ANNEX 4.2: MODEE Standard Components Compliance Sheet

ITEMS	Compliance
Comply to project duration as described in this document	
Comply to High Level Description of System Requirements	
Component 1 – System Delivery winning bidder activities and deliverables	
Component 2 – Required System Infrastructure winning bidder activities and deliverables	
Component 3 – Required information security winning bidder activities and deliverables	
Component 4 – Operations Support and Maintenance	
Component 5 - Change Management winning bidder activities and deliverables	
Component 6 – Project Management winning bidder activities and deliverables	
Component 7 – Quality Management winning bidder activities and deliverables	

High Level Description of System Requirements for System

System requirements	Description
Registration and User profile	For Jordanian and non-Jordanian users, winning bidder is requested to integrate with SANAD platform, which includes registration module. For other types of users specified in the requirements gathering phase winning bidder is requested to recommend, describe, design in a secure approach approved by MODEE including all details and implement for the registration module. Regarding users profiles, winning bidder should take into consideration that each applicant will have one user profile (unified user profile), which will contain the status of all his transactions regardless the way of applying to the service (walk-in or on-line).

	MODEE is working on adding the registration and user profile For Institutions and companies' users at SANAD, The winning bidder should upon completing the Institutions and companies integrate the proposed solution with SANAD platform, if it's not ready yet winning bidder is requested to recommend, describe, design in details and implement the registration module.
Notification	The system will send notification(s) according to the progress of the requests, the supported notification delivery methods includes and not limited to: 1. E-Mail 2. SMS Any other channel that will improve e-service delivery
Inquiries Module	The system should have advance search and filtration option so it will facilitate retrieving the required data existed either in the proposed solution or in the core MOA backend database.
System integration	**1.** The system should integrate with the following : The winning bidder shall integrate the MOA e-Service with GSB through supporting web services and message communication using XML format and SOAP messaging protocol, and / or REST APIs More details will be provided upon awarding to winning bidder. It is the winning bidder responsibility to build or update Web Services to integrate with Stakeholders through Web Services or APIs. A Government Service Bus (GSB) is a pattern of middleware and software infrastructure that enables Service Oriented Architecture (SOA) by acting as middleware through which a set of reusable Government Services are made widely available. It unifies and connects services and applications within the government of Jordan and provides a framework within which the capabilities of business' applications are made available for reuse by other applications throughout the organization and beyond. It also provides a messaging framework through which government e-services exchange information. IBM API Connect is an end-to-end solution that allows users to create, secure, manage, socialize, monetize and analyze APIs. It provides a powerful set of capabilities from turning backend RESTFUL or SOAP services into managed services. This is done by publishing APIs to API Gateways, while enforcing lifecycle and governance controls on those APIs. API Connect enables users to expose APIs, through a developer portal, targeting application developers both inside and outside their organization. Additionally, the solution's analytics tooling helps API providers

	and API consumers had better understand the health and consumption of deployed APIs. Note: Integration with stakeholders has to be system-to-system integration by implementing web services through GSB platform. However, if there are limitations for GSB integration for specific Stakeholder(s), integration will be done as user role integration through screens to be accessed by stakeholder(s) or attaching specific files or documents to the application **2.** National e-Government Contact Center: E-Government Contact Center is expected to be responsible for processing general inquiries and providing access to basic information services via phone, IVR, e-mail **3.** National SMS Gateway: SMS will be one of the notification channels that will facilitate interactions between MOA and their applicants. The winning bidder should integrate the e-Service Solution with the e-Government SMS Gateway. **4.** Current systems and Databases MOA internal systems and data bases such as but not limited to JIAMIS نظام تسجيل الحيازات الزراعية The winning shall conduct a comprehensive analysis to determine the optimal approach for integrating the developed e-services with MOA's internal systems, archiving system and existing databases, the bidder is responsible for developing the necessary APIs to facilitate this integration. **Additionally, the winning bidder must develop and provide all necessary APIs to enable other systems to integrate with the livestock numbering system.** **5. Build the** MOA **e- services portal:** The winning bidder should build and develop **livestock Numbering System** taking into consideration to maintain the user experience. Additionally, the system should be accessible from the MOA website.
Reporting, dashboards	The system should include performance monitoring and reporting tools both dynamic and static to generate summary reports and statistics on transactions and system activities. Number of reports for MOA is 20 reports. The system should include dashboard to display the data that commonly used and needed to be monitored

System administration	The system should contain administration module, to enable administrators to perform all day-to-day administrative tasks at data, automation engine, and application levels. The winning bidder should gather all MOA solution related administration requirements during business requirements gathering and analysis phase System should allow admin to perform the following tasks but not limited as follow: - Manage user profile. - Manage Security Permissions. - Manage lookups - User Role Management - Workflow Management - Access Control Management
Performance	The system should meet efficiency targets to serve volumes of transactions and number of users. Please find the performance measures defined below. The winning bidder shall propose the values of quality metrics below and they should adhere to industry best practices which are subject to approval, rejection or modification by MODEE in cooperation with MOA and the relevant entities System reaction time: The time taken for logging into a system or being connected to a network. [Up to 1 second intranet and up to 5 seconds internet)]. Throughput: The quantity of useful work made by the system per unit of time. [15 request/second (intranet and internet)]. Response time: The time the system takes to respond to specific query by the user. [Up to 1-second – intranet, up to 4 seconds – internet]. Workload: The capacity to handle the required volume of work in a given time frame. [1000 concurrent users]. Capacity: The capability of the newer system to handle a number of simultaneous requests from the network for the application and the volume of data that it can handle from each of the users (Internal users through the LAN as well as external users through the internet/ dedicated WAN). In addition to the H/W capacity such as processing capability of all servers including DB, Apps. [CPU Utilization: 70%, Memory Utilization: 70%]. Utilization: The system minimum availability time vs. the system down time [99.9].
Monitoring	The system should include performance monitoring for all transactions.
Role based security	The system should support role based authentication, authorization and access control list. Role based security should be applied at all system functionalities.
Information Security	Security of system and exchanged transaction information should be guaranteed at all system layers Based on ISO 27001, ISO 27002, WS-Security standards including infrastructure, application, web services and integration points, and access channels. This also includes using detective

	and preventive controls for all security threats and approval by MODEE in cooperation with MOA and related stakeholders.
Supported web browser	In the cases where any parts of the user interface solution were developed web forms, those forms should support latest versions of the top 5 browsers. According to the W3C standards and take into consideration most used versions of the top 5 browsers
System features	The system should support the following features: Availability, Scalability, Usability, Maintainability, Reliability and flexibility for future improvements.
Language	The system should be bilingual (Support Arabic and English)
User interface and Help	The system provide a user friendly interface along with on-line help (in both languages) for user guidance while applying for different services transactions through messages or wizard .
Audit, Logging and Data Versioning	System should Keep track of who login and in what time and what action he did. All these results should be store in separate database. The tracking system should help getting such information: - Timestamp of creation/modification - User last changed and date last changed - Changed record and last operation (Create, Update, and Delete). - Before and after value for each column that has changed. - Keep Track of what user retrieve or view (Select) - Actions performed by users (Select, Insert, Update, Delete). - IP address from which the action was performed. - Device or browser details used to perform the action. - User roles and permissions at the time of the action. - Export and import activities. Auditing and data versioning features should be configurable based on administrator selection to specify which system resources needs to audit and track changes.
Printing and Scanning	System should provide the ability to print/ scan document
Financial module	Will be stated in the scope of work (if needed)
Archiving system	The winning bidder is requested to integrate with the existing archiving system. MOA responsibility to provide the API to integrate with.
APIs	The winning bidder is required to generate APIs for all services under scope of work according to MoDEE and GSB standard. More over those APIs could be used for mobile application/ integration with any external system.

Component 1 – System Delivery

Required Activities

- Perform requirements gathering and analysis for processes related to the scope of work, and suggest any enhancement on the workflow of the processes that facilitate the digitization of the system taking into consideration all related laws, rules and regulations.
- Integrate the new systems with MOA internal systems through APIs/ if required in the scope of work, **the bidder is responsible for developing the necessary APIs to facilitate this integration**
- Conduct meetings with stakeholders involved in processes/services and provide a technical assessment for the integration points to determine the most appropriate integration way to obtain the required data.
- The system architecture will encompass both mobile and web applications, each integrated with a centralized backend. The web application will include distinct frontend and backend components. The mobile application will interface with the backend via RESTful APIs. The web application will feature an administrative dashboard (admin panel) designed for comprehensive management of various system modules, while the frontend will deliver e-Service functionalities, enabling livestock holders to apply for and manage available e-services.
- The backend services power both the web and mobile applications, providing a unified system for managing all e-Service functionalities.
- The mobile application requirement is to enable offline data collection with automatic synchronization when an internet connection is restored and more requirement in annex 4.14
- Provide detailed requirements specifications document (SRS) for the new systems showing integration with both internal and external systems and stakeholder.
- Provide a high-level design of the solution, describing system architecture, functions and interactions of all the components taking into consideration providing all options for solution architecture that may result from the assessment which will be conducted in the MOA (integration with current data base / migration/ availability of current systems/ no current systems. etc.).
- Conduct sprint review sessions with MODEE and MOA team.
- Provide solution architecture, and MODEE has the right to study, update and approve it.
- Design, develop, implement, deploy (install, test, launch) and rollout (if needed) of the proposed solution. This needs to be aligned with the e-Government Architecture Framework including the use of shared components and services like the SMS Gateway, e-Government Contact Center, Government Service Bus (GSB), where required.
- Develop/ provide all professional activities and services needed to deliver the integration between the existing systems and new system (if needed).
- Perform the integration between all stakeholders and the new system through GSB which may require provide, update and / or consume of web services and APIs.
- Perform data migration (if needed according to the assessment), Perform data migration to the new e-service database, performing data assessment and cleansing as necessary.

Build restful APIs to expose the services in the scope of work over GSB to be consumed by any other channel or application. Those APIs should be developed according to MODEE standards.

- Develop all needed web services and APIs as provider and /or consumer, needed for the proper functioning of the system.
- Provide very well documentation for the built APIs.
- Provide full use case scenarios for the built APIs.
- Working closely with MODEE – Datacenter teams to deploy the built APIs over GSB and test them.
- Make full cycle test of the APIs published over GSB and deliver its Postman collection.
- Develop and conduct the User Acceptance Test (UAT) in collaboration of MODEE.
- It's winning bidder responsibility to build the e-service on SANAD platform.

Deliverables

- Detailed solution architecture, with the description of models in UML, BPMN, or other relevant standard largely adopted by the ICT industry, which will include sufficient details of the architecture in several sections
- Detailed design that will be described by two key technical documents: SRS (Software Requirement Specifications) and SSD (Software Design Document). The detailed design will be delivered in several stages, however, the bidder is obliged to compile and deliver the final and comprehensive design.
- Sprint reviews feedback and sign off.
- Detailed integration document for integrations with internal and external stakeholders
- Complete Solution source code with documentation
- The database model (as a diagram, document, etc.)
- A document explaining application 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 and not limited to FAQ, "How do I" questions; in English and Arabic).
- Data Mapping Documentation for the migration
- Data Validation and Verification Reports
- Migration Scripts and Tools

- User Manuals for the New DatabaseProvide very well documentation for the built APIs.

Component 2 – Required System Infrastructure

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 below table*).
3. Must describe each component's functionality and role in the architecture, knowing that GPC provides 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 shown 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 its description
3. Proposed GPC services that will fulfill 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 borne by the winning bidder

Financial proposal requirements

The bidder is required to provide 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.
3. All required licenses

Component 3 – Information Security

Required Activities

- If the services 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 implement and develop the APIs in addition to Modee API requirement

- **Web application security:** make sure that any new Portlets developed are protected against web application threats. At latest OWASP Top 10 vulnerabilities(OWASP Top 10:2021)
- For secure development the bidder should follow the OWASP Application Security Verification Standard (ASVS) and 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 implement 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 to add the service on the web application firewall(WAF)
- MODEE 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/ bit.ly/3tcxct1" and "سياسة استخدام موارد تكنولوجيا المعلومات" annex 5.6
- The winning bidder should Fill and Sign the Security Assessment Questionnaire in Annex (4.3) and submit it to MoDEE upon request.
- The winning bidder must read and adhere on the national cyber security center instruction ,guideline and control (compressed معايير وضوابط الامن السيبراني للجهات المتعاقدة مع الوزارات والدوائر الحكومية2023.pdf (ncsc.jo))
- The winning bidder should follow SDLC Security minimum requirements in annex 4.13

Deliverables

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

Component 4 – Change Management & Knowledge Transfer

Winning bidder activities

- 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:
    - Training on the selected technology (5)
    - TOT End user training (8)
    - End user training, (50)
    - System Administrators (5)
    - Stakeholder training (10)
- Provide training handout material, materials should include related links and videos. (soft and hard copies for all attendees).
- The training venue and all needed PCs and equipment for training purposes will be the responsibility of the winning bidder.

Technical proposal requirements

The bidder is required to provide the following information in the technical proposal in relation to the Knowledge Transfer, and Training:

- State the commitment to perform all the activities mentioned in the winning bidder activity section above.
- Describe strategy and approach, including tools for change management, knowledge transfer and training.
- Provide a high-level training schedule showing the training activities by phase.
- Provide a list of deliverables for the Change Management, Knowledge Transfer, and Training

Financial proposal requirements

The bidder is required to provide the following information in the financial proposal in relation to the Knowledge Transfer, and Training:

- List all costs associated with Change Management activities.
- List all costs associated with training and Knowledge Transfer.

Deliverables

The winning bidder is required to provide the deliverables mentioned below, and any other related deliverables needed for the proper Change Management, Knowledge Transfer, and training and its cost should be included in the fixed lump sum price submitted by the bidder:

- Arabic and English videos detailing how to use the system upon the requirements mentioned above in activities section.
- Change management, Knowledge transfer and training plan.
- Awareness, Knowledge transfer, training and sessions schedule and curricula.
- Awareness, Knowledge transfer, training materials and documentations
- Executed Knowledge Transfer awareness and training sessions.
- Customer journey Compliance sheet

Component 5 – Operations Support and Maintenance

To execute "Operation Support and Maintenance" component of this project, the winning bidder is required to perform the activities mentioned below for 24 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 for severities 1 & 2 and for severities the support will be basis 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 detailed implementation plan for any pre-planned maintenance operation that may affect MOA services availability, functionality or stability, with necessity to provide 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 below
- Provide a renewal of the software license (if any and requested) to cover the maintenance and support period.
- Provide communication channels to enable the MOA to report incidents that should be tracked and monitored until final resolution by the winning bidder, and keeping MOA informed about the status for these incidents until the final resolution.

- Use a ticketing system that records all reported incidents and service request and ensuring MOA have 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 system's integrity, reliability, conformity, and normal operation for all system features including the content
- Define Escalation Procedure including the levels of escalation and name and contact details for contact person.

Deliverables

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

SERVICE LEVEL REQUIREMENTS

Severity Levels:

Severity One (Urgent)

A severity one (1) issue is a catastrophic production problem which 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 work around exists.

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 significant impact to portions of business operations and productivity of Required Service\Solution. The system is exposed to potential loss or interruption of service.

Severity Three (Medium)

A severity three (3) issue is a medium-to-low impact problem, which 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 to 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 no loss of functionality or impact to the client's operation and issues in which there is an easy circumvention or avoidance by the end user.

Severity Five (Planned)

Means an occurrence that can be scheduled and planned to a specific timing.

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

Severity	Response Time	Resolution Time
1	1 hour	4 hours.
2	2 hours	One working day
3	4 hours	3 working days
4	8 hours	7 working days
5	As will be planned and agreed between the government entity and the winning bidder	

Provide support and maintenance services on 24x7 for severities 1 &2 and 7x5 for severities 3&4

Where:

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

Escalation Procedure and Penalties:

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

1. Passed the Response Time: first level of escalation will be applied by notifying bidder's Technical Support Manager or the assigned contact person.
2. If the winning bidder Passed the resolution time without solving the incident (permanent or a temporary solution) and without accepted reasons from the government entity (who owns the project), then the government entity 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 the government entity for fixing the incident will be charged to the winning bidder and deducted from his dues or the performance/ maintenance bond.

Table 2: Penalties

Severity	Definition	Penalty
1	Must be done, essential to business survival. Business can't continue	A penalty of 85 J.D. shall be applied for each day or part of a day passing the resolution time. This penalty will be applied until resolving the incident. After 2 days, if the incident not resolved then MOA have the right to called 3rd party to resolve the incident and all cost incurred by MOH for fixing the problem will be charged to winning bidder.
2	Should be done, near essential to business survival.	A penalty of 72 J.D. shall be applied for each day pass the resolution time. This penalty will be applied until resolving the incident. After 3 days, if the incident not resolved then MOA have the right to called 3rd party to resolve the incident and all cost incurred by MOH for fixing the problem will be charged to winning bidder.
3	Could be done, high benefit to business if time and resources are available.	A penalty of 55 J.D. shall be applied for each day pass the resolution time. This penalty will be applied until resolving the incident. After 4 days, if the incident not resolved then MOA have the right to called 3rd party to resolve the incident and all cost incurred by MOH for fixing the problem will be charged to winning bidder.
4	Important problem but can wait	A penalty of 38 J.D. shall be applied for each day pass the resolution time. This penalty will be applied until resolving the incident. After 5 days, if the incident not resolved then MOA have the right to called 3rd party to resolve the incident and all cost incurred by MOH for fixing the problem will be charged to winning bidder.

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 project implementation strategy based on the needs and priorities of the business owner that will ensure stakeholders buy-in and creates 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 MOA and its stakeholders to come up with solid rational for phased approach of the project implementation plan

- Ensure close cooperation with Modee and MOA 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 Weekly progress meetings with Modee in cooperation with MOA team.
- Conduct periodic progress (steering committee) meetings with Modee 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 ensuring 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 learnt.

Note: Modee will be providing the winning bidder with a project management kit that is mandatory to comply with.

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
    - Stakeholder management plan including project organization structure and roles and responsibilities
    - Communications management plan
    - Quality management plan (as Described in Quality Management Component)
    - Risk management plan
    - Scheduled project status and progress reports, addressing Reasons behind any deviation from Project baseline plan.
    - Deliverables traceability matrix
- Issues and risk logs
- Action log
- Weekly and monthly status and progress reports
- Project closing presentation (in English or Arabic)
- Project conclusion document outlining work completed, lessons learned and recommendations for "next steps"

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 check behavior of the outcomes according to the expectations and requirements of MODEE and MOA 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 artefacts 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 not limited to Test Plans, Test Case Scenarios including acceptance test scenarios, Testing results/reports, Testing Summary report, Defect (Bug) report and other required/proposed artefacts.
- Perform all needed activities in the User Acceptance Testing that should be done in cooperation with MODEE and MOA, all bugs and defects should be solved in order to get the approval on e-Services launching before each phase.

  NOTE: MODEE reserves the right to perform their own functional and non-functional test including security, performance, load, stress, quality and customer journey test 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.
- **Prior conducting performance test, winning bidder, with collaboration with MoDEE project manager, has to deliver the requirements listed in annex 5.9: Performance Test Checklist.**
- **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 cost in JD for each testing type for each service:

#	Item Description	Additional round (JD)
1.	Quality Test (per service)	620
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 Check lists
- 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, scenarios aligned with test data.
- Performed UAT sessions reports