

Terms of Reference

Request for Proposal to Develop an Integrated Immunization Supply Chain Management Information System for the Iraq Ministry of Health as part of the continuous improvement and strengthening of Immunization system.

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Request for Proposal to Develop an Integrated Immunization Supply Chain Management Information System for the Iraq Ministry of Health

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Background	The Ministry of Health (MoH) and its partners intended to conduct several data collection projects including cold chain inventory equipment assessments either every year or every two years. The assessments used to be done by using survey software and they entail collecting information about health facilities such as their location, administrative structure, human resources, facility code, facility name, facility type, photos, GPS coordinates, province, district, target population, facility ownership, building status, building ownership, supportive supervisory visits per year amongst other details. The information collected covers existing immunization supply chain (iSC) system and it specifically includes detailed information about the human resource, their experience and training status, Health facility details, supportive supervision, electrical, solar and passive Cold Chain equipment details, temperature monitoring, vaccine & logistics stock, spare parts and vaccine van details. The current process for collecting data or assessment of the cold chain equipment and vaccine stock is considered expensive, time consuming, and it requires a lot of effort. It does not give real-time information to support the decision-making process, or the details needed to fill gaps, and provide decision makers with up-to-date data. Currently, no updates can be provided after the end of an assessment about current or actual inventory, or equipment/vaccine stock that has been added or removed after the assessment date. It only provides an offline dataset and hard copy report after the assessment. Once a deployment plan is implemented another assessment needs to start to seek updates and to check that progress has been made. The cost of each assessment is high and time consuming and consuming of effort. Furthermore, health facilities can't edit or update their information after the assessment. Based on the above scenario, any survey software will not be suitable for immunization supply chain assessment. However, such assessments are vital. The assessment system should allow health facilities and MoH national teams to submit and edit their data at any time and whenever an update takes place. The current survey tool software that is currently being used has one-time result submission and does not allow the MoH to add or update submitted data. Therefore, this kind of software should not be used since there is an ongoing need for information and updates at different levels. Instead, the EPI- iSC platform will be an online platform designed to bring the cold chain inventory, vaccine stock management, HR training details, and resource material online. It fills gaps, allows updates on different iSC data, and it could be scaled up, to meet country contexts. Furthermore, it provides real-time reports and a dashboard for national, province, district, and health facility levels. The user at the health facility level can edit, update, and delete equipment records as required. Meanwhile, immediately national dashboard system will be updated, and they can include real-time information for the decision maker and gap analyses. With the iSC platform, the MoH can get real-time and up to date information every day without any additional costs or efforts.

Objectives, Purpose & Expected results	The aim of this project is to develop and pilot an online Management Information System for the complete immunization supply chain components including cold chain inventory, Human resources profiling, e-learning and vaccine management components. System should be designed to ensuring that the right vaccines are available in the right place, at the right time, in the right quantities, in the right condition, and at the right cost is a goal set to strengthen immunization systems at country level. Therefore, vendor should propose taking the functions from all past cold chain inventory assessments done, wVSSM, ongoing HMIS platforms, remote temperature monitoring systems and any other iSC related assessments and placing them within one platform that achieves all the ministries' immunization goals. This comprehensive cold chain iSC platform will provide real-time updates on the status of health facilities, related human resources, iSC performance indicators and their inventory, thus increasing the accuracy of findings. Such outcomes will result in better planning, and they will bring ministries closer to achieving their goals and serve as one source of information for all iSC indicators at country level. System should provide accurate, up-to-date, real-time, and evidence-based information from the health facility to the national level about various components of iSC such as CCE inventory, stock management system, training management information system and learning management system, to support decision makers, fill gaps and strengthen immunization supply chain systems. The learning management system will also have the training and resource material on different aspects of immunization supply chain in the form of interactive learning management system, gamification, videos, presentations etc.
Description of the assignment	The Contractor will be responsible to design, develop, pilot the system for Iraq ministry of health, support the expanded rollout and to provide post-implementation support. The project is owned and managed by the respective Ministry of Health with a UNICEF partnership. The work generally includes the Provision of capacity building and knowledge transfer so the MoH team can sustain and expand their digital solutions. The implementation of the project (supplies provision, training, installation, and after-sales services) will be supervised by a technical committee from the Ministry of Health with support from UNICEF. The time for work completion, according to the stated deliverables, was estimated to be 9 months of system design and deployment plus one year of post-implementation support to provide guidance and troubleshoot the program needs. A detailed timeline implementation schedule should be submitted with the technical offer to facilitate monitoring and supervision by the technical committee. During that year, the bidder will provide technical support as needed. The contractor shall prepare a detailed work plan and submit it to UNICEF along with the offer. The contractor shall also prepare periodic progress reports as requested by UNICEF. The agreed items in the financial offer be priced and totaled in US Dollars. The tenderer shall ensure that all clauses are priced, and the calculations are accurate. The tenderer will bear responsibility for the non-priced clauses and inaccurate calculations in the submitted offer. UNICEF will pay the contractor in US Dollars according to percentages of completed work certified by the supervising officer and approved by UNICEF's respective sections.

Project phases

Phase	Duration	Deliverables
1. Planning and Envisioning	2 months	Software Requirements Specifications (SRS) and design document, business needs, user journey, system architecture, and technical recommendations & requirements
2. Design	1 months	Mockup screens and system design interface including system sections, components, and pages
3. Development	4 months	Pilot web application and prototype
4. Testing	1 month	Users feedback report
5. Documentation and training	2 months	User's guidelines and conduct training for system admin and end-users
6. Feedback and testing	1 month	End-users feedback report
7. Deployment	1 month	Install system on MoH servers
8. Piloting 9. Launching system in the whole country	3 months	Pilot system in 2-3 governorates to test and update System launched
10. Provide technical and end-user support	12 months	Technical and end-user support

System components

1. Website: An informative website to be developed to offer information for public about the iSC platform like about platform, who is using, contact information, success stories...etc. website will be accessible through domain name.
2. Cold Chain Equipment Inventory (CCEI): It will include:
 - a. Health Facility: This section includes all necessary information about health facility which will be gathered and stored. This information can be needs to be entered one time and available for changes as needed, for example new staff members employed or facility contact information.
 - b. Cold Chain Equipment: This section includes all equipment (Electrical, Passive, Solar and Ultra cold chain) detailed information, number of equipment, technical details, manufacturer, model number, functionality status, net space, date of installation etc. Whenever an equipment is being added or removed health workers can easily update the system and reflect the change, immediately national dashboard system got updated and designated person notified. The information on spare parts, tool kits and vaccine van will also be included.
 - c. Cold Chain Equipment Breakdown Details-This will include type and cause of breakdown, time of notification and repair. This will provide reports on breakdown rate, down time, and response time.
3. Human Resource & Training Management Information System This section will include HR information, their experience, training details etc. The system will be able to generate the name-based training load for various training. There will be provision to conduct periodic training need assessment and performance need assessment activities using an in-built questionnaire builder.

4. Vaccine Stock Management- This will include vaccine, diluents and supplies details with their manufacturer, formulation, number of doses per vial, number of doses per beneficiary, packed volume per dose, permissible vaccine wastage, iSC parameters such as supply schedule, max and min stock, and stock parameters such as issue, receipt, opening & closing stock, VVM status, shipping/ freeze indicator, lot/ batch number etc.
5. Temperature Monitoring - This will have linkage with the remote temperature monitoring devices (wherever applicable) using a bridging application and will provide information on real time temperature with the facility of temperature alarms notification through SMS/ app notification in case of any excursions.
6. Learning Management System- The system will have fully functional web-based learning platform for CCE repair and maintenance and vaccine management This will supplement the existing training programs with a relevant, adaptable, and sustainable training package, including a refresher training platform for medical officers, health workers and mobilizers for the Vaccine Logistics Managers, Cold Chain Handlers, and Cold Chain Technicians. This will apprise users of the latest developments in the immunization supply chain, facilitate self-learning and encourage peer to peer support for key stakeholders.
7. Reports- The system will generate reports not limited to the following, during design phase a complete analysis and reports list should be provided in addition to these reports.

Sr. No	Category	Reports
1.	Cold Chain Point (CCP) information- (Health Facility where vaccine is stored in the Cold Chain Equipment)	Facility wise summary
		Name of cold chain points
		District wise summary
		Solarization status and electricity supply duration
		Population covered
		Net Cold chain space
		Cold Chain technician availability
		Site visit for preventive maintenance
		GIS mapping of cold chain points
2.	Equipment	Electrical CCE inventory
		Non-Electrical CCE inventory
		Equipment condemnation (decommissioning) status
		Model wise inventory
		Model wise capacity
		Model wise breakdown instances
		Equipment movement
		Breakdown duration
		Vaccine van details
3.	Human Resources and e-learning	Line listing of Immunization Staff
		Coding and record transfer capacity
		Segmentation of training obtained
		Training Gap visualization
		E-learning account creation
		Gender and age reports.
4.	Cold Chain Rehabilitation Operational plan	Expansion
		Extension
		Replacement
		Annual forecasting of CCE need
5.		Breakdown rate

		Cold Chain System Performance indicators	Breakdown reporting time	
			Response time	
			Down time	
	6.	CCE details (Refrigeration units)	Age wise CCE	
			Refrigerant wise CCE	
			Model wise CCE	
	7.	Cold Chain Maintenance and spare parts	Spare parts utilization and requirement- Model wise	
			Maintenance Tool kit availability and requirement	
	8.	Cold Chain Maintenance and Procurement budget	Cold Chain equipment repair and maintenance cost Model wise	
			CCE Procurement cost	
			Total Cold chain asset cost	
			Spare parts and Tool kit procurement cost	
	9.	Cold Chain Space availability for vaccine movement	Cold Chain space available and required at all level stores for vaccine movement	
			Additional cold chain space required to store vaccines	
			Transportation type and space available and required for vaccine movement	
	10.	Temperature monitoring	Temperature records during storage and transport	
			High and low temperature alarms during storage and transport	
	11.	Vaccines and Logistics utilization and uptake	Antigen wise stock out, vaccine shortage and excess stock	
			Closed vial vaccine wastage- Antigen wise	
	12.	System usage Report	Frequency of user using the application for Cold Chain program	
			Documentation of field visit report in the system	
	Using this section users can generate reports or access real-time dashboard according to their access level and permission. Data is being aggregated from health facility level to national level. 8. <u>User Access and Permission:</u> Access can be controlled by the MoH national team, health facilities can be added, users can be assigned according to their roles with certain access level (view, edit, update, and delete). Each user has his/her own username and password and can access the platform using a computer, tablet, or mobile device. The MoH national users have full access on the system and work as country system administrators. The data will be hosted on the MoH server. 9. <u>Messages:</u> A communication tool to offer easy way to communicate with national level team and report issues and have it documented and in one place. Users can use this tool to submit service request or order material or any other. It provides personal, trackable, scalable conversation and rapid answers. 10. <u>Help:</u> An online user guideline on how to use the platform designed for end-users in platform language. 11. <u>Settings:</u> A section to configure and customize the platform based on country needs and requirements including administrative levels, country settings, PQS...etc.			
	Deliverables and Methodology			
		Deliverable	Duration	

1. Planning and Envisioning phase: Software Requirements Specifications (SRS) and design document, business needs, user journey, system architecture, and technical recommendations & requirements.	2 months
2. Design phase: mockup screens and system design interface including system sections, components, and pages	1 month
3. Development phase: pilot web application	4 months
4. Testing and Documentation and training phase: develop user's guidelines and conduct training for system admin and end-users	3 months
5. Feedback and testing phase: end-users feedback report	1 month
6. Deployment. 7. Pilot phase: pilot system in 2-3 governorates to test and update 8. Launching system in the whole country	4 months
9. Provide technical and end-user support	12 months

The contractor should take note of the following:

Vendor should develop the integrated iSC platform as an online system that will bring Cold Chain Equipment Inventory, vaccine stock, HR, and training details online. The developed system will provide countries with immediate and real-time updates about immunization supply chain. Noting that the application will be developed and piloted in Iraq country to verify and finalize. However, the same platform can be implemented in any region or country without any further development costs.

In line with that, questionnaires on Human resource, training status and needs, Health facility details, supportive supervision, electrical, solar, and passive Cold Chain equipment details, temperature monitoring, vaccine & logistics stock, spare parts and vaccine van details for baseline assessment will be designed and standardized to capture baseline data from all the supply chain levels. This will provide the full functionality of a management information system, including editing records (add/update/delete) and providing real-time reports about various iSC parameters. The system will be offered as an integrated system and include interactive and real-time reports/dashboards to support countries in identifying cold chain inventory gaps, vaccine & logistics stock gaps, HR and training gaps and support the decision-making process. Comprehensive reports and dashboards will be offered as an interactive and dynamic reporting tool for the country to allow end-users to generate any reports as required.

- All works shall be accomplished according to UNICEF- General Terms and Conditions as well as the direction of the supervising officer (supervising committee) formulated by the directorate and the below requirements:
- The bidder shall prepare and submit the expected methodology of implementation, brands, technical manuals, training plan, and a schedule plan.

	- The bidder shall also be deemed to have read and examined the terms of reference, technical specifications, drawings, and all other relevant documents before completing the bills of quantities. - No alterations or modifications shall be allowed without prior written approval from both parties, the respective directorate, and UNICEF. If such approval is granted, it will not relieve the bidder from his responsibilities under the contract. All works shall cover the provision of all required complementary supplies and works. Any demands from any party to undertake any additional works or to substitute any materials or works should be discussed and approved by UNICEF in form of a variation order. - The bidder shall provide the certificates to prove the technical capacity possession and institution registration documents The bidder shall be considered: - Ensure the best safety (including Covid-19 safety procedure) and security practices in the site for his own employees, everyone on the site. - Information confidentiality and privacy practices should be followed at all stages of the project. - The contractor should not handle, receive, or deal with any real data from MoH as this should be only MoH responsibility.
Reporting requirements	Lists of the reporting guidelines and the reports to be prepared during the assignment as well as deadlines for submission; it includes requirements such as contents, number of copies, language, who should receive the reports, and whether they should be submitted electronically (specify the file format, e.g., "pdf"), in hard copy, or both. Following reports for project milestones are required are: - The bidder shall submit periodic progress reports: A report shall be submitted one week prior the submission of each payment request. The report shall contain all the works done during the period, enclosed by documents and photos if available, minutes of meetings signed by all parties. - Preliminary handing over report: One technical report shall be submitted after the physical completion of all works and preliminary handing over. This report shall contain all the implementation details as stated, time correction, signed good receipts enclosed with an official cover letter from the management of the project/ directorate.
Location and Duration	- Ministry of Health/ Baghdad (Immunization department/ directorate of public health) Al-Andalus. - The expected duration of the project is 22 months after awarding the contract.
Qualification requirements	Specifies the professional requirements of the individual(s) and/or team(s) for the assignment including required experience, skills, and qualifications; if applicable: - Company background, with minimum of 3-5 years in business in related assignment and experience in managing similar services or projects. - Provision of Senior ICT specialist with experience with ICT Governance and Enterprise Architecture, and that he/she is supported by a Business Analyst. - Provision of Web Developer is needed. - Experience with Digital Health – specifically Health Information Exchanges, Health Standards, and Health Enterprise Architecture.

	• Preferable work with primary health project, vaccines related activities. • Financial strength, financial statement for the year 2019-2020 or 2021-2022 shall be provided. • Registration documents of the company is required. • Appropriate technical resources with the right skills/expertise, qualifications to deliver the outputs required. Key technical skills/expertise of individual team members to be used to execute the assignment, qualifications/level of education of key staff that will be assigned to this project, evidence of expertise/experience of each individual team member etc.		
Evaluation process and methods	4.1 Initial Technical Evaluation Pass/Fill approach: (Vendor must be passed all the below requirement to be consider for the technical evaluation process).		
	MANDATORY REQUIREMENTS	SUPPORTING DOCUMENTS	SCORE
	Lead bidder is a legal entity regulated and licensed in Iraq or the region.	A copy of the certificate of incorporation (i.e., company legal registration) or equivalent document verifying legal status/capacity in Iraq.	Pass / Fail
	Relative experience with Digital Health Initiatives. Digital Health – specifically Health Information Exchanges, Health Standards, and Health Enterprise Architecture.	Reports and reference check.	Pass / Fail
	The lead bidders have valid partnership with all related vendors.	A valid copy of Partnership / Authorization from the relevant manufacturers.	Pass / Fail
	Valid agreement with certified software development firm if the vendor is not so.	A detailed agreement with software development firm that are certified to provide the required development work.	Pass / Fail
	Then Bid shall be evaluated based on technical and financial criteria. The ratio weight between technical and financial criteria is (80:20).		
	• Technical Evaluation: • The Bid shall be technically evaluated as below:		
		Technical evaluation Criteria	Max. Points Obtainable
	i	Company and organizational profile	30
		Company background; years in business with experience in managing similar services or projects and client portfolios with evidence considering the minimum 5 years requirement. The scores will be calculated as following: 3-5 years=2 scores; 6 years=4 scores; 7 years=6 scores; 8 years=8 scores; 10+ years=10 scores	10

		Relative experience with Digital Health Initiatives. Digital Health – specifically Health Information Exchanges, Health Standards, and Health Enterprise Architecture.	20
	ii	Proposed work plan and approach	30
		Practicality of the proposed methodology relative to the context of the service and in line with the required technical specifications.	10
		Compliance with the ToR approach to establish for clear digital transformation roadmap.	15
		Appropriateness of the implementation schedule to the project timelines and project quality assurance measures to ensure successful implementation.	5
	iii	Company Key Resources	20
		Appropriate technical resource with the right skills/expertise, qualifications to deliver the outputs required; Key technical skills/expertise of Individual team members to be used to execute the assignment; Qualifications/level of education of key staff that will be assigned to this project, evidence of expertise/experience of each individual team member etc.	20
		Total out of 80 (minimum passing score is 64)	80
	- The passing score of the technical criteria is 64 out of 80. Financial Evaluation: - The bidder will be financially scored based on the formula below: $\text{Contractor(A)} = (\text{Maximum score for price proposal (20 points)} \times \text{Price of lowest-priced proposal among technically passed bidders}) / \text{Price of the proposal (A)}$ The total weight of the bidder will be cumulative of the two above formulas (Technical and Financial).		
Administrative issues	UNICEF will make payments to the contractor in U\$ Dollars according to percentages of completed work certified by the supervising committee and approved by UNICEF focal person at Iraq Country Office.		
Project management	For the technical related communications between UNICEF and other parties, UNICEF will provide overall supervision to the subject project through the technical officer in UNICEF-ICO, reports will be submitted to the supervision committee.		
Payment Schedule	Payments shall be made to the contractor in installments upon accomplishment of the deliverables based on the submitted offers and pricing, as follows: 10% after 60 days 10% after 60 days 10% after 60 days 20% after 90 days 20% after 60 days 20% after 120 days 10% after 7 months - UNICEF shall make payments in U\$ Dollars through bank transfer modality only: the contractor shall provide UNICEF with details of bank account		

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