boarding outcomes accessible at the State CCC.
   o Monitor and manage incident resolution to ensure timely and effective responses.

5. **Training and Capacity Building:**

   o Train staff to effectively use the CCC and its tools.
   o Develop capacity-building programs to enhance the skills of healthcare professionals in data analysis and incident management.

12. Scope of Work (Part 6) — Centralized Help Desk / Incident Management

A centralized IT Helpdesk is a critical component of the IHMS implementation, serving as a single point of contact for all ICT-related incidents, information, and service requests. The IT Helpdesk will handle issues related to the Health Information Management System (HIMS), Enterprise Resource Planning (ERP) systems, applications, and general IT infrastructure. It will also manage the resolution and tracking status of incidents. The key requirements for the IT Helpdesk for incident management are outlined below:

12.1 Key Requirements for IT Helpdesk

1. **Incident Reporting and Management:**

   o   Provide facilities for reporting issues or problems related to IT infrastructure, network, or HIMS.
   o   Implement a robust call logging system to categorize and prioritize incidents based on severity levels defined by SLAs.

2. **Service Desk Facility:**

   o   Establish a comprehensive service desk facility to act as the central hub for all helpdesk activities.
   o   Set up multiple channels for incident reporting to ensure ease of access and timely response.

13. Scope of Work (Part 7) — Incident Reporting using different Channels

To ensure effective and efficient reporting, the following channels will be established for users to report incidents to the helpdesk:

a. **Specific E-Mail Account:**

- Designate a specific email account for reporting IT issues and service requests.
- Ensure timely monitoring and response to emails received.

b. **HIMS Web Portal / Mobile App:**

- Integrate incident reporting features into the HIMS web portal and mobile app.
- Allow users to log issues directly through the portal or app, providing a seamless reporting experience.

c. **SMS:**

- Set up an SMS-based reporting system for users to report incidents.
- Ensure that the SMS system is monitored and that responses are prompt.

d. **Chatbots:**

- Implement AI-powered chatbots to assist users in reporting incidents and obtaining information.
- Ensure that chatbots are capable of handling common queries and escalating complex issues to human agents.

f. Call Logging and Severity Levels

- **Incident Classification:** Classify incidents based on predefined severity levels to ensure appropriate prioritization and handling.
- **Tracking and Resolution:** Implement a system for tracking the status of reported incidents from logging to resolution.
- **SLA Compliance:** Ensure that the incident management process adheres to the defined Service Level Agreements (SLAs) to maintain high standards of service.

Additional Features and Functionalities

1. **Knowledge Base and Self-Service:**

   - Develop a comprehensive knowledge base with articles, FAQs, and troubleshooting guides.
   - Enable self-service options for users to resolve common issues independently.

2. **Performance Monitoring and Reporting:**

   - Continuously monitor help desk performance and generate reports to track key metrics such as response times, resolution times, and user satisfaction.
   - Use these reports to identify areas for improvement and ensure the helpdesk meets performance targets.

3. **User Feedback and Improvement:**

   - Collect feedback from users on their helpdesk experience.
   - Implement a continuous improvement process to address user concerns and enhance service quality.

4. **Integration with Other Systems:**

   o Ensure seamless integration of the helpdesk with other IHMS components and IT systems.
   o Enable automatic ticket generation for issues detected by system monitoring tools.

5. **24/7 Availability:**

   o Ensure the helpdesk is available 24/7 to provide support at all times.
   o Implement shift-based staffing and automated systems to maintain continuous operation.

14. Scope of Work (Summary) – Activities to be carried out by MSP

The comprehensive scope of work for the implementation of the Integrated Health Management System (IHMS) in Tripura encompasses a series of essential activities. The approved Service Provider will be responsible for executing these activities to ensure successful deployment, operation, and sustainability of the IHMS. The activities include, but are not limited to, the following:

14.1 System Requirements Study and Solution Design

14.1.1 Project Plan and Inception Report Preparation:

   o **Project Plan:** Develop a comprehensive Project Plan outlining the entire scope of the project, including timelines, milestones, and key deliverables.
   o **Inception Report:** Prepare and submit an Inception Report that serves as the foundational document for all project-related activities, including:
      ▪ A detailed overview of the project.
      ▪ Anticipated risks and proposed mitigation strategies.
   o Obtain acceptance of the Inception Report from the Health Department before progressing to the next stage.

14.1.2 System Requirement Specification (SRS):

   o **Requirement Engineering:** Conduct detailed discussions with stakeholders to capture functional and non-functional requirements. Align this process with the business logic framework of the Health Department.

- o **SRS Document and Prototype:** Prepare a System Requirement Specification (SRS) document that includes:
  - ▪ A detailed description of all system requirements.
  - ▪ A clear plan of action for implementing the IHMS solution.
  - ▪ A prototype demonstrating all features and functions of the proposed IHMS solution.
- o Engage with stakeholders through Joint Application Development (JAD) sessions to ensure comprehensive requirement gathering.

14.2 Solution Design Document (SDD):

- o **Architecture:** Develop a Solution Design Document (SDD) outlining the complete architecture of the proposed IHMS solution.
- o **Audit Trail Mechanism:** Design mechanisms for capturing audit trails for all transactions to trace and reverse errors or intentional data modifications.
- o **Security Measures:** Detail security measures, including data encryption, secure access, and threat detection protocols.
- o **Access Controls:** Implement role-based access controls and audit logs to ensure databases are secure and managed appropriately.

14.3 Provision and Implementation of the HMIS Solution

1. **Provision of HMIS Solution:**

   - o Deliver a robust and scalable centralized management software solution that integrates various healthcare departments.
   - o Ensure seamless interoperability and data flow across different departments and functions.
   - o Design the software to accommodate future scalability and customization needs.

2. **Implementation Basis:**

   - o Implement the HMIS solution on a 'Design-Build-Own' basis, covering end-to-end management from design and construction to ownership and maintenance during the contract period.
   - o Charge monthly fees for the contract duration.
   - o Provide a clear transition plan for transferring the solution to the Health Department at the end of the contract period, including necessary training and

support.

3. **Module Implementation:**

   o Roll out the required number of HMIS modules in respective healthcare facilities, adjusting based on specific needs, workload, and infrastructure.
   o Conduct thorough needs assessments for each facility to determine the appropriate number of modules and provide a detailed implementation plan.
   o Finalize the number of modules through gap analysis, with approval from the Competent Authority.

14.4 Interaction with Program Teams

1. **Engagement with State and National Health Programs:**

   o Interact with program teams for state and national health programs such as NHM, AYUSH, RCH, NCD, etc., to understand their specific requirements.
   o Identify the data integration and reporting needs for each program.
   o Ensure the IHMS can seamlessly integrate with these health programs to facilitate comprehensive data exchange and coordination.

14.5 Gap Assessment and Procurement Planning

1. **Gap Assessment:**

   o Conduct a comprehensive gap assessment of all hardware and equipment required for HMIS implementation in identified healthcare facilities.
   o Identify current deficiencies and specify the necessary equipment to meet implementation standards.

2. **Procurement Planning:**

   o Based on the gap assessment and available funds, procure the necessary equipment as per specifications provided by the Service Provider.

14.6 Manpower Deployment for Technical Support

1. **Technical Support:**

- o Deploy technical manpower, excluding Data Entry Operators, to provide ongoing support for the HMIS implementation.
- o Provide technical assistance to administrative, medical, and para-medical staff across healthcare facilities.

14.7 Training and Handholding

1. **Comprehensive Training:**

   - o Deliver training programs and handholding support to administrative, medical, and para-medical staff during the stipulated period.
   - o Conduct periodic refresher training to ensure staff remain proficient and up to date with IHMS functionalities and updates.

14.8 Operational, Maintenance, and Technical Support

1. **Ongoing Support:**

   - o Provide operational, maintenance, and technical support throughout the contract period.
   - o This includes troubleshooting, routine maintenance, updates, and upgrades to ensure efficient and effective operation of the HMIS.

14.9 Architecture Monitoring and Management

1. **Continuous Monitoring:**

   - o Continuously monitor and manage the entire architecture of the HMIS solution.
   - o Conduct regular performance assessments, scalability reviews, and security audits.
   - o Implement system upgrades as required by the Health Department.

14.10 Online Help and User Support

1. **Online Help Resources:**

   - o Ensure availability of online help through multiple channels, including chatbots, email, and helpdesk.

- o Provide comprehensive user manuals to guide users in navigating and utilizing the IHMS.

14.11 Customized Reports

1. **Report Customization:**

   - o Develop and provide customized reports tailored to the specific needs of the Health Department and affiliated programs.
   - o Ensure reports are easily accessible and present data in a clear, actionable format.

14.12 Monitoring and Evaluation

1. **Progress Monitoring:**

   - o Regularly review progress with stakeholders and the project management team.
   - o Use tracking tools to monitor adherence to timelines and deliverables.

2. **Evaluation and Feedback:**

   - o Conduct regular evaluations of training effectiveness and system performance.
   - o Collect feedback to identify areas for improvement and ensure continuous enhancement of the IHMS.

14.13 Monitoring Committee and Project Performance Tracking

1. **Establishment of Monitoring Committee:**

   - o Set up a Monitoring Committee within Tripura to oversee the performance and quality of the project implementation.
   - o The committee will include representatives from the Health Department, key stakeholders, and external experts as needed.

2. **Project Performance Tracking Dashboard:**

   - o Develop a Project Performance Tracking Dashboard to provide real-time insights into the project's progress and performance.

- o Ensure the dashboard includes key performance indicators (KPIs), project milestones, risk assessments, and other critical data.
- o Make the dashboard accessible to senior stakeholders of the state to facilitate informed decision-making and oversight.

14.14 Health Facility Registry (HFR) and Healthcare Professional Registry (HPR)

1. **Creation and Maintenance of HFR and HPR:**

   - o Ensure the creation of Health Facility Registry (HFR) and Healthcare Professional Registry (HPR) for all public health facilities in Tripura as per the directives of the National Health Authority (NHA) under the Ayushman Bharat Digital Mission (ABDM).
   - o Regularly update the HFR and HPR every six months to ensure accuracy and completeness.

14.15 IT and Cyber Security

1. **Security Audits and Real-Time Monitoring:**

   - o Conduct regular IT and cyber security audits to identify vulnerabilities and ensure compliance with security standards.
   - o Implement real-time monitoring of the IT infrastructure to detect and respond to security threats promptly.

2. **Incident Response Team:**

   - o Establish a dedicated team to handle cyber security incidents and IT outages.
   - o Develop and maintain an incident response plan to ensure quick and effective resolution of security incidents and system disruptions.

By addressing these detailed responsibilities and ensuring comprehensive implementation, the Service Provider will ensure that the IHMS meets the strategic goals and operational needs of the Health Department, Tripura, leading to improved healthcare outcomes and operational.

15. Technical Specifications and Standards

15.1 ABDM Compliance

The bidder's product should be ABDM compliant, this includes being certified for ABDM M1, M2, M3. Further it is preferred that the bidders HMIS is also compliant with ABMD Health Locker and ABDM HCX. The bidders HMIS should support Scan and Share, Scan to Pay and be able to exchange data using FHIR bundles.

15.2 Adherence and Comply with Health Standards

The HMIS and IHMS should comply with specific coding standards and adhere to best practices of Data protection.

S.No.	Category	Description of Suggested Compliance Standards
1.	International Classification of Disease (ICD) – 10 or higher	Classify and code all diagnoses, symptoms, and procedures recorded in the system
2.	Systematized Nomenclature of Medicine – Clinical Terms (SNOMED CT)	Systematically organized computer-processable collection of medical terms providing codes, terms, synonyms, and definitions used in clinical documentation and reporting
3.	Logical Observation Identifiers Names and Codes (LOINC)	Database and universal standard for identifying medical laboratory observations
4.	Health Level (HL7)	Set of international standards for the transfer of clinical and administrative data between software applications, focusing on application "layer 7" in the OSI model
5.	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 across systems through Picture Archiving & Communications System (PACS), including Web Access to DICOM Persistent Objects (WADO)
6.	Picture Archiving and Communication System (PACS)	Digital storage, transmission, and retrieval of radiology images
7.	Fast Healthcare Interoperability Resources (FHIR)	Interoperability standard for electronic exchange of healthcare information

15.3 Compliance and Design Considerations

The successful bidder shall adhere to the policies and guidelines which are related to the National Digital Health Solution ecosystem within India. These include the following but are not limited to:

- **National Digital Health Blueprint:** Align with the National Digital Health Blueprint and strategy overview.

- **Health Data Management Policy:** Follow health data management policies and notifications from MOHFW and NHA.

- **Guidelines for Health Information Providers:** Adhere to guidelines for health information providers and health repository providers.

- **MeitY Guidelines:** Observe the Ministry of Electronics and Information Technology (MeitY) guidelines related to all aspects of the Integrated Digital Health Solution ecosystem.

- **Additional Policies:** Abide by any other policies, rules, or guidelines provided by the MOHFW, National Health Authority (NHA) and/or the Health Department, Tripura.

15.4 Solution Component Design Considerations

The solution design should incorporate the following considerations as applicable:

- **Pluggable and Scalable Architecture:** Ensure the architecture is modular and scalable to accommodate future enhancements and expansions.

- **Interactable:** Ensure that the architecture supports expansion of features by integration with other systems via secure API's

- **Security:** Implement robust security measures to protect the entire platform along with individual components and ensure data integrity and confidentiality.

16. Technology Framework Requirements

1. **Microservices Architecture:**

   o **Modularity:** The IHMS should be built using a microservices architecture to allow for modular development, deployment, and scaling of individual components.

   o **Inter-service Communication:** Use lightweight protocols such as REST or gRPC for inter-service communication to ensure efficient data exchange.

   o **Independent Deployment:** Ensure that each microservice can be developed, deployed, and scaled independently to facilitate continuous integration and continuous deployment (CI/CD).

2. **Front-end Frameworks:**

   o **Responsive Design:** Utilize modern front-end frameworks to create responsive and user-friendly interfaces that work seamlessly across various devices and screen sizes.

3. **Back-end Frameworks:**

   o **Robust APIs:** Develop robust and secure APIs to handle business logic and data processing.

   o **Scalability:** Ensure the back-end framework supports horizontal scaling to handle increased loads and user demands.

4. **Data Management:**

   o **Relational Databases:** Use relational databases like PostgreSQL or MySQL for structured data storage, ensuring ACID compliance and supporting complex queries.

   o **NoSQL Databases:** Implement NoSQL databases such as MongoDB or Cassandra for unstructured data and to handle large volumes of data with high availability and scalability.

   o **Data Warehousing:** Utilize data warehousing for analytics and reporting purposes.

5. **Security Frameworks:**

   o **Authentication and Authorization:** Implement robust authentication and authorization mechanisms using frameworks like OAuth 2.0, OpenID Connect, and JWT.

   o **Encryption:** Use industry-standard encryption protocols (e.g., TLS/SSL) to secure data in transit and at rest.

   o **Vulnerability Management:** Integrate security frameworks that provide automated vulnerability scanning and management.

16.1 Application Architecture Requirements

1. **Scalability and Flexibility:**

   o **Load Balancing:** Implement load balancing techniques to distribute traffic evenly across servers, ensuring high availability and reliability.
   o **Auto-scaling:** Use auto-scaling features to automatically adjust resources based on demand, ensuring optimal performance during peak usage times.

2. **Interoperability:**

   o **Standards Compliance:** Ensure compliance with healthcare standards such as HL7, FHIR, DICOM, and ICD-10 for data exchange and interoperability.
   o **API Integration:** Provide APIs for integration with external systems, health information exchanges (HIEs), and third-party applications.

3. **Performance Optimization:**

   o **Caching:** Implement caching mechanisms (e.g., Redis, Memcached) to improve response times and reduce database load.
   o **Asynchronous Processing:** Use asynchronous processing for time-consuming tasks to enhance system responsiveness and user experience.

4. **High Availability and Disaster Recovery:**

   o **Redundancy:** Design the system with redundancy to prevent single points of failure and ensure continuous operation.
   o **Backup and Recovery:** Implement robust backup and disaster recovery solutions to protect data integrity and ensure quick recovery in case of failures.

5. **User Experience (UX):**

   o **Intuitive Design:** Ensure the application provides an intuitive and user-friendly experience for all user roles, including healthcare providers, administrators, and patients.
   o **Accessibility:** Adhere to accessibility standards (e.g., WCAG) to ensure the system is usable by individuals with disabilities.

6. **Monitoring and Analytics:**

   o **Real-time Monitoring:** Implement real-time monitoring tools (e.g., Prometheus, Grafana) to track system performance, detect issues, and ensure system health.
   o **Analytics and Reporting:** Provide advanced analytics and reporting capabilities to support data-driven decision-making and continuous improvement.

17. Technology and Security Guidelines for Mobile Components within the IHMS

The mobile components of the Integrated Health Management System (IHMS) must adhere to stringent technology and security guidelines to ensure reliable performance, data security, and user privacy. The following guidelines outline the essential requirements for mobile applications and devices used within the IHMS:

17.1 Technology Guidelines

1. **Cross-Platform Compatibility:**

   o Develop mobile applications that are compatible with multiple operating systems, including Android and iOS.
   o Ensure consistent functionality and user experience across different devices and platforms.

2. **User-Friendly Interface:**

   o Design intuitive and user-friendly interfaces to facilitate ease of use for healthcare professionals and patients.
   o Implement accessibility features to accommodate users with disabilities.

3. **Scalability and Flexibility:**

   o Build mobile applications with scalable architecture to handle increasing numbers of users and data volumes.
   o Ensure flexibility to integrate new features and functionalities as needed.

4. **Performance Optimization:**
   o Optimize mobile applications for performance to ensure fast load times and smooth operation.
   o Implement efficient data management practices to minimize bandwidth usage and improve responsiveness.

5. **Offline Functionality:**

   o Enable offline functionality to allow users to access

6. **Mobile Interface Design:**

   o **Role-Based Access:** Both citizens and various department stakeholders should be able to access relevant processes and functionalities based on their assigned roles, responsibilities, and privileges.
   o **Screen Size Adaptability:** Design for varying screen sizes to ensure usability across a range of devices.

- **Touch Target Optimization:** Focus on touch targets and their placement to enhance usability and reduce input errors.
- **Consistent Layouts:** Ensure consistent layouts and templates across the application to provide a cohesive user experience.
- **Easy Data Entry:** Provide easy methods for data entry, including dropdowns, checkboxes, and auto-fill options to minimize user effort.

7. **Data Encryption:**

- Implement end-to-end encryption for all data transmitted between mobile devices and servers.
- Use strong encryption protocols (e.g., AES-256) to protect sensitive health information.

8. **User Authentication:**

- Require robust user authentication methods, such as multi-factor authentication (MFA), to ensure that only authorized users can access the system.
- Implement role-based access control to restrict access to sensitive functionalities and data.

9. **Secure Storage:**

- Ensure that all sensitive data stored on mobile devices is encrypted.
- Use secure storage mechanisms to protect data at rest.

10. **Regular Security Updates:**

- Provide regular security updates and patches to address vulnerabilities and protect against emerging threats.
- Ensure that the mobile application can be updated seamlessly without disrupting user experience.

11. **Wireframe and UI Requirements**

- The successful bidder expected to include indicative wireframe designs in their technical proposal for evaluation by the Department. These designs should demonstrate adherence to the following principles:

    1. **Design for Varying Screen Sizes:** Ensure the mobile application is usable across a range of device sizes and resolutions.

    2. **Focus on Touch Targets and Placement:** Optimize touch targets and their placement to enhance usability.

    3. **Consistent Layouts and Templates:** Use consistent layouts and templates to provide a cohesive user experience.

    4. **Easy Methods for Data Entry:** Implement user-friendly methods for data entry to minimize user effort and errors.

These compliance and design considerations are crucial for creating a robust, scalable, and secure Integrated Digital Health Solution that aligns with national and state health policies and standards.

18. Implementation Plan

The implementation plan for selecting a Managed Service Provider (MSP) for the Supply, Installation, Testing, Commissioning, Operations, and Maintenance of the Integrated Health Management Information System (IHMIS) in Tripura outlines a structured approach to ensure successful project execution. The plan includes the following components:

18.1 Phase-Wise Execution:

- Phase 1: Planning and Pilot Implementation
  - Initial assessment and planning of the IHMIS rollout in select pilot districts.
  - Conducting a pilot deployment in a limited number of healthcare facilities to validate the solution, refine processes, and gather user feedback.

- Phase 2: State-Wide Rollout

  - Expanding the implementation to all districts across Tripura, based on insights from the pilot phase.
  - Prioritizing healthcare facilities based on population, existing infrastructure, and identified health needs.

18.2 Infrastructure Strengthening:

- Upgrading healthcare facilities to ensure the availability of adequate ICT infrastructure (e.g., servers, networking, workstations).
- Integration of required medical and non-medical equipment with the IHMIS.

18.3 Training and Capacity Building:

- Comprehensive training programs for healthcare staff, IT personnel, and other stakeholders on the use of IHMIS.
- Continuous training during project phases to accommodate new users and updated functionalities.
- Dedicated support for training in remote and rural healthcare facilities to ensure inclusive capacity building.

18.4 Data Migration and System Integration:

- Migrating existing health data from legacy systems into the new IHMIS platform.
- Integration of the IHMIS with other digital health initiatives such as Ayushman Bharat Digital Mission (ABDM) and telemedicine services.
- Ensuring interoperability through standard APIs for seamless data exchange across multiple health programs.

18.5 Testing, Commissioning, and Go-Live:

- Conducting rigorous system testing at each phase, including functional, integration, and user acceptance testing.
- Commissioning the system in a phased manner to allow for smooth transition and adjustment.
- Ensuring a go-live process that minimizes disruption to health services, with contingency plans for quick issue resolution.

18.6 Operations and Maintenance:

- Providing ongoing support for the IHMIS, including helpdesk, troubleshooting, and regular maintenance.
- Monitoring system performance and conducting regular health checks to ensure optimal functioning.
- Implementing a service level agreement (SLA) with clearly defined metrics for system uptime, response times, and resolution of issues.

18.7 Monitoring and Evaluation:

- Establishing a monitoring framework to track progress, including key milestones, deliverables, and timelines.
- Regular reporting to stakeholders on project status, risks, and achievements.
- Conducting evaluation of the system's impact on healthcare delivery and adapting the plan as needed based on feedback.

18.8 Scalability and Sustainability:

- Ensuring that the IHMIS can scale to accommodate future growth in users, data, and functionalities.
- Planning for long-term sustainability by training internal teams and transitioning knowledge from the MSP.
- Continuous improvement initiatives based on system performance reviews and evolving healthcare needs.

18.9 Security and Compliance:

- Implementing security protocols to protect patient data, including adherence to CERT-In guidelines.

- Conducting regular security audits and compliance checks to ensure data integrity and privacy.

The above plan aims to ensure the successful deployment and management of IHMIS, enhancing healthcare delivery across Tripura through modern technology and efficient project execution.

While this explains what the implementation plan is expected to be, bidders are expected to provide the detailed implementation plan to suffice the deliverables and the execution of this RFP as part of their technical bids.

19. Security

The approved Service Provider must ensure that the IHMS adheres to stringent security standards and best practices throughout the system's life cycle, from inception and design to ongoing maintenance (O&M). The following technical security requirements are mandatory:

19.1 Layered Security Approach:

- **Perimeter Security:** Implement robust perimeter security measures, including firewalls, intrusion detection/prevention systems (IDS/IPS), and network segmentation, to protect against external threats.

- **Web Security:** Ensure the security of web applications through the use of secure coding practices, web application firewalls (WAF), and protection against common web vulnerabilities such as SQL injection, cross-site scripting (XSS), and cross-site request forgery (CSRF).

- **Application Security:** Incorporate security measures within the application itself, including regular code reviews, static and dynamic application security testing (SAST/DAST), and secure development lifecycle practices.

- **Database Security:** Secure database environments through encryption, access controls, regular audits, and monitoring for unauthorized access or anomalies.

19.2 Compliance with Industry Standards and Guidelines:

- The security solution must comply with all relevant industry standards and security guidelines issued by authorized agencies. This includes adherence to ISO/IEC 27001, ABDM, and other applicable standards.

- o The Service Provider must stay updated with and implement any new guidelines or standards issued during the contract period.

19.3 Vulnerability Assessment and Penetration Testing (VAPT):

- o Conduct regular VAPT tests to identify and address vulnerabilities within the system. This includes both internal and external testing.
- o Provide detailed VAPT reports to the Health Department outlining identified vulnerabilities, risk assessments, and mitigation measures taken.

19.4 Certifications:

- o Ensure that the IHMS is certified for security compliance by recognized bodies. Relevant certifications include ISO/IEC 27001 for information security management, and any other certifications required by the Health Department, Tripura.
- o Maintain these certifications throughout the contract period, with regular audits to ensure ongoing compliance.

19.5 Encryption:

- o Implement strong encryption mechanisms for data at rest and in transit. This includes the use of SSL/TLS for data transmission and AES-256 or equivalent for data storage of key data sets.
- o Ensure encryption keys are managed securely, with policies in place for key rotation and protection against unauthorized access.

19.6 Continuous Security Management:

- o The Service Provider is responsible for continuously managing a secure environment, implementing appropriate mitigating controls, and integrating security measures with the core IT environment.
- o Develop and maintain an incident response plan to address security incidents or emergencies promptly and effectively.
- o Regularly update security measures to counter evolving threats and vulnerabilities.

19.7 Integration and Incident Management:

- o Integrate security solutions with existing IT infrastructure to ensure seamless protection across all components of the IHMS.
- o Establish and maintain processes for incident detection, response, and escalation. Ensure timely reporting of incidents to the Health Department, Tripura with detailed incident analysis and remediation actions.

By adhering to these technical security requirements, the Service Provider will ensure that the IHMS is secure, resilient, and compliant with all relevant standards and guidelines, providing robust protection for sensitive healthcare data and operations.

20. Stakeholders Roles and Responsibilities

No.	Stakeholder Organization	Roles and Responsibilities	Notes
1.	Tripura State Health Department	**Project procurement** Facilitate procurement process for the project	
2.	NHM Tripura	**Project Execution and Oversight** • Setting up of a Project committee for overseeing the implementation of the project. • Providing project governance assistance • Providing support for organizational capacity building initiatives • Defining service levels for identified services and ensuring service level adherence • Acting as the key driver for the policy, regulatory and other relevant changes related to the project • Ensuring steady project financial support as per the project progress, from time to time • Supporting the Managed Service Provider (MSP) with respect to any dependencies to be managed by the stakeholders in the government. • Monitoring and managing the change requests, carried out by the MSP • Supporting the MSP with respect to any dependencies to be managed by the stakeholders in the government. • Provide sign off on the deliverables of the project • Ensure timely payment of invoices as per agreed terms with MSP • Working closely with the MSP to undertake the field work • Provide adequate space and compute resources at the State Data Centre for hosting requirement • Conducting User Acceptance Test (UAT) for the application solution deployed. • Coordinate with MSP for conducting workshops for the Stakeholders. • Ensuring active participation in the training programs by the MSP	

| 3. | Managed Service Provider | **Project Delivery**

• Preparation and submission of a phase-wise development, deployment and other Reports
• Design, develop, implementation, integration and management of applications defined in scope of work
• Achieving project objectives and outcome
• Training all relevant State Appointed Trainers
• Successful implementation and adoption of ABDM
• Management of Hosting of Application software on identified MeitY-empaneled cloud service provider (State Data Center)
• Generation of all reports as required and defined in RFP along with report for monitoring SLA's
• Design various manuals (User manual, Troubleshooting manual etc.) for the Application software
• Provide necessary support for the resolution of bugs, patches & upgrades of the Application software.
• Rectification of software problems due to crashing or malfunctioning of the OS, RDBMS or front end within the time limits to meet the SLAs as defined in RFP
• Develop/customize, deploy and maintain the requisite Software changes as per the requirements | |

21. Project Governance and Monitoring

The MSP should finalize the Project Governance Framework in conjunction with relevant stakeholders and implement a Project Management Tool to cover aspects of governance, project deliverables, milestones, service levels and payments. MSP will be responsible for providing a tool for project management and measuring the SLAs.

The MSP should specify their chosen Project Governance model in their proposal.

22. General Terms

The terms and conditions for the National Health Mission (NHM) and State Health Departments to be included in the Request for Proposal (RFP) for the selection of a Managed Service Provider (MSP) for the Supply, Installation, Testing, Commissioning, Operations, and Maintenance of the Integrated Health Management Information System (IHMIS) in Tripura should cover the following areas:

1. **General Conditions:**

   ○ The MSP shall comply with all relevant NHM policies, state health department regulations, and guidelines for the implementation of IHMIS.

   ○ The service provider must ensure that all work is carried out in accordance with applicable local, state, and central laws.

   ○ Any changes or deviations from the project scope must be approved in writing by NHM and the State Health Department.

   ○ The terms of this agreement will apply to all locations within Tripura where IHMIS implementation is carried out.

2. **Roles and Responsibilities:**

   ○ NHM and the State Health Department will provide necessary support, coordination, and access to healthcare facilities and staff required for the implementation.

   ○ The MSP shall be responsible for end-to-end execution of the project, including supply, installation, commissioning, and ongoing maintenance.

   ○ The MSP shall work in close coordination with the health department and NHM teams to ensure the seamless integration of existing health programs and services.

3. **Service Level Agreements (SLAs):**

   ○ The MSP must adhere to the service level agreements for system uptime, response times, and issue resolution as defined in the contract.

   ○ Any breach of SLAs will result in penalties or deductions from payments as outlined in the contract.

   ○ The performance of the MSP will be regularly reviewed against the SLAs to ensure compliance and quality of service.

4. **Payment Terms:**

   ○ Payments will be made based on the achievement of pre-defined milestones, subject to satisfactory completion and approval by NHM and the State Health Department.

○ Retention money or a performance guarantee may be held back as security for the duration of the project, including the maintenance period.

○ All payments shall be made in Indian Rupees (INR) through the banking channels as specified in the agreement.

5. **Security and Data Protection:**

○ The MSP shall ensure that all data is stored securely and adhere to data protection laws and regulations applicable in India.

○ Compliance with CERT-In guidelines for cybersecurity and health data privacy is mandatory.

○ Any data breach or unauthorized access must be reported to NHM and the State Health Department immediately, with appropriate remediation measures undertaken.

6. **Intellectual Property Rights:**

○ Any software, system configurations, or solutions developed as part of the project shall be the intellectual property of NHM and the State Health Department.

○ The MSP shall hand over all source code, documentation, and related materials upon completion of the project.

○ The MSP shall not reuse, modify, or distribute any part of the software for projects outside the scope of this contract.

7. **Warranty and Maintenance:**

○ The MSP shall provide a comprehensive warranty for the supplied hardware and software for a period of at least one year from the date of commissioning.

○ A maintenance contract shall follow the warranty period, covering all aspects of operations and system support.

○ The MSP is responsible for ensuring timely software updates, patches, and hardware repairs or replacements.

8. **Termination Clause:**

○ NHM and the State Health Department reserve the right to terminate the contract in case of non-performance, non-compliance with contractual terms, or breach of SLAs.

- The MSP will be given a reasonable notice period to rectify any issues before termination proceedings are initiated.

- In the event of termination, the MSP shall return all assets and hand over all documentation and source code related to the project. Details or Exit Management are specified in Chapter 26 which deals with Exit Management.

9. **Indemnity and Liability:**

- The MSP shall indemnify NHM and the State Health Department against any claims, damages, or liabilities arising from the use of the system, third-party services, or data breaches.
- The liability of the MSP for any damages shall be limited to the total value of the contract, except in cases of gross negligence or willful misconduct.

10. **Compliance with Government Guidelines:**

- The MSP shall comply with all relevant guidelines from the Ministry of Health and Family Welfare, Government of India, including those related to the Ayushman Bharat Digital Mission (ABDM).

- The developed system must follow all relevant e-governance standards and guidelines for interoperability.

11. **Dispute Resolution:**

- Any disputes arising out of the contract shall be resolved amicably through discussions. If not resolved, arbitration as per Indian Arbitration and Conciliation Act, 1996 will apply.

- All the legal disputes arising between any parties involved with regard to this RFP will be settled within the judicial jurisdiction of West Tripura.

- Any dispute arising between any parties involved with regard to this RFP shall be communicated in writing to the other party.

These terms and conditions aim to ensure a clear understanding of the responsibilities, expectations, and legal obligations for all parties involved in the IHMIS project.

23 Service Level Agreement

Service Level Agreements (SLAs) are crucial for maintaining the performance and reliability of the Integrated Health Management System (IHMS). The approved Service Provider must adhere to the following SLAs to ensure high-quality service delivery. This SLA is dependent on the MSP being responsible for the Hosting environment.

23.1 Uptime and Downtime

a. **Quarterly Uptime Requirement:**

- The IHMIS must be operational for a minimum of 99.5% of the time in any given quarter.

b. **Unscheduled Downtime Penalties:**

- If unscheduled downtime for the entire IHMIS exceeds 9 hours, penalties will be imposed as follows:

Unscheduled Downtime	Penalty Imposed
> 9 hours < 12 hours	1% of Quarterly Payment
> 12 hours < 15 hours	2% of Quarterly Payment
> 15 hours	5% of Quarterly Payment

c. **Contract Termination Clause:**

- If unscheduled downtime consistently exceeds 15 hours for two consecutive quarters, the Health Department, Tripura reserves the right to terminate the contract.

23.2 Help Desk Resolution Time

a. **Incident Definition:**

- An incident refers to any event or abnormality in the application's functioning that disrupts normal operations.

b. **Query Categorization:**

- Queries will be categorized based on their impact:

  o **High Priority:** Issues that prevent users from performing routine work (e.g., system login failures, core module malfunctions).

  o **Medium Priority:** Issues that partially impede routine work (e.g., request approval failures).

  o **Normal Priority:** Issues with minimal business impact.

  o **Other Queries:** Enhancement requests.

c. **Resolution Timelines:**

Nature of Query	Maximum Resolution Time Allowed	Performance Baseline
High Priority	4 Business Hours	All Calls Resolved
Medium Priority	8 Business Hours	99.5% Calls Resolved
Normal Priority	2 Working Days	98% Calls Resolved
Other Queries	Case-by-case basis	-

d. **Penalty for Resolution Delays:**

- Delays beyond the maximum resolution time will incur penalties as follows:

Nature of Query	Penalty per Hour
High Priority	Rs. 1,000
Medium Priority	Rs. 5,00
Normal Priority	Rs. 1,00
Other Queries	Case-by-case basis

e. **Helpdesk Software and Reporting:**

- The Service Provider must supply Helpdesk software/tools to measure and log resolution times.
- Monthly reports, verified by the concerned users, must be submitted detailing query resolutions.

23.3 Other SLAs

a. **Timely Completion of Scheduled Tasks:**

- Failure to meet scheduled timelines without explicit approval from Health Department will result in a penalty of 0.5% of the total project cost per week of delay, up to a maximum of 4 weeks. After this, the contract may be terminated.

b. **Software Upgrades:**

- Regular upgrades of all software, both proprietary and third-party, must be ensured. Failure to do so may result in a penalty of up to 5% of the monthly operational cost.

c. **Data Confidentiality:**

- The Service Provider must ensure the confidentiality of all data. Any breach may result in liquidated damages of up to Rs. 1 crore and potential blacklisting of the Service Provider.

d. **Integrity and Performance Standards:**

- The Service Provider must maintain the highest level of integrity and performance throughout the contract. Any detrimental act found after an inquiry will result in penalties, performance security forfeiture, and potential blacklisting.

23.4 SLA Reporting Procedures

a. **Monthly and Quarterly Reports:**

- SLA performance reports must be prepared and submitted by the 10th day of every month following the end of a quarter, including a variance analysis and discussion of issues or significant events.

23.5 SLA Monitoring

a. **Performance Reviews:**

- The Health Department will review performance against SLAs quarterly or as deemed appropriate, which may be scheduled or unscheduled.
- A third-party auditor may be appointed to validate SLA adherence.

23.6 Maximum Penalty for Breach of SLAs

a. **Penalty Limits:**

- The maximum penalty in any quarter shall not exceed 20% of the quarterly payments due.
- If the penalty exceeds 20% for two consecutive quarters, the Health Department, Tripura reserves the right to terminate the contract.

23.7 Outages

a. **Unplanned Outages:**

- Defined as unexpected downtime where users experience no response from the application. The Service Provider is responsible for these incidents.

b. **Planned Outages:**

- Pre-scheduled downtime for maintenance must be notified at least three business days in advance and should not occur during business hours.
- Planned downtime should not exceed 12 hours and should not run into the following business day. Overall planned downtime must not exceed 24 hours per quarter.

c. **Outage Recording:**

- Outages are recorded from the time of reporting until the problem is resolved and the application/service is available to users.

d. **Uptime Calculation:**

- Uptime is calculated as the percentage of hours the application is available for use out of the total hours in the specified period.

These SLAs ensure that the IHMS maintains high standards of performance, reliability, and security, aligning with the strategic objectives of the Health Department

24. Deliverables

These deliverables aim to ensure a smooth and comprehensive implementation of the Integrated Health Management Information System in the state.

24.1 Development or Customization of Existing Solutions:

- ○ Develop or customize approved Health Information Management System (HIMS), Clinic Management System, Laboratory Information Management System (LIMS), and mobile applications for Health Sub-Centers (HSC).
- ○ Implement a Training Learning Management System (LMS) for comprehensive training programs.

- ○ Provide an Exit Management Plan which is updated every 6 months.

24.2 Integration:

- ○ Integrate the above systems with existing program integrations, the State Health Dashboard, and the Ayushman Bharat Digital Mission (ABDM) Dashboard to create a comprehensive Integrated Health Management Solution.

24.3 Implementation and Rollout:

- ○ Implement and roll out the Integrated Health Management Solution across government healthcare facilities, including mental health centers, cancer treatment facilities, AYUSH centers, and drug rehabilitation centers.

24.4 Training Setup:

- ○ Establish an LMS with training programs for the entire solution.
- ○ Plan and execute "Train the Trainer" programs to prepare state-supplied local trainers.

24.5 Cloud Management and Integration:

- ○ Manage the cloud setup of the application within the state's data center.
- ○ Integrate the application with state-provided SMS and email gateways.

24.6 Pilot Rollout (8 Months):

- ○ Execute a pilot rollout covering all public health facilities in one complete district, along with district hospitals and state hospitals in the other seven districts.

24.7 Scale-up Rollout (4 Months):

- ○ Scale up the implementation to cover the remaining facilities, incorporating any modifications and improvements based on feedback from the pilot phase.

24.8 Operations and Maintenance Phase (24 Months):

- ○ Provide annual management of the application, software support, and dashboard maintenance.
- ○ Facilitate data analysis for the publication of the State Health Bulletin.
- ○ Integrate the dashboard with private healthcare solutions.
- ○ Add state health program training and ABDM training modules to the LMS.

25. Timelines and Payment Schedule

The timeline and payment schedule are structured to ensure efficient completion and smooth implementation of the Integrated Health Management Information System (IHMIS) in Tripura.

The schedule outlines specific milestones for the supply, installation, testing, commissioning, operations, and maintenance phases. Payments to the MSP will be released upon the successful completion of each milestone, with clear timelines to guide both progress and accountability, aligning with project goals to enhance healthcare delivery across the state.

Phase	Timeline	Deliverables	Payment Milestone
Phase 1a: System Development/Customization & Integration	0-3 Months	- Development or customization of HIMS, Clinic Management Solution, LIMS, Mobile Apps, Training LMS. - Integration with program dashboards and ABDM.	10% upon successful system development and integration.

Phase 1b: Pilot Rollout	0-8 Months	- Pilot implementation in one complete district, covering public health facilities, district hospitals, and state hospitals in other 7 districts. - Address issues and optimize based on pilot feedback. Initiate Cloud IT Management and Cyber Security	20% after successful completion of the pilot phase.
Phase 1c: Training and LMS Setup & other apps & modules	0-3 Months	- Setup of LMS and execution of "Train the Trainer" programs. - facilities for Mental health, Cancer, AYUSH & modules - Rollout of training programs statewide.	10% upon completion of Training and LMS Setup & other apps.
Phase 2: Statewide Scale-Up	9-12 Months	- Full implementation across all remaining public health facilities in the state. - Incorporate modifications from pilot feedback. - Conduct Cloud IT Management and Cyber Security	20% upon completion of the statewide scale-up.
Phase 3a: Operations & Maintenance	12-24 Months	- Annual management of the application, software support, dashboard maintenance. - Data analysis and integration of the dashboard with private health solutions. - Update LMS with state health program training modules. - Conduct Cloud IT Management and	20% spread across quarterly payments during the O&M phase.

		Cyber Security	
Phase 3b: Operations & Maintenance	24-36 Months	- Annual management of the application, software support, dashboard maintenance. - Conduct Cloud IT Management and Cyber Security	20% spread across quarterly payments during the O&M phase.

26. Exit Management

The purpose of this Exit Management Clause is to ensure a seamless transition and continuity of operations in the event of vendor exit due to contract termination, expiration, or any other reason.

This clause safeguards the interests of the State of Tripura and ensures that critical health services are not disrupted.

26.1 Exit Management Plan

All bidders will provide a structured and detailed Exit Management plan along with a knowledge transfer plan along with the technical proposal, as part of their submission towards this RFP. The chosen MSP will update the Exit Management plan within 30 days of coming onboard and then update it every 6 months. This plan needs to be discussed and approved by the state nominated agency.

This includes the following:

a) **Data Transfer and Handover Plan:**
- Details of how the MSP shall transfer all data, reports, and system documentation in a mutually agreed format to the state nominated agency or a designated replacement vendor.
- Details of how the MSPshall maintain Data integrity, accuracy, and completeness during the transfer.
- Details of how the MSPshallensure compliance with all applicable data protection laws during the transfer.

b) **Knowledge Transfer Plan:**
- Details of how the MSP shall conduct detailed knowledge transfer sessions to enable smooth operation and maintenance by the State or a replacement vendor.

c) **Software and Licenses Transfer Plan:**

- Details of how the MSPshall handover to the State, All software (customized or proprietary) developed specifically for this project, along with source code, documentation, and licenses.
- If third-party software licenses were procured, Details of how the MSPwill ensure that these shall be transitioned or reassigned to the State where legally permissible.

d) **Operational Support Plan:**
- Details of how the MSPshall provide operational support for a specified transition period (e.g., 6 months) to ensure continuity of services.

26.2 Exit Management Timelines

- The Exit Management process shall commence no later than 3 months before the contract's termination/expiration date or within 7 days of an early termination notice.
- The entire Exit Management process must be completed within 3 months unless mutually agreed otherwise.

26.3 Payment Obligations During Exit Management

- The State shall make any outstanding payments for the services rendered up to the contract termination date, subject to satisfactory compliance with Exit Management requirements.
- The MSP shall not charge additional fees for data handover, knowledge transfer, or documentation.

26.4. Termination of Vendor Access

- Upon completion of the Exit Management process, the MSP's access to all systems, data, and premises shall be terminated.
- The MSP shall certify in writing that no copies of State data or intellectual property have been retained.

ANNEXURES

Annexure - 1: Format for Annual Turnover of Bidder

Annual Turnover Bidder

(Original Photocopies of Audited Balance Sheets / P&L Statements should be attached for the last three Financial Years)

Ref: RFP No. —------------------Dated—--------------------------
(Amount in Rs.)

Financial Year	Turnover	Net Profit and Loss	Net worth

Yours faithfully,

For & on behalf of ……………………………

(Authorized Signatory)

Name: -

Designation-

Date:-

Annexure – 2: Format for Undertaking against any Blacklisting

Self-Declaration-Non-Blacklisting

To
XYZ Department

Subject: Self-Declaration of Unblemished Record

Reference: …………………… dated: ……………………………..

In response to Tender Ref. No.: …………………………, dated ………………………, I/We, M/s ………………………………, hereby declare that our company, _____, maintains an unblemished record and has not been declared ineligible due to corrupt or fraudulent practices by any State/Central Government institutions or any PSU in India, either indefinitely or for a specified period. We confirm the following statements:

a) We are not insolvent, under receivership, bankrupt, or in the process of winding up, nor are we under the administration of any court or judicial officer. Our business activities are not suspended, and we are not involved in any related legal proceedings.

b) Neither our company, its directors, nor its officers have been convicted of any criminal offense related to professional conduct, misrepresentation, or false statements regarding qualifications for procurement contracts within the last three years, nor have we been disqualified due to any debarment proceedings.

c) We have no conflict of interest in the procurement process as specified in the bidding documents.

d) We adhere to the code of integrity outlined in the bidding documents.

Signature of the Authorized Signatory

Name:

Date:

Place:

Seal:

Annexure-3: Format for Turnover Certificate

Turnover Certificate of Bidder
(Attach a photocopy of the Turnover Certificate)

Reference: RFP No. ——————————- Dated: ——————————————-

We, M/s ……………………………, with our registered office located at
……………………………… certify that our organization's Turnover/Revenue for the Financial
Years 2021-22, 2022-23, and 2023-24 is as follows:

Financial Year	Turnover/Revenue
2021-22	
2022-23	
2023-24	

We, M/s………………………, hereby affirm that the information provided above is accurate to
the best of our knowledge. We understand that any inaccuracies or misrepresentations may
result in legal or procedural actions as deemed appropriate by [Department Name]. We also
acknowledge that any forgery or falsification may lead to disqualification and blacklisting from
future tender processes initiated by [Department Name].

Sincerely,

M/s …………………

Authorized Signatory

Name:

Designation:

Seal & Signature:

ANNEXURE-4 : Government Project References

S.No.	Description	Details
	General Information	
1	Customer Name	
2	Name of the contact person and contact details for the client of the assignment	
	Project Details	
3	Project Title	
4	Start Date: DD/MM/YYYY	
	End Date : DD/MM/YYYY	
5	Current Status (work in progress/completed)	
6	Number of staff deployed in the assignment	
	Size of the project	
7	Total Cost of the project	
8	Period of contract	
9	Technologies Used	
10	Number of end users catered to by the system	
11	Any other information to be shared	
12	Documentary Proof & Details	

Please attach the proof - Work Orders/Completion Certificates, Go-Live Letters or Letter of Appointments and Agreement/MOU Copies. with the document.

Yours Faithfully

M/s …………………

Authorized Signatory

Name:-

Designation:-

Seal &Sign:-

Annexure – 5: Format for Pre-Bid Queries

Reference No.: —………………………
Date: —………………………

Company/Firm Name: M/s _____

Representative Information:

Name of Person	Designation	Email-ID(s)	Telephone & Fax Nos.

Company/Firm Contact Details:

Contact Person(s)	Address for Correspondence	Email-ID(s)	Telephone & Fax Nos.

Pre-Bid Queries Table:

S No	RFP Page No	Clause Details as per RFP	Query/Suggestion/ Clarification	Reply to the Queries (Updated Clauses)

Yours faithfully,

Authorized Signature (in full and initials): _____
Name and Designation of Signatory: _____
Company/Firm Name: _____
Business Address: _____
Office Seal: _____
Place: _____
Date: _____

Annexure-6: Covering Letter for Bid (to be submitted on the letter head of the bidder)

Ref: ……………………………………… Date ……………………

To

The Executive Director,

XYZ ………...

Subject: -

Dear Sir/Madam,

We, the undersigned, offer to provide services to ……………………… activities for providing ………………in response to your Notice Inviting Tender dated […………..], the receipt of which is duly acknowledged, we, the undersigned, hereby submit our offer to provide the services as outlined in the Scope of Work, Technical Specifications, and Service Level Standards in conformity with the bidding document requirements.

1. We confirm that our bid is made in good faith, without collusion or fraud, and that all information provided is true and correct to the best of our knowledge and belief.
2. We accept all terms and conditions of the tender without deviations and submit our bid in good faith to deliver the services requested in the RFP.
3. We understand that, until a formal contract is prepared and executed, this bid—along with your written acceptance and notification of award—will constitute a binding contract between us.
4. We agree to abide by the terms of this RFP for the period specified in the NIB from the closing date for bid submission as stated in the RFP document.
5. We undertake to establish a local office in Agartala within 30 days of receiving the Work Order, should we be awarded the project. (Alternatively, we confirm that we already have an existing office at Agartala, located at: [address].)
6. We understand that the Purchaser is under no obligation to accept any bid received in response to this RFP.
7. Should we be engaged by the Purchaser, we will fully cooperate with all stakeholders, including the Purchaser, appointed audit agencies, state government officials, and other project stakeholders, as required. We acknowledge that failure to cooperate may result in the termination of our services.
8. We affirm that all statements and information provided in this bid are accurate. We also understand that any misrepresentation regarding the RFP document may lead to the disqualification of our bid.

We further understand that the Purchaser reserves the right to accept or reject any proposal received.

Yours faithfully,

Authorized Signature (Full Name and Initials): _____
Designation: _____
Name of the Firm: _____
Business Address: _____
Office Seal: _____
Place: _____
Date: _____

Annexure-7: Financial bid Format

(To be filled by the bidder in their Letterhead)

To,

……………..

[Reference No. ………………….. Dated: ……………]

Dear Sir,

We, M/s [Company Name], the undersigned bidder, having thoroughly read and reviewed the Tender Document, hereby acknowledge receipt of the same. We propose to undertake the role of "System Integrator/Implementing Agency/Selected Bidder" as per the Scope of Work, technical specifications, Service Level Standards, and all other requirements outlined in the bidding document.

We hereby submit our best price offer as detailed below, valid according to the terms specified in the Tender Document. We confirm that our quoted price aligns with the prescribed specifications and requirements, inclusive of all costs required to complete the work as well as all applicable government taxes and duties, as specified in the financial bid.

Should our bid be accepted, we commit to providing the services in accordance with the requirements of [Department Name] stated in the bidding document. Additionally, we pledge to submit the prescribed performance security for the proper execution of the contract as per the Department's specifications.

We agree to keep this bid binding for the period specified in the Tender, starting from the last date for bid submission, allowing acceptance any time before the expiration of that period. Until a formal contract is prepared and signed, this bid, combined with your written acceptance and notification of award, will serve as a binding contract between us.

We declare that this bid is made in good faith, without any collusion or fraud, and all information presented is accurate and true to the best of our knowledge. We understand that the Purchaser is under no obligation to accept the lowest or any bid received. We also confirm that we agree to all terms and conditions of the bidding document and have submitted this bid without any deviations.

Date:

Authorized Signatory:

Seal of the Organization:

Name:

Designation:

Annexure-8: Price Bid Format

*Notes:

To be submitted in the BOQ only (Submission of the hardcopy of financial bid may lead to disqualification of the Bidder.) Reference format is provided in Schedule – A below

SCHEDULE-A

No.	Item	Price	Taxes	Total
1	Design, Development, Customization, Configuration, Integration, Training, Implementationand Maintenance of The Integrated Health Management System for the State of Tripura. This includes: I. Development, Customization and Roll out of HIMS (Hospital Management Information System) for state hospitals, district hospitals, RH's, SDH's and CHC's, II. Development, Customization and Roll out of CLIMS (Clinic and Small Hospital Management Information System) for PHCs III. Development and Customization of the CLIMS/HIMS to covers Govt. facilities for Mental health, Cancer, AYUSH and Drug rehabilitation. IV. Development and Customization of Mobile Apps for HSC V. Development and Customization of State Health Dashboard and ABDM Dashboard which will include a Performance Management Dashboard VI. Development and Customization of Training LMS. VII. Integration of the HIMS, CLIMS, Mobile Apps and the Dashboards will form the IHMIS. VIII. Development and Customization of Integrations between IHMIS and Govt Apps and Portals, IX. Development and Customization of the LMS X. Train the Trainer programs for State supplied local trainers.			

	XI. Cloud management of setup of the application (IHMIS) within the state data center and integration with state supplied SMS and email gateways. XII. Development and Customization of Performance dashboards to the CM dashboard for the state of Tripura Provide financial break up by scope of activities			

Yours faithfully,

Authorized signature (in full and initials) ………..…………………………….………..

Name and designation of the signatory …………… ………………………… ………

Name of the Firm …………………………………………………………………..

Business address ………………………………………………………………..

Office seal…………………………

Place………………

Date ………………..

Annexure-9: BANK GUARANTEE FORMAT – PERFORMANCE SECURITY (PBG)

(To be stamped as per Stamp Act and affixed on appropriately valued Stamp Paper)

To,

Subject: Performance Bank Guarantee for Agreement No. [Agreement No.] dated [Agreement Date]

2. In consideration of [Department Name] (hereinafter referred to as the "Beneficiary") agreeing to exempt M/s [Contractor Name] (hereinafter referred to as the "Contractor") from the demand of Security Deposit under Agreement No. [Agreement Number] dated [Agreement Date] for the project [Project Name] (hereinafter referred to as "the Agreement"), we, [Bank Name], hereby issue this Bank Guarantee for Rs. [Amount in words and figures] at the request of the Contractor.

3. We, [Bank Name], hereby undertake to pay Rs. [Amount in figures and words] without any hesitation or delay, on demand by the Beneficiary. Such demand from the Beneficiary shall be final and binding with regard to the amount payable by the Bank under this Guarantee. This Bank Guarantee shall remain at the full discretion of the Beneficiary, and we bind ourselves to all directives issued by the Beneficiary regarding this Guarantee. However, our liability under this Guarantee shall be restricted to Rs. [Amount in words and figures].

4. We, [Bank Name], further commit to paying any amount demanded by the Beneficiary, regardless of any dispute or objection raised by the Contractor in any legal or arbitration proceeding, our liability remaining unequivocal and absolute.

5. This Performance Bank Guarantee shall remain in force and effective until [Expiry Date], and shall continue to be enforceable until all claims by the Beneficiary under or in relation to the Agreement have been fully satisfied or until the Beneficiary certifies that the terms of the Agreement have been fulfilled by the Contractor and discharges this Guarantee.

6. We, [Bank Name], agree that the Beneficiary has full authority, without our prior consent, to modify any terms and conditions of the Agreement, extend the Contractor's performance timeline, or defer or enforce any term without affecting our obligations under this Guarantee.

7. Our liability under this Guarantee shall not be discharged by any change in the constitution of the Bank or the Contractor.

8. We, [Bank Name], undertake not to revoke this Guarantee except with the prior written consent of the Beneficiary.

9. This Guarantee shall remain valid and enforceable until the Beneficiary determines its discharge. Notwithstanding anything to the contrary, our liability under this Guarantee is limited to Rs. [Amount in words and figures].

10. The Beneficiary is not required to pursue any claim against the Contractor prior to making a claim against the Bank under this Guarantee.
11. We, [Bank Name], confirm that we have a branch located at [Branch Location], where this Guarantee shall be payable. If the expiry date falls on a Bank holiday, the Guarantee will expire on the following working day.
12. We confirm that we are authorized to issue this Guarantee on behalf of our Bank, and the undersigned has full authority to execute this Guarantee by express delegation of powers under the Bank's constitution.

Dated this _____ day of _____ [Year].

For and on behalf of [Bank Name]

Signature: _____
(Name & Designation)
Bank's Seal

Accepted by [Beneficiary]
For and on behalf of [Department Name]
Signature: _____
(Name & Designation)

ANNEXURE-10: HIMS Project References

Sr. No	Assignment No & Date	Description of work/services provided	Value of assignment	Date of commencement	Date of completion	Was assignment satisfactorily completed	Address of organization with Phone No. where assignment done.

Project Name:	
Country: Location within country:	Project Duration: -
Name of Customer:	
Project Name:	

Country: Location within country:	
Name of Customer:	
Contact person with address, phone, fax and e-mail:	
Start Date (Month/Year):-	
Name of associated Bidders, if any: -	
Narrative description of Project: -	
Scope of work (including the details of modules implemented if applicable):-	
Project Scope of work - Module wise	

Name of the Authorized Representative: -

Email Id-

Designation-

Seal &Sign: -

Date-

....