

Clinton Health Access Initiative, Inc.

Request for Proposal for the development of the National Integrated Laboratory System

Dated: 28 May 2025



Terms of Reference for the development of the National Integrated Laboratory System

The Clinton Health Access Initiative, Inc. (CHAI) is a global health organization committed to saving lives and reducing the burden of disease in low-and middle-income countries while strengthening the capabilities of governments and the private sector in those countries to create and sustain high-quality health systems that can succeed without our assistance. For more information, please visit: <http://www.clintonhealthaccess.org>

1. Background

The Rwanda medical laboratory network comprises 514 Health Centers (HCs), 5 Medicalized Health Centers, 56 Hospitals, and the National Reference Laboratory (NRL). This network currently operates with multiple Laboratory Information Systems (LIS), including LabWare at the National reference Laboratory (NRL), VLSMS, initially deployed for HIV-related testing and now expanded to include Hepatitis, TB, and other modules. Data to Care, used for TB data reporting, an Electronic Proficiency Testing (ePT) for quality management and various Laboratory modules within hospital Electronic Medical Records (EMRs).

These systems, both proprietary and open source, are fragmented and often inconsistent across facilities. This proliferation results in high operational costs, heavy workloads for clinical and IT staff, and limited interoperability. Additionally, several lower-level health facilities still rely on manual processes, limiting the overall efficiency and accuracy of laboratory services.

To address these challenges, the Ministry of Health (MoH) and Rwanda Biomedical Centre (RBC), with support from the Clinton Health Access Initiative (CHAI) are initiating a project to develop a harmonized and fully integrated National LIS. This initiative aims to streamline laboratory operations, promote interoperability, enhance data management, and reduce dependency on external service providers.

2. Scope of work

The selected consultancy firm or companies will be responsible for the following:

1. Conduct a comprehensive assessment of the current laboratory systems and infrastructure to inform the design and development of the national LIS, aligned with the specifications in Annex 1 and relevant API standards.
2. Use an Agile methodology to develop the LIS in phased stages, including:

- Core LIS
 - Supporting modules (e.g., EPT, HTS, quality control)
 - System integrations and interoperability
 - Instrument interfacing
3. Conduct iterative and adaptive internal system testing.
 4. Collaborate with the digitalization team from MoH, RBC/NRL, hospitals, and stakeholders to perform User Acceptance Testing (UAT) based on predefined criteria and methodology.
 5. Undertake data cleaning and migration from legacy systems.
 6. Provide comprehensive training for system administrators, super users, and end users.
 7. Deploy the system in a phased approach, beginning with pilot facilities (NRL, one hospital per level, and one health center).
 8. Conduct ongoing system maintenance and support in line with the Service Level Agreement (SLA) during the warranty period.

3. Expected results.

Delivery of a **web-based, centralized, and fully integrated Laboratory Information System (LIS)**, including all core and supporting modules, interfaced with instruments and other national health systems, and capable of scaling nationwide.

4. Key deliverables

1. Initial Project and system Documentation:
 - a. Inception Report
 - b. System Architecture Document
 - c. Security Architecture Document
2. Detailed Requirements Specification compliant with the Rwanda laboratory network workflows and API toolkit.
3. Phased system release and validation documentation for:
 - a. Core LIS
 - b. Supporting Modules (e.g., ePT, eHTS, Quality Control)
 - c. Integrations with national health systems
 - d. Instrument interfacing
4. Data Migration Report

5. Training Report for administrators, super users, and end users
6. Pilot Deployment Report covering NRL, one hospital per level, and one health center.
7. Comprehensive Technical Documentation and user guides
8. Two-Year Service Level Agreement (SLA) for post-deployment support

5. Request for Proposal (RFP) rules, timeline, process, and contact information

CHAI Rwanda Country office invites qualified Service Providers to submit a competitive bid by responding to this “Request for Proposal” (RFP). Please follow these instructions in completing your bid.

- Well written bids documents prepared in English, will be sent to this email address rwandaprocurement@clintonhealthaccess.org, with “Consultancy Services for National NLS” in the subject line not later than Friday 27th June 2025 at 05:00 pm Kigali local time. It shall remain your responsibility to ensure that your bids will reach the email address above or before the deadline. Bids documents that are received by CHAI after the deadline indicated above, for whatever reason, shall not be considered for evaluation. Only shortlisted companies will be contacted.
- Faxed copies will not be accepted.
- Signature of this letter is done by a duly authorized representative of the company.
- **Language:** Documents should be submitted in English.
- **Validity:** Ensure that all certificates and documents are valid at the time of bid submission.
- **Proposal validity:** All proposals must be valid for at least 120 calendar days
- Any questions/concerns/clarifications related to this tender should be addressed to CHAI Rwanda procurement Office through rwandaprocurement@clintonhealthaccess.org not later than 7 days before the deadline for submission. Any questions/concerns/clarifications received after this deadline will not be considered.
- All bids must indicate that they are valid for no less than One Hundred Twenty (120) days from the quotation due date.

- The development of the National LIS is expected to start immediately following contract signature.
- Foreign companies are required to have representation on the ground, to ease communication and follow up.

CHAI Rwanda Country office reserves the right to:

- reject any proposal without obligation or liability to the potential Service Provider;
- withdraw this RFP at any time before or after submission of bids, without prior notice, explanation or reason;
- modify the evaluation procedure described in this RFP;
- accept other than the lowest price offer;
- award a contract based on initial offers received, without discussions or requests for best and final offers;
- decide not to award any contract to any Service Provider responding to this RFP;
- request additional data, information, discussions, or presentations to support part of, or your entire bid proposal. All responses should be submitted in electronic format. Service Providers or their representatives must be available to discuss the details of their proposal during the evaluation process.

6. Administrative documents

Interested and qualified candidates are required to submit their competitive bids in consideration of the terms of reference and requirements shared. Below are the administrative requirements pertaining to this tender:

1. **Certificate of Incorporation / Business Registration:** A valid Certificate of Incorporation or equivalent document from the bidder's country of registration. This will confirm the bidder's legal status and authority to operate.
2. **Tax Clearance Certificate, RSSB clearance certificate and proof of using EBM:** A valid Tax Clearance Certificate from the bidder's country of registration to ensure the bidder is compliant with tax obligations. Bidders registered to operate in Rwanda should provide a valid RSSB clearance certificate and proof of using Electronic Billing Machine (EBM)

3. **Power of Attorney:** A notarized Power of Attorney authorizing the person signing the bid to represent the bidder and validate the authority of the signatory.
4. **Bid Submission Form:** A completed and signed Bid Submission Form by the bidder's authorized signatory that confirms the bidder's intent to participate and accept tender terms.
5. **Bid Security:** A Bid Security equivalent to \$5,000 from a reputable bank and the bid security should be valid until 30 days after the bid validity period. (see **Annex I for bank bid security**)
6. **Audited Financial Statements:** Audited financial statements for the past 3 years that demonstrate the bidder's financial stability and capacity to execute the contract. They must be signed by certified auditors
7. **Joint Venture Agreement (if applicable):** A legally binding Joint Venture Agreement outlining roles, responsibilities, and profit-sharing arrangements.
8. **Certificate of Good Standing:** A Certificate of Good Standing from the relevant authority in the bidder's country that confirms the bidder's compliance with local laws and regulations.
9. **Data Protection Compliance:** The consulting firm should ensure compliance with Rwanda's data protection laws, as health-related software often involves sensitive personal data.
10. **Litigation History:** A statement disclosing any ongoing or past legal disputes to help the client assess potential risks associated with the bidder
11. **Local Representation Plan (optional):** A plan detailing the bidder's approach to local representation, including partnerships with local firms or hiring local staff. This facilitates local engagement, compliance with national policies, and the capability to respond on time during the post-deployment support.
12. **Confirmation of performance guarantee:** the winner of the tender will be required to provide a bank performance guarantee amounting to 5% of the whole tender amount (see **Annex I for bank performance guarantee**). The performance guarantee must cover the entire **duration of the contract** until six months after the final handover of the NLS. usually an additional 12 months after project completion. Should be extended in case of contract extensions.

7. Timelines

The assignment schedule will be in accordance with an agreed work plan in the inception report. However, the delivery of the assignment from inception/contract signing to implementation is expected to take one and a half years from the date of commencement followed by 24 months of post-deployment support, according to the following indicative timeline.

S/N	Deliverables	Period
1	Initial project and system documentation	1 month
2	Detailed requirements specification	1 month
3	Core LIS	4 months
4	Supporting modules (ePT, eHTS, quality control, Quality assurance, Biobank, Genomic Surveillance, ODK, Inventory management, Instrument Management, AMR surveillance, Research and Development)	3 months
5	Integrations with external systems: eBuzima, HMIS, eIDSR, Open Clinic.	2 months
6	Instrument interfacing	3 months
7	Data migration report	1 month
8	User training report	1 month
9	Pilot deployment and report of complete system (NRL, one hospital for each level, and one health centre)	1 month
10	Final technical documentation, system handover and SLA	1 month

8. Qualifications and competences

8.1 Minimum required profile for the consulting firm

The successful consultant firm is expected to meet the following qualifications and competencies:

- A minimum of 7 years of proven experience in software development and implementation

- At least 2 certificates of completion of similar work (software development and implementation) in the health sector
- Must have experience working with government agencies, especially in the health sector system implementation.

8.2 Key personnel profiles

a. Project Manager/Team Leader (1)

- Must have at least a bachelor's degree in information technology, computer sciences or equivalent, but preferably a Master's in the same field (with copy of degree)
- Must have at least 7 years of experience in software development, with at least two years in the health sector
- Must have successfully implemented at least 2 similar projects (software development) as a team leader, proven by related certificates or any other documents proving such experience.

b. Software developer (5)

- Must have at least a bachelor's degree in computer sciences, Information Technology, or equivalent field, but preferably a master's degree in the same field, proven by a copy of degree certificate.
- Must have at least 5 years of experience in software development using commonly used programming languages and frameworks, proven by a certificate.
- Must have successfully implemented at least 2 similar projects as a software developer, proven by related certificates or any other document proving this experience.

c. Data analyst (1)

- Must have at least a master's degree in data science or equivalent field, proven by a copy of degree certificate.
- Must have at least 5 years of experience in data engineering and data analytics using Python/ R or Power BI ecosystems.
- Must have successfully implemented at least 2 similar projects as a Data Analyst, proven by related certificates or any other document proving this experience.

d. DevOps Engineer (1)

- Bachelor's degree in computer science, Information Technology, or related field
- Proven skills in CI/CD, containerization, scripting, and automation.

e. Business Analyst (1)

- Bachelor's degree in computer sciences, Information Technology, or a related field , but a master's degree is preferred.
- Minimum 5 years in business analysis for IT projects
- Must have successfully implemented at least 2 similar projects as a Business Analyst, proven by related certificates or any other document proving this experience.

f. UI/UX specialist (1)

- Bachelor's degree in computer science, Information Technology, or related field
Minimum **2 years** of experience in UI/UX and system design.

g. Laboratory scientist (2)

- Bachelor's degree in biomedical laboratory science
- Minimum 7 years of experience in medical laboratory science supporting high-level medical laboratory services.
- Proven experience supporting laboratory accreditation processes.
- Experience in a Lab information system is advantage.

For more details, please refer to the attached requirements.

9. Required Proposal Format and Documents Provided

Responses to this RFP must consist of the following:

9.1 Cover letter, which includes:

- Name and address of the Service Provider.
- Name, title, telephone number, and e-mail address of the person authorized to commit the Service Provider to a contract.
- Name, title, telephone number, and e-mail address of the person to be contacted regarding the content of the proposal, if different from above.

9.2 Technical Proposal

Submissions must contain a technical proposal, submit in Word or PDF format, containing at the minimum the following sections:

- Detailed methodology and technical implementation approach. This will also include a simulated concept design of the proposed national NLS.
- Detailed work plan with estimated and reasonable timelines for each deliverable.
- A plan for extended support/maintenance services of the system
- Biographies, and responsibilities for the proposed key administrative and technical team of experts who will serve on this consultancy. CVs to be provided as annexes
- Two letters of reference and certificates of completion of similar or related projects performed in the past three years encompassing the following information: Customer name, Type of service provided, contact name, Contact phone and e-mail.

9.3 Financial Proposal

Financial proposals must be submitted separately from the technical proposal and should provide full details of the financial offer and reasonably priced as part of the financial proposal.

- Fixed costs for the experts.
- Separate listings for material cost (including any required software licenses or printing), logistic and travel cost where applicable (flights, in country transportation and logging) and per-diems.
- Any additional fixed costs or overheads.

Prices should be submitted inclusive of any applicable taxes and in US\$ for international companies. Local companies are required to submit their offer in Frw. However, for comparison purpose, CHAI will use the average exchange rate of National Bank of Rwanda (BNR) of the proposal submission deadline date.

10.Evaluation Criteria

The decision to award a contract will be based on Service Provider's responses to this RFP and any subsequent negotiations or discussions. The decision-making process will consider the ability of the Service Provider to fulfil requirements as outlined in the ToRs and the cost of doing so. CHAI Rwanda Country office will consider proposals based on their total score (technical + financial). Proposals will be evaluated against the following criteria:

#	Evaluation Criteria	Maximum Score
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1	Technical proposal	20
2	Applicants' relevant capacity and past performance in developing similar national laboratory systems.	30
3	Qualifications and experience of the proposed development team.	30
4	Financial proposal – value for money.	20
Total Score		100

Annex I: Bid and performance bank guarantee template.

Form of Bid Security (Bank Guarantee)

*[If required, the **Bank** shall fill in this Bank Guarantee form in accordance with the instructions indicated in brackets.]*

[Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: _____ *[Name and Address of Procuring Entity]*

Date: _____

BID GUARANTEE N°.: _____

We have been informed that *[name of the Bidder]* (hereinafter called "the Bidder") has submitted to you its bid dated (hereinafter called "the Bid") for the execution of *[name of tender]* under Invitation for Bids No. *[IFB number]* ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we *[name of Bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[amount in figures]* (*[amount in words]*) upon receipt by us of your first demand in writing stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
- (b) having been notified of the acceptance of its Bid by the Procuring Entity during the period of bid validity, (i) fails or refuses to Sign the Contract or (ii) fails or refuses to furnish the performance security, in accordance with the Instructions to Bidders.
- (c) does not accept the arithmetic corrections made to his bill of quantities and price list of his bill

This guarantee will expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful bidder; or (ii) thirty days after the expiration of the Bidder's Bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

Date:.....

Name of Authorized Representative personAddress:.....

Position:.....

Signature:..... Seal:.....

Performance Bank Guarantee

(Unconditional)

[The **bank** providing the Guarantee shall fill in this form in accordance with the instructions indicated in brackets, if the Procuring Entity requires this type of security.]

[insert bank's name, and address of issuing branch or office]

Beneficiary: *[insert name and address of Procuring Entity]*

Date: *[insert date]*

PERFORMANCE GUARANTEE No.: *[insert Performance Guarantee number]*

We have been informed that *[insert name of Contractor]* (hereinafter called "the Contractor") has entered into Contract No. *[insert reference number of the Contract]* dated with you, for the execution of *[insert name of Contract and brief description of Works]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Contractor, we *[insert name of Bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert amount in figures]* (*[insert amount in words]*),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the . . . Day/month/year..., and any demand for payment under it must be received by us at this office on or before that date. However, before that expiration date, if the planned contract execution period has been delayed or

¹ The Guarantor (bank) shall insert an amount representing the percentage of the Contract Price specified in the Contract and denominated either in the currency (ies) of the Contract or a freely convertible currency acceptable to the Procuring Entity.

extended, or its value increased, the contractor shall respectively extend the validity period of this performance security or increase its amount accordingly.

Date:.....

Name:.....Address:.....

Position:.....

Signature:.....

Seal:.....

END