



INVITATION TO BID (ITB LK24-002)

Supply, Installation and Commissioning of Automated Border Control (ABC) Gates and Automated Face Recognition System (AFRS) at the Bandaranaike international Airport, Sri Lanka

BID BULLETIN

**Amendment No. 2
Issued on 04 March 2024**

1. This Amendment #1 to the ITB LK24-002 is being issued to address amendments to the solicitation documents and provide clarifications of the queries submitted by bidders (as of 20 February 2024)

2. Amendments to the ITB:

ITB-LK24-002

Annex B - Automated Face Recognition System: Technical and Non-technical Requirements

New requirement

12.3	Hardware Requirements	Bidders are required to submit hardware requirements for optimal operations of the AFRS software solution being proposed.
-------------	------------------------------	---

3. All responses to clarifications requested by bidders via email:

Refer annex below

Prepared by
Sugath Mapa
Head of Procurement
IOM Sri Lanka

Responses to Bidder Queries

This document summarizes the responses to the queries/ clarifications requested by the bidders in repose to the ITB LK24-002 ‘Supply, Installation and Commissioning of ABC Gates and Automated Face Recognition System (AFRS) at Bandaranaike international Airport, Sri Lanka’. All queries have been sorted and listed below based on the document name and related provision.

	Related Provision	Bidder Query	Response
General Queries			
1	N/A	If the manufacturer is directly bidding, do they need to have a JV / Consortium to bid with the local partner or letter of authorization of appointing local partner will be enough?	One of the following approaches will be acceptable; A manufacturer can apply for this bid directly Or A manufacturer can apply as part of a joint venture, consortium or association (<i>Refer Section 2: Instruction to Bidders, Provision 20</i>) Or An authorized local representative can submit a bid on behalf of the manufacturer.
2	N/A	Can the contractor/bidder access DIE existing infrastructure/application software for the application installations and for the data communications (If available and agreed by DIE)?	The DIE server environment is virtualized (VMware). The bidder has to submit required hardware configurations for the entire solution along with the technical proposal. Then DIE will facilitate these depending on the requirement.
3	N/A	Please confirm the process of Technical Evaluation	Refer ITB LK24-002 ABC gates and AFRS Invitation and Instructions, Section II (Instructions to bidders) Provision 38 and 39. "38. Technical evaluation will be conducted to establish substantial compliance, as per the criteria included in Section 4: Evaluation

Responses to Bidder Queries

			<p><i>Criteria. When the bid varies in one or more aspect/s from the minimum technical specifications and/or delivery requirements specified in Section 5: Schedule of Requirements, the bid will not be considered substantially compliant and will not be evaluated further."</i></p> <p><i>"39. The prices of bids found to be substantially compliant will be compared to identify the most substantially compliant bid which represents the lowest overall costs to IOM."</i></p>
4	N/A	Please confirm the payment terms as the same is not been mentioned in the RFP.	<p>Refer ITB Lk24-002 ABC gates and AFRS Invitation and Instructions, Section III (Data Sheet), Provision 22.</p> <p><i>"22. Usually, IOM does not allow advance for any procurement. However, in this procurement a maximum 50% advance can be allowed upon request of bidder, subject to submission of a Bank Guarantee from a reputed commercial bank."</i></p>
ITB-LK24-002 ABC Gates and AFRS Invitation and Instructions			
5	Section 2: Instructions to Bidders Provision 10 – Cost of preparation of bid	Please advise if bidders need to buy the IOM bid document ITB LK24-002 or the downloaded document from IOM portal is good for bidding?	All ITB documents are available to be downloaded free of charge.
6	Section 2: Instructions to Bidders Provision 12 – Documents comprising the bid	Please help clarify if bid security is applicable for this bid	No, a bid security will not be required.

Responses to Bidder Queries

			(Refer Section 3: Data Sheet, Provision 11)
7	Section 2: Instructions to Bidders Provision 17 – Duties and Taxes	Does IOM need to withhold tax for the payment for services & software?	All prices should be exclusive of VAT and applicable indirect taxes
8	Section 2: Instructions to Bidders Provision 20 – Joint Venture, Consortium or Association	What is meant by “duly notarized agreement”? To comply with this clause, should we provide a Power of Attorney, a Board resolution, or just a letter signed by all the parties?	A "duly notarized agreement" refers to a legal document that has been signed in the presence of a notary public and officially stamped or sealed by the notary to certify the authenticity of the signatures. Notarization typically involves the notary verifying the identities of the signatories, ensuring they are signing the document of their own free will, and witnessing the signing process.
9	Section 3: Data Sheet Provision 8 – Bid Currencies	We seek your clarification if the bids can be allowed in USD and Euro currency both?	Bid currency must be USD
10	Section 3: Data Sheet Provision 16 – Deadline for bid submission	Please provide 4 weeks of bid preparation time after all pre bid responses are responded and final addendum is published.	Bid submission deadline will only be extended until 14 March 2024. Time: 17:00hrs. Time zone: (GMT +5.30)
11	Section 3: Data Sheet Provision 22 – Advance Payment	50% Advance Payment is mentioned with Advance Payment Bank Guarantee Please confirm the payment terms as the same is not been mentioned in the RFP. Since its USD are you going to establish Irrevocable LC with our Principals	As a UN agency, IOM does not open LCs. Instead our international procurement is conducted through confirmed purchase orders or Goods/Service Agreements.
12	Section 3: Data Sheet Provision 23 – Liquidated Damages	Is there a ceiling to the penalty?	No ceiling will be applied at this stage of the process.

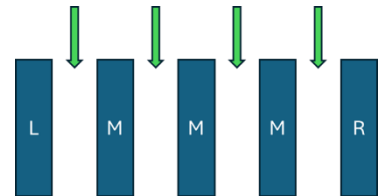
Responses to Bidder Queries

	Penalty of 0.1% of the total price for every day of unjustified breach of the delivery schedule by the Supplier.	The Penalty has No capping, request to kindly Cap it to 5% of contract value for the items not delivered / pending.	IOM is open for further negotiating this clause during the Contract signing with the selected bidder.
13	Section 4: Evaluation Criteria Eligibility and qualification criteria (Page 16) <ul style="list-style-type: none"> - Vendor is not suspended, nor otherwise identified as ineligible by any UN Organization, the World Bank Group or any other International Organisation in accordance with Section 2 Article 4. - No conflicts of interest in accordance with Section 2 Article 4. - The bidder has not declared bankruptcy, in not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against the vendor that could impair its operations in the foreseeable future 	Should we submit a declaration letter to comply with these clauses?	As instructed in the ITB, please complete the declarations under ' <i>Forms and Templates - Form C: Bid Submission</i> '
14	Section 4: Evaluation Criteria Litigation history (Page 17)	Should we submit a declaration letter to comply with this section?	As instructed in the ITB, please complete the declarations under ' <i>Forms and Templates - Form F: Eligibility and Qualification Form</i> '

Responses to Bidder Queries

	Section 4: Evaluation Criteria Certificates and Licenses (Page 17)	<p>We understand, a local representative can be the bidder for solution from provider located outside the country. In this situation the solution provider fulfilling the eligibility is a sub-supplier to the bidder and need not be the bidding entity. Could you confirm our understanding?</p> <p>Additionally, the offer relies on the references, experience, eligibility and offer from the solution provider, with the local representative being the bidder.</p>	<p>A local representative can submit a bid on behalf of a principal located outside of Sri Lanka.</p> <p>If the local representative is submitting the bid on behalf of the principal, in that case the principal's financial documentation, references, experiences etc. would be accepted as supporting documents.</p>
15	Section 4: Evaluation Criteria Previous Experience (Page 17) Minimum five (5) years of relevant experience	<p>We understand this experience could pertain to Group / affiliates of the solution provider. Additionally, would be considered as experience for the bidder relying on experience of solution provider located outside the country?</p>	<p>If the local representative is submitting the bid on behalf of a principal located outside Sri Lanka, in that case the principal's past experiences would be acceptable.</p>
16	Section 4: Evaluation Criteria Previous Experience (Page 17) Minimum three (3) contracts of similar value, nature and complexity implemented over the last five (5) years.	<p>We understand this experience could pertain to Group / affiliates of the solution provider. Additionally, would be considered as experience for the bidder relying on experience of solution provider located outside the country.</p>	<p>If the local representative is submitting the bid on behalf of a principal located outside Sri Lanka, in that case the principal's past experiences would be acceptable.</p>
17	Section 05: Schedule of Requirements Provision B – Technical Specification for Goods	How many lanes?	4
	Lot 1: ABC gates – Quantity	What is the lane configuration for these 4 eGates? 1+1+1+1 4x single lane? or 2+2 2x	Ideal lane configuration is as follows;

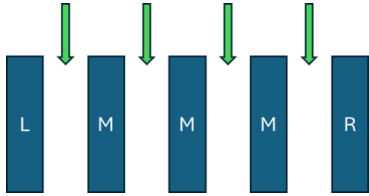
Responses to Bidder Queries

		dual lane, or 3 + 1 1x triple lane + 1x single lane? or 1x quad lane	
18	Section 5: Schedule of Requirements Provision C – Delivery Requirements Bidder shall deliver the goods LOT 1. ABC Gates within maximum 180 days. And Lot 2. AFRS within maximum 60 days after contract signature.	Please help clarify if this delivery is for physical delivery of hardware & software only. It is understood that the installation, integration and customization would be excluded for the delivery timelines.	Lot 1: ABC gates - Delivery of all deliverables including installation, integration and customization will have to be completed within 180 days. Lot 2: AFRS – Software installation and testing will have to be completed within 60 days. Integration and customization will be completed within 180 days. <i>*Please note that in both cases the number of days will be calculated from the Contract signature date.</i>
ITB LK24-002 Forms and Templates			
19	Form C – Bid Submission	Our understanding is that this form needs to be completed by the bidder only. Please confirm.	Yes, bid submission form (Form C) needs to be completed only by the bidder. Form should be duly signed and sealed.
20	Form E - Joint Venture/ Consortium/ Association Information	Is the LOI sufficient, or is a draft JV/consortium needed to be submitted with the bid? If required, should the draft JV/Consortium agreement be initialed by the parties?	At the bid submission stage a letter of intent (LOI) signed by all parties will be acceptable. However, the duly signed and notarized JV agreement will be the prerequisite for the Contract signature. If LOI is submitted without the draft JV agreement, it should clearly stipulate the parties involved, their roles, the lead entity, etc..

Responses to Bidder Queries

	Vendor Information Sheet		
21	Vendor Code, UNGM No.	As we do not have an IOM vendor code, will IOM allow bidders not having IOM vendor code to participate in this bid?	Bidders are not mandatorily required to have an IOM vendor code or an UNGM Number to apply for this bid.
		For vendors not having an IOM vendor code apply for IOM vendor registration? How long will it take to get the registration to be completed?	Bidders are not mandatorily required to have an IOM vendor code or an UNGM Number to apply for this bid.
		For vendors not having IOM vendor code bid through their local Sri Lankan partner who has an IOM Vendor code.	Bidders are not mandatorily required to have an IOM vendor code or an UNGM Number to apply for this bid.
	Annex A: ABC Gates Technical and Non-technical Requirements		
22	General	Can the bidder get below hardware and software from DIE for the operations of the ABC gate Monitoring Station? <ul style="list-style-type: none"> • Network Switches (2 Nos) and SFPs (2 Nos) • Displays (2 Nos) with HDMI cables (2 Nos) • Workstations, Operating Systems and the anti-virus software (3 Nos) • UPS power for all the components • Surge Protection Devices 40ka 2 pole (1 Nos) 	DIE will provide UPS power for all components. The remaining equipment/hardware or software including licenses required for operations of the monitoring room will have to be supplied by the bidder as part of the solution. The power and network must be configured with high-availability features and avoiding any single point of failure in operations
		What is the Egate passage width required and overall Dimensions of E gate?	Total space available for ABC gate installation approximately 20ft x 20ft. Ideal lane configuration is as follows;

Responses to Bidder Queries

			
23	A.4: The system must be compatible with the environmental conditions of Sri Lanka, including operating temperature of 15-40 degrees Celsius and humidity of 90% non-condensing.	Please confirm that the final location at the airport is equipped with air-condition.	Yes, ABC gate location at the airport will be air-conditioned.
24	B.7 : The barrier gates (swing barriers) must be of sufficient height to retain a passenger who requires secondary inspection. The height of the obstacle should be at minimum 48 inches.	Would ABC gates with sliding telescopic doors which retract seamlessly within the gate module be acceptable under this tender?	Barrier gate requirement will be limited to swing barriers.
		In eGate the first entry barrier should be of lesser height compare to second inspection barrier for better visibility of complete system to passengers. Hope the understanding is correct?	This is acceptable as long as the design comply with the minimum height and the passenger retention requirements specified in the ITB.
25	C.4 : ABC gate entry control requirements: The first barrier (i.e., 1 st stage control) of the ABC gate must support the following operations. 1) A self-service, passenger data/document capture and decoding device capable of capturing the following information.	Note from the technical committee	Please note that C.4. (1) (b) & (c) will not be considered mandatory requirements.
		What is the size of the departure/arrival card?	Current departure/arrival card size is 18cm x 13cm. However, size specifications can be revised to be line with international standards.

Responses to Bidder Queries

	<p>a) Passenger data page in an ICAO 9303 compatible machine-readable (MRTD) passport, including its multi-spectral images and decoding the Machine Readable Zone (MRZ). For e-passports, the device should be capable of reading the chip data.</p> <p>b) Image of a standard boarding pass (either home-printed, mobile, or issued at a checking counter) and decode the embedded barcoded information.</p> <p>c) The departure/arrival card image used by the Department of Immigration and Emigration (DIE)</p> <p>d) Any standard QR code/barcode printed on standard paper or on a mobile device screen.</p>	<p>what image format needs to be saved into? JPEG?</p>	<p>Image should be saved in either JPEG or PNG formats.</p>
26	<p>C.5: ABC gate exit control requirements: The second barrier (i.e., 2nd stage control) of the ABC gate must support the following operations.</p> <p>1. Capture the biometrics of the passenger (finger print and ICAO compliant face image), including active liveness detection based on 3-D imaging technology. The face</p>	<p>In Egate for finger scanner, do we need to scan single finger or all Ten fingers, accordingly scanner model to be decided</p>	<p>Four-finger scanner required.</p>
		<p>The Emergency switch inside the eGate barrier should be placed to raise an alarm for human intervention or it should be calling switch with a facility to speak. Pls clarify.</p>	<p>The ability to speak with the passenger remotely is not a minimum requirement. However, the alarm must be both visible and audible.</p>

Responses to Bidder Queries

	<p>image capture should support the variable height of the passenger and should be able to capture while the passenger is standing. The system should also be supported with an optical feedback (digital mirror) mirror to assist the passenger during the operation.</p> <ol style="list-style-type: none"> The passenger must be provided with necessary instructions and feedback using an electronic screen (supporting graphical instructions) An emergency switch allowing the passenger to seek assistance from the staff. The emergency switch must raise an alarm (audible and visible) but should not automatically release the barriers. The responding staff should be able to release the barriers using an emergency override, which is not accessible to the passenger in the second stage of control. 	<p>We kindly ask the IOM to replace the requested “3-D imaging technology” in Annex A with “Presentation Attack Detection” (PAD), as requested in <i>Annex B Item 3.4 “ISO 30107-3 Biometric Presentation Attack Detection Standards”</i>.</p>	<p>To clarify, the functional requirement is for the ABC gates to conduct liveness detection using imaging technology.</p> <p>Test methodology should comply with ISO 30107-3 Biometric Presentation Attack Detection Standards.</p> <p>Note: Under this tender, liveness detection must be an ABC gate functionality. The most advanced liveness technologies are able to conduct passive liveness, which requires no user involvement and provides the best user experience out of all liveness technologies. “Imaging technology” in this situation simply means that the ABC gate has to be able to conduct liveness detection by analyzing the traveler image being captured at the ABC gate.</p>
27	<p>C.6: The ABC gate should be equipped with CCTV cameras. The entire ABC gate process and the surrounding entry/exit areas should be covered with CCTV, providing a clear view to the monitoring staff. All transactions that a passenger would carry out with the ABC gate components must be covered in the CCTV footage. The recorded CCTV footage should be able to be saved at a pre-designated location in the DIE system.</p>	<p>Please clarify pre-designated location in the DIE system, is it a Storage provided by DIE?</p>	<p>CCTV system should have its own Network Video Recorder (NVR) for video storage. The NVR must be placed under the administrative authority of the DIE.</p>
		<p>ABC gate system has to save this recorded footage directly to that Storage? Or that can be done manually or by file transferring?</p>	<p>CCTV system should have its own Network Video Recorder (NVR) for video storage. The NVR must be placed under the administrative authority of the DIE.</p>

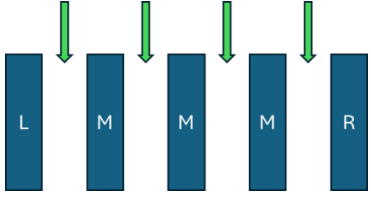
Responses to Bidder Queries

	(This feature is required so that CCTV footage can be indexed and stored at DIE to be utilized during auditing/ investigations)	Saving the videos into the storage should happen automatically? Or that can be scheduled?	Saving the CCTV footage to the NVR should be happen automatically.
		What is the retention time period for those video footages saving in the DIE system?	Minimum storage time should be at least 45 days. The exact retention period will be decided by the DIE as per applicable privacy and data protection guidelines.
28	D.3: Monitoring station should be inclusive of at minimum 4 monitoring displays (configurable to display the data feeds from CCTV, ABC gate operational/transaction info etc).	Please clarify whether, 4 displays could include the Monitoring Station PC/workstation monitors also or we should provide separate 4 monitoring displays?	4 monitoring displays can be inclusive of PC/workstation monitors (Eg: 2 Monitoring dashboards + 2 PC workstations)
29	D.4: Signing on to the ABC gate control system must be integrated with the role-based sign-on system of the DIE. Officers authorized by the DIE should be able to sign into the system and perform their monitoring duties.	Please confirm whether DIE is providing LDAP (Lightweight Directory Access Protocol) for their users?	Yes
		Also, confirm whether how many users will be using the monitoring stations?	Maximum of 02 officers will be assigned to manage the monitoring station per shift. DIE has around 500 officers attached to the BIA who will manage these responsibilities on a roster.

Responses to Bidder Queries

30	<p>E.2: The purchaser's responsibility in the installation will be limited to providing physical space for the ABC gate and the control/monitoring station. Power supply will be made available from the nearest distribution board (230V AC, 50Hz 3-Phase). The supplier shall be responsible for all necessary civil works, construction, cabling, and related activities.</p>	<p>As per our understanding we believe that DIE will provide electricity (Distribution Board) up to the monitoring stations (Since we have no idea about the distance to the any other given locations from the monitoring station). Please confirm.</p>	<p>The purchaser will provide power connectivity up to the monitoring station distribution board.</p> <p>Obtaining power connectivity from the monitoring station distribution board is the bidder's responsibility. The bidder must provide a distribution board for the monitoring station with high-availability features and avoiding any single point of failure in operations.</p> <p>Estimated distance between the monitoring station and the ABC gate installation site: 50m</p>
		<p>We believe that DIE will provide the Data Connectivity up to the Monitoring Station (Fiber connectivity from Data Center to the Monitoring station). Please confirm.</p>	<p>The purchaser will provide networking to the monitoring station rack provided by the bidder.</p> <p>Establishing the networking connectivity with high-availability features and avoiding any single point of failure in operations between the ABC gates and the monitoring station is the bidder's responsibility.</p> <p>Estimated distance between the monitoring station and the ABC gate installation site: 50m</p>
		<p>Please provide a Floor architecture plan of the final installation place</p>	<p>Space allocated for ABC gates installation at the BIA 20ft x 20ft.</p> <p>Ideal lane configuration is as follows;</p>

Responses to Bidder Queries

			 <p>Detailed floor plans will be shared only with the selected bidder.</p>
		Please confirm that the network cabling and IT Network configuration is provided by the purchaser	<p>Purchaser will provide network connection and power to the monitoring station.</p> <p>Obtaining power connectivity from the monitoring station distribution board is the bidder's responsibility. The bidder must provide a distribution board for the monitoring station with high-availability features and avoiding any single point of failure in operations.</p> <p>Establishing the networking connectivity with high-availability features and avoiding any single point of failure in operations between the ABC gates and the monitoring station is the bidder's responsibility.</p> <p>Estimated distance between the monitoring station and the ABC gate installation site: 50m</p>
		Please confirm that the booths for the Control and Monitoring station are provide by the purchaser	<p>Yes, space/booths for the control and monitoring station will be provided by the purchaser</p>

Responses to Bidder Queries

		Please confirm that the purchaser provides all technical detailed information of the Interface of the existing BMS System	Yes, necessary technical details will be shared with the selected bidder
		Please clarify if only certified companies are allowed to perform the requested civil work. If yes please provide a list of certified companies.	There is no such limitation.
31	E.3: The installation of ABC gates must be carried out with minimum disruption to airport terminal operation during the construction period.	Please provide the preferred working time during the construction period time	Implementation plan will be mutually decided with the selected bidder, Airport and Aviation Services Sri Lanka (AASL) and the DIE.
32	Section II: Non-technical requirements 1.1: The solution/product shall have been implemented in at least Three (03) different International Airports (other than the country of origin) of the principal supplier/manufacturer with a minimum of 25 units installed (cumulative total installations > 25 units) (Bidder will be expected to submit verifiable reference letters/ referee information)	In this regard, we assume that Sub-Contractor experience will be considered for technical evaluation. Kindly Confirm.	Sub-contractor experience will be acceptable if the bidder can provide evidence on the exact nature of the relationship between the bidder and the sub-contractor in reference to such past projects (either as an authorized representative or part of a JV/ consortium/ association)
		We would like to know, 1. we are bidding along with our Principals whom are the manufacturer, can we (local representative) offer as bidder and manufacturer as our Principals. Our Principal have relevant Experience to meet for eligibility criteria. They will submit reference letter etc Pls inform this method is acceptable to you. we will submit a letter with regard to this	Overseas manufacturer's experience will be accepted if the bidder can provide documentary evidence to prove that they are the authorized local representative of the manufacturer.

Responses to Bidder Queries

		respect. we will submit the Performance Bond in the event our offer is selected and award is placed with us.	
33	Section II: Non-technical requirements 4.1: Life time shall not be less than ten (10) years, commencing from the issuance of Provisional Acceptance Certificate. During this period, the contractor shall provide all support services, maintenance, firmware/software upgrades under the service contract which will be signed after the warranty period is over. Maintenance support should be available throughout lifespan of the product.	<p>Our understanding is Maintenance support should be available throughout lifespan of the product (10 years commencing from the issuance of PAC), but we are liable to provide maintenance and support during the warranty (default) and the during the time we are under the service contract which will be signed after the warranty period is over.</p> <p>Please confirm.</p>	<p>Bidder will be required to provide support services, maintenance, firmware/software upgrades etc. throughout the lifespan of the product, which should be at minimum 10 years from the issuance of the PAC.</p> <p>Within the 3-year warranty period, the bidder shall extend all such support/ maintenance services without an additional charge.</p> <p>A separate service/maintenance agreement will be signed between the bidder and the DIE to continue these services beyond the initial 3-year warranty period.</p>
34	Section II: Non-technical requirements 6.1: The entire system and other associated equipment shall be guaranteed comprehensively for a minimum period of 36 operational months from the date of final acceptance	Please share the milestones/timelines for Provisional Acceptance test mentioned in clause 4.1 and the Final Acceptance Test.	<p>Provisional acceptance will be conducted post-installation using test data to ensure compliance of the product with key technical requirements.</p> <p>The final acceptance test will be conducted after a mutually agreed period from the provisional test, and will aim to test end-to-end operations of the system in the production environment.</p>

Responses to Bidder Queries

			Both PAC and final acceptance test will be expected to be conducted within 180 days from the Contract date.
		Our understanding is warranty should start after the PAC or when the system is going live. Please confirm.	As stated in the bid, warranty should start from the date of the Final Acceptance Test (which will be conducted prior to going live)
35	Section II: Non-technical requirements 6.2 The Contractor shall undertake by the above guarantee to replace any part / parts or the system in whole which are found defective within 24 hours from the time the Contractor was informed, at his own cost and maintain such replaced item/items for a period as indicated above.	For this we will maintain a stock of critical spare parts for the gates. We can use them for the replacements when required. Please confirm whether DIE will provide a space to keep those spares in the BIA?	Yes
		Please clarify whether the meaning of the word "Contractor" is similar to the bidder?	Yes In some places the word 'contractor' has been used to denote the bidder selected to deliver services/ goods
36	Section II: Non-technical requirements 6.3: The Contractor shall submit details including the cost for service level agreement for the maintenance of the equipment for 5 years after the warranty period	Post 3-years comprehensive warranty, what is the SLA requirement for 5years maintenance in terms on Manpower & spare support	Bidder is expected to make informed estimates on these aspects based on data/knowledge gathered through previous deployments of the product. The SLA will be negotiated at the time of contract signing. Bidders can include their standard SLA for information purposes.
37	Section II: Non-technical requirements 7.1 The Contractor shall hold the responsibility to safeguard the equipment	Our understanding is DIE should also hold the responsibility of safeguarding the equipment since we are delivering and storing the equipment in BIA.	Following review of the request, the provision has been revised to read as follows;

Responses to Bidder Queries

	from delivery to satisfactory completion of the Provisional Acceptance Test	<p>During the implementation up to the PAC, the gates will be installed in BIA, so the safeguarding should happen by DIE as well. (Especially during the time which the installations are not going on with the contractor's/bidder's engineers)</p> <p>Please confirm.</p>	<p>“7.1 The Contractor shall hold the responsibility to safeguard the equipment until the equipment are delivered to a pre-designated site at the BIA”</p> <p>Bidders are expected to cover the equipment through an appropriate insurance policy until the system is officially handed over to the purchaser.</p>
		<p>Please clarify whether the meaning of the word “Contractor” is similar to the bidder?</p>	<p>Yes</p> <p>In some places the word ‘contractor’ has been used to denote the bidder selected to deliver services/ goods</p>
Annex B: AFRS Technical and Non-technical Requirements			
38	General	<p>Most organizations price 1-1 solutions based on transaction volume.</p> <p>How many 1-1 transactions are expected to be processed each year?</p>	<p>It will depend on ABC-gate adoption, there are 8 lanes in total (4 departure and 4 arrival).</p> <p>There are about 4 million passenger movements per year who will be eligible for ABC Gates. It is not possible to provide an exact number.</p> <p>However, the solution should not depend on transaction volumes other than for the performance parameters given in the technical and non-technical requirements enclosed with the ITB.</p>
		<p>We could not find this in the terms. What is the length of the Contract term to be?</p>	<p>Under this procurement a perpetual product license is required (refer Provision 3.1, AFRS Technical and Non-technical Requirements)</p>

Responses to Bidder Queries

			<p>Bidders will be expected to extend annual maintenance support throughout the product's lifespan. The product's lifespan should be at minimum 15 years (including the warranty period of 3 years).</p> <p>Please indicate the cost of annual maintenance services separately in the financial proposal.</p>
		Does the DIE infrastructure have a preference of Operating System such as Windows or Linux ?	Both operating systems are acceptable. However, Linux is preferred based on compatibility with existing infrastructure
		Do the bidder need to provide AFRS solution for past ABC gate solution that shall be implemented by other service providers?	AFRS will be a separate module that will support REST-API based interface for multiple functions within the DIE, including other installations of ABC-gates. Hence the API must be open and standard.
39	1.1: The proposed solution should provide backend verification (i.e., 1:1 matching) between a live-captured face image (mug shot) and an ICAO compliant face image included in a claimed identity. The verification should be exposed via a secure API as a service, enabling multiple external systems to integrate and use the system for verification.	What is the size of database/watchlist for 1:1 matching?	The expected functionality will be limited to 1:1 face verification. A pre-registered image of the traveller needs to be verified against the live-captured face image.
		Do we need to perform data migration from existing ABIS?	No
		What is the data retention period (how long do we keep the data)?	The ABC gate controller is expected to transfer all transactional details (including captured image) to a middleware layer maintained by the Immigration Department's back-end solution via a published Rest-API

Responses to Bidder Queries

			call. All data will be retained only at the Immigration Department's backend. The ABC gate or ABC-gate controller is not expected to retain any transactional data other than the technical logs relating to its operations
		Is 1:N matching needed?	No
		Does this mean that 2 images will always be passed via API to the proposed solution to be compared, and the proposed solution is not required to have its own database of images to be compared with ?	Images will be passed through a REST-API. The AFRS module does not require local storage of images
		Is the wording here meant to be “the proposed solution must”	This is a language oversight. This requirement is mandatory.
40	2.1: Supply, customizations (if any), installation, deployment, testing, and commissioning of the automated face verification software service and management interfaces within the purchaser's ICT infrastructure.	Please clarify the meaning of “purchaser's ICT infrastructure”.	'Purchaser's ICT infrastructure' is an umbrella term utilized to denote the ICT infrastructure of the DIE.
		Does the bidder has to provide hardware to install the Face Verification Services software (Overall software)?	No, the DIE will allocate required hardware (i.e. servers). Bidder will be expected to submit the hardware technical requirements for optimal performance of the AFRS.
41	2.2: Supply, install, configure, and commission the hardware components and infrastructure required for the face	Please clarify the meaning of “purchaser's ICT infrastructure”.	'Purchaser's ICT infrastructure' is an umbrella term utilized to denote the ICT infrastructure of the DIE.

Responses to Bidder Queries

	verification service at the purchaser's ICT infrastructure.	Does the bidder has to provide hardware to install the Face Verification Services software (Overall software)?	No, the DIE will allocate required hardware (i.e. servers) Bidder will be expected to submit the hardware technical requirements for optimal performance of the AFRS.
		Please clarify that the IT infra like Servers, Network equipment and associated COTS (commercial off-the-shelf) license shall be in provided by IOM and the SLA of the same shall be in IOM scope.	DIE will provide necessary server and networking facilities. License requirements for all components supplied under this tender must be provided by the contractor. The initial license (included in the Bid price) must cover the complete warranty period of the equipment (3 years). The Bid must clearly indicate the annual license fees (if any) that are applicable after the warranty period.
42	2.5: Supporting other nominated service providers in integrating and testing the face verification service	Please clarify more and share some examples for the "other nominated service providers"	The term 'other nominated service providers' broadly refer to any third party service provider (current or future) extending their services to the DIE Eg: <ul style="list-style-type: none"> - System developer managing the DIE's border control system - ABC gate supplier
43	2.6: Provision of warranty and maintenance services. Warranty will be required for 3 years from the date of final user acceptance. The solution should be supported with an	Please help to clarify if there will be two independent "final user acceptance" for AFRS and ABC Gates? And the warranty period will be calculated separately.	Yes

Responses to Bidder Queries

	annual maintenance contract following the warranty period.	How many years will the AFRS support and maintenance be?	<p>Warranty period should be 3 years.</p> <p>Bidders will be expected to extend annual maintenance support throughout the product's lifespan. The product's lifespan should be at minimum 15 years (including the warranty period).</p> <p>Please indicate the cost of annual maintenance services separately in the financial proposal.</p>
		Please share the milestones/timelines for Final User Acceptance, And share the milestones/timelines for Provisional Acceptance test if its applicable.	<p>Provisional acceptance will be conducted post-installation using test data to ensure compliance of the product with key technical requirements.</p> <p>The final acceptance test will be conducted after a mutually agreed period from the provisional test, and will aim to test end-to-end operations of the system in the production environment.</p> <p>Both PAC and final acceptance test will be expected to be conducted within 180 days from the Contract date.</p>
		Our understanding is warranty should start after the PAC or when the system is going live. Please confirm.	As stated in the bid, warranty should start from the date of the Final Acceptance Test (which will be conducted prior to going live)

Responses to Bidder Queries

44	3.3: Automated detection of glasses, hats, facial masks, or other components that may interfere with the verification process and generation of token images based on ISO 19794-5 criteria.	Does this mean the software has to perform Quality Assessment tests on images, score quality and reject images from 1-1 comparison if they fail quality checks? Or does it simply mean the software when it does 1-1 has to handle glasses, hats, face masks etc?	The system needs to do the quality assessment of the image captured from the ABC Gate and provide feedback to the user appropriately if the quality does not meet the requirements.
45	3.4: Support for face liveness detection compliant with ISO 30107-3 Biometric Presentation Attack Detection Standards	Per clause 3.4, is face liveness checking to be done only on the probe image, or on both images being compared?	A liveness check is required on test image captured at the ABC Gate
46	3.6: Provision of the outcome through the response API call, including the final determination (as per the given threshold) and the statistical confidence level of the match.	Item 3.6 is listed under the headline "License". Please briefly describe the expected outcome of this requirement in more detail.	After the 1:1 matching is completed, the AFRS must call an API in the DIE back-end to pass its outcome. This outcome should include the match results with an indicator showing the statistical confidence level of the match.
47	4.1: The proposed solution must be deployed as a separate, independent sub-system module within the DIE's ICT infrastructure. All communications concerning verification, auditing, management, and monitoring must be carried out through standard API services and protocols. The system must have a management web interface for auditing, monitoring, configuration, and management purposes.	Please clarify the meaning of "purchaser's ICT infrastructure"	'Purchaser's ICT infrastructure' is an umbrella term utilized to denote the ICT infrastructure of the DIE.
48	5.1: The proposed solution must comply with the provisions of Sri Lanka Personal Data Protection Act No 9 (2022) and other relevant legislation applicable within Sri Lanka and internally.	Does this mean that the proposed solution must store no images in any database or file system, after the 1-1 comparison check is done?	The image captured for the ABC Gate will be stored in the DIE back-end with the matching test results as part of a transactional audit trail.

Responses to Bidder Queries

49	6.1: The solution must handle not less than 100 face matching transactions per second, with a maximum latency of not exceeding 3 seconds (measured from calling the request API to delivery of the outcome).	Please confirm it's 100 faces per second, not per minute, as the number of eGates does not seem to support such throughput.	Software must be able to handle at minimum 100 face matching transactions per second.
50	7.1: The proposed core solution must be listed within the top 25 products, preferably within the top 20 for NIST Face Recognition Technology Evaluation (FRTE) 1:1 Verification	<p>You can see the NIST webpage at Face Recognition Technology Evaluation (FRTE) 1:1 Verification (nist.gov)</p> <p>There are several issues with this criterion that cause a restraint of trade and mean that IOM is limiting its choice not to 25 bidders but to 1 or 2, for these reasons</p> <ol style="list-style-type: none"> 1. About 20 of the top 25 algorithms are Chinese or Russian companies with no commercial selling presence (eg no website) and no support capability for DIE (eg don't speak English). 2. Some of the companies have 2 algorithms listed in the top 25, further reducing the real number of companies that can compete 3. They probably also will fail the annual turnover test of \$500K minimum in the bid conditions. 	<p>Note: In Bid Bulletin #1 (issued on 22 Feb) this provision was amended to read "The proposed core solution must be listed within the top 25 products, preferably within the top 25 for NIST Face Recognition Technology Evaluation (FRTE) 1:1 Verification"</p> <p>The NIST benchmark is used internationally as the de-facto assessment for biometric accuracy and performance. It tests the accuracy of the algorithms and not commercial entities. Most work-leading systems are within this threshold, and we believe the given threshold is reasonable.</p>

Responses to Bidder Queries

		Can this clause therefore be deleted because it restrains severely the list of companies that can comply ?	
51	8.1: The system must be configured with high-availability features and avoiding any single point of failure in operations	If DIE is providing "DIE's ICT infrastructure" to install the software, please share the architecture and related technology details. (Architecture diagram/Virtualization platform details etc)	DIE will allocate necessary server space for installation of the software. Bidders are required to submit hardware technical requirements and any other pre-requisites for optimal performance of the AFRS.
52	10.1: The system in general should support the following technical requirements concerning the face verification algorithm and performance accuracy: <ul style="list-style-type: none"> a. Face image compatibility: near-frontal face image with roll, pitch, and yaw angles up to +/- 20 degrees; b. Images captured under ambient lighting environments present in airport operations; c. Matching with configurable threshold concerning false acceptance and false rejection ratios; d. The solution should be able to detect fake image based on the input/ live captured face imaging from front-end; 	Clause 10.1(d) of the technical requirements says "The solution should be able to detect fake image based on the input/ live captured face imaging from front-end". This requires a passive liveness solution. Most organizations offering passive liveness solutions charge for a volume of transactions. However, the DIE ITB wants a perpetual license. How many liveness transactions are expected to be done over the 3 year life of the Contract?	Under this procurement a perpetual product license is required (refer Provision 3.1, AFRS Technical and Non-technical Requirements) Number of transactions will depend on ABC-gate adoption, there are 8 lanes in total (4 departure and 4 arrival). There are about 4 million passenger movements per year who will be eligible for ABC Gates. It is not possible to provide an exact number. However, the solution should not depend on transaction volumes other than for the performance parameters given in the technical and non-technical requirements enclosed with the ITB.

Responses to Bidder Queries

	e. Face Non-Match Rate (FNMR) @ Face Match Rate (FMR = 10^{-5}) must be less than 0.003 on Mugshot test dataset on NIST Face Recognition Technology Evaluation (FRTE) 1:1 Verification;	This requirement uses the word “should” [(10.d) highlighted], not “must”. Is including liveness mandatory or can you win the ITB without it?	This is a language oversight. This requirement is mandatory.
	f. The solution should have the capability of extension to or experiences in multiple biometric fused machines.	10.1.e: NIST uses 4 decimal places (not 3). In this test our software scores 0.0035 (meaning 96.5% match rate). The best company in the NIST test scores 0.0021 (meaning 97.9% match rate) The difference between best and ours is only 1.4% Whether 0.0035 is compliant or not is subject to interpretation. To avoid doubt, can this requirement be changed to less than 0.0039 ?	We check only up to the 3rd decimal point without rounding. Hence 0.0035 will be within the accepted range
ITB LK24-002 Bid Bulletin #1			
53	Page no 6, Chapter 1.1, Response row 3: “The ABC gate controller is expected to transfer all transactional details (including captured image) to a middleware layer maintained by the Immigration Department's back-end solution via a published Rest-API call. All data will be retained only at the Immigration Department's backend. The ABC gate or ABC-gate controller is not expected to retain any transactional data other than the technical logs relating to its operations”	Please confirm that the interface specification will be provided for all external systems that have to be integrated? Please confirm that the integration is limited to the middleware layer maintained by the immigration department	The interface will be a REST-API call. The data schemas of the call will be provided under technical negotiations with the selected Bidder, as the information is not available in the public domain. Integration is required only with the middleware layer operated by the DIE.