Ministry Of Education

*Higher Education Affairs*

Request for Information (RFI)

Automation Services

for the Design, Development and Implementation of an

Integrated Higher Education Platform

*(Systems & Smart Services)*

RFI Reference No.: MOEHEA Integrated Platform

Release Date: Apri 2019

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# BACKGROUND

* In February 2016, the Ministry of Higher Education responsible for regulating the higher education sector in the UAE has undergone a merger with the Ministry of Education responsible for General Education (at the time). The merger also covered the inclusion of Early Child education under one single umbrella named Ministry of Education (MOE).
* The merger has resulted in a new vision, mandate, roles, responsibilities and organisation structure for the new MOE’s Higher Education Affairs (MOEHEA) including the introduction of four new specialist functional areas (depts.), hence expanding its core business operation.
* In addition to existing core business depts., which are Commission of Academic Accreditation (CAA), Scholarships, Equivalency & Attestation, Student Registration & Counselling and Scientific Research; new core business depts. were added which include; Licensing and Institutional Accreditation, Teacher Licensing, Evaluation & Quality and Graduate Affairs & Labour Market.
* In view of the mandate, vision and strategy of the new MOE, MOEHEA has commissioned a project to define its vision and strategy for 2030 taking into account the strategy of the UAE and its national agenda. This new vision and strategy are centred around students, institutions and the educational system.
* As one of the stakeholders of the education process, MOEHEA work closely with many organisations to shape up the education industry in UAE such as MOE (General Education Sector), Federal universities, Ministry of Interior (MOI), Ministry of Foreign Affairs (MOFA), Ministry of Finance (MOF) and Education & Human Resources Council (EHRC) as well as regulators such as Abu Dhabi Education Council (ADEC) and Knowledge and Human Resources Development Authority (KHDA).
* MOE’s IT dept. has been working to consolidate, update and upgrade some of MOEHEA’s legacy systems which include the following:
  + Scholarship management system and services.
  + Equivalency and attestation management system and services.
  + Student Registration and Counselling management system (NAPO) and services.
  + Academic accreditation management system and services.
  + Scientific Research Awards management system and services.
  + Interfaces with MOI, MOFA (embassies), MOF (payment gateway), Cultural Attachés and others.
* MOEHEA in collaboration with central MOE departments such as IT and Strategy & Future has undergone a major exercise to document its ‘As Is’ processes for all its depts. including new ones. MOEHEA is currently in the processes of reviewing and updating its strategic and operational policies for specialist depts. such as Commission of Academic Accreditation (CAA), Institutional licensing and Accreditation, Equivalency & Attestation and Scientific Research as part of its thrive to provide better services.
* Supported by MOE’s IT department, MOEHEA is embarking on an automation project to design, develop and implement an integrated Higher Education Platform of new operational systems, eservices portal and smart services to support its business operation. This document details MOEHEA’s requirements in addition to the services and deliverables expected from this project.

# SCOPE & EXPECTED DELIVERABLES

## Business Review and System Requirements Analysis.

1. The Bidder is expected to conduct an overall system requirement analysis to derive automation requirements for all MOEHEA’s depts. based on MOEHEA’s ‘AS-IS’ process documentation and any new operating models (at the time). MOEHEA’s team will provide all necessary support and documentation to bridge any information gaps required for this analysis.
2. The requirements analysis should cover core functions, integrating points and dependencies for all MOEHEA’s depts. which include:

* Commission of Academic Accreditation (CAA).
* Equivalency and Attestation.
* Student Registration and Counselling (NAPO).
* Licensing and Accreditation.
* Teacher Licensing.
* Scientific Research.
* Evaluation and Quality.
* Scholarships.
* Graduate Affairs and Labour Market.

1. For each dept. the system requirement analysis should cover all processes and procedures and is expected to introduce automation efficiencies in processes, procedures and workflows as well as improvements (where appropriate) to facilitate the implementation of the new system. Overall, for each department the Bidder is expected to review the following items.

* All functions, processes, procedures and policies.
* Governance processes (e.g. committees) to support daily operation such as Scholarship committee, Equivalency and Attestation committee and others) which are part of the daily business processes of MOEHEA’s depts.
* Relationships, integration points and dependencies with:
  + Other MOEHEA departments and functions.
  + Other MOE common and support functions (see details below).
  + External government organisations and entities (see details below).
* Customer management and customer services (see details below).

1. The Bidder is expected to cover the integration points and dependencies between MOEHEA’s depts. and Cultural Attachés (CAs). CAs play an integral role in the scholarship and equivalency processes and others.
2. MOE has adopted a shared services model for common and support functions such as HR, Finance, Procurement, Customers Service Centres, IT, Institutional Development, Government Communication, Data & Stats Centre and Foreign Affairs and others. The Bidder is expected to automate integration points and dependencies between MOEHEA’s depts. and these common and support functions to support the daily operation of MOEHEA’s depts. The following are a couple of examples of such relationships, integration points and dependencies.

* Scholarship students must be issued air flight tickets (sometimes tickets for family members as well) on an annual basis (sometimes even more than once in a year) as well as a monthly salary until the graduation date (as long as the scholarship is active). These scholarship related processes are dependent on MOE’s Procurement and Finance functions.
* CAA regularly invites (from outside of UAE) external examiners and academic reviewers (with certain financial terms and conditions) as part of the accreditation process of universities. This CAA process is dependent on MOE’s Finance and HR (e.g. visa processing) functions.
* Scientific Research dept. relies on various operational data from universities to perform statistical analysis. This data is collected by the MOE’s Data Centre on a periodic basis. This process is dependent on MOE’s IT and Data & Statistics centre.
* And many others.

1. As part of its daily business, MOEHEA depts. have many interactions with external entities (e.g. government entities such as MOF, MOI and others) as well as Higher Education regulators (e.g. ADEC and KHDA and others). Hence, the requirement analysis and automation scope is expected to cover all relationships, integration points and dependencies with such external entities. We expect the bidder to provide the best solution possible to integrate with such entities however, we do not expect the bidder to automate the processes or alter the systems of these entities. The following are a couple of examples of such relationships, integration points and dependencies.

* The Student Registration and Counselling dept. interacts with federal universities for the registration and early admission of UAE national students into these universities according to their admission criteria.
* The Institutional Licensing dept. interacts with other Higher Ed regulators such as ADEC as part of the process of licensing universities and higher education institutions to operate in Abu Dhabi.
* In addition to MOE’s scholarship students, the Scholarship dept. oversee scholarship students from organisations who have their own scholarship programmes (such as ADNOC, Etisalat and others) under a management contract.
* And many others.

1. The Bidder is also expected to analyse all MOEHEA’s customer services in terms of their service portfolio and fulfilment model. The requirement analysis should consider that customer services should be delivered through website and smart devices. Bidders should visit MOE’s website for a full list of MOEHEA’s customer services which are grouped as follows:

* Scholarships services.
* Equivalency & attestation services.
* Licensing & accreditation services.
* Student registration services.
* Scientific research services.
* Teacher licensing services.
* Labour market services.

1. The Bidder is expected to review the current IT echo system for MOEHEA to identify weaknesses and gaps as well as draw recommendations for the new systems. Bidders should consider that the newly integrated platform will replace current IT systems which includes;

* Operational systems (e.g. equivalency system, scholarships system, student Registration)
* Customer e-services (www.moe.gov.ae).
* Currently running integration and interfaces (with external partner systems) which cover MOFA, MOI and others.

1. The Bidder is expected to provide the following deliverables:

* Requirements analysis with detailed gaps, weaknesses, areas for improvement and recommendations from a system’s point of view.
* High-level description architecture (design) of the ‘To Be’ Integrated Higher Ed platform covering all the areas described above.

## Detailed Design of the Integrated Higher Ed Platform

1. Once the requirements analysis is completed and initial design is agreed, the Bidder is expected to provide detailed design for the integrated Higher Ed platform which includes, among others, the following systems:

* Scholarship management system and services.
* Equivalency and attestation management system and services.
* Student registration, admission and eligibility management system (NAPO) and services.
* Unified accreditation management system and services, which cover:
  + Programme accreditation.
  + Institutional licensing and accreditation.
  + Evaluation and quality.
  + Compliance.
* Teacher licensing and qualifications management system and services.
* Scientific research management system and services.
* Graduate affairs and labour market management system and services.
* All Integration and interface points (external and internal).
* E-services’ portal (improvement recommendations only)
* Smart (mobile) services.

1. The bidder is expected to provide a custom tailored mobile solution (and experience) to the following areas:

* Customer Services (for customers).
* Process (application) Approvals (for top management).

1. The design should be based on best practice in Higher Education and should cover all elements described in section 2.1. (above) and should include:

* Best User Experience.
* Top rated look and feel.
* Description of the automated ‘To Be’ model.
  + Process maps and flows.
  + Process resources and roles.
  + Process controls, integration points, dependencies, inputs and outputs.
  + Process KPIs.
* Customer services.
* All integration points with support functions (within MOE).
* All integration with stakeholders’ processes and procedures (external).

1. As part of the design of the integrated Higher Ed platform, the Bidder is expected to liaise with MOE’s IT department to finalise and deliver the following (also see next chapter for non-functional requirements):

* Recommended technologies (inc. licensing requirements) with justification.
* IT dept.’s capabilities to maintain and support the new platform.
* Technical requirement to deliver the various project phases (developing, testing and production) and any dependencies.
* Data Centre technical requirements for hosting and operating the new platform.

1. The Bidder is expected to provide the following deliverables:

* Detailed designs and specifications for the Integrated Higher Ed platform.
* IT plan with recommendations.

## Building, Testing and Implementing the Integrated Higher Ed Platform

1. The Bidder is expected to build, test and implement the integrated platform based on approved designs and specifications.
2. The Bidder is expected to adopt a suitable fast-track methodology to deliver the integrated platform. The methodology and approach must be defined and agreed with MOE IT department and MOEHEA. This methodology should be tailored to accommodate for MOEHEA’s business needs and cover the following elements:

* System analysis, design and development.
* Prototyping.
* Testing (unit, business, integration, volume, stress).
* Implementation activities (setup, data migration, training and switchover).
* Support services (maintenance, warranty and support).

1. The Bidder can suggest a suitable phased approach (if needed) to the design, build and implementation of the operational systems depending on priority and business need.
2. The Bidder is expected to provide appropriate post implementation plan, which include warranty and post-warranty support.
3. The Bidder is expected to provide the following deliverables:

* Integrated Higher Ed Platform (as described above).
* System requirements specifications documentation.
* Design documentation.
* Setup documentation.
* Source code.
* Quality plan.
* Testing plan and deliverables (testing scenarios and scripts).
* Data migration plan.
* Implementation and switchover plan.
* Post implementation plan.

# Non- Functional Requirements

The following are the main non-functional requirements that the new integrated Higher Ed platform must comply with:

1. Authentication:

The users must be authenticated to be able to use the system. The authentication will be done through the integration with the current SSO (Single Sign On).

1. Authorization:

Logged-in users can only perform activities in the system according to their assigned roles for each respective service. The system shall provide the functionality of creating new roles and assigning them to users.

1. Interoperability:

The system is expected to integrate with many other systems internally within the ministry or externally with other governmental/private entities or international institutions. The integration protocols shall comply with current industry standards, such as Webservices (ex: SOAP and REST), or Messaging (ex: AMQP or Kafka) but not expecting a shared database, files exchange, or an RPC style communication protocol as forms of integration.

The system shall integrate with SMS and payment gateways to send notifications and process end users payments.

1. Usability:

The system shall be intuitive, responsive and easy to use. The business processes shall be designed to be streamlined and effective with no waiting time as possible. Modern modelling languages must be used to model the business processes, such as UML and BPMN.

The system shall be compatible with all known browsers e.g. Internet Explorer, Chrome, Firefox, Safari, etc.

1. Scalability:

The system as a whole or any of its modules shall be scalable vertically and/or horizontally with minimum effort and cost.

1. Auditability:

Each business transaction performed by the user must be logged for auditing purposes. The audit logs shall be analysed through dashboards and analytical reports built within the new system.

1. Data Integrity:

The current and historical data shall be migrated to the new system. It is inevitable to ensure data integrity while migrating to the new data structure.

1. Performance:

The response time shall be very acceptable to the users according to the internet bandwidth and computer processing power. Proving this requires conducting different types of performance tests, such as load and stress testing.

1. Analysis and Reporting:

The new system shall be capable in analysing the collected data and present insightful information to the business users (decision makers) and to the applicants. Such insightful information can be viewed through dynamic reports and dashboards.

1. Architecture and Technology:

The new integrated Higher Ed platform shall be cloud native system in terms of the proposed architecture and technologies. The hosting of the new system will be in the MoE data centres.

Furthermore, the Bidder must follow the TRA’s policies and regulations, which includes UI design specifications and federated identity. TRA’s policies and regulations can be found on the TRA website.

# General Requirements & Conditions

1. Due to the cyclic nature of MOEHEA’s business and in order to support the higher education season which commences in February/March the Bidder needs to demonstrate how their approach to this project will support MOEHEA during next seasons.

1. The Bidder is expected to demonstrate how they intend to deliver against the scope of this RFI. Detailed methodologies, approaches, project plans, resources plans should be presented as part of the proposal.
2. During all phases of the project, especially the business review and requirements analysis stage, the Bidder is expected to deploy specialist skills to ensure that deliverables are alignment with higher education industry and best practice standards.
3. As some of MOEHEA’s departments are newly introduced (post the merger), during the business review stage the Bidder is expected to deploy bilingual skills to be able to analyse existing legislation, mandate and policies which are predominately written in the Arabic language.
4. The Bidder is expected to provide detailed pricing by function, service, phase and entire project.
5. The Bidder is expected to provide the following assurance of quality for the Integrated Higher Ed Platform:

* 90 days Warranty (on-site support) which commences from the ‘Go live’ date.
* One-year maintenance and support (off-site) for the developed system, which commences from the end of Warranty.

1. Payment for this project should be spread across the following delivery milestones:

* Approval of business review and requirements analysis stage deliverables.
* Approval of ‘To Be’ design stage deliverables.
* Approval of UAT and Go live of the integrated platform.
* End of warranty period (90 days from Go live).
* End of support period.

1. During the evaluation and selection stage, priority will be given to comprehensive offers. Hence the Bidder can enter into partnerships to provide a full response to this RFI.
2. Although it’s preferred to select a complete solution from a single Bidder, MOE has the right to select suitable part offers from different Bidders to create the best hybrid solution for MOEHEA.
3. The Bidder should comply with MOE’s rules and regulations required to apply for this RFI.
4. The timetable of this RFI is summarised in the table below:

|  |  |
| --- | --- |
| **ACTIVITY** | **TENTATIVE DATE** |
| Issuance of RFI | 30/03/2019 |
| Confirmation of participation | 7/04/2019 |
| Deadline for RFI Submission | 30/04/2019 |
| Bidders’ presentations and Discussions completed | 15/05/2019 |

# Submission and Evaluation Criteria

These criteria are provided to guide bidders through the preparation of their proposals.

* Relevant industry experience and similar experiences.
* Relevant experience in Higher Education.
* Strength of local references of similar projects.
* Strength of global references of similar projects.
* Understanding of the requirements and clarity in addressing those requirements.
* Proposed services and deliverables.
* Comprehensiveness of the offer (addressing all requirements is key).
* Proposed methodology, solution approach and PM approach.
* Proposed solution architecture and technologies that cover the non-functional requirements.
* Proposed team structure to deliver.
* Proposed timeline.
* Delivery timelines to support 2018-2019 season.
* Proposed cost.