



المركز الوطني لمكافحة الأمراض السارية
JORDAN CENTER FOR DISEASE CONTROL

JORDAN CENTER FOR DISEASE
CONTROL
Technical Specifications and Special
Conditions
المواصفات الفنية والشروط الخاصة

LABORATORY INFORMATION
MANAGEMENT SYSTEM

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DISCLAIMER:

THIS DOCUMENT IS A REQUEST FOR PROPOSAL (RFP), AND SHALL NOT BE CONSTRUED IN WHOLE OR PART AS A DIRECT OR INDIRECT ORDER. IT SHALL NOT BE CONSTRUED AS A REQUEST OR AUTHORIZATION TO PERFORM WORK AT THE EXPENSE OF JORDAN CDC. THE INFORMATION IN THIS RFP IS INTENDED TO ENABLE BIDDERS TO FORMULATE A PROPOSAL IN RESPONSE TO THE PROJECT REQUIREMENTS SET FORTH. ALTHOUGH THIS RFP CONTAINS SUCH ENABLING INFORMATION, BIDDERS MUST MAKE THEIR INDEPENDENT ASSESSMENTS AND INVESTIGATIONS REGARDING THE SUBJECT MATTER OF THIS RFP. JORDAN CDC DOES NOT GUARANTEE THE ACCURACY, RELIABILITY, CORRECTNESS, OR COMPLETENESS OF THE INFORMATION IN THIS RFP. THE BIDDER REMAINS RESPONSIBLE ABOUT IDENTIFYING ANY FURTHER INFORMATION THAT IS REQUIRED TO PREPARE THE PROPOSAL. THIS RFP SHALL CONSTITUTE PART OF THE CONTRACT THAT WILL BE SIGNED BETWEEN JORDAN CDC AND THE WINNING BIDDER.

RFP Organization:

This RFP provides the information to enable bidders to submit written proposals for the sought solution. The organization of the RFP is as follows:

Section 1: Introduction

This section outlines the RFP's purpose and its organization.

Section 2: Project Definition and Overall Solution Description

This section provides a general definition of the project scope and a high-level description of the solution to be implemented.

Section 3: Scope of the Project

This section defines the scope of work, proposal requirements, and deliverables for the Project.

Section 4: Administrative Procedures and Requirements

This section describes the administrative rules and procedures that guide the proposal and its processes.

Section 5: Annexes

This section includes all annexes to the RFP.

Section 1: INTRODUCTION

1.1 RFP Purpose

The Jordanian Center for Disease Control (JCDC) is dedicated to improving work quality and optimizing processes by introducing a Laboratory Information Management System (LIMS) for its reference laboratory. The LIMS plays a crucial role in enhancing workflow efficiency through automated result processing, the application of work protocols, and establishing a digital platform suitable for disease surveillance and monitoring programs. LIMS is designed to handle various sample types, including but not limited to environmental, animal, and human samples ensuring support for diverse sample sources.

Furthermore, the LIMS facilitates the creation of comprehensive databases for analysis and reporting, providing valuable insights for decision-makers to aid them in their endeavors.

From the perspective of Jordan CDC, the primary objectives of a Laboratory Information Management System (LIMS) solution are as follows:

- Standardizing processes to ensure consistent adherence to laboratory procedures.
- Reducing human errors resulting from manual data entry through LIMS integration and data validation.
- Supporting regulatory compliance by providing a comprehensive audit trail.
- Enabling full tracking and traceability of information, including sample tracking throughout their lifecycle.
- Simplifying data entry.
- Improving quality and implementing quality control measures.
- Enhancing accessibility to information through search, reporting, and analysis capabilities.
- Increasing information security through controlled access.
- Enhancing turnaround times, leading to improved quality of care.
- Real-time monitoring: LIMS enables real-time monitoring of laboratory processes, allowing supervisors to identify bottlenecks, track progress, and make timely adjustments for better workflow management.
- Trend analysis and forecasting: By analyzing historical data, LIMS can help in identifying trends and patterns related to disease outbreaks or research findings, assisting in better preparedness, and planning for future challenges.
- Mobile accessibility: A mobile-friendly LIMS interface enables authorized personnel to access critical information and perform tasks remotely, increasing efficiency and responsiveness.
- Inter-laboratory collaboration: LIMS can facilitate collaboration between different laboratories, sharing data securely and efficiently, which can be beneficial in joint research projects or during disease outbreaks.
- Cost-effectiveness: Over time, LIMS implementation can lead to cost savings by reducing operational inefficiencies, minimizing errors, and optimizing resource utilization.
- LIMS shall not include any additional payment for licenses or future upgrades. The proposed system should provide a comprehensive and fully functional LIMS without requiring any ongoing license fees or imposing any financial burden on JCDC beyond the initial implementation cost

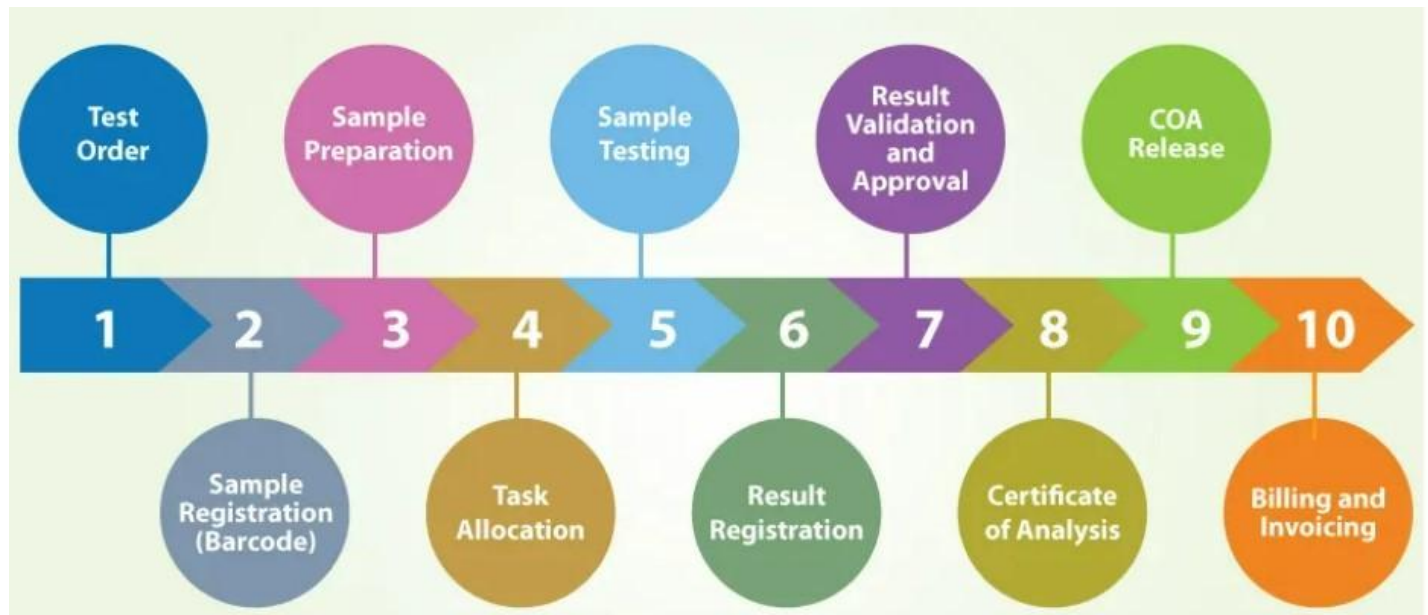
The Jordan Center for Disease and Control (JCDC) is actively seeking a highly qualified bidder who possesses the necessary expertise to deliver functional requirements and present a meticulously planned and all-encompassing implementation framework.

The winning bidder must demonstrate exceptional project management and leadership skills to ensure the successful completion of the project within the stipulated timeframe. It is imperative that the chosen bidder strictly adheres to agreed-upon tasks and achieves the desired goals and objectives, thereby ensuring optimal efficiency and effectiveness in project management. Additionally, the winning bidder will bear the responsibility of financing the lump sum cost of the project.

Section 2. PROJECT DEFINITION AND OVERALL SOLUTION DESCRIPTION

2.1 Project Definition:

The system should cover the journey of a sample from its induction into a laboratory till the end of its life cycle, including the stages of Sample Storage, Testing, Reporting, and Archiving. As a sample is introduced into a lab, the LIMS operation starts by accessioning the sample onto the system and assigning it with a particular identification number. As and when the samples move through the laboratory, the related information can then be updated in a LIMS to maintain the audit trail.



2.1.1 LIMS Purpose

As mentioned above, the system should balance both record-keeping as well as report generation. and the core functions of a LIMS should include:

- **Sample Management:**

The LIMS should manage detailed and accurate records of each sample and store them securely, thus eliminating loss of data as it moves between the departments. Additionally, when the sample moves from one unit of the laboratory to another, the Chain of Custody is updated to ensure proper tracking of the sample's location and custodian.

- **Inventory Management (day-to-day management):**

The LIMS should manage stock supplies and reagents. also, generate automatic reorder alerts in case of stock depletion. These alerts facilitate laboratory workflows and prevent any delays resulting from the unavailability of stocks.

- **Test Management:**

The LIMS should help standardize testing workflows while providing complete and accurate control of the testing process. and allows to manage of the test conducted on the batch of samples, enables easy entry of the results, tracking approval/validation of results, and generation of reports. Besides, to manage test analytes and allocate tests to specific LIMS users.

- **Reporting:**

The LIMS should enable a laboratory to achieve an entire view of data collected and potential trends, reducing the reporting overhead of the laboratory. And allow to generate reports including sample tracking, sample summary, inventory, system configuration, test results, audit trail, QC data, sample/analysis count, and invoices.

- **Document Management:**

The LIMS should efficiently handle internal and external documents, including standard operating procedures (SOPs), manuals, policies, and consent forms. And enables tracking of revision history, assigning documents for review, and controlling access to confidential documents based on staff roles.

- **Study Management:**

The system should help associate clinical research samples with a relevant study or project. So that researchers can streamline all this data within a unified system.

2.1.2 Technology and Business Enablers: A Summary of the Solution

- **Seamless Integration:** The solution is designed to seamlessly integrate with existing technological infrastructure and systems, ensuring minimal disruption to business operations. It supports interoperability with various platforms, databases, and applications, allowing for smooth data exchange and integration with other business processes.
- **Scalability and Flexibility:** The solution is scalable, accommodating growing data volumes and expanding business requirements. It offers the flexibility to adapt to changing market dynamics, regulations, and customer needs. The underlying architecture enables easy customization, configuration, and extension of functionalities, empowering businesses to tailor the solution to their unique requirements.
- **Data-Driven Insights:** Leveraging robust data analytics capabilities, the solution provides valuable insights and actionable intelligence to drive informed decision-making. It aggregates, processes, and visualizes data in meaningful ways, uncovering trends, patterns, and correlations that can optimize operations, enhance customer experiences, and drive strategic initiatives.
- **Enhanced Security and Privacy:** Security is a top priority for the solution, employing advanced encryption, access controls, and authentication mechanisms to safeguard sensitive data and protect against cyber threats. It ensures compliance with relevant data protection and privacy regulations, fostering trust among customers and stakeholders.
- **Customer-Centric Approach:** The solution places a strong emphasis on understanding and meeting customer needs. It enables personalized experiences, enhances customer engagement, and empowers businesses to deliver tailored products, services, and solutions. Customer feedback and preferences are captured, analyzed, and utilized to drive continuous improvement and innovation.
- **Agile and Collaborative Environment:** The solution fosters an agile and collaborative work environment, facilitating cross-functional collaboration, knowledge sharing, and teamwork. It enables real-time communication, task coordination, and project management, promoting efficiency and productivity among employees.

By leveraging these technology and business enablers, the solution empowers JCDC to achieve operational excellence and drive sustainable growth in today's dynamic and digital business landscape.

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2.1.3 Legal Aspects of Delivering the LIMS.

The Electronic Transactions Law provides the general legal framework that recognizes the execution of transactions through electronic means and the provision of such services through electronic means. The winning bidder should consider this Law as basic guidelines for JCDCs' solution design and implementation.

Note: The JCDC is responsible for providing the winning bidder with instructions and conditions that affect delivering the programs and services.

2.2 Overall Solution Description:

2.2.1 high-level Description of System Requirements:

In the following sub-section, a high-level description of the system requirements.

Below are the proposed system requirements that must be provided by the winning bidder, noting that any additional system requirements needed for the proper functioning of the system should be provided by the winning bidder and its cost should be included in the fixed lump sum price submitted by the bidder.

#	Specification	Comply (Y/N)	Details
1.	General		
	LIMS shall comply with the following: • ISO 15189:2022 Medical laboratories — Requirements for quality and competence • ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories • ISO 20387:2018 Biotechnology — Biobanking — General requirements for biobanking • CLSI (Clinical and Laboratory Standard Institute) standards.		
	LIMS shall support: ICD-10, LOINC, and SNOMED codes, and has the ability to include and more coding systems and change them without the need for development. (Provide management menu for the coding systems)		
	LIMS shall display the patient's full history of Laboratory tests and results.		
	LIMS shall support all lab sections, including Hematology, Immunology, Microbiology, Endocrinology, Chemistry, and more.		
	Specimen tracking and lab support through the bar code labels		
	LIMS shall provide efficient Sample/ patient searches and registration capabilities		
	LIMS shall allow for easy entry of Sample/ patient medical information		
	Allow for entry of medical and non-medical indicators inside the patient/ sample		
	LIMS shall allow for multiple types of diagnostic sample information which will cover different type of samples and species (Human, Animal, water, air and others)		

	Record financial transactions for the tests		
	Automatic generation of collection lists, specimen labels, and worksheets		
	Use an international standard as CLSI (Clinical and Laboratory Standard Institute) Auto12-A for generating barcode labels (agreed upon)		
	Assign multiple international standard codes with profiles definition		
	Facility for free text or coded comments addition		
	Re-collection and reprint label capabilities		
	The ability to do bulk sample registration and generate multiple barcode labels at once.		
	To provide pre-defined test catalogs, techniques, reference ranges, and supplies according to international standards.		
	Ability to handle the SI and conventional units		
	Manual entry should be supported for all machines, to account for cases of machine failure.		
	LIMS should flag The Critical High and Critical Low results and alert the Lab director through SMS or email or both.		
	LIMS should provide the facility for result comparison with the previous tests. Such comparison should be in table and graphical format		
	The availability of result Auto Approval Feature.		
	24/7 support and availability.		
	Ability to send results VIA: email, WhatsApp, API integration or SMS		
	Bilingual support: offers interfaces in both English and Arabic		
	LIMS should cover unlimited number of users without any extra costs		
	LIMS should cover unlimited concurrent users without extra cost		
	LIMS shall be able to manage the process of initiating samples; sample receipt, testing, release and reporting of analytical information.		
	LIMS shall be able to manage the process of initiating, receiving, testing, and releasing of raw materials, in-process materials, finished goods, pilot batches, R&D samples, and related samples.		
	LIMS shall include the use of e-signatures using prompts for passwords or enrolling the user's fingerprint.		
	LIMS should support multiple location/branches.		

	Ability to upload any kind of document(s) on the level of patient profile, sample, or test		
	LIMS should have the ability to define laboratory test profiles and attach specific tests to them. Such groups should be shown during normal ordering process to select them along with other tests.		
	User can order certain test / group of tests from selected investigation panels or investigation profiles		
	Support sample rejection cycle		
	Highlight sample rejection with reasons		
	Option to display/hide of previous results		
	LIMS must support multiple payment options, including cash, credit card, bank transfer, and cheque.		
	LIMS should allow accepting multiple payment methods within the same encounter (visit).		
	LIMS should allow users to customize header and footer information or choose an empty printing option for letterhead printing purposes.		
	LIMS should provide an option to specify the number of previous results to be included in the result report preview.		
	LIMS should include a maintenance screen for doctors to update their data, including mobile number, email, name, and specialty.		
	LIMS should be able to document the method/technique of testing and include it on the result report.		
	The system should automatically review the test that have been ordered and should calculate the volume of the required specimen and the appropriate container(s) For all types of sample Human, Animal etc.		
	The system should enable each laboratory section to modify the design and comment of the result entry screen. It is unlikely that one result entry screen will be appropriate for all sections of the Laboratory		
	LIMS should allow result amendment, this should be tracked and privileged to certain users		
	LIMS shall be installed on the government cloud and to should adhere with all the technical requirements of this implementation.		
2.	Electronic Integration		
	To provide Restful API(s) in standard forms for receiving or sending results		

	To integrate with accounting, invoicing, and government payment systems.		
	To integrate with CSPD and services provided, such as national identity verification. This should include the integration with foreign affairs to include non-Jordanian's data.		
	To integrate with Barcode reading devices		
	To integrate any data analysis or visualization tools used by the Center.		
3.	Reports, data, and business intelligence		
	Advanced data search and presentation capabilities enhance critical data-driven decisions. Intuitive user-definable dashboards display meaningful data in tables and graphs for instant oversight of laboratory activities and results. Built-in functionality to chart and identify data trends, with statistical analysis supports process improvement and quality control.		
	The system should provide ready preapproved reports such as not limited to: Abnormal reports, Turnaround time, rejected samples, workloads		
	Ability to export reports in PDF, Word, and Excel or a format enabled to publish on the website.		
	Generate summary and cumulative stats for different lab sections		
	Result Report to have the name & signature of the Lab Director along with QR code for verification.		
	The BI tool should help in identifying trends and patterns related to disease outbreaks.		
	LIMS should offer financial reports, including daily cash by user or cashbox, and daily credit, with the flexibility to extend the reporting interval as needed.		
	LIMS should have the capability to generate and print claim reports for insurance companies at the end of each month or any required period.		
	The BI/analytics solution within the Laboratory Information Management System (LIMS) must have the capability to integrate data from external sources.		
	The data integration should extend beyond the LIMS system itself and an agreed-upon standardized format.		
	Integration of data from various sources should not disrupt the core functionality of the LIMS.		
	Any data in the LIMS database is available to be included on a data query report.		

4.	Web & Smart Devices		
	LIMS supports a wide range of browsers with the latest versions, including Google Chrome, Microsoft Edge, Safari, and Mozilla Firefox.		
	LIMS should fully function on tablets and mobile devices.		
5.	QC		
	Receive QC results automatically from analyzers		
	Support multi-level controls		
	Automatic detection of Westgard rule violations		
	Notification of Westgard rule violations		
	Resolution of Westgard rule violations		
	Plot monthly Levy-Jennings (L-V) graphs		
	Shows results from multiple lots, tests, analyzers etc. on the same graph		
	Export Monthly L-V graph to Excel		
	Show QC results of the same day from different tests, controls, analyzers, etc. on one graph		
	Filter QC results on graphs by control lots, tests, analyzers, etc.		
	Export daily QC graph to Excel		
	Show warning messages received automatically from analyzers		
	A complete log of messaging with analyzers		
	Show the number of Orders, calibrations, QC per test during a period		
6.	Middleware		
	The middleware should integrate with a wide variety of laboratory instruments, using International codes like HL7, ASTM, and LIS2		
	Integrating with all types of laboratory devices that fall under the following categories: • Biochemistry Analyzers • Hematology Analyzers • Microscope systems (light, inverted, fluorescent) • Microbiology systems (bact-Alert, Vitek, Vitek MS) • PCR, sanger sequencer, and NGS systems • Automated chemiluminescent imaging System and blotting systems. • Gas chromatography, HPLC		
	The middleware should support bi-directional communication between the laboratory devices and the information system for efficient data exchange.		

	The middleware should facilitate real-time data transfer from laboratory devices to LIMS, ensuring the timely availability of test results.		
	The middleware should be able to handle various data formats used by different laboratory devices for test results and other data.		
	The middleware should include error-handling mechanisms to detect and address any discrepancies or errors during data transmission.		
7.	Referral Portal		
	LIMS License should cover unlimited external users without extra cost		
	Referral Link Generation: The portal should automatically generate unique referral links for each user.		
	LIMS must grant the referral entity access to input sample information and specify desired tests.		
	The referral entity should be able to generate and print barcodes, worksheets, workloads, and result reports using the system.		
	Referral Tracking: The portal should have a mechanism to track referrals made by each user.		
	Real-time Referral Tracking and Notifications: The portal should provide real-time tracking of referrals, allowing users to see the status and progress of their referrals		
	Referral Analytics and Reporting: The portal should provide analytics and reporting features to track the effectiveness of referrals		
	Provide web portal access of project, order, test status and test results for customers and other external stakeholders. Alerts and emails can be automatically sent based on customer-specific business logic.		
9.	Test Definition		
	LIMS should provide international CPT codes and LOINC, or any available international national codes the is required by JCDC.		
	Supports calculated results		
	LIMS should support defining sections according to user preferences		
	LIMS should support defining specimen types according to user preferences		
	LIMS should support defining container types according to user preferences		
	LIMS should support multiple result templates according to user preference		

		LIMS should offer the ability to perform repetition			
		on the same or different samples and provide the option to make the repetition chargeable or not			
		Ability to define test TAT			
		LIMS should include the capability to add a disclaimer for a test, which will be printed on the result report along with the test result			
		LIMS should also allow the addition of multiple specimen types for the same test, i.e.: considering that infant specimens may differ from adult specimens, any animal or environmental samples			
		LIMS should support the definition of specimen attributes such as volume, stability, minimum volume, sample rejection reasons, specimen requirements, and other relevant information.			
		LIMS should have the ability to accommodate multiple result types, including quantitative, free text, qualitative, ratio, coded values, and limit of values (LoVs), among others.			
		LIMS should incorporate a validation feature for entered results, providing the user with the option to override notifications, or preventing them from saving until a valid value is entered			
		Ability to define single lined, multi-lined tests as needed			
		LIMS should possess the capability to include questions for each test, allowing the user to specify whether the answer format is Date/Time, Yes/No, or free text.			
		LIMS should have the capacity to define multiple normal ranges and associate them with various methods, all without the necessity to create separate tests for the same analysis.			
		LIMS should offer a feature that allows the user to duplicate a test while retaining the same details, but with the option to assign a different code.			
		Test codes should be unique			
		Ability to activate/deactivate tests			
		LIMS must cope with many different species and not only human, many of which require different test limits to be applied			
		The capabilities to manage and allow sample pooling this allows screening of the combined samples in a single test which, if negative, enables all samples within that pool to be given a negative result. This saves the cost and time of testing each			

	sample individually and allows herds or flocks of animals to be tested quickly.		
10.	Billing System		
	LIMS should have the functionality to define and manage multiple price lists, enabling flexible pricing options for tests.		
	LIMS should support the linking of the same price list with multiple clients, allowing for efficient and convenient management of pricing for different clients.		
	LIMS should have the capability to display price lists in a single view, facilitating easy comparison.		
	Ability to update price list(s) using excel sheet		
	LIMS should provide users with the ability to access and view outstanding balances, as well as the option to settle these balances conveniently within the platform.		
	LIMS should incorporate VAT (Value Added Tax) support, allowing for seamless integration of tax calculations and invoicing.		
	The VAT definition should be dynamic, giving users the flexibility to modify the VAT percentage and details.		
	LIMS should also support differentiated VAT application, with Jordanian nationals being exempted from VAT, while non-Jordanian individuals are subject to VAT charges		
	LIMS should be capable of supporting Business-to- Business (B2B) price lists specifically designed for referrals		
	LIMS should offer the capability to manage clients and specify coverage percentages for contractual discounts. It should also support calculating discounts based on either net or gross amounts.		
	LIMS should allow the definition of multiple client types, including referral labs, private sector companies, public sector entities, doctors, insurance companies, individuals, Third-Party Administrators (TPAs), and Self-Funded organizations.		
11.	User Management System UMS		
	LIMS will categorize users into various roles, and access and user management will be overseen by an administrator account, which includes the following roles: Laboratory director, Laboratory technologist, Phlebotomist, Nurse, IT support/Administrator,		

	Accountant, Laboratory supervisor. Each role will have its distinct permissions and access levels within the system, controlled by the administrator account.		
	LIMS should have the capability to add new roles, allowing for the customization of user permissions and access levels.		
	LIMS should support the addition of groups, enabling users to be categorized efficiently based on their roles or affiliations.		
	LIMS should allow for linking users to multiple roles and groups, providing flexibility in assigning permissions and privileges.		
	LIMS should support the definition of an e-signature for each user.		
	LIMS should offer fingerprint association with users for verification and signing of result reports.		
	LIMS must enable administrators to define maximum allowable discounts for individual users.		
	Upon the user creation, LIMS will send an automatic verification email containing all the necessary credentials.		
	LIMS will include an option to enforce password changes for all users.		
	LIMS will provide an option to reset a user's password.		
	LIMS will offer users the option to reset their password in the event they forget it.		
	Duplicate User: Upon selecting a user and clicking the "Duplicate" option, LIMS will open a new form with all the user's details, excluding demographic information and the username field for user convenience.		
	The username must be unique		
	LIMS enables user activation and deactivation.		
	The system should have the feature of 2-factor authentication code login using SMS OTP code on users' mobile phone numbers if needed.		
12.	Sample Management		
	Sample tracking allows for seamless monitoring of samples from the initial request stage until the signed result is published.		
	LIMS offers a versatile search function, allowing users to search by various criteria such as date, barcode number, file number, mobile number, national ID, requested doctor, referral center, order type, sample status, section, accession number,		

	sample number, and test name.		
	LIMS allows users to view orders either in a test-specific view or consolidated in an order view.		
	Sample separation in LIMS offers flexibility to segregate samples based on predefined options like method and section. After the automated separation, users retain the ability to modify it by adding new samples or combining two samples into one.		
	LIMS allows only privileged users to amend and release or publish results. When results are amended, the user is required to provide a clear explanation for the modification.		
	Rerun test(s): LIMS should provide an option for laboratories to re-run tests as needed		
	LIMS enables users to cancel individual test samples or the entire order, with a mandatory requirement to provide a cancellation reason		
	In the event of cancellation, if the order is a paid one, a refund option will be displayed for the user to select.		
	LIMS should offer an option to export all data based on selected criteria for further analysis by the laboratory.		
	LIMS should include an update option (button) for the test(s) normal range(s) whenever the test definition is modified.		
13.	Sample Storage and Biobanking		
	Proper labeling: Samples are accurately labeled with sample details, date, and sample type, ensuring clear identification.		
	LIMS empowers users to browse and edit storage conditions and types with initial data available. It allows updating location type prefixes for seamless identification.		
	LIMS empowers users with various functionalities related to storage location management. Users can easily navigate the storage location tree, view, and update location details, and build the location tree as needed. They have the flexibility to rearrange locations by moving them within the tree, as well as delete empty locations.		
	LIMS should offer the option to print location barcodes for easy identification and sample loading, while also enabling users to scan a location code to collapse the tree and expand only the relevant location branch.		

	The LIMS must possess the capability to effectively track and manage various studies along with their corresponding biobank specimens and containers.		
	It should provide a mechanism for recording sample testing activities and the interpretation of resulting data.		
	The system should be capable of Specifying container type and multi-level hierarchies as you need, with no limits in Allocating and placing specimens		
	The solution should offer robust capabilities for tracking sample storage and movement, thereby guaranteeing adherence to regulatory compliance requirements.		
	The system must have the capabilities to do environmental monitoring to spot check fridge and freezer conditions and track measured storage temperatures across the biobank		
14.	Inventory		
	LIMS shall provide comprehensive inventory management capabilities, allowing laboratories to track and manage laboratory supplies, reagents, and consumables.		
	LIMS shall offer automatic alerts and notifications for low stock levels, expiring items, and potential supply shortages.		
	LIMS shall have barcode scanning functionality to streamline the process of adding new inventory items and updating existing ones.		
	LIMS shall maintain an audit trail of all inventory- related activities, ensuring traceability and compliance with regulatory requirements.		
15.	location-based chain of custody (COC) system		
	The Laboratory Information Management System (LIMS) must incorporate a location-based Chain of Custody (COC) feature.		
	The COC feature should utilize radio frequency identification (RFID) technology for enhanced tracking capabilities.		
	Containers must be affixed with labels containing microchips and antennae for RFID functionality.		
	RFID readers should be deployed to actively monitor the movement of samples within specified locations.		
	The COC feature should enable tracking of sample		

	movements between different designated locations.		
	Each RFID reader positioned at distinct locations must possess unique identifiers for differentiation.		
	RFID readers must continually monitor and record transitions of sample locations to ensure accurate tracking.		
	The COC feature should contribute to maintaining a secure and transparent sample tracking process within the LIMS.		
16.	Electronic Notebook (ELN)		
	The Electronic Notebook (ELN) system must serve as a designated platform for the storage of notations and easy reference to Standard Operating Procedures (SOPs) relevant to tests conducted within the sample processing life cycle.		
	ELNs must provide a structured mechanism to document all pertinent information related to tests performed as part of the sample processing life cycle.		
	ELNs should support the inclusion of essential metadata and annotations to ensure accurate context and traceability of recorded test-related data.		
	The ELN system must enable authorized personnel to access stored information, including SOP references, in a user-friendly and efficient manner		

Section 3. SCOPE OF THE PROJECT

➤ Important notes:

- There are certain activities to be performed and deliverables to be provided by the winning bidder during the execution of the Project. More detailed information on each of them is given in the next paragraphs. The bidder shall provide such LIMS, and deliverables, in addition, to support, maintenance, and warranty, including any requirements or activities needed for the proper functioning of the system besides those outlined in the following listing, and the cost of these requirements or activities should be included in the fixed lump sum price submitted by the bidder. Note that bidders should detail in their proposals all recommended mechanisms and methodologies through which their services and deliverables will be accomplished. All the final documentation deliverables of the project are required to be prepared in Arabic. Nevertheless, very technical documents such as DB design, architecture design, etc. can be accepted in the English language.
- Final deliverables submitted by the winning bidder should be attached to original official letters properly bounded, stamped, and signed by the winning bidder as shall be defined and approved by JCDC.
- The winning bidder shall provide all the required licenses.
- The required solution will be deployed centrally at e-Government private Cloud GPC.
- The duration time for implementing this project is (180 calendar days)
- The winning bidder is required to perform the operations and support activities for 60 months after obtaining the preliminary acceptance for the system under the scope of this RFP.

➤ Important Definitions:

- Preliminary Acceptance: the official acceptance by JCDC after the winning bidder finishes and delivers all work defined in the scope of work and before the start of maintenance.
- Final Acceptance: the official acceptance by JCDC after the winning bidder finishes and delivers all work in the contract and after completing the process of verifying the validity and efficiency of the system and its compliance with all technical requirements specified in the RFP.

3.1 Component 1 – LIMS Delivery

Required Activities:

In order to complete the project in a proper manner; the winning bidder is required to perform the activities mentioned below, noting that any additional related activities needed for the proper fulfillment of the project should be provided by the winning bidder and its cost should be included in the fixed lump sum price submitted by the bidder.

- The winning bidder shall perform requirements gathering and analysis with the JCDC business and technical team to capture all the details regarding the required functional requirements of the LIMS and all the points that are mentioned in the project definition.
- The winning bidder shall provide a high-level design of the solution, describing system architecture, functions, and interactions of all the components.
- The winning bidder shall conduct sprint review sessions with the JCDC team and related entities.
- The winning bidder shall provide solution architecture, MODEE and JCDC have the right to study, update, and approve it.
- The winning bidder shall integrate the new systems with JCDC internal systems through APIs/ if required in the scope of work
- The winning bidder shall provide a detailed requirements specifications document based on the deliverables of the Business Requirements Document (BRD) and Software Requirements Specification (SRS).
- The winning bidder shall provide a detailed functional design document together with detailed functional, non-functional, and technical specifications of the proposed solution, use cases, and use case diagrams.
- The winning bidder shall design, develop, implement, deploy (install, test, launch), and roll out of the proposed solution including a soft launch to ensure user adoption.
- The winning bidder shall design and build the required interfaces for the various solution components.
- The winning bidder shall develop/ provide all professional activities and services needed to deliver the integration between the existing systems and the new system (if needed).
- Develop and build all needed web services and APIs as provider and /or consumer, needed for the proper functioning of the system.
- The built APIs should comply with JCDC requirements.
- Provide very good documentation for the built APIs.
- Provide full use case scenarios for the built APIs.
- Make a full cycle test of the APIs published over GSB.
- Develop and conduct the User Acceptance Test (UAT) in collaboration with MODEE and JCDC.

Technical proposal requirements

- Describe the implementation methodology for all the points that are mentioned in the scope of work and service system delivery component
- Provide a high-level design and logical architecture of the solution, describing system architecture, functions, and interactions of all the components.

Financial proposal requirements:

- List all costs associated with system implementation and documentation as described in Annex 5.2.
- List all costs associated with the Integrations points in detail

Deliverables

- Documented Standard Operating Procedures (SOP)
- SRS (Software Requirement Specifications)
- Sprint reviews feedback and sign off.
- The database model (as a diagram, document, etc.)
- A document explaining system setup and basic troubleshooting
- Tested and deployed APIs
- Technical and business documentation for the implemented APIs
- System technical documentation (covering use cases and use case diagrams, detailed requirements, architecture, data model, algorithms, protocols, functionality of modules, quality-related documentation and artifacts, etc.)
- System manuals (covering software and hardware installation and configuration, maintenance, backup, recovery, optimization, etc.)
- End-user manuals (including but not limited to FAQ, “How do I” questions; in English and Arabic).

3.2 Component 2 – Required Infrastructure

Required Activities

The winning bidder is required to perform the activities mentioned below regarding solution Infrastructure:

- 1- Must provide the solution hosted on the Government Private Cloud (GPC) and fully integrated with Nutanix AHV/VMware Vsphere.
- 2- Must provide the solution design architecture that includes the required virtual machines (VMs), databases (DBs), or any other related services (GPC and infrastructure services are listed in the table below*).
- 3- Must describe each component's functionality and role in the architecture, knowing that GPC provides a 3-tiers architecture for management and security purposes (Web, App, and Data).
- 4- Must provide the required sizing (computing specifications) that will be utilized for VMs and DBs.

* GPC provides the bidders with different services as in the below table.

Government Private Cloud (GPC) Services		
1	Virtual Machines	
	Option 1	Windows Server 2019\2022 Enterprise Edition (Licensed).
	Option 2	UPUNTU / Oracle Linux
	Option 2	Any other OS is the bidder responsibility to provide, install, configure, and license it. Any required licenses must be included in the financial proposal as optional item.
2	Databases	
	Option 1	MySQL database as a service on GPC (DBaaS)
	Option 2	Microsoft SQL database as a service on GPC (DBaaS)
	Option 3	Oracle database as a service on GPC based on EXADATA. The available version is 19C.(DBaaS)
	Option 4	Installing your own MySQL , MS SQL server, Oracle DBs or any other DBs. In this case, it is the bidder responsibility to provide, install, configure, and license the DB. Licenses cost must be included in the financial proposal as optional item.
3	Other services	
	1.	Load Balancer (LB)
	2.	web application Firewall (WAF)
	3.	Publishing & DNS
	4.	Object storage
	5.	Micro Segmentation
	6.	Backup Solution
	7.	Warm DR Site on infrastructure level; the bidder must provide business continuity plan for all proposed solution components
	8.	antivirus
	9.	SSL certificate
	10.	SMTP Integration
	11.	SMS Gateway integration

Technical proposal requirements

The bidder is required to provide the following information in the technical proposal in relation to the required infrastructure:

1. Proposed options for hosting on GPC
2. Logical infrastructure architecture showing all solution components and their description
3. Proposed GPC services that will fulfill the project's needs and requirements
4. Required computing resources to host the solution

Note: *If during the implementation found that the infrastructure component described in the technical proposal submitted by the winning bidder does not fulfill the requirements of the scope of this project, then the winning bidder must provide all additional needed infrastructure components and the cost of all these additional components will be borne by the winning bidder*

Financial proposal requirements:

The bidder is required to provide a list of all costs associated with the required infrastructure components, services, and licenses in the financial proposal:

Deliverables:

The winning bidder is required to provide the below deliverables:

1. Comprehensive logical infrastructure architecture
2. Computing resources required to host the solution (sizing)
3. Description and functionality for each infrastructure component
4. All required licenses

3.3 Component 3 – Information Security

Required Activities

- If the services are hosted outside the GPC the winning bidder should conduct a security risk assessment at the beginning of the project and reflect the mitigation on the developed solution
- API Security: the winning bidder should follow the OWASP API Security Top 10 guide when implementing and developing the APIs in addition to the JCDC API requirement
- Web application security: make sure that any new Portlets developed are protected against web application threats. At the latest OWASP Top 10 vulnerabilities (OWASP Top 10:2021)
- For secure development the bidder should follow the OWASP Application Security Verification Standard (ASVS) Mobile Application Security Verification Standard (MASVS) and Web Security Testing Guide project and apply the applicable control from them
- Input validation must be done on the client side and server-side
- Two-factor authentication/OTP must be implemented on the user login and the password policy must have the minimum standard requirement
- Ensure registration, credential recovery, and API pathways are hardened against account enumeration attacks by using the same messages for all outcomes
- Establish and use a secure development lifecycle and establish and use a library of secure design patterns or paved road ready-to-use components
- Use a server-side, secure, built-in session manager that generates a new random session ID with high entropy after login. Session identifier should not be in the URL, be securely stored, and invalidated after logout, idle, and absolute timeouts
- Design and build secure connections and communication channels using TLSv2 or above and only Strong Cipher is used
- Ensure all login, access control, transaction, and server-side input validation failures can be logged with sufficient user context to identify suspicious or malicious accounts and held for enough time
- Ensure high-value transactions have an audit trail with integrity controls to prevent tampering or deletion, such as append-only database tables or similar.
- Work with MODEE and JCDC to add the service on the web application firewall (WAF)
- MODEE and JCDC reserves the right to perform their own vulnerability assessment and/or penetration test on any task that has been done by the bidder and provide the vulnerability reports to the winning bidder to apply appropriate recommendations to ensure system security. Another security test should be conducted to ensure recommendations are reflected.
- Agree on both “Information Security Policy” and “سياسة استخدام موارد تكنولوجيا المعلومات” Annex 5.4
- The winning bidder must read and adhere to the national cyber security center instructions, guidelines and control
[\(2023\) معايير وضوابط الأمن السيبراني للجهات المتعاقدة مع الوزارات والمؤسسات الحكومية](#)

Technical proposal requirements:

- Comply with all activities and deliverables related to the security component

Financial proposal requirements

- List all costs associated with the information security activities.

Deliverables

The winning bidder is required to provide the deliverables mentioned below:

- Risk assessment and mitigation report (if applicable)
- Security testing reports

3.4 Component 4 – Change Management, Knowledge Transfer, Training & Customer Journey/Experience

Required activities

- a) It is important to emphasize that the design of a standard **customer Journey/experience** would be of great help to Modee, who may be in the process of developing new e-Government services to ensure consistency among e-Government services in general and with launched services in JCDC in specific and provide a focus for customer experience, please refer to Annex (5.6) for more information about the customer journey/experience
- The winning bidder is required to prepare, present, and execute a plan of knowledge transfer and training for identified stakeholders among different user types.
 - Change management and awareness sessions should be conducted; in two levels; technical team and top management awareness
 - The following are training types:
 - End-user training (TOT), (5)
 - Training on the selected technology (5)
 - End-user training (10)
 - System Administrators (3)
 - Provide training handout material, materials should include related links and videos. (soft and hard copies for all attendees)
 - Training venue and all needed PCs and equipment for training purposes will be the winning bidder's responsibility.
 - Comply with the Customer journey Compliance sheet

Technical proposal requirements

- Comply with all activities and deliverables related to the change management component

Financial proposal requirements

- List all costs associated with change management activities

Deliverables

- Training plan for all training sessions
- Arabic and English videos detailing how to use the system upon the requirements mentioned above in the activities section.
- Executed training sessions for all relevant e-Service stakeholders. - provide delivery notes for executed sessions
- Training material (hardcopy and soft copy) (including Administrator training, technical training, Stakeholder's training, and End-user training).
- Customer journey Compliance sheet

3.5 Component 5 – Operations Support and Maintenance

To execute the “Operation Support and Maintenance” component of this project, the winning bidder is required to perform the activities mentioned below for 60 months after obtaining the preliminary acceptance for the system under the scope of work. Noting that any additional related activities needed for the proper functioning of the system should be provided by the winning bidder and its cost should be included in the fixed lump sum price submitted by the winning bidder:

- Assign a contact person/account manager to be responsible during the support and maintenance period of this contract.
- Provide support and maintenance services on 24x7 basis for severities 1&2 and 8x5 for severities 3&4 for the implemented solution by a team which possesses the proper knowledge and proven experience of the proposed solution.
- Ensure the availability of qualified resources at the local partner’s premises to provide on-site support when needed.
- Provide a detailed implementation plan for any pre-planned maintenance operation that may affect JCDC services availability, functionality, or stability, with the necessity to provide a roll-back plan before commencing with maintenance operation
- Issue a service report after each and every site visit registering the reported incident, its root cause and the followed procedures that resulted in the successful resolution including the taken and/or suggested recommendations and measures that shall prevent such incidents/issues from reoccurring in the future.
- Comply with the service level requirements defined and as shown in Annex (5.5) of this document.
- Provide a renewal of the software license (if any and requested) to cover the maintenance and support period.
- Provide communication channels to enable the JCDC to report incidents that should be tracked and monitored until the final resolution by the winning bidder, and keep the JCDC informed about the status of these incidents until the final resolution.
- Use a ticketing system that records all reported incidents and service requests and ensure government JCDC has access to both the system and report incident the generated incident- reports, and it shall be able to integrate with the ticketing system in Modee if requested.
- Applying the latest fixes, patches, and required updates to the installed software during the support and maintenance period (if required) while ensuring the system’s integrity, reliability, conformity, and normal operation for all system features including the content
 - If hardware is provided in the scope of the project, then spare parts required under the scope of this RFP shall be provided and installed by the winning bidder, the winning bidder has to use only genuine parts when replacing defective ones otherwise the winning bidder will be held responsible for all losses incurred due to using non-genuine spare parts or not adequate parts (in case the resolution needed replacing spare parts, and if more time needed, the winning bidder must get the related government JCDC approval to extend the time, otherwise a penalty will be applied)
- Define Escalation Procedure including the levels of escalation and name and contact details for the contact person.

Technical proposal requirements

- Comply with all activities and deliverables related to operations support and maintenance component

Financial proposal requirements

- List all costs associated with operation support and maintenance activities

Deliverables

- Service reports for all reported and resolved incidents approved by a representative from the owner.
- Proof of license renewal (if any is available in the scope)

3.6 Component 6 – Agile Project Management

Required activities

- Appoint a designated Project Manager (full-time for the contract duration) to oversee the project execution together with project teams to execute all designated tasks and activities
- Develop a Project Plan, including project objectives and success criteria, deliverables, role/responsibilities, communication protocols, document control methodology, cost management, schedule management, quality management plan, and any needed project plan.
- Develop and maintain the overall project schedule, and review and verify the integration of the project team's activities & deliverables
- Develop a project implementation strategy based on the needs and priorities of the business owner that will ensure stakeholders buy-in and create the needed impact at the different stages of the project
- Develop a project plan that will determine and ensure the attainment of all project objectives through the proper prioritization and dependency consideration of different project activities.
- Work with Modee and JCDC and its stakeholders to come up with a solid rationale for a phased approach to the project implementation plan
- Ensure close cooperation with Modee and the JCDC Project team as well as the service provider and dependencies representatives
- Schedule and conduct on-site bi-weekly progress meetings involving the project team. Meeting Minutes will be recorded and distributed, including an outstanding action Item Log, detailing the status of key decisions, responsibility, and required timing.
- Conduct periodic progress (steering committee) meetings with JCDC and all stakeholders' representatives at least once a month. Provide and maintain a full and comprehensive plan that covers all project management knowledge areas (i.e., time, scope, quality, HR, communication, risk, etc.)
- Develop project organization structure to underline all possible resources needed from engaged parties including their roles and responsibilities as well as their involvement at different stages of the Project
- Establish and execute a process for reporting project progress including deadlines; delays, issues, and critical paths to ensure deliverables are met within resource constraints
- Establish and execute a process for project risks and issues management and mitigation
- Implement submission, key performance indicators, and acceptance procedures for approving project deliverables
- Close the project and document lessons learned.

Technical proposal requirements

- Comply with all activities and deliverables related to the project management component

Financial proposal requirements

- List all costs associated with project management activities

Deliverables

- Project kick-off presentation (in English or Arabic)
- A project milestone schedule during the project preparation phase
- Project management documentation that will cover the different knowledge areas, listed below but not limited to:
 - Project management plan
 - Communications management plan
 - Stakeholder management plan including project organization structure and roles and responsibilities
 - Risk management plan
 - Quality management plan (as described in the Quality Management Component)
 - Deliverable's traceability matrix
- Issues and risk logs
- Action log
- Scheduled project status and progress reports (Weekly) addressing Reasons behind any deviation from the Project baseline plan.
- Project closing presentation (in English or Arabic) outlining work completed, lessons learned, and recommendations for "next steps"

3.7 Component 7 – Quality Management

Required activities

- Perform agile testing as it will be an integral part of the software development, where the whole development team will be conducting the testing on the developed features and functionalities and checking the behavior of the outcomes according to the expectations and requirements of the MODEE and JCDC team.
- Assign a dedicated Quality team to ensure quality of project deliverables or software through the related set of (Verification and Validation) activities.
- Prepare a detailed Quality plan scope that should include all project phases, deliverables, and artifacts of any type relevant to the project nature like Portals, websites, e-services software, documentation, etc.
- Provide all Quality deliverables, which ensure that all related activities are done successfully. This includes but is not limited to Test Plans, Test Case Scenarios including acceptance test scenarios, testing results/reports, Testing Summary reports, Defect (Bug) reports, and other required/proposed artifacts.
- Prepare the testing/staging environment to be identical to the production environment in the following points:
 - Testing environment is fully Integrated into all web services and web forms
 - Testing environment is fully integrated into staging e-payment gateways and shared government services
- Perform all needed activities in the User Acceptance Testing that should be done in cooperation with MODEE and JCDC, all bugs and defects should be solved in order to get the approval on e-Services launching before each phase.
- **NOTE: MODEE and JCDC reserve the right to perform their own functional and non-functional test including security, performance, load, stress, quality, and customer journey tests on the solution (2 rounds test), and provide the reports to the winning bidder to apply bug fixing and recommendations to ensure system functionalities this will be done in each phase.**

- In case an additional round of testing is needed after the official 2 rounds, the cost will be covered by the winning bidder.

Following are the estimated costs in JD for each testing type for each service:

#	Item Description	Additional round (JD)
1.	Quality Test	620 (per service)
2.	Customer Journey Test	440
3.	Performance test	100
4.	Load test	100
5.	Stress test	100
6.	Security	730

Technical proposal requirements

- Describe methodology and quality standards for the overall Quality Management
- Comply that testing/staging environment will be identical to production environment in the following points:
 - Testing environment is fully Integrated to all web services and web forms
 - Testing environment is fully integrated to staging e-payment gateways and shared government services
- Identify and describe the testing tools should be used by the bidder to perform all required testing types to measure of project deliverables quality and final products.

Financial proposal requirements

- List all costs associated with Quality Management activities

Deliverables

- Quality Checklists
- Complete Quality Assurance and Control documentation including functional and non- functional reports and health check reports against the pre-defined performance measures (KPIs).
- UAT Test Cases, and scenarios aligned with test data.
- Performed UAT session reports

Section 4. ADMINISTRATIVE PROCEDURES & REQUIREMENTS

4.1 Response Format

Bidders responding to this RFP shall demonstrate up-to-date capabilities and experience in providing similar services and similar engagements of the same scope and size (LIMS). These services and engagements must be performed by the bidder during the last 5 years (2 similar accomplished projects are required and the company will be excluded if it does not.)

Note: accomplishment letters might be requested during the evaluation process

Important Note:

- 1) Bidders must detail the description about Scope, size, and year for each project according to the below template

<i>Project Name</i>	
<i>Start date</i>	
<i>End date</i>	
<i>Project size and number of services</i>	
<i>Detailed Project components</i>	
<i>Client contact number and email</i>	

Bidders shall demonstrate the following specific capabilities:

Bidders should demonstrate several key capabilities to ensure they are well-equipped to meet the JCDC needs of the laboratory.

- Experience in designing, developing, and implementing LIMS Systems.
- Functional Requirements Understanding: Bidders should thoroughly understand the functional requirements of the laboratory and how their LIMS solution can fulfill those requirements effectively. This includes understanding workflows, sample management, data management, reporting needs, and compliance requirements.
- Customization and Configurability: The ability to customize and configure the LIMS to adapt to the specific needs and workflows of the laboratory is crucial. Bidders should demonstrate their capability to tailor the system to meet unique requirements without significant customization costs or complexity.
- Integration Capabilities: Bidders should demonstrate their ability to integrate the LIMS with existing laboratory instruments, equipment, and other software systems such as electronic health records (EHRs), laboratory information systems (LIS), and middleware. Seamless integration enhances data flow, reduces manual entry errors, and improves overall efficiency.

- Scalability and Performance: The LIMS should be scalable to accommodate the current and future needs of the laboratory, including increased sample volumes, new test methods, and additional users. Bidders should demonstrate the system's performance under various load conditions and its ability to scale without compromising functionality or speed.
- User Interface and Experience: An intuitive and user-friendly interface is essential for maximizing user adoption and productivity. Bidders should demonstrate a well-designed user interface that streamlines workflows, minimizes training requirements and enhances user experience.
- Data Analysis and Reporting: The LIMS should offer robust data analysis and reporting capabilities to help laboratory staff derive insights from their data, monitor performance, and meet regulatory reporting requirements. Bidders should demonstrate the system's ability to generate customizable reports, dashboards, and analytics tools.
- Mobile and Remote Access: In today's increasingly connected world, the ability to access the LIMS remotely via mobile devices is important for enhancing flexibility and productivity. Bidders should demonstrate mobile compatibility and remote access capabilities while ensuring data security and compliance.
- Experience in Information Security
- Experience in project planning and management.
- Experience in providing post-implementation support and maintenance
- Experience in quality assurance and quality control
- Experience in change management Practice.

Note: Where some skills are not available, the bidder should joint venture or sub-contract with a reputable local/international firm to cover for this specific skill, service, or equipment provided that all partners to a joint venture will be jointly and severally responsible towards JCDC In case of subcontracting, the subcontractor has to be approved by JCDC and the contractor will be liable for all works performed by the sub-contractor.

Bidders' written response to the RFP must include:

Part I: Technical Proposal

- A. Corporate capability statement: The corporate capability statement must include all the following:
 - Corporate technical capabilities and experience in implementing similar solutions together with detailed description and reference to each component underlined in Section 3: Scope of the project.
 - Detailed proposed Team Resumes (with names) (each resume will be subjected to the approval of JCDC, in case of replacements the winning bidder has to abide by JCDC requirements for replacements and approvals. In the implementation phase JCDC reserves the right to request a replacement of any resource that cannot fulfill the job)
 - Description and references to similar projects performed in the last 5 years.
 - Reference to appropriate work samples
 - If a bidder is a joint venture, partners need to be specified with the rationale behind the partnership. A corporate capability statement should be provided for all partners
 - Current client list, highlighting potential conflict of interest
 - Submit work plan allocation resources with their percentage of involvement
 - Project Organizational Structure
- B. Technical proposal: The technical proposal should include the approach to achieving the scope of work defined in this RFP and delivering each of the major components as specified in the Deliverables section. For the evaluation to progress quickly and effectively, bidders are requested to provide Part I of their proposal as per the format described in Annex 5.3.

4.2 Response Evaluation

All responses to the RFP will be evaluated technically and financially and the winning proposal will be selected based on “best value” in terms of technical superiority as well as cost effectiveness. Technical proposals shall be reviewed by the specialized technical committee and financial proposals by the Procurement Committee, at JCDC and evaluated in accordance with the following procedure:

The overall proposal will be evaluated according to the following criteria:

1. Overall Technical Proposal 70%
2. Overall Financial Proposal 30%
3. The overall bidder mark will be calculated as follows:

$$(30 \times \text{least value of financial proposals}) / \text{bidder financial proposal value} + (70 \times \text{bidder technical mark})$$

The technical proposal shall be first evaluated according to the following criteria:

1. References in similar projects (26.00%) (2 projects in the last 5 years).

مطلوب مشروعين اثنين مشابه لنطاق العمل (تطوير أنظمة ذات علاقة بإدارة معلومات المختبرات) على أن تكون بداية المشروع ونهايته خلال آخر 5 سنوات

علما بأن علامة المشروع الواحد (13 علامة) سيتم وضعها اعتمادا على تقييم أفضل مشروعين تم تقديمهم على أن يغطوا كافة مكونات نطاق العمل ولا يتم تجزئة المكونات على أكثر من مشروع

حجم المشروع 3 علامات
نطاق العمل 10 علامة، مقسمة كما يلي:
يتضمن ربط مع جهات خارجية 3 علامات
يتضمن ربط مع أنظمة داخلية 3 علامات
يتضمن سير عمل (Work Flow) 2 علامات
يتضمن واجهات أمامية (Frontend) 2 علامات

2. Staff Qualifications and Experience (26.00%):

Minimum CVs required (minimum Bachelor Degree for all CVs):

1. One Project Manager: (PMP certified or equivalent), minimum 5 years of relevant experience.
2. One Data Analyst, with at least 5 years of relevant experience.
3. One Laboratory Information Technology (IT) Specialist: An IT specialist with a minimum of 5 years' experience in laboratory informatics and information systems is essential for managing the technical aspects of the LIMS, including system integration, data migration, software updates, and security protocols. They should be familiar with relevant technologies, such as database management systems, networking, and cybersecurity principles.
4. One Technical leader / Solution Architect, with a minimum 5 years of relevant experience.
5. Two Developers: 1 senior minimum 5 years of relevant experience. 1 junior developer
6. One System engineer (LIMS Administrator), with a minimum of 5 years of relevant experience (Systems, network)

7. One information security Specialist with at least three years' experience and industry-recognized certifications may be preferred
8. One UI\UX expert with at least 3 years' experience in Customer journey and UI\UX.
9. One Trainer, (Certified TOT) minimum 5 years of relevant experience.
10. One Senior Quality Engineer/specialist with a minimum of 5 years of relevant experience.
11. One Quality Tester with minimum 2 years of relevant experience

Note: include a copy/ image of the requested professional certificate for each resource within the technical proposal

3. **Presentation by the bidders to be conducted during the evaluation period (should cover the methodology of the implementation approach of the project and the solution) (4%)**
4. **Proposed Approach and Methodology in correspondence to the RFP requirements including to the following components (44%):**
 1. Meet the high-level Description of System Requirements.
 2. LIMS Delivery.
 3. Onsite (At JCDC) LIMS Demo.
 4. Required Infrastructure.
 5. Information Security.
 6. Quality Management.
5. **Comply to the following:**
 - 1- Comply with the project time frame
 - 2- Comply with high-level Description of System Requirements
 - 3- Comply to perform all activities and submit all deliverables mentioned in sections 3.4, 3.5, and 3.6

Note: Refer to the detailed evaluation criteria attached in annex (5.1)

Only those bidders that qualify in the technical proposal (qualification mark 70% or above), will have their financial offers reviewed. The Financial proposal will be evaluated only for companies who qualify. The financial offer of those who do not qualify will not be opened and will be returned. JCDC reserves the right not to select any offer. JCDC also assumes no responsibility for the costs of bidders in preparing their submissions.

Section 5. ANNEXES

5.1 Detailed Evaluation Criteria (attached)

5.2 Financial Proposal Response Format

Please indicate the overall estimated cost of your proposed solution.

Cost should be broken down as per the schedules below as well as the detailed scope of work presented in section 3 of this document.

The price quotation should be an all-inclusive fixed lump sum price and provided in Jordanian Dinars (JD). All prices are inclusive of all fees, finance rates, and taxes. All prices are for site delivery.

Project Total Cost (Lump Sum Contract Amount) for the total compensation for the whole WORK contemplated under this proposal: [JD]

The bidder is required to finance the lump sum cost of the project according to Annex 5.2

Services	Amount
LIMS Delivery	
Required Licensees (if any)	
Infrastructure component	
Information Security	
Change Management, Knowledge Transfer, Training, and Customer Journey/Experience	
Operations Support, Maintenance, and Warranty	
Project Management	
Quality Management	
Total	

Total Amount in Words: (Only Jordanian Dinars)

Project Detailed Cost:

1. LIMS Delivery:

LIMS Delivery	Resource	Unit cost (man-day cost) per resource	Number of Units (man days) per resource	Total Cost	Comments

Total Amount in Words: (Only Jordanian Dinars)

1. ITEMS requested to be costed separately (If any)

	Resource	Unit cost (man-day cost)	Number of Units (man days)	Total Cost	Comments

2. Software Licenses (if any)

Software Supplier	Name of Software	License Metrics (i.e., by number of clients, processor power, or other	No Licenses	Unit price	Total	two years maintenance (24/7) and up-grade	Total (Including maintenance)

(i) Use several lines in the table if the license complexity warrants

Total Amount in Words: (Only Jordanian Dinars)

3. Information Security:

Information Security	Resource	Unit cost (man-day cost)	Number of Units (man days)	Total Cost	Comments
[List all activities associated with Information Security]	Skill 1				
	Skill 2				
	Skill 3				
	Skill N				

Total Amount in Words: (Only Jordanian Dinars)

4. Knowledge Transfer Training and Customer Journey/Experience

Knowledge Transfer, and Training	Resource	Unit cost (man-day cost)	Number of Units (man days)	Total Cost	Comments
[List all activities associated with Knowledge Transfer, Training, and Customer Journey/Experience]					

Total Amount in Words: (Only Jordanian Dinars)

5. Operation Support, Maintenance and Warranty:

- List all costs associated with the operations, support, and maintenance component for 60 months after obtaining the preliminary acceptance for the LIMS system under the scope of this RFP

Operations Support	Resource	Unit cost (man-day cost)	Number of Units (man days)	Total Cost	Comments

6. Project Management

Project Management	Resource	Unit cost (man-day cost)	Number of Units (man days)	Total Cost	Comments
[List all activities associated with Project Management]					

Total Amount in Words: (Only Jordanian Dinars)

7. Quality Management

Quality Management	Resource	Unit cost (man-day cost)	Number of Units (man days)	Total Cost	Comments
[List all activities associated with Quality Man- agreement]					

Total Amount in Words: (Only Jordanian Dinars)

8. Other Costs (if any)

Note (1): The Itemized Financial Proposal will be examined prior Contract Award in order to ascertain that the items are correctly calculated. The itemized prices are for reference only and the lump sum price shall constitute all costs ...etc. incurred by the bidder for the execution of the project. Should any arithmetical error be found, it will be corrected and the Proposal Value will be amended accordingly. JCDC encourages all bidders to study carefully their prices and to submit their final and lowest prices.

Note (2): The bidder shall also take into account that all the rates quoted in his Price Proposal shall be fixed throughout the Contract duration and that no adjustment to such rates shall be accepted by JCDC, except when otherwise provided for in the Contract.

5.3 Technical Proposal Response Format

Introduction

Executive Summary

This includes the bidder's understanding of the terms of reference, scope of work necessary skills, and company profile. This involves including an overview of the main points contained in the proposal with references to sections where a more detailed discussion of each point can be found (maximum 4 pages).

Approach

A detailed description of how the bidder will undertake each major area in the SCOPE OF THE PROJECT and DELIVERABLES section, required resources (bidder and JCDC) and any special skills required, the deliverables (format and structure), use of any methodology and how it will cover the scope, use of any standard tools, and duration of any work streams.

[Activity 1]

Implementation Approach

<i>Actions</i>	<i>Approach</i>
<i>Provides a listing of the actions needed for the Activity</i>	<i>Describe the bidder's approach to implementing the action; including</i> <i>▪ Process (i.e., steps)</i> <i>▪ Standard methodologies adopted</i> <i>▪ Scope of involvement for each stakeholder</i>

Deliverables

<i>Deliverables</i>	<i>Format and Structure</i>
<i>Provides a listing of the deliverables of the Activity</i>	<i>Describes the format (e.g. MS Word document) and Structure (e.g. Outline, indicating the scope and content) of each deliverable.</i>

[Activity 2]

Implementation Approach

<i>Actions</i>	<i>Approach</i>
<i>Provides a listing of the actions needed for the Activity</i>	<i>Describe the bidder's approach to implementing the action; including</i> <i>Process (i.e. steps)</i> <i>Standard methodologies adopted</i> <i>Scope of involvement for each stakeholder</i>

Deliverables

<i>Deliverables</i>	<i>Format and Structure</i>
<i>Provides a listing of the deliverables of the Activity</i>	<i>Describes the format (e.g. MS Word document) and Structure (e.g. Outline, indicating the scope and content) of each deliverable.</i>

[Activity...]

Implementation Approach

<i>Actions</i>	<i>Approach</i>
<i>Provides a listing of the actions needed for the Activity</i>	<i>Describe the bidder's approach to implementing the action; including</i> <i>Process (i.e. steps)</i> <i>Standard methodologies adopted</i> <i>Scope of involvement for each stakeholder</i>

Deliverables

<i>Deliverables</i>	<i>Format and Structure</i>
<i>Provides a listing of the deliverables of the Activity</i>	<i>Describes the format (e.g. MS Word document) and Structure (e.g. Outline, indicating the scope and content) of each deliverable.</i>

Work Plan and Duration

The work plan and duration for the overall consulting work, including any dependencies between the separate items in the scope. The bidder should provide milestones for each deliverable. The work plan should break down the phases and tasks within each phase and indicate which resources will be working on these tasks

Track Record

The bidder's track record on projects similar in both size and nature undertaken in the last five years, and references of suitable client references with contact details

CVs of Project Staff

A summary of proposed team and a description of each project staff role and their relevant experience. Brief resumes of the team who will work on the project (all detailed resumes should be included in an Appendix). The bidder should also indicate the availability of the proposed staff and indicate which phases of the project each team member is participating in, what role they will be playing, and what their utilization rate will be (percentage of their time), below is the required template to be filled for each team member

Curriculum Vitae

Proposed Position on the Project:

Name of Firm:

Name of Personnel:

Profession/Position

Date of Birth

Years with the
Company:

Nationality:

Proposed Duration on Site: _____

Key Qualifications and Relevant Experience

—

—

—

—

—

Expected Role in LIMS Project

Education

Employment Record:

Employment Record *From date — present*
Employer _____
Position held _____

Employment record _____ — _____
Employer _____
Position held _____

Employment record _____ — _____
Employer _____
Position held _____

Languages:

	<u>Reading</u>	<u>Speaking</u>	<u>Writing</u>
Language 1			
Language n			
.....			
Signature	Date		

Other Information

Appendices

5.4 "Information Security Policy" and "سياسة استخدام موارد تكنولوجيا المعلومات" (Attached)

5.5 Support Procedures & Policies

Severity Levels:

- Severity One (Urgent)

A severity one (1) issue is a catastrophic production problem that may severely impact the Required Service\Solution Availability, In such case, part or all Required Service\Solution production components are down or not functioning; loss of production data, and no procedural workaround exists.

Examples of Severity One case: DB becoming corrupted or inaccessible.

- Severity Two (High)

A severity two (2) issue is a problem where the Required Service\Solution is functioning but in a severely reduced capacity. The situation is causing a significant impact on portions of business operations and productivity of Required Service\Solution. The system is exposed to potential loss or interruption of service.

Example of Severity two cases: one node of the cluster becomes down or unavailable, inability to update DB by entity representatives or solution administrators, or inability to synchronize data between DB nodes.

➤ Severity Three (Medium)

A severity three (3) issue is a medium-to-low impact problem that involves partial non-critical functionality loss one which impairs some operations but allows the Required Service\Solution users/administrators to continue to function. This may be a minor issue with limited loss or no loss of functionality or impact on the client's operation and issues in which there is an easy circumvention or avoidance by the end user.

➤ Severity Four (Low)

Important problem but it can wait for no loss of functionality or impact on the client's operation and issues in which there is an easy circumvention or avoidance by the end user.

Table 1: Response, Resolution, and times for different severity levels

Severity	Response Time	Resolution Time
1	1 hour	8 hours.
2	2 hours	24 hours
3	4 hours	3 working days
4	8 hours	5 working days

*** Support is required to be 24x7 basis for severities 1&2 while 7X5 basis for severities 3&4**

Response Time: Time taken to acknowledge receiving of reported incident calculated from the time sending an email explaining the incident, opening a ticket on the bidder ticketing system, or conducting a phone call with the assigned support engineer by the bidder or the bidder's first line of support.

Resolution Time: Time taken to solve the reported incident completely. Resolution Time is calculated from the end of the defined response time for each severity level as shown in the above table.

5.5.1 Escalation Procedures & Penalties

For incidents classified as Severity Level 1, 2, 3 & 4, if bidder:

1. Passed the Response Time: the first level of escalation will be applied by notifying the bidder's Technical Support Manager or the assigned contact person.
2. Passed the Resolution Time: if no accepted reason from JCDC then, JCDC is entitled to fix the problem and to apply a penalty on the winning bidder in accordance with the following criteria in the below table and all costs incurred by JCDC for fixing the problem will be charged to the winning bidder and deducted from his dues or the performance/maintenance bond

Table 2: Penalties

<i>Severity</i>	<i>Definition</i>	<i>Penalty</i>
	<i>Must be done, essential to business survival. Business can't continue</i>	<i>A penalty of 1 J.D. shall be applied for each hour past the resolution time. This penalty shall continue for the first 24 hours (1x24). If the delay continues, then a penalty of 24 J.D. per day shall be applied until resolving the incident. After 2 days, if the incident is not resolved then JCDC has the right to call 3rd party to resolve the incident and all costs incurred by JCDC for fixing the problem will be charged to the winning bidder</i>
	<i>Should be done, near essential to business survival.</i>	<i>A penalty of 20 J.D. shall be applied for each day past the resolution time. This penalty will be applied until resolving the incident. After 3 days, if the incident is not resolved then JCDC has the right to call 3rd party to resolve the incident and all costs incurred by JCDC for fixing the problem will be charged to the winning bidder</i>
	<i>This could be done, with high benefit to the business if time and resources are available.</i>	<i>A penalty of 16 J.D. shall be applied for each day past the resolution time. This penalty will be applied until resolving the incident. After 4 days, if the incident is not resolved then JCDC has the right to call 3rd party to resolve the incident and all costs incurred by JCDC for fixing the problem will be charged to the winning bidder</i>
	<i>Important problem but can wait</i>	<i>A penalty of 10 J.D. shall be applied for each day past the resolution time. This penalty will be applied until resolving the incident. After 5 days, if the incident is not resolved then JCDC has the right to call 3rd party to resolve the incident and all costs incurred by JCDC for fixing the problem will be charged to the winning bidder</i>

5.6 Customer Journey Experience Standard (attached)