

REQUEST FOR EXPRESSIONS OF INTEREST

(CONSULTING SERVICES - FIRMS SELECTION)

RE - ADVERTISEMENT

**CONSULTANCY SERVICE TO DESIGN AND RE-DEVELOPMENT OF CRASA WEBSITE AS ANCHOR OF ORGANISATIONAL DIGITAL TRANSFORMATION STRATEGY FOR ENHANCEMENT OF GOVERNANCE AND ENABLING ENVIRONMENT IN THE ICT SECTOR (EGEE-ICT) PROGRAMME.**

COMMON MARKET FOR EASTERN AND SOUTHERN AFRICA (COMESA)

**Reference ID No:** **CRASA/WEBSITE/25/07/2025-as**

1. **INTRODUCATION**

The Common Market for Eastern and Southern Africa (COMESA) Secretariat and the European Union (EU) signed a Grant contribution agreement for the Enhancement of Governance and Enabling Environment in the ICT sector (EGEE-ICT) in the Eastern Africa, Southern Africa, and the Indian Ocean region (EA-SA-IO).

The EGEE-ICT is a programme that aims at supporting the effective review and/or development of various regional policy and regulatory frameworks in a harmonized manner that will contribute to enhancing competition, improved access to cost effective and secure ICT services.

COMESA as the lead REC is implementing the programme in collaboration with other Partner RECs in the EA-SA-IO region namely Southern Africa Development Community (SADC), East African Community (EAC), Intergovernmental Authority on Development (IGAD) and the Indian Ocean Commission (IOC).

The primary beneficiaries of the EGEE-ICT programme are 29 Member States of EA-SA-IO region namely (Angola, Botswana, Burundi, Comoros, the Democratic Republic of the Congo, Djibouti, Egypt, Eritrea, Eswatini, Ethiopia, Kenya, Lesotho, Libya, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, South Africa, South Sudan, Sudan, United Republic of Tanzania, Tunisia, Uganda, Zambia, and Zimbabwe) , through their respective ICT Ministries and Regulators as they will use this programme to support the development and implementation of policies and regulatory frameworks that will provide a conducive environment for the effective development of the ICT sector. Others are Regional Association of Regulators that play a great role in the development of policy guidelines and regulations and in the harmonization process namely the Communication Regulators Association of Southern Africa (CRASA), East African Communications Organisation (EACO) and Association of Regulators for Information and Communication for Eastern and Southern Africa (ARICEA).

**2.0 OBJECTIVE OF THE ASSIGNMENT**

The overall objective of the programme is to deepen regional integration and growth of the ICT sector in EA-SA-IO region It has three specific objectives (Result Areas), namely:

1. Regionally coordinated public and private sector ICT policy development.
2. Enhanced policy and regulatory environment for competitive markets and gender sensitive ICT markets; and
3. Improved infrastructure connectivity and access to ICT.

**The detailed Terms of Reference (TOR) for the assignment are attached to this request for expressions of interest.**

**3.0 SHORTLISTING CRITERIA**

The Common Market for Eastern and Southern Africa now invites eligible consulting firms (“Consultants”) to indicate their interest in providing the Services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services. The shortlisting criteria is as follows;

|  |  |
| --- | --- |
| **No.** |  **Evaluation CRITERIA** |
| 1 | The firm’s core business (Submit company profile) |
| 2 | **Experience of the firm** Evidence of having carried out implementation and support of electronic document management system (Name, scope and cost of precious comparable similar assignments and client contact details -email, physical address and details of the contact person)  |
| 3 | Technical and managerial capability of the firm to manage the assignment, and (appropriate skills among staff) |
| 4 | Eligibility (Firms must not be debarred or sanctioned) |

Consultants may associate with other firms to enhance their qualifications but should indicate clearly whether the association is in the form of a joint venture and/or a sub-consultancy. In the case of a joint venture, all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected.

A Consultant will be selected in accordance with *the Quality and Cost Based Selection* method set out in the COMESA Procurement Rules and Regulations of February 2014.

Further information can be obtained at the address below during office hours from *09:00 to 16:00 hours* Monday to Thursday, on Fridays from *09:00 to 12:30 hours Zambian time except for weekends and Public Holidays. Address:* Head of Procurement, COMESA Secretariat, Ben Bella Road, Lusaka, Zambia.

 Email address: procurement@comesa.int

**4.0 SUBMISSION**

Expressions of interest must be submitted written to the following email address;

Tenders@comesa.int, procurement@comesa.int with a copy to asakala@comesa.int

ATT: THE HEAD OF PROCUREMENT

**ASSIGNMENT TITLE:** CONSULTANCY SERVICE TO DESIGN AND RE-DEVELOPMENT OF CRASA WEBSITE AS ANCHOR OF ORGANISATIONAL DIGITAL TRANSFORMATION STRATEGY FOR ENHANCEMENT OF GOVERNANCE AND ENABLING ENVIRONMENT IN THE ICT SECTOR (EGEE-ICT) PROGRAMME

**REFERENCE No: CRASA/WEBSITE/25/07/2025-as**

**5.0 CLOSING DATE FOR SUBMISSION**

 The Closing date for receipt of Expression of Interest is **17th *September* 2025** *at* ***12:00 hours*** *Zambian time*

NB: Physical submission of EOIs shall not be accepted.

ANNEX I: Terms of Reference



**Distr**.

**LIMITED**

Original: **ENGLISH**

**COMMON MARKET FOR EASTERN AND**

**SOUTHERN AFRICA**

**TERMS OF REFERENCE FOR THE PROCUREMENT OF CONSULTANCY SERVICE TO DESIGN AND RE-DEVELOPMENT OF CRASA WEBSITE AS ANCHOR OF ORGANISATIONAL DIGITAL TRANSFORMATION STRATEGY FOR ENHANCEMENT OF GOVERNANCE AND ENABLING ENVIRONMENT IN THE ICT SECTOR (EGEE-ICT) PROGRAMME.**

**August 2025**

# background

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The EGEE-ICT is a programme that aims at supporting the effective review and/or development of various regional policy and regulatory frameworks in a harmonized manner that will contribute to enhancing competition, improved access to cost effective and secure ICT services.

COMESA as the lead REC is implementing the programme in collaboration with other Partner RECs in the EA-SA-IO region namely Southern Africa Development Community (SADC), East African Community (EAC), Intergovernmental Authority on Development (IGAD) and the Indian Ocean Commission (IOC).

The primary beneficiaries of the EGEE-ICT programme are 29 Member States of EA-SA-IO region namely (Angola, Botswana, Burundi, Comoros, the Democratic Republic of the Congo, Djibouti, Egypt, Eritrea, Eswatini, Ethiopia, Kenya, Lesotho, Libya, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, South Africa, South Sudan, Sudan, United Republic of Tanzania, Tunisia, Uganda, Zambia, and Zimbabwe) , through their respective ICT Ministries and Regulators as they will use this programme to support the development and implementation of policies and regulatory frameworks that will provide a conducive environment for the effective development of the ICT sector. Others are Regional Association of Regulators that play a great role in the development of policy guidelines and regulations and in the harmonization process namely the Communication Regulators Association of Southern Africa (CRASA), East African Communications Organisation (EACO) and Association of Regulators for Information and Communication for Eastern and Southern Africa (ARICEA).

**1.1 Programme Objectives**

The overall objective of the programme is to deepen regional integration and growth of the ICT sector in EA-SA-IO region It has three specific objectives (Result Areas), namely: -

1. Regionally coordinated public and private sector ICT policy development.
2. Enhanced policy and regulatory environment for competitive markets and gender sensitive ICT markets; and
3. Improved infrastructure connectivity and access to ICT.

**1.2 Result Areas of the Programme**

The program integrates three key result areas which will be implemented with sub result areas as follows:

Result Area 1: Regionally coordinated public and private sector ICT policy development.

1. Sub Result 1.1: Mechanism for consensus building in policy development among public and private sectors developed.
2. Sub Result 1.2: Capacity of existing regional ICT associations enhanced.
3. Sub Result 1.3: Accountability systems in policy formulation and implementation strengthened between public and private ICT sector actors.

Result Area 2: Enhanced policy and regulatory environment for competitive markets and gender sensitive ICT markets.

1. Sub result 2.1: Regional model policy and regulatory frameworks for e-commerce developed.
2. Sub result 2.2: Gender responsive rights-based policy and regulatory frameworks for universal access and licensing strengthened.
3. Sub result 2.3: Policy and regulatory frameworks to harmonize mobile roaming and termination tariffs and transit internet charges developed.

Result Area 3: Improved Policies, infrastructure connectivity and access to ICT.

1. Sub result 3.1: Policies to promote private sector investment in ICT infrastructure developed.
2. Sub result 3.2: Policies and regulatory frameworks for open access and infrastructure sharing developed.

**2. Assignment Background**

This assignment falls under Result Area 1 that aims to achieve regionally coordinated public and private sector ICT policy development, under sub result 1.2 which seeks to ensure that the capacity of existing RICTAs. The assignment is in line with Activity 1.2.1 of the programme, therefore, seeks to provide technical assistance to the regional associations to develop institutional strategies and business models targeted at training based on the capacity needs of the RICTAs.

**2.1 Rationale of the Assignment**

RICTAs play a vital role in ensuring that the digital economy is achieved through regional integration of ICTs. It should further be noted that building a Digital Economy for Africa is necessary for ensuring that the African continent benefits from embracing digital technologies and ICTs.

The key mandate for the RICTAs is to promote regional integration in the ICT sector. RICTAs work closely with regulators, operators, and relevant stakeholders in the ICT policy harmonization process to ensure ICT growth at a regional level. RICTAs therefore have a direct linkage to the development and successful implementation of ICT policies in the region.

The Communications Regulators’ Association of Southern Africa (CRASA) is a specialised agency of the Southern African Development Community (SADC) and was established in 1997 within the framework of the CRASA Protocol on Transport, Communications, and Meteorology (TCM). CRASA’s focus is on harmonisation of Telecommunications, Broadcasting, and Postal regulatory frameworks in the SADC Region. Currently, CRASA is comprised of fourteen (14) Member States: Angola, Botswana, Comoros, Democratic Republic of Congo (DRC), Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Eswatini, Tanzania, Zambia, and Zimbabwe.

CRASA aims to develop an online information-sharing platform for postal regulatory information to support regulatory collaboration and harmonisation efforts in SADC.

The CRASA website is a vital communication tool that connects CRASA members, stakeholders, and the public, providing resources, news, and a platform for collaboration. However, the current website no longer meets the demands of a modern, user-centric digital platform.

To address this challenge, CRASA seeks to upgrade its website into a dynamic, state-of-the-art platform that aligns with its mission and vision for regional integration. This project will ensure the website becomes a robust and engaging tool to facilitate communication, enhance stakeholder engagement, and support CRASA’s strategic priorities.

The project aligns with the objectives of the European Union EU funded Enhancement of Governance and Enabling Environment in the ICT Sector (EGEE-ICT) programme specifically because its key outputs will support regulatory transparency, improve efficiency and ensure regional integration.

The aim of the project is to engage an experienced service provider to design, develop, maintain and support the CRASA Website as the foundational component of CRASA Secretariat’s digital transformation drive. In this regard, the project shall be focused on re-designing CRASA’s website to modernize, enhance and align it with CRASA’s goals and user needs, involving a complete redesign, functionality upgrades, and integration of new technologies and features.

The redesigned website shall serve as the foundation of CRASA’s digital transformation strategy and shall integrate the appropriate digital tools to facilitate effective interaction with stakeholders and dissemination of information on demand in appropriate formats as illustrated below:

1. **Objectives of the Assignment**

The objective of the assignment is to modernise the CRASA website.

The Specific Objectives are:

1. Design and develop a modern, responsive, user-friendly, interactive and visually appealing website for the dissemination of information to and dynamic interaction with the Association’s stakeholders;
2. Create a well-structured, intuitive website layout, and utilise modern features and functionalities for easy navigation and searchability of relevant information;
3. Creatively and appropriately integrate CRASA’s existing digital tools (Extranet, Event Management Platform and Automated Monitoring and Evaluation System) to ensure seamless one-stop access and easy utilisation by targeted user;
4. Design, develop and integrate new digital tools for the benefit of internal and external stakeholders including a regulatory Information-sharing platform with its supporting database infrastructure and interactive functionality;
5. Incorporate statistics and monitoring features to track visitor traffic patterns and popular search items, facilitating data-driven decision-making and continuous improvement;
6. Seamlessly integrate CRASA's social media accounts (e.g., Facebook, LinkedIn, YouTube, Twitter) with the website to enhance visibility and engage users; and
7. Establish and enforce appropriate security policies to ensure the daily maintenance and integrity of the website.
8. Incorporate an information sharing platform to the CRASA website
9. **SCOPE OF WORK:**

**Activity 1: Baseline Assessment and Review**

**Task 1:** Detailed review and analysis of best practice of system development, website design and information-sharing platforms. This should take into consideration security, optimal design, data management, user experience, hosting, scalability, and performance, among others.

**Task 2:** Conduct a comprehensive audience analysis to identify and review the information-dissemination needs of CRASA Members and CRASA secretariat in the context of the project and its stated objectives.

**Task 3:** Review and align (to identify opportunities for interoperability) with existing information-sharing tools within the CRASA environment such as the CRASA Extranet or other similar resources.

**Activity 2: Design and Develop the System**

**Task 4**: Design and develop the enhanced CRASA website incorporated with an information-sharing platform.

**Task 5:** Develop a fully interactive database complimented with a user-friendly interface that will be used to collect, store, and conduct real-time analysis of the regulatory information from the various CRASA Members, while at the same time allowing the generation, viewing, storing and printing of various reports

**Task 6**: Ensure robust Information Security procedures and principles on relevant data protection and confidentiality aspects (including appropriate data backups), in accordance with applicable legislation, standards and procedures.

***Refer to Annexures A and B for guidance on system design***

**Task 7**: Test and debug developed tools and database.

**Task 8:** Provide the prototype to COMESA, SADC and CRASA for test and review

**Task 9**: Provide documentation which will include a detailed training manual, system design, user manual, maintenance guide, source code, and software used, among others.

**Activity 3: Validation and Training Workshop**

**Task 10:** Present the developed portal/ website to CRASA Secretariat and Membership for validation and approval

**Task 11:** Provide training on the use of the above systems.

1. **DELIVERABLES**

The deliverables shall include the following:

1. An Inception Report. The inception report should provide a detailed work plan clearly showing the information gathering, planning, design methodology, development, testing and delivery and maintenance phases of the undertaking;
2. The Prototype of the website and information-sharing platform;
3. Validation Workshop and training session for the designed portal and validation workshop report;
4. A fully working website/portal and information-sharing system that is easy to use, with clear navigation available for both Android and IOS platforms. Appropriately integrated databases for CRASA’s inward and outward-looking digital tools, with user-friendly Graphical User Interfaces (GUI) and a dashboard able to provide clear data analysis and reports; and
5. Provide documentation which will include a detailed training manual, system design, user manual, and maintenance guide (inclusive of costs). Additionally, provide all software codes for the website’s tools and databases in a softcopy format and source code.
6. **REPORTING AND ADMINISTRATIVE ARRANGEMENT**

It is expected that the consultant/institution will work in very close coordination with the COMESA Secretariat, providing regular, unsolicited updates, and responding promptly and flexibly to the needs and demands of COMESA and the corresponding timelines. COMESA will provide the linkage with CRASA Secretariat.

1. **DURATION**

The consultant is expected to complete the assignment within 120 days from the date of contract award.

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| **Deliverables** | **Timeline** |
| Inception Report including Detailed Work Plan | T0 = 20 days from the date of contract signature |
| First prototype  | T1 =T0+ 60 days  |
| Validation workshop Testing, user training and skills transfer  | T3 = T1+30 days |
| Final website for Commissioning, handover and go-live | T4 = T3+10 |
| Final Report and system documentation | T5 = T3+10 |

1. **QUALIFICATION AND EXPERIENCE**

COMESA is seeking applications from a firm. The successful firm should demonstrate personnel with the following qualifications and experience:

1. Has demonstrable skills and experience in designing and developing digital forms using digital app and systems like Kobo Collect, ODK Collect, CommCare and SurveyCTO;
2. Ability to design the structure of the database and write appropriate interfaces (e.g. Microsoft Excel) for data entry and ensure data quality and security;
3. Experience working with local and international organizations and clients on similar assignments; and
4. Experience in the African region will be an added advantage

| **Key Staff**  | **Qualifications and Experience**  |
| --- | --- |
| **Project Manager** | The Project Manager should have the following qualifications and experience:1. Bachelor’s Degree in Computer Science/ Computer System Engineering or any other relevant field;
2. Additional qualifications in Telecommunications Policy and Regulation will be an added advantage;
3. MSc in Computer Science/ Computer System Engineering or any other relevant field will be an added advantage;
4. Additional qualifications and competencies in Information Security and Cyber Security will be an added advantage;
5. At least 15 years' experience in system development and the successful development and implementation of a similar project. Of which, 7 years was in a Senior Developer/Lead role; and
6. Management skills and project management skills
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| **System Analyst** | The System Analyst should have the following qualifications:1. Bachelor’s Degree in Computer Science/ Computer System Engineering or any other relevant field;
2. MSc will be an added advantage;
3. At least 10 years of experience in IT systems;

In addition, the System Analyst should have the following demonstrable skills:1. Programming: Proficiency in languages like Python, Java, C++, and JavaScript;
2. Database Knowledge: Understanding of database management systems (DBMS) and SQL is required;
3. Operating Systems Knowledge: Familiarity with various operating systems (Windows, Linux, macOS) is necessary;
4. Networking: A grasp of network concepts, protocols, and technologies is advantageous; and
5. Software Development: Knowledge of software development methodologies (e.g., Agile, Waterfall) and tools is required;
6. Cybersecurity: Understanding potential threats and vulnerabilities, as well as security best practices is required.
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| **Software Developer** | The Software Developer should have the following qualifications:1. BSc in Computer Science/ Computer System Engineering or any other relevant field
2. MSc will be an added advantage
3. At least 10 years of demonstratable experience in the Software Development field.

In addition, the Software Developer should have the following demonstrable skills:1. Programming: Proficiency in languages like Python, Java, C++, and JavaScript;
2. Data Structures and Algorithms: Demonstrable understanding of how to organize and process data efficiently is required;
3. Database Knowledge: Understanding of database management systems (DBMS) and SQL is required;
4. Version Control Systems: Skills in using Git and GitHub for code management and collaboration are required;
5. Software Development Lifecycle: demonstrable understanding of stages of software development, from planning to deployment, is required;
6. Testing and Debugging: The ability to identify and fix errors in code is required; and
7. Cloud Computing: Knowledge of cloud platforms like AWS, Azure, or GCP is advantageous.
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| **UI/UX Designer** | The UI/UX Designer should have the following qualifications:1. Bachelor's degree in Computer Science, Design or a related field is required;
2. MSc and Professional Qualifications will be an added advantage
3. At least 10 years of relevant work experience; and
4. Demonstratable experience in the UI/UX field.

In addition, the UI/UX Designer should have the following demonstrable skills:1. Design Software Proficiency: Familiarity with tools like Figma, Adobe XD, Photoshop, and Sketch is required;
2. Wireframing and Prototyping: Ability to create low-fidelity wireframes to structure information and high-fidelity prototypes is required;
3. Visual Design: Ability to apply design principles to create aesthetically pleasing and engaging interfaces is required;
4. Interaction Design: Ability to design user-interactions with the interface, including animations, transitions, and feedback mechanisms is required; and
5. Front-End Development Knowledge: demonstrable knowledge and understanding of HTML, CSS, and JavaScript is required.
 |
| **Software Tester** | The Software Tester should have the following qualifications:1. Bachelor's degree in Computer Science, Design or a related field is required; and
2. MSc and Professional Qualifications will be an added advantage
3. At least 10 years of experience in ICT field.

In addition, the Software Developer should have the following demonstrable skills:1. Programming: Proficiency in languages like Python, Java, C++, and JavaScript;
2. Testing Tools and Frameworks: Familiarity with various testing tools like Selenium, Appium, and JUnit is required;
3. Testing Techniques: Proficiency in different testing techniques like functional testing, UI testing, performance testing, and security testing is necessary;
4. Databases and Operating Systems: Understanding of database systems (e.g., SQL) and operating systems is desirable; and
5. Version Control Systems: Skills in using Git and GitHub for code management and collaboration are required.
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| **Quality Assurance engineer** | The Quality Assurance engineer should have the following qualifications:1. Bachelor's degree in Computer Science, Design or a related field is required; and
2. MSc and Professional Qualifications will be an added advantage
3. At least 10 years of experience in ICT field.

In addition, the Quality Assurance Engineer should have the following demonstrable skills:1. Coding: A foundational understanding of programming languages (like Python, Java, or JavaScript) is required;
2. Testing Tools & Techniques: Expertise in various testing tools (e.g., Selenium, Appium) and techniques (e.g., manual, automated, A/B) is required;
3. Databases and Operating Systems: Understanding of database systems (e.g., SQL) and operating systems is desirable.
4. API Knowledge: Familiarity with APIs (Application Programming Interfaces) is necessary;
5. Software Debugging: Proficiency in using debugging tools to isolate and resolve software issues is required;
6. Version Control Systems: Skills in using Git and GitHub for code management and collaboration are required; and
7. Project Management Tools: Familiarity with project management tools is required.
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1. **PLACE OF ASSIGNMENT**

This is a home-based assignment, enabled by electronic communications services such as email and videoconferencing. There will be travel missions to CRASA Secretariat in Gaborone, Botswana.

**Annexure A: MANDATORY REQUIREMENTS**

* 1. **Accessibility**

The website must adhere to the highest accessibility standards to ensure that all users, including those with disabilities, can access and navigate the website with ease. Furthermore, the website should optimise graphics and utilise Cascading Style Sheets (CSS) to enhance page load times and minimize bandwidth usage.

To streamline processes and improve user convenience, the website should incorporate online services such as online forms for feedback submission, service requests, and customer inquiries. Additionally, seamless integration with popular social media platforms like Facebook, LinkedIn, YouTube, and Twitter is essential to enhance engagement and provide avenues for users to interact with CRASA’s content and services.

* 1. **Content Management and User Experience**

The website should incorporate a suitable Content Management System (CMS) that allows CRASA staff, with average IT (Information Technology) literacy and no prior website editing experience, to easily update and manage website content in-house. The CMS should have a user-friendly interface, allowing staff members to add, edit, and delete pages, update text and multimedia content, and manage various media formats, including videos, photos, and textual content.

The project budget should consider CMS licensing costs, which may include both initial licensing fees and ongoing subscription fees, based on the chosen CMS platform. In addition, training sessions should be provided to familiarise CRASA staff with CMS usage, empowering them to independently manage and update the website's content.

A one-year maintenance Service Level Agreement (SLA) should be included to address any technical issues and provide ongoing support for the CMS and related functionalities.

* 1. **Scalability, Data Migration, and Integration**

The website should be a scalable solution that integrates with existing and new customer facing CRASA systems and platforms allowing for seamless data flow and future web development and integrations. This shall require a smooth transition by migrating, archiving, and indexing website data and content accurately.

* 1. **Security and Maintenance**

Robust security measures should be implemented to protect against hacking attempts, unauthorised access, and data breaches. This includes employing industry-standard security protocols, encryption technologies, and secure communication channels. Regular security updates and patches should be applied to the website's underlying infrastructure and software components to address potential vulnerabilities and maintain a secure environment.

Appropriate security measures, such as user authentication and role-based access controls, should be implemented to ensure that only authorized personnel can access the CMS and make changes to the website's content. Regular CMS updates and patches should be applied to protect against potential vulnerabilities.

* 1. **Design and Imagery**

The website's design should embody a vibrant and creative yet timeless and high-quality visual style. It should reflect the diverse demographics of its users and create a visually engaging experience. A visually prominent and intuitive user interface (UI) design is essential to facilitate user understanding of the website's layout and navigation. Consistency in graphics, typography, and terminology should be maintained throughout the website to ensure a cohesive user experience and avoid confusion. The selected imagery should align with CRASA's brand guidelines and reflect the Association's professionalism and commitment to its stakeholders.

* 1. **Database Integration**

To ensure the website provides comprehensive and accurate information, seamless integration with selected information from CRASA's databases is crucial. This integration allows real-time data updates and ensures that the website's content, such as industry statistics, regulatory documents, and reports, remains current and reliable.

To achieve successful database integration, close collaboration between the bidding agency and CRASA Secretariat is necessary. The agency's technical team should work closely with CRASA's database administrators and system developers to establish secure connections and implement efficient data synchronization mechanisms. The search tool's design and functionality shall include advanced search features, such as faceted search, filtering options, and predictive search suggestions to enhance the user experience by enabling users to find specific information more efficiently.

* 1. **Search and Meta Data**

In addition to the integrated CRASA database's search functionality, the website should provide users with the ability to search the website's text content. This search feature should be robust, accurate, and efficient, allowing users to find desired information quickly. The search results page should display relevant content snippets, highlighting the searched keywords for better user understanding.

* 1. **Desirable Content and Functions**

The website should offer efficient document viewing and downloads, supporting a range of file formats including but not limited to; JPG, PDF, and Docx. This functionality allows users to access important documents, publications, reports, and other resources directly from the website.

Additionally, it is desirable to have a password-protected area on the website. This area provides a secure environment for sharing confidential files and sensitive information with selected clients or stakeholders. Robust security measures, such as encrypted file transfer and access controls, should be implemented to safeguard the shared files. The bidding agency is encouraged to propose alternative solutions that exceed CRASA's requirements, enhancing the functionality and value of the website. These proposals may include innovative features, interactive tools, or additional content offerings that align with CRASA's objectives and enhance the user experience.

* 1. **Website Hosting**

The bidding agency should propose a suitable hosting location for the website. The proposed hosting solution should ensure a reliable and scalable infrastructure to accommodate increasing website traffic and data storage requirements. Service Level Agreements (SLAs) for the hosting platform should be included in the project scope. These SLAs should outline the agreed-upon performance standards, uptime guarantees, and technical support provided by the hosting provider. Additionally, the SLAs should address any potential data backup and disaster recovery procedures to ensure the website's availability and data integrity.

* 1. **IPv6 Support**

The website developed should fully support IPv6.

**Annexure B: Technical Specifications**

* + - 1. **Functional Requirements**

**1.1 User Roles and Permissions:**

1.1.1Administrator: Full access to manage users, data, and settings.

1.1.2 Editor: Ability to add, update, and delete regulation entries.

1.1.3 Viewer: Read-only access to the database content.

* 1. **User Interface (UI) Requirements:**

1.2.1 Dashboard: Overview of recent updates, user activities, and database status.

1.2.2 Search and Filter: Advanced search functionality to filter regulations by country,

 date, type, and keywords.

1.2.3 Regulation Entry: Form for adding new regulations, including fields for title,

 description, country, date of enactment, and related documents.

1.2.4 Regulation View: Detailed view of each regulation entry, including metadata and

 associated documents.

1.2.5 Notifications: System for notifying users of updates or new entries.

**1.3 Database Management:**

1.3.1 CRUD Operations: Capabilities for creating, reading, updating, and deleting

 regulation entries.

1.3.2 Version Control: Track changes to regulation entries over time.

1.3.3 Data Import/Export: Ability to import data from external sources and export

 database content in various formats (e.g., CSV, JSON).

**2. Technical Requirements**

**2.1 Architecture:**

* + 1. Backend: Server-side framework (e.g., Django, Node.js) and database management system (e.g., PostgreSQL, MySQL).
		2. Frontend: Client-side framework (e.g., React, Angular) for building interactive UI components.
		3. API: RESTful API for interaction between frontend and backend, and for external integrations.

**2.1 Security:**

* + 1. Authentication: Implement user authentication mechanisms (e.g., OAuth, JWT).
		2. Authorization: Role-based access control to restrict user actions based on their role.
		3. Data Encryption: Encrypt sensitive data both in transit and at rest; and

2.3.4 Recovery: Regular data backups and a disaster recovery plan.

**3. Data Management**

* 1. Data Structure: Define the schema for regulation entries, including all relevant fields (e.g., ID, title, description, country, date, document links).

3.2 Data Sources: Identify sources of regulation data, such as government websites, international organizations, and regulatory bodies.

3.3 Data Validation: Ensure the accuracy and consistency of data entries through validation rules and automated checks.

**4. User Interface Design**

* 1. Wireframes: Create wireframes for each major UI component, including the dashboard, search results, regulation entry form, and detailed view.
	2. User Experience (UX): Design the database to be intuitive and user-friendly, minimizing the number of steps required to perform common tasks.
	3. Responsive Design: Ensure the database is accessible on various devices, including desktops, tablets, and smartphones.

**5. Testing and Quality Assurance**

* 1. Unit Testing: Test individual components and functions to ensure they work correctly.
	2. Integration Testing: Test interactions between different components to identify any issues.
	3. User Acceptance Testing (UAT): Conduct testing sessions with end-users to gather

feedback and ensure the database meets their needs.

**6. Deployment and Maintenance**

* 1. Deployment: Plan for deploying the database on a suitable hosting platform, considering scalability and performance.
	2. Maintenance: Establish procedures for regular maintenance, including updates, bug fixes, and performance monitoring.

**7. Documentation**

* 1. User Guide: Provide a comprehensive guide for end-users, covering all functionalities and features.
	2. Administrator Manual: Document procedures for database management, including user administration and data backup.
	3. API Documentation: Offer detailed documentation for any APIs provided by the database.

**8. Project Management**

8.1 Timeline: Define the project timeline with key milestones and deadlines.

8.2 Budget: Estimate the budget required for development, deployment, and maintenance.

8.3 Team Roles: Identify the team members and their roles in the project.

1. **Objectives of the Assignment**

The objective of the assignment is to modernise the CRASA website.

The Specific Objectives are:

1. Design and develop a modern, responsive, user-friendly, interactive and visually appealing website for the dissemination of information to and dynamic interaction with the Association’s stakeholders;
2. Create a well-structured, intuitive website layout, and utilise modern features and functionalities for easy navigation and searchability of relevant information;
3. Creatively and appropriately integrate CRASA’s existing digital tools (Extranet, Event Management Platform and Automated Monitoring and Evaluation System) to ensure seamless one-stop access and easy utilisation by targeted user;
4. Design, develop and integrate new digital tools for the benefit of internal and external stakeholders including a regulatory Information-sharing platform with its supporting database infrastructure and interactive functionality;
5. Incorporate statistics and monitoring features to track visitor traffic patterns and popular search items, facilitating data-driven decision-making and continuous improvement;
6. Seamlessly integrate CRASA's social media accounts (e.g., Facebook, LinkedIn, YouTube, Twitter) with the website to enhance visibility and engage users; and
7. Establish and enforce appropriate security policies to ensure the daily maintenance and integrity of the website.
8. Incorporate an information sharing platform to the CRASA website
9. **SCOPE OF WORK:**

**Activity 1: Baseline Assessment and Review**

**Task 1:** Detailed review and analysis of best practice of system development, website design and information-sharing platforms. This should take into consideration security, optimal design, data management, user experience, hosting, scalability, and performance, among others.

**Task 2:** Conduct a comprehensive audience analysis to identify and review the information-dissemination needs of CRASA Members and CRASA secretariat in the context of the project and its stated objectives.

**Task 3:** Review and align (to identify opportunities for interoperability) with existing information-sharing tools within the CRASA environment such as the CRASA Extranet or other similar resources.

**Activity 2: Design and Develop the System**

**Task 4**: Design and develop the enhanced CRASA website incorporated with an information-sharing platform.

**Task 5:** Develop a fully interactive database complimented with a user-friendly interface that will be used to collect, store, and conduct real-time analysis of the regulatory information from the various CRASA Members, while at the same time allowing the generation, viewing, storing and printing of various reports

**Task 6**: Ensure robust Information Security procedures and principles on relevant data protection and confidentiality aspects (including appropriate data backups), in accordance with applicable legislation, standards and procedures.

***Refer to Annexures A and B for guidance on system design***

**Task 7**: Test and debug developed tools and database.

**Task 8:** Provide the prototype to COMESA, SADC and CRASA for test and review

**Task 9**: Provide documentation which will include a detailed training manual, system design, user manual, maintenance guide, source code, and software used, among others.

**Activity 3: Validation and Training Workshop**

**Task 10:** Present the developed portal/ website to CRASA Secretariat and Membership for validation and approval

**Task 11:** Provide training on the use of the above systems.

1. **DELIVERABLES**

The deliverables shall include the following:

1. An Inception Report. The inception report should provide a detailed work plan clearly showing the information gathering, planning, design methodology, development, testing and delivery and maintenance phases of the undertaking;
2. The Prototype of the website and information-sharing platform;
3. Validation Workshop and training session for the designed portal and validation workshop report;
4. A fully working website/portal and information-sharing system that is easy to use, with clear navigation available for both Android and IOS platforms. Appropriately integrated databases for CRASA’s inward and outward-looking digital tools, with user-friendly Graphical User Interfaces (GUI) and a dashboard able to provide clear data analysis and reports; and
5. Provide documentation which will include a detailed training manual, system design, user manual, and maintenance guide (inclusive of costs). Additionally, provide all software codes for the website’s tools and databases in a softcopy format and source code.
6. **REPORTING AND ADMINISTRATIVE ARRANGEMENT**

It is expected that the consultant/institution will work in very close coordination with the COMESA Secretariat, providing regular, unsolicited updates, and responding promptly and flexibly to the needs and demands of COMESA and the corresponding timelines. COMESA will provide the linkage with CRASA Secretariat.

1. **DURATION**

The consultant is expected to complete the assignment within 120 days from the date of contract award.

|  |  |
| --- | --- |
| **Deliverables** | **Timeline** |
| Inception Report including Detailed Work Plan | T0 = 20 days from the date of contract signature |
| First prototype  | T1 =T0+ 60 days  |
| Validation workshop Testing, user training and skills transfer  | T3 = T1+30 days |
| Final website for Commissioning, handover and go-live | T4 = T3+10 |
| Final Report and system documentation | T5 = T3+10 |

1. **QUALIFICATION AND EXPERIENCE**

COMESA is seeking applications from a firm. The successful firm should demonstrate personnel with the following qualifications and experience:

1. Has demonstrable skills and experience in designing and developing digital forms using digital app and systems like Kobo Collect, ODK Collect, CommCare and SurveyCTO;
2. Ability to design the structure of the database and write appropriate interfaces (e.g. Microsoft Excel) for data entry and ensure data quality and security;
3. Experience working with local and international organizations and clients on similar assignments; and
4. Experience in the African region will be an added advantage

| **Key Staff**  | **Qualifications and Experience**  |
| --- | --- |
| **Project Manager** | The Project Manager should have the following qualifications and experience:1. Bachelor’s Degree in Computer Science/ Computer System Engineering or any other relevant field;
2. Additional qualifications in Telecommunications Policy and Regulation will be an added advantage;
3. MSc in Computer Science/ Computer System Engineering or any other relevant field will be an added advantage;
4. Additional qualifications and competencies in Information Security and Cyber Security will be an added advantage;
5. At least 15 years' experience in system development and the successful development and implementation of a similar project. Of which, 7 years was in a Senior Developer/Lead role; and
6. Management skills and project management skills
 |
| **System Analyst** | The System Analyst should have the following qualifications:1. Bachelor’s Degree in Computer Science/ Computer System Engineering or any other relevant field;
2. MSc will be an added advantage;
3. At least 10 years of experience in IT systems;

In addition, the System Analyst should have the following demonstrable skills:1. Programming: Proficiency in languages like Python, Java, C++, and JavaScript;
2. Database Knowledge: Understanding of database management systems (DBMS) and SQL is required;
3. Operating Systems Knowledge: Familiarity with various operating systems (Windows, Linux, macOS) is necessary;
4. Networking: A grasp of network concepts, protocols, and technologies is advantageous; and
5. Software Development: Knowledge of software development methodologies (e.g., Agile, Waterfall) and tools is required;
6. Cybersecurity: Understanding potential threats and vulnerabilities, as well as security best practices is required.
 |
| **Software Developer** | The Software Developer should have the following qualifications:1. BSc in Computer Science/ Computer System Engineering or any other relevant field
2. MSc will be an added advantage
3. At least 10 years of demonstratable experience in the Software Development field.

In addition, the Software Developer should have the following demonstrable skills:1. Programming: Proficiency in languages like Python, Java, C++, and JavaScript;
2. Data Structures and Algorithms: Demonstrable understanding of how to organize and process data efficiently is required;
3. Database Knowledge: Understanding of database management systems (DBMS) and SQL is required;
4. Version Control Systems: Skills in using Git and GitHub for code management and collaboration are required;
5. Software Development Lifecycle: demonstrable understanding of stages of software development, from planning to deployment, is required;
6. Testing and Debugging: The ability to identify and fix errors in code is required; and
7. Cloud Computing: Knowledge of cloud platforms like AWS, Azure, or GCP is advantageous.
 |
| **UI/UX Designer** | The UI/UX Designer should have the following qualifications:1. Bachelor's degree in Computer Science, Design or a related field is required;
2. MSc and Professional Qualifications will be an added advantage
3. At least 10 years of relevant work experience; and
4. Demonstratable experience in the UI/UX field.

In addition, the UI/UX Designer should have the following demonstrable skills:1. Design Software Proficiency: Familiarity with tools like Figma, Adobe XD, Photoshop, and Sketch is required;
2. Wireframing and Prototyping: Ability to create low-fidelity wireframes to structure information and high-fidelity prototypes is required;
3. Visual Design: Ability to apply design principles to create aesthetically pleasing and engaging interfaces is required;
4. Interaction Design: Ability to design user-interactions with the interface, including animations, transitions, and feedback mechanisms is required; and
5. Front-End Development Knowledge: demonstrable knowledge and understanding of HTML, CSS, and JavaScript is required.
 |
| **Software Tester** | The Software Tester should have the following qualifications:1. Bachelor's degree in Computer Science, Design or a related field is required; and
2. MSc and Professional Qualifications will be an added advantage
3. At least 10 years of experience in ICT field.

In addition, the Software Developer should have the following demonstrable skills:1. Programming: Proficiency in languages like Python, Java, C++, and JavaScript;
2. Testing Tools and Frameworks: Familiarity with various testing tools like Selenium, Appium, and JUnit is required;
3. Testing Techniques: Proficiency in different testing techniques like functional testing, UI testing, performance testing, and security testing is necessary;
4. Databases and Operating Systems: Understanding of database systems (e.g., SQL) and operating systems is desirable; and
5. Version Control Systems: Skills in using Git and GitHub for code management and collaboration are required.
 |
| **Quality Assurance engineer** | The Quality Assurance engineer should have the following qualifications:1. Bachelor's degree in Computer Science, Design or a related field is required; and
2. MSc and Professional Qualifications will be an added advantage
3. At least 10 years of experience in ICT field.

In addition, the Quality Assurance Engineer should have the following demonstrable skills:1. Coding: A foundational understanding of programming languages (like Python, Java, or JavaScript) is required;
2. Testing Tools & Techniques: Expertise in various testing tools (e.g., Selenium, Appium) and techniques (e.g., manual, automated, A/B) is required;
3. Databases and Operating Systems: Understanding of database systems (e.g., SQL) and operating systems is desirable.
4. API Knowledge: Familiarity with APIs (Application Programming Interfaces) is necessary;
5. Software Debugging: Proficiency in using debugging tools to isolate and resolve software issues is required;
6. Version Control Systems: Skills in using Git and GitHub for code management and collaboration are required; and
7. Project Management Tools: Familiarity with project management tools is required.
 |

1. **PLACE OF ASSIGNMENT**

This is a home-based assignment, enabled by electronic communications services such as email and videoconferencing. There will be travel missions to CRASA Secretariat in Gaborone, Botswana.

# Annexure A: MANDATORY REQUIREMENTS

* 1. **Accessibility**

The website must adhere to the highest accessibility standards to ensure that all users, including those with disabilities, can access and navigate the website with ease. Furthermore, the website should optimise graphics and utilise Cascading Style Sheets (CSS) to enhance page load times and minimize bandwidth usage.

To streamline processes and improve user convenience, the website should incorporate online services such as online forms for feedback submission, service requests, and customer inquiries. Additionally, seamless integration with popular social media platforms like Facebook, LinkedIn, YouTube, and Twitter is essential to enhance engagement and provide avenues for users to interact with CRASA’s content and services.

* 1. **Content Management and User Experience**

The website should incorporate a suitable Content Management System (CMS) that allows CRASA staff, with average IT (Information Technology) literacy and no prior website editing experience, to easily update and manage website content in-house. The CMS should have a user-friendly interface, allowing staff members to add, edit, and delete pages, update text and multimedia content, and manage various media formats, including videos, photos, and textual content.

The project budget should consider CMS licensing costs, which may include both initial licensing fees and ongoing subscription fees, based on the chosen CMS platform. In addition, training sessions should be provided to familiarise CRASA staff with CMS usage, empowering them to independently manage and update the website's content.

A one-year maintenance Service Level Agreement (SLA) should be included to address any technical issues and provide ongoing support for the CMS and related functionalities.

* 1. **Scalability, Data Migration, and Integration**

The website should be a scalable solution that integrates with existing and new customer facing CRASA systems and platforms allowing for seamless data flow and future web development and integrations. This shall require a smooth transition by migrating, archiving, and indexing website data and content accurately.

* 1. **Security and Maintenance**

Robust security measures should be implemented to protect against hacking attempts, unauthorised access, and data breaches. This includes employing industry-standard security protocols, encryption technologies, and secure communication channels. Regular security updates and patches should be applied to the website's underlying infrastructure and software components to address potential vulnerabilities and maintain a secure environment.

Appropriate security measures, such as user authentication and role-based access controls, should be implemented to ensure that only authorized personnel can access the CMS and make changes to the website's content. Regular CMS updates and patches should be applied to protect against potential vulnerabilities.

* 1. **Design and Imagery**

The website's design should embody a vibrant and creative yet timeless and high-quality visual style. It should reflect the diverse demographics of its users and create a visually engaging experience. A visually prominent and intuitive user interface (UI) design is essential to facilitate user understanding of the website's layout and navigation. Consistency in graphics, typography, and terminology should be maintained throughout the website to ensure a cohesive user experience and avoid confusion. The selected imagery should align with CRASA's brand guidelines and reflect the Association's professionalism and commitment to its stakeholders.

* 1. **Database Integration**

To ensure the website provides comprehensive and accurate information, seamless integration with selected information from CRASA's databases is crucial. This integration allows real-time data updates and ensures that the website's content, such as industry statistics, regulatory documents, and reports, remains current and reliable.

To achieve successful database integration, close collaboration between the bidding agency and CRASA Secretariat is necessary. The agency's technical team should work closely with CRASA's database administrators and system developers to establish secure connections and implement efficient data synchronization mechanisms. The search tool's design and functionality shall include advanced search features, such as faceted search, filtering options, and predictive search suggestions to enhance the user experience by enabling users to find specific information more efficiently.

* 1. **Search and Meta Data**

In addition to the integrated CRASA database's search functionality, the website should provide users with the ability to search the website's text content. This search feature should be robust, accurate, and efficient, allowing users to find desired information quickly. The search results page should display relevant content snippets, highlighting the searched keywords for better user understanding.

* 1. **Desirable Content and Functions**

The website should offer efficient document viewing and downloads, supporting a range of file formats including but not limited to; JPG, PDF, and Docx. This functionality allows users to access important documents, publications, reports, and other resources directly from the website.

Additionally, it is desirable to have a password-protected area on the website. This area provides a secure environment for sharing confidential files and sensitive information with selected clients or stakeholders. Robust security measures, such as encrypted file transfer and access controls, should be implemented to safeguard the shared files. The bidding agency is encouraged to propose alternative solutions that exceed CRASA's requirements, enhancing the functionality and value of the website. These proposals may include innovative features, interactive tools, or additional content offerings that align with CRASA's objectives and enhance the user experience.

* 1. **Website Hosting**

The bidding agency should propose a suitable hosting location for the website. The proposed hosting solution should ensure a reliable and scalable infrastructure to accommodate increasing website traffic and data storage requirements. Service Level Agreements (SLAs) for the hosting platform should be included in the project scope. These SLAs should outline the agreed-upon performance standards, uptime guarantees, and technical support provided by the hosting provider. Additionally, the SLAs should address any potential data backup and disaster recovery procedures to ensure the website's availability and data integrity.

* 1. **IPv6 Support**

The website developed should fully support IPv6.

**Annexure B: Technical Specifications**

* + - 1. **Functional Requirements**

**1.1 User Roles and Permissions:**

1.1.1Administrator: Full access to manage users, data, and settings.

1.1.2 Editor: Ability to add, update, and delete regulation entries.

1.1.3 Viewer: Read-only access to the database content.

* 1. **User Interface (UI) Requirements:**

1.2.1 Dashboard: Overview of recent updates, user activities, and database status.

1.2.2 Search and Filter: Advanced search functionality to filter regulations by country, date, type, and keywords.

1.2.3 Regulation Entry: Form for adding new regulations, including fields for title, description, country, date of enactment, and related documents.

1.2.4 Regulation View: Detailed view of each regulation entry, including metadata and associated documents.

1.2.5 Notifications: System for notifying users of updates or new entries.

**1.3 Database Management:**

1.3.1 CRUD Operations: Capabilities for creating, reading, updating, and deleting regulation entries.

1.3.2 Version Control: Track changes to regulation entries over time.

1.3.3 Data Import/Export: Ability to import data from external sources and export database content in various formats (e.g., CSV, JSON).

**2. Technical Requirements**

**2.1 Architecture:**

* + 1. Backend: Server-side framework (e.g., Django, Node.js) and database management system (e.g., PostgreSQL, MySQL).
		2. Frontend: Client-side framework (e.g., React, Angular) for building interactive UI components.
		3. API: RESTful API for interaction between frontend and backend, and for external integrations.

**2.1 Security:**

* + 1. Authentication: Implement user authentication mechanisms (e.g., OAuth, JWT).
		2. Authorization: Role-based access control to restrict user actions based on their role.
		3. Data Encryption: Encrypt sensitive data both in transit and at rest.

2.3.4 Backup and Recovery: Regular data backups and a disaster recovery plan.

**3. Data Management**

* 1. Data Structure: Define the schema for regulation entries, including all relevant fields (e.g., ID, title, description, country, date, document links).

3.2 Data Sources: Identify sources of regulation data, such as government websites, international organizations, and regulatory bodies.

3.3 Data Validation: Ensure the accuracy and consistency of data entries through validation rules and automated checks.

**4. User Interface Design**

* 1. Wireframes: Create wireframes for each major UI component, including the dashboard, search results, regulation entry form, and detailed view.
	2. User Experience (UX): Design the database to be intuitive and user-friendly, minimizing the number of steps required to perform common tasks.
	3. Responsive Design: Ensure the database is accessible on various devices, including desktops, tablets, and smartphones.

**5. Testing and Quality Assurance**

* 1. Unit Testing: Test individual components and functions to ensure they work correctly.
	2. Integration Testing: Test interactions between different components to identify any issues.

5.3 User Acceptance Testing (UAT): Conduct testing sessions with end-users to gather feedback and ensure the database meets their needs.

**6. Deployment and Maintenance**

* 1. Deployment: Plan for deploying the database on a suitable hosting platform, considering scalability and performance.
	2. Maintenance: Establish procedures for regular maintenance, including updates, bug fixes, and performance monitoring.

**7. Documentation**

* 1. User Guide: Provide a comprehensive guide for end-users, covering all functionalities and features.
	2. Administrator Manual: Document procedures for database management, including user administration and data backup.
	3. API Documentation: Offer detailed documentation for any APIs provided by the database.

**8. Project Management**

8.1 Timeline: Define the project timeline with key milestones and deadlines.

8.2 Budget: Estimate the budget required for development, deployment, and maintenance.

8.3 Team Roles: Identify the team members and their roles in the project.