BID BULLETIN NO. 4

(Date)

I. Attention is hereby invited to the Bidders of the Project **SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF THE SAFETY OVERSIGHT MANAGEMENT SYSTEMS FOR THE CIVIL AVIATION AUTHORITY OF THE PHILIPPINES INCLUDING THE HARDWARE AND SOFTWARE COMPONENTS Bid No 24-081-10 BRAVO**

II. Please be informed of the following revision:

QUERY	REPLY
Since there was an increase of the ABC from P250M to P350M, can we request that the SLCC be two, one for software and one for hardware OR an aggregated contract from one client?	SLCC requirement is retained
Are documents from outside the country all needed to be apostille?	Apostille is required for all documents originating from outside the Philippines, except product brochures and those that regularly used in the course of ordinary business.
Can we use any Philippine ID instead, given the notarial format of the documents in the bid docs indicating that the needed ID is a Community Certificate?	Any Philippine Government-issued ID may be used.
Do we need to attach 1, 2 or 3 years of Audited Financial Statements?	Only the latest financial statement is required to be submitted.

Is there any format for the No Pending Case Certificate that we can use?	A copy of a notarized Certificate of No Pending case may be acquired at the BAC Secretariat office.
100 Units Mini PC Page 110 Item USB Configuration At least 5x USB 2.0/3.0/3.2 May we please request to relax to at least 4xUSB 2.0/3.0/3.2	4XUSB is acceptable 2x front and 2x rear USB 3.0/3.2
10 Units Webcam Page 110 May we please request if we could counter offer specification as the original requirement is already End-of-Life. Proposed counter offer Specifications: • Full HD 1080p at 30fps / 720p at 60fps streaming • Customizable background replacement • Automatic low-light correction • Two omnidirectional mics • Fully adjustable tabletop tripod • swivel mount and extends to 18.5 cm	Higher and better specifications are acceptable
What is the size of the question bank for each exam type that requires importing into the exam system?	On a .TXT format of 100-character questionnaires, approximately 20MB of storage is required for all exam type.
Which exam subjects are required to be imported?	All exam subjects
What are the estimated number of exams sat per year?	The requested information will be provided to the winning bidder.
Who pays for sitting the exam? Do examinees pay for sitting an exam, or is it part of the overall budget for the bid?	The examinees pay for the exam.
Is hosting solutions inside the Philippines a must-have requirement for the examinations section of the tender or are you open to other solutions?	The examination is an integral part of the solution required by

	the CAAP. The minimum requirement should be that the hosting service be a secure, efficient, and resilient public cloud hosting.
Is there an opportunity to submit multiple hosting options for the examinations section only?	Not possible
Is it acceptable to have a fully managed solution for the examinations section of the tender?	CAAP Requires an end to end fully manageable regulatory application/solution
Is the requirement to have an RPO < 1 second a must-have requirement or is CAAP open to other options for the examinations section?	A less than one-hour Recovery Point Object (RPO) or better is required, considering that the solution will be hosted on a public cloud, where reliability, availability, and fault tolerance are guaranteed, and every operation is replicated to multiple locations/instances.
What regulatory framework are your rules based on?	CAAP's regulatory framework is based on the Philippine Civil Aviation Regulation and the ICAO SARPS
Does CAAP want the question banks maintained as part of the service? If they are to be maintained, what percentage of the question bank is to be refreshed each year?	The question bank is part of the service. The question bank is being refreshed randomly per examination.
What contract term are you contemplating, and what, if any, rights of renewal will there be?	The project contract includes a 3-year SLA on the application system and database. Also included is a 3-year subscription to a public cloud hosting service. The contract is renewable after 3

	years from the project's final acceptance.
Is it acceptable to not require a photo of the examinee to be captured in the exam system?	A photo of the examinee is required
For item 3.1 CLOUD HOSTING GENERAL REQUIREMENT (MANAGED SERVICE), can CAAP verify that this Safety Oversight Management System will be deployed in a Philippine colocation Datacenter?	Considering the critical nature of the required solution, with emphasis on security, efficiency, and resiliency, the CAAP opted to shift from private cloud infrastructure to the public cloud to host the required application/solution with 20TB of usable space. A reputable on-shore/off-shore public cloud service should offer high availability, security, scalability, and excellent support and be compliant with SOC 2, ISO 27001, PCI DSS, or its equivalent. Minimum public cloud requirements are as follows: On-shore public cloud hosting should be at least a Tier 3 (or its equivalent) facility and compliant with the DICT minimum requirement. Off-shore public cloud hosting should be at least a Tier 4 (or its equivalent) compliant public cloud hosting facility
Regarding the CAAP database, we would like to clarify the following details to ensure compatibility	The existing database is 4TB (estimate)

and optimized integration: • Could you specify the current database brand and version used by CAAP? • What is the approximate size of CAAP's existing database (in GB or TB) to help us assess storage and performance requirements?	
Does CAAP have a preferred database solution for this project, or would alternative database technologies be considered based on compatibility and performance needs?	CAAP has no preferred database solution.
What type of data migration support will CAAP provide for historical data, and are there specific formats required for data transfer?	CAAP will provide the requested information to the winning bidder
May we request a copy of the editable forms of the modules, especially the required annexes?	A sample of requested form is attached as Annex A
For item 2.1.9 "Once developed, the ownership of the data base/system shall be retained by the CAAP. The winning bidder shall provide a perpetual license certificate for the continuous use of the developed system." – We want to emphasize that the ownership will be just for the SOMS application alone. The backend infrastructure would be annually paid to the Philippine Datacenter provider.	The project includes a Perpetual license to use the application, and Data ownership shall be retained by CAAP. It also includes a 3-year Public Cloud Hosting service.
Would CAAP consider allowing a fully online solution to optimize ease of use and ensure seamless data synchronization? Implementing a fully online approach would enable continuous real-time data access, minimize synchronization lags and disruptions, and simplify system maintenance and updates. This would also ensure that oversight information is always up-to-date and accessible.	System users should be able to continue using the solution in Offline mode.
Could CAAP clarify what level of system enhancements and updates are expected during the three-year maintenance period and if there are specific compliance standards (e.g., ICAO)?	ICAO, Philippine Civil Aviation Regulation, and other statutory laws and issuances by the Republic of the Philippines
On Section VI. Schedule of Requirements, current delivery days/weeks/months is at 540 days. Can CAAP extend the delivery time to 1095 days (3 years).	The project timeline is adjusted from 18 months to 24 months
Due to the documentary requirements that need to be prepared for this project, we will need more time to ensure our compliance with the CAAP's requirements. With this, may we respectfully request an extension on the submission of bids until December 13, 2024?	The deadline for submission of bids will be on January 08, 2024

Maximum allowable downtime per year is 8 hours. Can we relax the requirement for the downtime? Part of TOR mentioned that the uptime guarantee should be 90% which allows 86 hours of downtime per year.	Required up-time is 99.982% (maximum of 1.6 HRS of downtime per year)
The managed cloud data center positioned as the production site must be in Metro Manila. Is it okay to have the production site outside of Metro Manila, specifically in Carmona?	Considering the critical nature of the required solution, with emphasis on security, efficiency, and resiliency, the CAAP opted to shift from private cloud infrastructure to the public cloud to host the required application/solution with 20TB of usable space. A reputable on-shore/off-shore public cloud service should offer high availability, security, scalability, and excellent support. Compliant with SOC 2, ISO 27001, PCI DSS, or its equivalent Minimum public cloud requirements are as follows: Onshore public cloud hosting should be at least a Tier 3 (or equivalent) facility and compliant with the DICT minimum requirement. Off-shore public cloud hosting should be at least a Tier 4 (or its equivalent) compliant public cloud hosting facility
Managed Cloud Service with Dedicated Active-Active Configuration—Please clarify whether this is going to be	CAAP has opted for Public Cloud Hosting

an active-active or active-passive setup, as an active-passive setup was also mentioned in the TOR.	
At least 5x10T SATA HDD for storage (on each node) 50TB of Usable Storage (per site) – please clarify if you need 50TB usable storage per node or 50TB usable per site.	CAAP has opted for Public Cloud Hosting with a minimum of 20TB usable space
The proposed solution must provide 128 SSD disks – please clarify what is this for. Is this part of the cloud requirement?	Removed
Should have a managed Disaster Recovery service available outside of Luzon and within the Philippines – can we relax this requirement? Our data center location is in Carmona and Makati only.	CAAP has opted for Public Cloud Hosting
After careful consideration of the project requirements and objectives, we would like to request an extension of the implementation timeline formally. Based on our extensive experience with over 30 aviation regulators and a proven track record of successful implementations, we believe that 540 calendar days may not be sufficient for the project's requirements. Given the intricacies involved, Given the complexities involved, we respectfully request to extend the implementation timeline to approximately 2.5 to 3 years. This additional time will ensure thorough planning, execution, and compliance with all necessary regulations, ultimately leading to a more successful outcome.	The project timeline is adjusted from 18 months to 24 months.
To ensure optimal functionality, we also request to specify that the mobile device to be used for this project will be the provided tablet.	System accessibility should not be limited to the provided tablets. It should also be usable and functional for iOS and Android devices, including Windows OS.
Regarding the feature of a "fully configurable" system, including aesthetic customization, we would like to highlight potential risks associated with this level of openness. This flexibility may lead to inconsistencies, which can undermine the global standard that aviation regulators rely on to ensure uniformity and best practices in safety oversight.

As this system is part of a globally released standard, its development and roadmap are informed by best practices through a user community, ensuring alignment with regulatory needs. Excessive customization could | CAAP requires a fully configurable and customizable system to adopt to State and ICAO compliance changes, technological innovations and operational needs. |

disrupt this alignment, potentially compromising its reliability and effectiveness in aviation safety.

Moreover, while the potential for continuous innovation and improvement of the developed software system is crucial to meet operational needs, it can also introduce complexity and unpredictability. Frequent changes or updates may disrupt established processes, and without careful management, these innovations could lead to confusion among users and stakeholders.
Additionally, the reliance on discussions within user communities to shape the product roadmap, while beneficial in some respects, may lead to an overemphasis on individual needs rather than a focus on comprehensive best practices. Striking a balance between flexibility and
standardization is vital to ensure that the system remains efficient, effective, and aligned with safety oversight activities. In summary, while customization offers potential advantages, it is crucial to consider the risks of diverging from established standards and the potential impact on safety and efficiency in the aviation sector. | |
| May we request clarification and suggest a refined approach to the offline requirements for the Employee Application Portal, we propose to specify the particular module that can be accessible offline not the whole portal. This module should include essential features such as checklists, templates, and forms, allowing employees to download necessary materials in advance. This will enable personnel to conduct audits, inspections, and investigations offline, and upon reconnection, the system can automatically sync any completed forms or data.

This approach will ensure functionality in low-connectivity areas without compromising data integrity or workflow continuity, as the offline data will integrate seamlessly with the online system once a connection is available. | Offline mode is retained.
Sample forms are attached as Annex A |
| While we recognize the importance of having a system that is usable on mobile devices with offline capabilities, we must consider the current system's design and its optimized performance on Windows tablets and notebooks. Supporting a wider range of mobile devices, such as smartphones and various tablets, may introduce complexities that could impact system stability and | System accessibility should not be limited only to the provided tablets. It should also |

performance. Our system is specifically built to function effectively in offline modes for audit and inspection use cases, leveraging a JAVA client with caching strategies to manage low bandwidth or unstable connections. This targeted approach ensures reliability and efficiency in essential functions. We recommend focusing on enhancing the existing capabilities rather than expanding to all mobile platforms, as this will maintain the system's integrity and effectiveness for CAAP's operational needs.	be usable and functional for iOS and Android devices, including Windows OS
We noted that the Integrated Reporting Tool (Section 2.1.5) must be equipped with communication tools for collaborative reporting. May we request from your good office to provide additional details regarding this requirement specifically the Collaborative Reporting?	Information will be provided to the winning bidder.
May we seek clarification regarding the alert notification requirement outlined in Page 38, Item 2.1.6, Bullet 3. The specification that the system should be capable of providing alert notifications for any unusual data changes or delays in process or transaction. To ensure that we effectively meet this requirement, could you please provide more details on the following aspects:	Alert functionality should be an integral part of the system. CAAP will provide the requested information to the winning bidder
Definition of Unusual Data Changes: What constitutes unusual data changes? Are there specific thresholds or criteria that need to be established for triggering alerts? Types of Alerts: What types of alerts are expected? For instance, should these alerts be categorized by severity, or should they differ based on the type of data or transaction? Notification Methods: How should these alerts be delivered to users? Should they be through email, in-app notifications or a combination of methods? User Roles: Are there specific user roles or groups that should receive these alerts, or should all users be notified of any unusual changes?	CAAP will provide the requested information to the winning bidder
On page 39, Item 2.1.9 Ownership Once developed, the ownership of the data base/system shall be retained by the CAAP and that the winning bidder shall provide a perpetual license certificate for the continuous use of the developed system To ensure that we fully understand the requirements, may we please clarify the following: Scope of the System Does the term encompass only the software application developed for CAAP, or does it also include associated components such as the database,	The system pertains to the software application, the Database, and associated information.

Endpoint security, firewall security and any third-party integrations?	
On page 49, under Regulatory Standards Development Division; Bullet 2: The module shall serve as a project management tool for RSDD and TWG. Regarding the requirement for the module to serve as a project management tool for RSDD and TWG, may we request that you provide further details on the expected functionalities? Specifically, we would appreciate clarification on the key features, scope, and any particular project management capabilities that are essential for supporting RSDD and TWG activities.	CAAP will provide the requested information to the winning bidder.
On page 56, Item no. 1 The system should be available online and offline. System access must be controlled according to user levels in CAAP. May we request to specify the modules that needs to be offline	CAAP will provide the requested information to the winning bidder.
On page 60, The system should be capable of Automatic Compliance Monitoring. Could you please explain how the system will ensure automatic compliance monitoring, and what specific criteria or regulations will it monitor to ensure adherence?	CAAP will provide the requested information to the winning bidder.
Considerations for Offline Functionality in System-Wide Transactions We understand the goal of providing greater flexibility, implementing this feature across the entire system poses significant risks to the consistency and accuracy of transactional data. A system-wide offline feature introduces the potential for misalignment between data held offline and the current state of the backend, which is continuously updated by multiple users. For example, if a transaction (upload of data and decisions with status from three days ago) is synchronized later, it may conflict with more recent updates made in the backend just one day prior. This collision of outdated and current data can lead to inconsistent records, especially critical in CAA work, where traceability and compliance with ICAO USOAP audit requirements are essential. To prevent such conflicts, blocking data for offline work across the system would be necessary, but this would interrupt real-time transactions, ultimately affecting online work and reducing the system's reliability. Consistent, reliable data quality within the EMPIC system has been a key factor in helping CAAs pass ICAO USOAP	Offline functionality is retained.

audits successfully over the past 15 years. We are fully committed to maintaining this level of quality and data integrity. May we seek clarification on the term system as referenced in Item 2.1.9 regarding ownership. The statement indicates that the ownership of the database/system shall be. We hope this clarifies the inherent challenges and limitations of a broad offline capability. We would be pleased to explore alternative approaches that may offer flexibility without compromising data consistency and quality.	
On page 42, 43, 44, 47, 49, 58, 60 "Such other specifications necessary as determined by the end user that requires modification or alteration of the existing system upon procurement. Permitting unspecified modifications as determined by the end user can result in scope expansion not specified in the TOR, where the project extends beyond its initial objectives. This requirement often leads to project delays, escalated costs, and challenges in resource allocation, ultimately risking the project's success and undermining the initial timeline and budget. Modifications based on end-user requests can strain resources, diverting attention from other critical tasks or projects. Prioritizing these modifications may hinder the overall effectiveness of the development team. Frequent modifications to an existing system can introduce instability, leading to bugs or performance issues. A more structured approach to changes may be needed to ensure system reliability.	Requirement is retained.
Milestone 2: Delivery of all hardware and software component. May we request that the deliverables for the hardware and software components be separated. This distinction will help us manage and track the delivery process more effectively and ensure that each component meets the required specifications.	Separate delivery is acceptable

Important Notice:

All prospective bidders are hereby informed that the CAAP BAC will accept 2024 issued bid eligibility documents provided that the bidders will be able to present a stamped received application form for renewal.

The winning bidder will enter into a Non-Disclosure Agreement (NDA) with CAAP to safeguard and protect CAAP sensitive information from unauthorized dissemination and

use in compliance with the Data Privacy Act of 2012, RA 10173 of the Republic of the Philippines.

For the information and guidance of all concerned.

CAPT. FLORENDO JOSE C. AQUINO III
Acting Assistant Director General II,
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Project end-user

Noted by:

ATTY. DANJUN G. LUCAS
Chairperson
Bids and Awards Committee