



## REQUEST FOR PROPOSAL (RFP)

RFP No. ASLM/ACDC/LNIMS/12/24/24

### FOR CONSULTANCY FOR THE MAINTENANCE AND UPGRADING OF AFRICA CDC'S LABORATORY NETWORK INFORMATION MANAGEMENT SYSTEM

**CLOSING DATE: 20 FEBRUARY 2025 @1700 EAT**

**When you apply for this RFP mention the RFP number in the subject line**

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#### 1.0 INTRODUCTION

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The African Society for Laboratory Medicine (ASLM) is a Pan-African professional body, working to advocate for the critical role and needs of laboratory medicine and networks throughout Africa. For more information, please visit our website at <https://aslm.org>.

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#### 2.0 OBJECTIVE OF THE ASSIGNMENT | SCOPE OF WORK | EXPECTED DELIVERABLES

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##### 2.1. Background:

In 2020, the Africa CDC jointly with ASLM, public, philanthropic, and private sector partners launched a continent-wide Africa Pathogen Genomics Initiative (Africa PGI) to respond to the COVID-19 pandemic but with a vision to effectively use new and emerging molecular diagnostics, genomic, and bioinformatics tools for enhanced disease surveillance, timely outbreak detection, and response. The Africa PGI continental genomic surveillance and sample referral network comprised of four (4) Centers of Excellence (CoE's), nine (9) regional hubs (RH's) and fifty-five (55) national laboratories. In order to modernize and automate the operation of the continental laboratory network, Africa CDC in collaboration with ASLM and Member States led the development of the Africa CDC Laboratory Network Information Management System (NIMS - <https://pginims.africacdc.org>). The system was developed in consultation with member states. The system is functional and is being used by multiple users to automate their daily lab transactions within some countries and cross-border levels.

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**The NIMS platform is comprised of eight modules, that include:**

- 1. Sample Referral:** Tracking the shipment of samples (in-country and across borders) and their integrity while in transit from the referral sites to the destination facility;
- 2. Quality Management System:** Tracking the implementation and improvement of quality standards and measures within the laboratory network, including the management EQA providers and result tracking
- 3. Equipment and inventory:** Tracking the placement of orders, deliveries and consumption of the different supplies to the laboratory network such as reagents and equipment including forecasting of needs;
- 4. Training and workforce development:** Managing training events, training materials, post training evaluations and maintaining a database of trainers, and trainees.
- 5. Document management:** Maintaining a repository of documents related to the operations of the network such the MTAs, Custom invoices, SOPs, Manuals, etc;
- 6. Network management:** a module to manage members of the network across Africa
- 7. User management:** a module to manage user, their roles, permissions among other user related services.
- 8. Help desk:** Provide a platform to the members of the network to make inquiries and receive timely feedback.

## **2.2 Objective of the Request for Proposal:**

ASLM is soliciting proposals from qualified consultants to maintain and **upgrade** the Africa CDC Laboratory Network Information Management System (NIMS - <https://pginims.africacdc.org>). This system provides an interface through which multi-source information regarding the laboratory network is obtained in an intuitive and timely fashion. The Consultant will adopt a consultative, holistic approach to conduct work.

## **2.3 Scope of Work**

The Consultant will be expected to provide services in phases, to a timeline to be agreed between the Africa CDC/ASLM and the Consultant upon award of the project of which the details are provided as follows:

### **Phase One: Maintenance, Upgrade, and Bug Fixing**

This phase aims to enhance system performance, fix critical issues, to ensure continuous system stability and reliability. Activities include:

- Ensuring the stability and reliability of the existing Network Information Management System (NIMS) version 1.0.
- Troubleshooting different functionalities of NIMS
  - GUI: setting on notification email and phone number change/update feature
- Performance penetration testing and advanced encryption
- Set up a system for proactive monitoring, including automated issue detection and resolution mechanisms.

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- Real-time notification and reminders to the business actors to take action. including helpdesk supporters.
- Implement multi-factor authentication-MFA
- Resolving existing bugs including registration link features and functionality
- Routine maintenance tasks
- Performance optimization:
  - average time to load pages or execute queries (target: <2 seconds for critical functions).
  - average time taken to process sample referrals or generate reports (target: <4 seconds for critical functions)
  - ability to handle simultaneous users without performance degradation.
  - capacity to store and retrieve data efficiently as records grow (e.g., target: 1 million records).

#### **Deliverable:**

- A maintenance report detailing resolved bugs and metrics showing improved performance.
- Percentage of resolved vulnerabilities from security audits.
- A fully functional NIMS version 1.1 with the newly added features and functions

#### **Phase Two: modify existing modules and develop new modules**

- Develop separate modules for in-country and cross-border sample referral: the architecture of the samples referral process are developed in the current module, however, there are no dedicated modules for referral of samples within a country and across borders
- Develop a biobanking module to support the operations of the Africa Biobank Network (ABN):
  - Develop detailed specifications in consultation with the ABN steering committee, experts, and Member States
  - Design and develop the module as per an approved System Requirements Specification (SRS)
- **Develop Diagnostics Module** to support the evaluation of diagnostic and the operations of the Africa CDC diagnostic access committee (DAC)
  - Develop detailed specifications in consultation with the DAC, experts, and Member States
  - Design and develop the module as per an approved System Requirements Specification (SRS)
- **Develop** Automated alerts for critical tasks (e.g., reagents nearing expiration date)
- **Develop** Automatically generate audit-ready reports exportable in different formats i.e. csv, pdf.
- **Develop Advanced Analytics and Reporting module with a dashboard**
- **Develop Laboratory Performance Monitoring module with a dashboard:** Monitor key lab metrics such as turnaround times, error rates, and resource utilization.
- Development of sample geolocation tracking

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- Upgrading the user interface

### **Phase three: Interoperability Development: API**

Phase three aims to facilitate seamless data exchange and integration and concentrates on developing interoperability capabilities between NIMS and commonly utilized Laboratory Information Systems (LIS). A landscape of commonly used LIS's in the African continent will be mapped and prioritized. These include but not limited to;

- DHIS-2: District Health Information Software 2
- DISA: Data Intensive Systems and Applications LIMS
- SEDR-LIMS: Sample Event Data Repository - Laboratory Information Management System.
- Africa CDC data sharing and archiving platform (AGARI).

#### **Deliverable:**

- A summary report of the interoperability module development. A Fully integrated NIMS with interoperability capabilities.
- NIMS integrates data seamlessly through APIs from different systems.
- New modules should operate independently and interface with the core system without disrupting existing processes.
- Create a detailed mapping between the old data structure and the new schema to ensure all data points are preserved and correctly transformed.
- Before deploying updates, run automated regression tests to ensure existing functionalities remain operational.
- Ensure all system APIs are versioned. New versions should support additional features without altering existing behaviours.

### **Phase four: Scalability Enhancement and UI Responsiveness**

Phase four aims to boost system adaptability, efficiency and user experience by emphasizing on enhancing NIMS' scalability. Key activities include:

- Retrospective entry of all data regarding all trainings conducted since PGI's inception
- Refine database queries and indexing strategies for faster retrieval.
- Increase the system's capacity to handle simultaneous users without performance degradation.
- Add dynamic role allocation to support new institutions and countries when creation users.
- Develop and implement archiving mechanisms to maintain system efficiency as historical data grows.
- Conduct stress testing to simulate high usage scenarios.
- Optimize front-end design for seamless performance on low-bandwidth networks and mobile-first responsiveness.

#### **Deliverable:**

- A summary report on developed modules. An enhanced NIMS with scalability features.

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- Details infrastructure enhancements, database optimization strategies, and caching mechanisms.
- Includes results of stress and performance tests showcasing the system's capacity to handle large-scale operations.
- Enhanced NIMS Version 1.2
  - Fully optimized system with scalable architecture capable of supporting a target of:
    - ☐ Concurrent Users: Minimum of 1,000 active users.
    - ☐ Data Volume: Handling of at least 1 million records with no significant performance degradation.

### **Phase Five: Update of User Manual**

Phase five aims to enhance user understanding and system adoption by focusing on updating documentation. Specific activities include revising the user manual to reflect changes in the system, workflow design, and creating mini-training videos.

#### **Deliverable:**

- An updated documentation suite with training videos.
- Update the manual to include all new features, modules, and functionalities.
- Provide step-by-step guides for core tasks such as sample referral, diagnostics, and reporting.
- Include troubleshooting tips for common user issues.
- Develop role-based short, interactive training videos for each module and feature, tailored for different user roles (users, administrators, and support staff.)
- Provide downloadable PDF versions of manuals and video scripts.
- Integrate visual guides and tutorials into the system for in-app support.
- Translate the manual and training materials into key African Union working languages. e.g. French.
- Ensure materials are accessible to users with disabilities (e.g., screen reader compatibility).

### **Phase Five: Pilot Deployment and Validation**

Phase Five assesses system readiness for full-scale deployment and involves piloting the upgraded NIMS. Key activities include; conducting training sessions (virtual and in-person as needed. If in-person, the travel cost will be handled separately); validating module functionality; and gathering user feedback.

#### **Deliverable:**

- Comprehensive pilot deployment report detailing validation results and user feedback.
- Detailed results of module validation, including identified issues and resolutions.
- Analysis of user feedback, including recommendations for improvements.
- Clear metrics demonstrating system stability, performance, and usability.
- Refined NIMS Version based on the final feedback from pilot users.

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### **PERIOD OF PERFORMANCE AND OPTIONAL PERIODS:**

The initial term (or period of performance) of the consultancy shall be from the 15 February 2025 to the 31<sup>st</sup> December 2025.

ASLM may exercise its right to extend the contract subject to the performance of the consultant and availability of funding.

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### **3.0 MANDATORY REQUIREMENTS**

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- Company profile with Certificate of Incorporation, Tax Clearance and all other applicable licenses, permit, authorizations, affiliations and certifications required per applicable laws and regulations. The company profile should provide additional information such as Registration name and trading name if applicable, physical address, telephone, contact person, period in business, key personnel/management and line of business.
- Individual consultants can also participate, and the above requirements may not be applicable but should conform to in-country tax requirements.

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#### 4.0 EVALUATION CRITERIA AND SUBMISSION REQUIREMENTS

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ASLM will accept proposals from bidders that provide Best Value and satisfy the requirements stipulated in the solicitation. All submissions/proposals will be evaluated against the set Evaluation Criteria provided below. Each proposal should contain the items listed in the Submission Requirements column in the following table.

Evaluation Criteria	Submission Requirements	Weight
1. Qualifications, Experience, Competencies	<ul style="list-style-type: none"><li>• Demonstrated experience and qualifications relevant to this consultancy. Provide at least 3 contactable references where similar/comparable consultancy was performed</li><li>• Past experience in Network Information Systems development.</li><li>• Provide CV proposed to work on this consultancy for the development &amp; support of the system.</li></ul>	40%
2. Technical Approach & Methodology & Timelines	<ul style="list-style-type: none"><li>• Provide technical approach and methodology on how this consultancy will be performed including clear, realistic timelines.</li><li>• Plans/strategies for the development of the system and engagement with relevant stakeholders in the development process.</li><li>• Monitoring and evaluation framework/plan.</li></ul> <p><b>NB: Bidders may be invited to make oral virtual presentations as part of the evaluation process.</b></p>	35%
3. Price	Provide the consultancy fees for the work. A clear cost break-down for materials, labour and maintenance component.	25%

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<b>Total</b>	<b>100%</b>
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## 5.0 CONTRACT TYPE

For this procurement, ASLM will issue out a Firm Fixed Price Contract on its terms and conditions indicating the consultant's quoted firm fixed price, scope of work, deliverables, timelines duration of contract and other instructions.

## 6.0 SUBMISSION REQUIREMENTS

Completed proposals must be addressed to the Procurement Committee and send electronically on or before the closing date and time to [rfpsubmission@aslm.org](mailto:rfpsubmission@aslm.org) **ONLY**.

## 7.0 PROPOSED TIMELINES

Date	Activity
24 December 2024	Release of RFP and publicly posted on ASLM website:
27 January 2025	Deadline for submission of inquiries related to this RFP directed to Email to: <a href="mailto:JShonhe@aslm.org">JShonhe@aslm.org</a> , <a href="mailto:SMate@aslm.org">SMate@aslm.org</a> and all questions must clearly identified with the solicitation #
	Indicate the RFP number indicated at the top of this RFP (i.e. RFQ #) in your proposals.
31 January 2025	Response to all inquiries released and posted publicly on ASLM website
20 February 2025	Deadline for Proposal submission.
28 February 2025	Final decision announced and Bidders receive feedback
5 March 2025	Contract confirmed & issued out.

*While ASLM is desirous of maintaining the proposed timelines, delays necessitated by unforeseen circumstances.*

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## 8.0 ASLM TERMS AND CONDITIONS

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The following are the terms and conditions of ASLM and any exceptions to these should be noted in writing at submission:

8.1. This RFP is not an offer to enter into agreement with any party, but rather a request to receive proposals from companies interested in providing the goods or services outlined in this RFP.

8.2. The specifications prescribed are not in any way limited to any specific tenderer as they are based on generally achievable requirements and thus, participation in this solicitation is open to all legal vendors that are registered and comply with the laws of doing business in the applicable country(ies) where services will be rendered. The necessary legal, commercial, technical and financial requirements should be satisfied.

8.3. ASLM does not bind itself to accept the lowest tender price and reserves the right to reject all submissions, in whole or in part, enter into negotiations with any party, and/or award multiple contracts.

8.4. ASLM reserves the right (but is not under obligation to do so) to enter into discussions with one or more respondents in order to obtain clarifications or additional details, to suggest service delivery refinements in the proposal or other aspects of the proposal, or to negotiate the cost quotation.

8.5. All quotations **MUST** be typed, on company official letterhead with full contact details including physical address, contact phone, email. Submissions **MUST** be received on or before the **closing date and time** and all bids received after the closing date and time may not be considered.

8.6. ASLM shall NOT be responsible for any costs involved in the preparation and submission of bids or proposals. All costs to be borne by the bidder and this is irrespective of the outcome.

8.7. Bid validity of quotation/proposals shall be 90 days.

8.8. Unless otherwise specified in the final contract, full payment will be made by ASLM to the Vendor within 30 days of receipt of invoice from the Vendor and either delivery of goods or completion of required deliverable.

8.9 ASLM provides an equal opportunity for any vendor/supplier to participate irrespective of race, colour, religion, sex, or national origin and will receive equal treatment.

8.10. By participating, preparation and submitting this quotation or proposal, you represent that none from your organization has any conflict of interests.

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8.11. To the maximum extent practical and possible, ASLM will strive to ensure that the finances provided in this procurement do not support organisations, companies and individuals associated with acts of terrorism, prostitution and drug trafficking.

8.12. ASLM reserves the right to delay, amend, reissue, or cancel all or part of this RFP at any time but feedback will be provided to the vendors who participated. Additionally, ASLM will be under no obligation to reveal, or discuss with any bidder how a quotation/proposal was assessed, or to provide any other information relative to the selection process. Respondents whose quotations are not selected will be notified in writing and shall have no claim whatsoever for any kind of compensation.

8.13. ASLM reserves the right to waive or permit cure of non-material variances in the bid proposal if, in the judgment of ASLM, it is in ASLM's best interest to do so. Non-material variances include minor informalities that do not affect responsiveness; that are merely a matter of form or format; that do not change the relative standing or otherwise prejudice other vendors; that do not change the meaning or scope of the RFP; or that do not reflect a material change in the services. In the event ASLM waives or permits cure of nonmaterial variances, such waiver or cure will not modify the RFP requirements or excuse the vendor from full compliance with RFP specifications or other contract requirements if the vendor is awarded the contract. The determination of materiality is in the sole discretion of ASLM.

8.14. Failure to provide any of the above specifications and requirements may be considered non-responsive and disqualify the bidder from final selection.

8.15. As part of its commitment to engrain a culture of honesty and integrity in all its business processes, unethical conduct such as undisclosed conflict of interests, bribes and kickbacks and other corrupt activities are strictly prohibited and denounced. No employees at ASLM are allowed to use their position to pursue personal and unethical gain. In the same vein, bidders or potential suppliers and contractors are proscribed from offering bribes aimed at influencing the process and the outcome(s). ASLM implore vendors to embrace this culture in their interactions with us. Violation of this ethical principle and requirement will result in the supplier or service provider disqualified and ASLM will not solicit or accept bids in the future from the same. Should you experience or suspect unethical behaviour by an ASLM employee, please reach out to via email: [ASLM@tips-offs.com](mailto:ASLM@tips-offs.com) or through the website: <http://www.tip-offs.com/>.

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