

# TERMS OF REFERENCE (TOR)

## Improvement to the ARC Database: AI Search Function

### 1 EXECUTIVE SUMMARY

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Information Resources Management Division (IRMD), under the orbit of Community Affairs Directorate (CMAD), is responsible for managing the ASEAN Secretariat Resource Centre (ARC) – the Library and Archives of the ASEAN Secretariat. ARC acts as the repository of the ASEAN documents, such as ASEAN Meeting Reports, ASEAN Legal documents, ASEAN publications, photos, multimedia, and other collections related to ASEAN subject matters, access to these collections is mostly limited to authorized personnel only. The ARC database also maintains documents from the ASEC Website which provides a lot of valuable public information related to ASEAN and its activities. The ASEC Website is managed by Community Relations Division (CRD) which is also under the orbit of CMAD.

As the designated Resource Centre, IRMD frequently receives inquiries and requests for specific information from internal and external stakeholders. Considering ARC Database and ASEAN Website's diverse and rich contents, a reliable, fast and convenient retrieval system to find and locate the information and document collections is very crucial. In this regard, IRMD is of the view that further enhancements to the ARC database, including improvements to the overall search and document search functionalities, are necessary. To address this, the implementation of an AI-based search engine is chosen to significantly improve the user experience by providing faster, more intuitive, and context-aware search results, thereby enabling more efficient and accurate information retrieval.

To support this objective, the selected vendor is expected to design and develop an AI Assistant system powered by Large Language Models (LLMs), integrated with Retrieval-Augmented Generation (RAG) technology or other equivalent advanced architectures. This approach, hopefully, will enable the system to provide reliable, contextually relevant, and human-like responses while leveraging validated enterprise knowledge sources. The system will integrate data from various ARC collections and ASEAN Website documents, creating a unified and comprehensive knowledge base.

For this purpose, ASEC is seeking a vendor who is able to provide and deliver the solutions and to work closely with IRMD and ASEC Webmaster in enhancing the system.

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### 2 BACKGROUND AND CURRENT STATUS

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The ARC Database and the ASEAN Website have been integrated in order to provide efficient and easy searching across both platforms. The ARC Database currently houses more than 30,000 internal documents comprising Meeting reports, Publications, Legal Documents, Photos, and other reference materials related to ASEAN matters. While ASEAN Website maintains more than 15,000 public documents. Appropriate access controls and authentication mechanisms, to safeguard confidential collections and sensitive information, have been implemented across the ARC Database.

As the designated Resource Centre, IRMD frequently receives inquiries and requests and often require staff to retrieve relevant documents and data – from internal documents and public documents – within a limited timeframe. As the volume and diversity of content within the ARC Database and ASEAN Website continue to expand, the process of locating relevant information has become increasingly complex and time-consuming. Staff often encounter challenges in identifying the most relevant documents efficiently and accurately, particularly when dealing with broad subject areas, varying document formats, or incomplete search terms. Conventional search methods are no longer sufficient to support the growing demand for timely and precise information retrieval.

In light of these challenges, the implementation of an AI-based search engine has been identified as a strategic solution to enhance the overall search capabilities of the ARC Database. By leveraging artificial intelligence and advanced search technologies, the proposed enhancement is expected to deliver faster, more intuitive, and context-aware search results. This will significantly improve the staff experience, streamline the information retrieval process, and enable the staff to access relevant documents and information more efficiently and accurately across both platforms.

To support the implementation of the AI-based search function, both platforms (ARC Database and ASEAN Website) must maintain a high level of security and data protection. The system shall be designed to safeguard confidential collections and sensitive information through robust security measures, ensuring that access is restricted only to authorised personnel. In addition, appropriate access controls and authentication mechanisms shall be implemented to preserve the integrity, confidentiality, and reliability of the information stored within the platforms.

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### 3 SCOPE OF WORK

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The selected vendor is required to demonstrate knowledge and skills warranting that they will be able to implement this project successfully according to the intended timeline.

The selected vendor should provide a clear methodology and approach in carrying out this assignment. They will be responsible for accurately fulfilling the described tasks in a timely and professional manner and to provide regular updates to the ASEC team throughout the period of the consultancy.

The selected vendor shall work closely with IRMD staff and ASEC Webmaster to achieve the above objectives as well as undertake the following indicative tasks:

1. Enhance the ARC Database and ASEAN Website, to create a more secure and reliable system with a high level of security and data protection and common international encryption algorithm method to protect network security and ensure confidential collection such as ASEAN Meeting Reports, Financing Agreements, and other confidential documents are well protected and can only be accessed by authorised personnel. Appropriate access controls and authentication mechanisms shall be implemented to preserve the integrity, confidentiality, and reliability of the information stored within the platforms.
2. Enhance the search and retrieval system, improvements to the overall search and document search functionalities, which require:
  - A. Provide the design and development of an AI Assistant system powered by Large Language Models (LLMs) and Retrieval-Augmented Generation (RAG) or other equivalent advanced architectures to support advanced information retrieval across the ARC Database and the ASEAN website. The system is expected to leverage semantic search capabilities, enabling users to retrieve information based on contextual meaning rather than relying solely on keyword matching, thereby improving the relevance and accuracy of search results.
  - B. Implement appropriate data classification and access controls to clearly distinguish between information intended for public access and content restricted for internal use, ensuring compliance with data governance and security requirements. The AI Assistant must also provide transparent and

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verifiable outputs, whereby each response includes a clear reference or link to the original source document.

- C. Furthermore, the vendor will be responsible for integrating existing data sources and documents from the ARC Database and ASEAN Website into the AI system, ensuring seamless interoperability and a unified, efficient knowledge retrieval experience. Provide a team to assist with document processing/data input.
  - D. The platform shall be developed using a trusted, supported, high security solution as well as readily available in the market.
3. Conduct Pre-Project Finalisation, which comprises:
- A. Testing & Debugging (Positive testing, Random testing, Internal testing, Acceptance testing, Debugging, Fixing);
  - B. Conduct of Pilot Trial before full-scale implementation to identify issues and knowledge gaps, fine tune to iron out any mismatch requirement issues;
  - C. User Acceptance Test;
  - D. Maintenance and performance tuning;
  - E. Provision of adequate training to the users and administrators for daily operations;
  - F. Ensure proper hand-over of deliverable with complete report and documentation, including back-end user manual and administrator guidelines.
4. Provide free and immediate support and maintenance during the development, implementation and warranty period (inclusive of on-site debugging/correction, when necessary).
5. Provide Warranty, Maintenance and Licensing fee
- A. Provide a 12-month warranty period, to ensure that necessary revisions will be made to meet the criteria described in this TOR;
  - B. Provide support, maintain, debug and resolve any system problems during the warranty period;
  - C. A 24-month maintenance and monitoring system period **at no additional cost to ASEC** upon the completion of the project, covering:

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- a. Maintenance, updating, patching, debugging, repairing, replacement, remedying, or otherwise correcting any problem on the website and its hardware environment.
  - b. Ad-hoc technical support on a 24/7 basis. In case of emergency, the expected response shall be within 3 hours.
  - D. Provide a 36-month licensing fee, which shall include all necessary software, plug-ins and user licenses, if needed, for smooth running of the website.
6. The selected vendor is required to demonstrate knowledge and skills warranting that they will be able to implement this project successfully according to the intended timeline.
7. The selected vendor shall be able to provide recommendations of the required services, or better solutions in accordance with the Technical Specification/ TOR.

### 3. EXPECTED DELIVERABLES

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The to-be-selected Vendor is expected to deliver the following:

- 1) A detailed inception report, which includes a clear methodology, detailed work plan, and proposed conceptual model including the name of the proposed technologies;
- 2) A more secure and reliable system with common international encryption algorithm method to protect network security and ensure confidential collection such as ASEAN Meeting Reports, Financing Agreements, and other confidential documents are well protected and can only be accessed by authorised personnel;
- 3) An enhanced ARC Database which enables users to search and retrieve information based on contextual meaning rather than keywords, supported by AI assistant system. The database also equips with appropriate data classification and access controls to clearly differentiate between public information and restricted/internal information, as well as provide transparent and verifiable outputs.
- 4) A comprehensive and systematic user guidelines along with technical support guidelines;
- 5) Necessary trainings to be provided to the users and the administrators;
- 6) A final report, which includes a clear documentation of all technical data, source files, server panel, etc.;

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- 7) Provide post-development support, warranty, maintenance, and licencing as mentioned in the SCOPE OF WORK point 5;
- 8) The Consultant shall be able to deliver all outputs within **six (6) months** after the project starts.

The contract for this assignment will be issued by ASEC. The selected vendor shall report and work closely with IRMD and ASEC Webmaster. The ownership of the system and its documentation shall rest with ASEC. The concept and design of the system shall be the intellectual property of ASEC

#### 4. TIMELINE

The following timeline may need to be followed to achieve the expected deliverables. The to-be-selected vendors are encouraged to provide detailed implementation plans within their proposals and may suggest revised timelines or additional activities as deemed necessary to ensure successful project delivery.

| No.      | Indicative Activities                                                                                                                                                                                     | Estimated Duration |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <b>1</b> | <b>Strategy and Assessment</b>                                                                                                                                                                            |                    |
| 1.1      | Conduct a needs assessment/analysis exercise on the existing ARC Database and ASEAN Website                                                                                                               | 2 weeks            |
| 1.2      | Submit an inception report, comprised of a clear methodology, detailed work plan, timeline, and proposed conceptual model, as well as staffing and management plans for each activity for ASEC's approval |                    |
| 1.3      | Provide briefing and clarification                                                                                                                                                                        |                    |
| <b>2</b> | <b>Design, Development and Implementation</b>                                                                                                                                                             |                    |
| 2.1      | Develop the system                                                                                                                                                                                        | 4 months           |
| 2.2      | Provide briefing and clarification                                                                                                                                                                        |                    |

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| 2.3 | Perform testing, data migration, data processing, etc.            |               |
| 2.4 | Develop Training Plan and conduct training                        |               |
| 2.5 | Conduct UAT                                                       |               |
| 2.6 | Conduct Pilot Trial                                               |               |
| 3   | Operate and Review                                                |               |
| 3.1 | Deploy and Configure the system                                   | 1,5<br>months |
| 3.2 | System Go-Live                                                    |               |
| 3.3 | Submit a final report and related documents of the entire project |               |

## 5. REQUIRED QUALIFICATIONS

The Interested companies/firms are invited to submit a proposal in English including the following documents and requirements:

- 1) A legally established entity, in accordance with applicable laws and regulations in their respective country of registration, including small, medium, or large enterprises, - preferably a company based in Jakarta or has a representative office in Jakarta (please provide evidence);
- 2) Has proven records in AI-based/ AI-driven solutions, particularly in the areas of natural language processing (NLP), semantic search, machine learning, LLM integration, and Retrieval-Augmented Generation (RAG) architectures (please provide evidence);
- 3) Participating vendors are expected to have experience in handling large-scale digital repositories and implementing secure information retrieval systems that support data classification, user access management, and source traceability (please provide evidence);
- 4) Participating vendors must also demonstrate sufficient technical resources, qualified personnel, and project management capability to undertake the

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assignment within the required timeline and quality standards. The vendor shall assign a dedicated project team consisting of, at a minimum:

- a. Project Manager,
- b. Software Developer/AI Engineer,
- c. Database Specialist,
- d. UI/UX Designer, and
- e. Quality Assurance personnel.

All personnel assigned should provide a Curriculum Vitae (CV) that highlights his/her educational background, specialty and experience (proven experience in the design, development, deployment, and maintenance of AI-based systems and enterprise information retrieval platforms, Wordpress database and integration with other system would be an advantage); as well as has ability to communicate in English, both written and verbal;

- 5) In addition to the Project Team, the participating vendor will be expected to assign a dedicated team to support document processing and data input activities, including the integration of existing data sources and documents from the ARC database and ASEAN website into the AI system.
- 6) Provide samples of similar projects that have been previously designed; the demonstration of which can be in the form of thumb-drive or web links.

## 6. TERMS OF PAYMENT

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Payment schedules will be made in stages:

1. **First payment (25%)** will be paid by ASEAN to the Vendor within two (2) weeks after PO is released (Payment Schedule 1);
2. **Second payment (50%)** will be paid by ASEAN to the Vendor within two (2) weeks after the system Go Live and upon issuance of written approval by ASEAN (Payment Schedule 2); and
3. **Third payment (25%)** will be paid by ASEAN to the Contractor within two (2) weeks upon completion of all deliverables and upon issuance of written approval by ASEAN (Payment Schedule 3).

A detailed financial proposal indicating the costs (IDR for local bidders and USD for international bidders) is required for undertaking the assignment.

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