REPÚBLICA DE CABO VERDE

TERM OF REFERENCE

Technical Assistance to upgrade the consular portal mobile app

1. BACKGROUND INFORMATION

The Government of Republic of Cabo Verde has received financing in the amount of US$ twenty million dollars ($20, 000 000) from the International Development Association (World Bank) toward the cost to facilitate the implementation of DIGITAL CABO VERDE PROJECT, which has as objective to contribute to transforming the country into a regional digital hub for accelerating its digital economy through an enhanced digital infrastructure and strengthened demand of digital services and skills. The proposed project will support the Government's strategy to transform the country into a digitally enabled service economy, raising its competitiveness and attracting further investments. Enhancing the supply and demand of broadband connectivity and data depositories (digital infrastructure) is critical to support the development of digital platforms, both public and private, and to create new services for individual, businesses and governments. In its Digital Public Services and Marketplaces component 3, the Project will support the GoCV in its recent efforts to support activities aimed at increasing the GoCV's capacity to better deliver digital public services in the domains: G2G; G2B and G2P, in a context where user's digital maturity to access online services continues to pose challenges.

1.1. **Relevant country background**

Cabo Verde is a diasporic Nation and an Archipelago country with most of its population living abroad all over the world.

The government defined a national strategy for its digital transformation and decided to implement this reform from the outside in, with the focus on the Diaspora and Foreign Investment.

In 2018, the government created the digital transformation project for its Diplomatic Representation and designated the embassy in Portugal as the project management entity with the mission of adopting and experimenting solutions that would subsequently be replicated to all other Cabo Verde Diplomatic Missions abroad, contributing to a

substantial reduction in waiting time for assistance and the provision of final services to its citizens seeking Consular Services. In some cases, the services include the evacuation of patients and students as well as the advice to foreigners who intend to invest or reside in Cabo Verde. The project also includes the digital transformation of the financial services with the construction of a new and integrated financial management system that privileges a totally dematerialized processes.

Within the scope of the project, a new Cabo Verde Consular Portal is in development with a focus on dematerialization, interoperability with other public administration information systems and online and on-time services. A first version of the Cabo Verde Consular Portal is already available online and a second version is coming soon. With this latest update, citizens will be able to order, pay and get more services online and we are working on combating info-exclusion so that it is truly a Government Portal for all, particularly for all emigrants.

The Government reinforced the powers of the project team by creating the Mission Unit for the Digital Diaspora composed of several public institutions and defined more ambitious objectives for the current year. An interesting journey has already been made and we are confident that the stipulated objectives will be achieved, despite the pandemic that we are experiencing, and that has posed new challenges for the team and obliges us to further streamline the processes underway for the provision of remote services.

Since 2020, the World Bank started supporting Cabo Verde to mitigate the impact of Covid-19 pandemic supporting some essential projects like the Cabo Verde Consular Portal that is investing on online public services delivery. On this basis with the support of the World Bank, a consultancy was hired to support the design, development and implementation of a mobile app that help in the capture of the biometric data for electronic documents, in the validation and sign forms or documents and in the creation of a secure videoconference system.

The next step will be to upgrade the mobile app, to go beyond the functionalities listed above, complementing all the services already available on the portal consular and improving users experience with the consular portal. The Government of Cabo Verde has been able to collect data that substantiates that that citizens privilege the use of mobile phones and tablets to interact with government digital services. As a result this consultancy will serve to support in the design, development and implementation of the

upgraded consular portal mobile app to radically improve the users (employees and citizens) experience.

2. OBJECTIVE, PURPOSE & EXPECTED RESULTS

2.1. Overall objective

The Overall Objective of this assignment is to support the Mission Unit for Digital Diaspora (UMDD – acronym in Portuguese) in the design, development and implementation of a new upgraded version of consular portal mobile app in order to supply all the critical services already online it the consular portal web app so that the citizens can order, pay, schedule and get all in the mobile app (Android and iOS) without the need to jump to the consular portal web app and vice-versa.

2.2. Specific objectives

The Specific Objectives include:

1. Perform an initial consular web portal and mobile app diagnostic, application assessment and code review, while focusing on the functionalities already developed and the application interoperability in order to prepare a strategy to develop the systems proposed in this assignment.

2. Develop the conceptual design and the architecture of an upgraded Portal Consular mobile app with the capacity for supplying all the services already available in Portal Consular web app, including functional specifications, hosting requirements, technical requirements, and capacity building requirements.

3. Develop, implement, commission and pilot test the above proposed systems integrated with the Cabo Verde Consular Portal and according to the approved conceptual design and implementation plan;

3. EXPECTED RESULTS/ DELIVERABLES

The purposes for the consultancy services are to improve the users (employees and citizens) experience at the Consular Portal, developing a mobile app with the capacity to supply all the services already available on the portal consular web app in a easier and secure way and speed up customer resolutions with Custom Bots. The citizens should be able to order, pay, schedule and get all the services in the mobile app.

The consultancy shall namely:

1. Promote the use of the Consular Portal mobile application to carry out consular services in a simpler and more easily accessible way with:

   a. Simplified processes of ordering, paying and get the most requested services, namely:

      - Passport (First-time and renewal)
      - Birth, marriage and death certificate
      - National Identity Card (First time and renewal)
      - Criminal registry certificate
      - Emigrant Certificate
      - Consular Registry
      - Drive license certificate
      - Registy certificate translation
      - Travel consent certificate
      - Letters of attorney
      - Signature recognition
      - Document Autentication
      - Consular Registry Certificate
      - Birth, mariage and death Transcript
      - Certificate for legal capacity to marry
      - Live and identity certificate
      - Definitif return certificate
      - Others relevant services identified later

   b. Simplified form filling on the mobile app for services requesting.

c. Checking the order's status and receive notifications

d. Custom bot to centralize and speed up customer resolutions

e. Upgraded app with the ability to utilize technologies like Passport and ID Card reader, OCR (Optical Character Recognition) and data extraction, Scanning of documents and MRZ reading on the services requests.

With these new functionalities in mobile applications, the aim is to expand the user's ordering on the different digital platforms, facilitating access to information on the Consular Portal in the context of service requests and reducing barriers to the use of the various channels.

All the services available shall accept and integrate the new functionalities of Digital Signature, Facial recognition, Biometric data capture, Cabo Verde Mobile Key (CMDCV) and videoconference developed previously and all electronic documents provided by the consular portal web and mobile app should be time-stamped to prove that the document exist at a particular time and that they have not been subsequently altered. The mobile app shall accept offline services requests.

The solution shall include the Consular Portal SMS gateway integration, One Time Password confirmation and Mobile Digital Signature configurable by service. Others security layers should be considered if it is needed.

The contents of the Consular Portal Web app should be improved and simplified to create a unique brand with the mobile apps.

The work carried out by this consultancy service must respond to the above objectives and the vision set forward in this assignment. The consultancy firm must show Experience working with Liferay Platform or similar, the importance of the functionalities to be developed and their main functions.

The preferred knowledge of Liferay plataform, is related to the previous development of the web portal developed on this platform.

- The technological solutions (software) have been unified using the JAVA language, thus maintaining the standard with the other institutions, namely NOSI and the Ministry of Finance.

- The sustainability, taking into account that there is a technical team, in permanent preparation, which will be able to monitor the application systems

The consultancy firm shall present a work methodology for the systems development that must follow the following principles:

- Guarantee an effective communication between the consultants and the UMDD.
- Guarantee an effective communication between the consultants and the firm responsible for the development of the Consular Portal (partner in the project)
- Guarantee a common understanding of the expected work
- Be flexible in managing expectations and adjusting the process flows
- Be able to anticipate and manage project risk

The proposed methodology should be tailored to achieve the objectives of this consultancy within the required timeframe while ensuring high-quality product.

Tasks

Foreseen tasks shall include but not limited to:

1. Diagnostic

   The purpose of this tasks is to have a clear and complete picture of the Consular Portal mobile and web app considering the data governance and data analysis, the interoperability with other public administrations systems and the stakeholders and their responsibility in current data and information schemes.

2. Roadmap for the upgrade of the portal consular mobile and web app with all the services available in the portal consular web app so that citizens can order, pay, schedule an appointment a get on the mobile app without need to jump to portal consular web app and vice-versa to satisfy their needs.

3. The systems development plan is supposed to be documents based on the previous diagnostic and benchmarking which communicates the strategic actions and principles to help and achieve the objectives and the vision set forward by the UMDD.

   The document will be developed around the following sections:

   1. Diagnostic
   2. Establish a common vision

3. Prioritize strategic objectives and actions

4. Monitoring and Evaluation Principles

4. Development of the systems conceptual design and data architecture.

The proposed design should be flexible to incorporate changes in processes, allow modular implementations and be user-friendly. Consultancy must develop wireframes to conceptualize the layout of the solution.

The conceptual design and information architecture will be based on the vision, the objectives set forward and the consulting team's expertise.

5. Development of the above systems implementation plan

The implementation plan will define the step-by-step timeline and assign responsibilities for all the implementation phases including a detailed work and project plan to facilitate the implementation management and client's follow up.

6. Development, implementation, commissioning and pilot test of the systems

based on the proposed and approved conceptual design and information architecture, and the implementation plan that the consultants will develop, implement, commission and pilot test the solution in close collaboration with the UMDD in order to guaranty the ownership and knowledge transfer.

The Consulting team will also previously present a pilot test framework proposal to the UMDD for validation

7. Preparation of the supporting documents

- Technical manual;
- User's manual.

8. Online and on the job training for Employees and knowledge transfer

All the development code must be Open to the Sponsor team for training and future improvements.

The consulting team will guaranty the knowledge transfer to UMDD and NOSi development team so that they can support and improve the solutions in the future.

9. The development code shall be well documented by the consultant and approved by UMDD and NOSi

4. QUALIFICATIONS OF THE CONSULTANT

The assignment will require a consulting firm with at least 10 years of experience in biometrics data solutions development and with experience in the design and implementation of digital services projects for Public Administrations. They should also have experience in working on similar projects.

4.1 The team should be comprised of the following key experts:

Team Leader
- University degree in Computer Science, Engineering, or equivalent;
- More than 7 years of experience developing web technology solutions with practical development and experience in corporate development and systems analysis;
- Have experience of at least 5 years developing IT solutions using JAVA technology;
- At least 3 years as a development project leader;
- Experience using Maven or equivalent;
- Experience working with Liferay Platform or similar;
- Experience with front-end technologies - HTML5, CSS3, jQuery, Bootstrap, JavaScript, Typescript and React;
- Good experience in creating and consuming web services;
- Spring Framework Experience (Boot, Core, Security, Batch, MVC, Cloud, etc.);
- Ability to provide unit testing and production support as needed and assist Quality Assurance and User Acceptance teams.

Three (3) Developers:
Experience and qualification for each developer:
- University degree in Computer Science, Engineering, or equivalent

- Over 3 years of experience as a Java developer with hands-on development and experience in development and systems analysis - Java, JWT Authorization, RESTful API;
- Experience working with Liferay Platform or similar
- Experience with front-end technologies - HTML5, CSS3, jQuery, Bootstrap, JavaScript, Typescript and React
- Experience with using Maven or similar
- Over 3 years of experience in creating and consuming web services
- Spring Framework Experience (Boot, Core, Batch, Security, MVC, Cloud, etc.)
- MYSQL Database experience
- Understanding Web Security Concepts

For mobile developers:

- Over 3 years of experience as a mobile app developer for android and iOS platforms
- Proficiency in Swift, and Cocoa Touch. Optionally Objective-c
- Experience publishing applications on App Store
- Knowledge of Apple's design principles and application interface guidelines
- Proficiency in Java or Kotlin
- Publishing applications on Play Store
- Conceptualizing and formulating apps that are suitable for use on all types of Android devices
- Experience with continuous integration.

5. REPORTING REQUIREMENTS AND TIME SCHEDULE FOR DELIVERABLES

The assignment is expected to take **about 4 months to complete**. The consultant must deliver monthly report, on each end of the month.

Deliverables	*Schedule*
Deliverable 1 – Preliminary Report	10 days after the contract signature
Deliverable 2 – Diagnostic and Systems development plan	3 weeks after the contract signature
Deliverable 4 – Conceptual Design	4 weeks after the contract signature
Deliverable 5 – Implementation plan	6 weeks after the contract signature
Deliverable 6 – Fully operational systems for pilot test in accordance with the implementation plan and Supporting documents (Technical and user's manual) and Pilot test report in accordance with task 5	12 weeks after the contract signature
Deliverable 8 – Fully operational web and mobile app upgrade and all the services available and fully functional in the mobile app, and Final Report	16 weeks after the contract signature

6. ORGANIZATION OF THE ASSIGNMENT

The selected firm shall undertake the assignments in close consultation with the Mission Unit for Digital Diaspora UMDD, which shall follow and support the assignment.

The Consultant will report to Unidade de Gestão de Projetos Especiais (UGPE) for contract administration.

The deliverables and the reports shall be submitted to UMDD with UGPE in copy. The Reports shall be submitted in Portuguese Language

The working language is Portuguese.

7. CONTRACT TYPES

A Lump-Sum form of Contract shall be signed, payments of the Consultant remuneration are linked to approval of deliverables, and the payment of reimbursable expenses are made upon presentation of the receipt of the expenses occurred at the real cost.