



International Organization for Migration (IOM)
The UN Migration Agency

*IOM Headquarters, Route des Morillons 17
1218 Le Grand-Saconnex Geneva, Switzerland*

REQUEST FOR INFORMATION

21 October 2022

The International Organization for Migration (IOM) is an intergovernmental humanitarian organization established in 1951 and is committed to the principle that humane and orderly migration benefits both migrants and society.

The IOM runs large-scale global health assessment programs to assist migrants with satisfying immigration health screening requirements and to provide medical documentation required by various destination countries. Given that the pre-departure health assessments are obligatory in the immigration process for certain categories of migrants, such as visa applicants and labor migrants, and highly impact their migration circumstance as well as the public health scenario of the host countries, it is critical that integrity and reliability of the health assessment process is maintained, particularly in verifying the identity of applicants. As such, IOM intends to integrate biometrics in its global health assessment programs for client identity verification throughout the health assessment cycle, with facial recognition as the biometric modality.

In view of the above, IOM now requests *Information* from [Service Providers in the market on services offered to undertake the design, development, and deployment of the abovementioned biometric solution for its global health assessment program](#). Project details and description of indicative scope of work can be found in the attached Annex A.

IOM would like to solicit technical views and best practice from vendors on the following questions in order to validate its planned approach and generate a responsive term of reference based on services offered by the market for the Request for Proposals (RFP) stage.

The information shall contain responses to questions pertaining to the following list below, which aims to gather technical views and best practice from the vendors.

RN	IOM Questions	Vendor Responses
1	What architecture principles would you consider in developing and integrating the outlined biometric system? What key issues do you think should be considered in undertaking this task where legacy systems are involved?	
2	Could you please provide an indicative infrastructure (i.e., server, storage, network, etc.) and sizing requirements for the intended biometric system as	

RN	IOM Questions	Vendor Responses
	described above? Note that the biometric matching software requirements are not included in the scope of services.	
3	What cloud options (e.g. virtual machines, service architecture, etc.) would you recommend to be suitable for the intended biometric system? Could you please provide the advantages and disadvantages of each option, particularly in terms of security and latency?	
4	What technical security requirements would you recommend to be considered in system design, along with security controls to be implemented to ensure data privacy and information security of the system?	
5	In view of minimizing operational risks, would you agree with IOM's planned roll-out approach as described in #3 to #5 under section III? Do you have additional or alternative suggestions on what to consider during these stages?	
6	What strategies would you propose to ensure high performance, high availability, and scalability of the biometric system?	
7	How would you propose to undertake knowledge transfer and exit management upon completion of global roll-out and project sign off?	
8	Could you propose the timeline to design, develop, and deploy the solution to all 80 clinics globally, given the indicative scope of services and your recommended requirements?	
9	Could you also provide a recommendation on the project team structure and human resource requirements that will enable effective and timely delivery of the outlined scope of services?	
10	Could you provide a Rough Order of Magnitude (ROM) cost broken down per scope of service and/or requirement, so that IOM may understand how much a project of this scale will cost?	
11	Would you be amenable with milestone-based payment terms and for each payment tranche to be due 30 days upon receipt of invoice? Could you please provide a recommendation on payment tranches and schedule?	

On the basis of this RFI, IOM shall draw up technical specifications and scope of services from the gathered information which may be issued later as a Request for Proposals.

Please also note that IOM does not intend to pay for any information furnished in response to this RFI or will not be responsible for any costs incurred by the vendors related to the response to this RFI or any other activities related to the preparation of information. This call for RFI does not constitute a solicitation.

Please note that this is not an Expression of Interest (Eoi), and therefore the outcome of this survey may not necessarily result in an Invitation to Bid or a Request for Proposal.

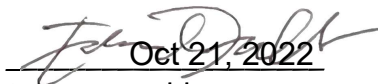
The responses shall be submitted through electronic mail at address anyu@iom.int copying mscuprocurement@iom.int not later than **14 November 2022, 4:00PM Manila time**. Receipt confirmations, status updates or clarifications in response to this RFI or planned solicitation will not be provided.

IOM also reserves the right to require compliance with additional conditions as and when issuing the solicitation documents. Submitting a reply to a call for RFI does not automatically guarantee that a supplier will be invited to tender.

All information which comes into IOM's possession or knowledge in connection with the RFI is to be treated as strictly confidential and will not be communicated to any third party.

Nothing in this RFI affects the privileges and immunities enjoyed by IOM as an intergovernmental organization.

Very truly yours,


Oct 21, 2022





For: Ms. Niiara Abliamitova
Head of (Global) Manila Supply Chain Unit
Manila Administrative Center

IOM is encouraging companies to use recycled materials or materials coming from sustainable resources or produced using a technology that has lower ecological footprints.

Annex A

Request for Information

Systems Integrator for Biometrics for Health Assessment Project

I. Background

The International Organization for Migration (IOM) runs large-scale global health assessment programs to assist migrants with satisfying immigration health screening requirements and to provide medical documentation required by various destination countries. Given that pre-departure health assessments are obligatory in the immigration process for certain categories of migrants (such as visa applicants and labor migrants), and highly impact the migration circumstance of the migrants as well as the public health scenario of the host countries, it is critical that integrity and reliability of the health assessment process is maintained, particularly in verifying the identity of applicants.

IOM staff verifies the client's identity at all points in the health assessment process, including at registration, cashier for payments, radiology, phlebotomy, laboratory testing, physical examination, vaccinations, sputum collection, and additional pre-departure evaluations or interventions. As clients move through the health assessment from one medical examination stage to another, it is crucial to ensure that identities are verified with high certainty throughout the whole cycle – that it is the same person participating in each stage of the assessment. It is equally important to ensure that none of the clients can use multiple identities during the health assessment process.

At present, IOM staff involved in the health assessment programs perform manual identity verification of clients relying mainly on their travel documents and supporting identity documents. While this approach offers some protection against substitution, unintended human errors may happen at critical points of the process. Such errors include clerical errors, which may compromise the integrity of health assessment processing, especially when opening client records or printing out labels for chest X-rays or laboratory samples. Cases of deliberate fraud are quite rare but not unknown. In order to consolidate the integrity of the health assessment process, IOM intends to integrate biometric technologies in the health assessment cycle to dramatically reduce the possibility of error and fraud.

II. Project Description

As a proposed solution, IOM aims to use facial recognition for identity verification of applicants at points of registration and clinical service provision. A browser-based application will be developed and integrated in the IOM corporate migrant management system (MIMOSA), one of the two IOM corporate systems ¹, along with a biometric matching algorithm software that will enable biometric template generation, 1:n search

¹ The other system is the UK Tuberculosis Detection Programme Global Software (UKTB GS), which is also being considered for biometric integration in the future.

for identity verification during registration, and 1:1 matching for identity authentication during clinical service provision. While IOM currently records the biographical details of applicants in MIMOSA, it does not include any biometric data. A separate biometric database but linked to MIMOSA is proposed as part of the solution.

The global health assessment program is present in 59 countries across Asia Pacific, Middle East, Central Asia, Europe, and Africa regions through more than 80 IOM Migration Health Assessment Clinics (MHACs), as of the first quarter of 2022. In 2021, the program handled over 390,000² immigrants globally. Each person is required to visit five to six assessment stations within the IOM clinics in the course of the process. In normal cases, the health assessment can be completed within one to two days but could take up to six to eight months, particularly for cases where TB treatment and management is necessary. It is anticipated that the biometric data of each client would be retained for seven years.

Applicants going through the health assessment can vary in age from small babies to much older people. The choice of biometrics is critical as the solution must be robust and the biometrics stable across the age ranges and across a long period of time.

Biometrics capture will most likely take place in controlled, air-conditioned offices or clinics, with ample office lighting and some having auxiliary lights set up in registration stations or photobooths. At present, the health assessment screening program already records an image of all migrants who are registered, but these are not deemed suitable for biometric matching. The clinics have existing cameras stationed at registration points and are believed to be capable of capturing a biometric matching compliant image, although these must be further tested. Cameras that achieve the required standard will be retained and those that do not will be replaced.

Many of the IOM migration health clinics have multiple assessment stations, meaning that they require several sets of biometric capture devices and workstations. To give an indication of the size of the requirement, the following was identified based on our 2022 requirements assessment with the field missions:

Registration stations (for enrollment)	200
HA stations (for matching)	800
TOTAL	1,000

To ensure project success, the implementation strategy is to first do a solution model office testing to simulate production setup, test the end-to-end process and data flows and possible scenarios that can be encountered in the live environment, and undertake risk analysis and mitigation. The solution will then be piloted in one or two locations to test functionality and performance real-time, and gather lessons learned that will be built into the project for the gradual roll-out to all 80 locations.

² The IOM Migration Health Division Annual Report in 2021 recorded a total of 393,600 health assessments undertaken for immigrants, globally.

III. Indicative Scope of Services and Description of the Requirements

IOM intends to procure the services of an experienced Systems Integrator to develop and deliver the solution and ensure that the delivery of the solution is de-risked as much as possible. IOM deems this as the best approach to move the biometrics implementation in full swing within the shortest time possible.

In general, the Systems Integrator will undertake the design, development, and integration of the biometrics system with the existing MIMOSA ecosystem of IOM. In addition, the Systems Integrator shall also be responsible for the initial system operations and maintenance until the solution is fully rolled out to IOM clinics globally. To this end, the IOM shall provide the Systems Integrator with corporate application architecture knowledge, along with infrastructure management and administrative support. Descriptions of the indicative scope of services are detailed below.

1. Requirements definition and architectural solution design

This will involve business analysis of the health assessment process in prevalent regional contexts, along with the existing architecture of the MiMOSA ecosystem to define detailed functional requirements according to the proposed biometric solution. The business analysis should also define relevant non-functional requirements such as, but not limited to system scalability, availability, reliability, and security. Both functional and non-functional requirements shall be signed off by IOM. The business analysis should also consider the integration of the passport reader functionality in the overall biometric system and workflows, which is currently undergoing development and is slated for pilot roll-out by the fourth quarter of 2022.

The vendor should also deliver the architectural solution design based on the approved business requirements. The biometrics architecture is expected to detail database and infrastructure requirements, along with requirements and strategies for solution maintenance and upgrades.

The solution architecture should also include an analysis of available options and an explanation of why the proposed design is the best fit for the required business solution. Furthermore, the architecture shall be complemented by a proposal on the required ICT resources to operate and maintain the biometric solution.

2. Biometrics system development and integration with MiMOSA

The biometric matching algorithm software to be used will be procured separately by IOM. The Systems Integrator is expected to develop the biometrics application using this software and integrate components to the existing MiMOSA system. While the first integration phase only involves MiMOSA, the biometric system must be as flexible as possible to allow connection with other IOM systems (i.e., existing, new, or replacement systems) for succeeding integration phases.

Software requirements for both the application and central matching server will be procured separately and will be provided by the biometric algorithm service provider selected by IOM.

Hardware requirements for the biometric workstations (enrollment and verification) will make use of the existing computers and laptops allocated per registration and health assessment stations in the IOM clinics. Currently, the registration stations have existing cameras to capture the applicants' image for uploading to MiMOSA, however the camera specifications and resulting photo quality must be reviewed to determine its suitability for facial recognition matching. Cameras that will pass the evaluation will be kept while those that do not will be replaced. Camera specifications must also be prescribed by the Systems Integrator for the health assessment stations that will perform face verification. Note that the additional cameras shall be purchased by IOM.

Backend hardware requirements such as servers, storage, networking, etc. shall be provided, installed, and commissioned by IOM ICT in its existing data centers. The sizing requirements for such, however should be provided by the Systems Integrator as part of the system architecture requirements.

Development milestones per sprint cycle will be defined with IOM, to which progress shall be presented and/or the developed component of the solution demonstrated where applicable, during regular touch base meetings. A complete demonstration of the end-to-end solution, i.e., from image capture during registration to face verification at health assessment stations shall be undertaken onsite in Manila once the solution is fully developed and integrated.

3. Solution model office testing

This would involve the development of a pre-production environment that mirrors the proposed architectural solution design including the enrollment solution (hardware and software), matching algorithm, biographic and biometric database, an offline copy of MiMOSA and all other relevant IOM medical systems plus all the interconnections that will be set-up in the production environment.

A test plan would be developed that tests all appropriate data flows and processes in order to minimize risk when the solution goes live. A detailed risk analysis should be developed that will lead to mitigation of risks prior to pilot roll-out.

The model office will seek to replicate many of the most challenging scenarios facing the health assessment program, including difficult enrollment characteristics, frequent loss of power, mobile enrollment, etc. to ensure all identified risks can be mitigated. In addition to replicating difficult scenarios, the model office test population should reflect the wide range of client types from babies and young children to elderly people and various ethnic backgrounds, skin tones disabilities, etc. The model office will be set up in the IOM Manila, Philippines clinic to test both frontend and backend operations scenarios.

The size of the biographic and biometric database and enrollment population would be defined as part of the model office test plan.

4. Pilot roll-out in two or more sites

Following the successful model office testing, the solution would be rolled out to the live environment in pilot sites, currently envisaged to be only two sites – one in Asia (either Philippines or Thailand) and one in Africa (Nigeria), but this could be expanded. The sites would be carefully selected so as to represent vastly different levels of complexity and challenge.

Prior to the pilot roll-out, the Systems Integrator shall be responsible in conducting a training of trainer for end-users onsite, location of which to be determined by IOM. The venue shall be provided by IOM. Furthermore, depending on the results of the pilot implementation, the Systems Integrator may conduct an online refresher training for the regional trainers and/or provide support in the conduct of regional end-user trainings during the global roll-out.

5. Phased roll-out in IOM clinics globally

Following the successful completion of the pilot roll-out, a global roll-out plan will be developed. The roll-out plan should consider issues such as seasonal workload and challenges. It should also seek to minimize travel costs by undertaking the roll-out to all clinics within a region. The roll-out should take account of risk and consider whether a failure of the roll-out in one office could be mitigated by clients travelling to another location until the issue is resolved.

Ideally the roll-out should be able to be managed remotely by the Systems Integrator with limited travel required, as local IOM ICT resources are available to support implementation in their respective clinics. To achieve this, the planning phase will require the development of detailed instruction and guidance for local staff to show them how to install the hardware and software solutions themselves, but with the aid of an on-call support team in Manila.

6. System operations, maintenance, and upgrading

The systems integrator will be responsible in operating and maintaining the biometric system from pilot until the global roll-out has been completed in all IOM clinics. This should include monitoring of biometric solution service level agreements (SLA) defined with IOM, provision of helpdesk services 24/7 on all working days during the roll-out stage, and resolution of incidents raised by the end-users.

Necessary upgrades to the solution while roll-out shall also be provided to ensure optimal functionality and performance of the biometric system.

In collaboration with IOM ICT, the Systems Integrator shall also be responsible in planning and creating the environment that will ensure business continuity in the event of disasters. This should include mechanisms to backup and recover data, and restore the solution online.

7. Training and technical support for turnover of biometrics system to IOM

This would be a role for the IOM project team in Manila plus the Systems Integrator and biometric algorithm vendor. Prior to final handover of the system to IOM, and the

closure of the project, all IOM clinics globally should have received the solution, successfully installed it and received training.

The solution should be up and running, used daily and with no outstanding issues. An IOM team should be appointed who will have the final say as when this has been achieved and the project can be signed off.

The Systems Integrator shall train the IOM ICT project team that will takeover the system operations including helpdesk and Tier 1 to 2 support, maintenance, and upgrading. In general, the training sessions shall cover, but not be limited to the following:

- System configuration and administration, including backup and restoration
- SDK tool kit libraries, development, configuration, and integration
- System quality and accuracy management
- Data quality monitoring
- Performance measurement and SLA monitoring

The vendor shall recommend the relevant training type, whether onsite in Manila or online, for the abovementioned sessions. The IOM shall be responsible in providing the venue, should onsite training be required.

Further, Tier 3 technical and maintenance support may be required from the Systems Integrator for a period of six to 12 months after system handover.