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|  | **C:\Users\dsabiti\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\92752C14.tmp** |  |  |

**EAST AFRICAN COMMUNITY SECRETARIAT**

**- 50 MILLION AFRICAN WOMEN SPEAK NETWORKING PLATFORM PROJECT -**

**TERMS OF REFERENCE**

**Consultancy Services to design and integrate an SMS-based verification module to the 50 Million African Women Speak Networking Platform using One Time Password (OTP) system.**

1. **Background**

The East African Community (EAC) is a regional intergovernmental organization comprising the Republic of Burundi, the Republic of Kenya, the Republic of Rwanda, the United Republic of Tanzania, Republic of South Sudan and the Republic of Uganda with its Headquarters in Arusha, Tanzania and whose mission is to widen and deepen economic, political, social and cultural integration to improve the quality of life of the people of East Africa through increased competitiveness, value added production, trade and investments.

The EAC Secretariat has received a grant from the African Development Bank to finance the 50 Million African Women Speak Networking Platform Project (50MWSP) whose development objective is to contribute to the economic empowerment of African women through the provision of a dynamic Digital Networking Platform for women entrepreneurs. The Platform aims to connect women entrepreneurs in Africa with one another in ways that will foster peer-to-peer learning, mentoring and the sharing of information and knowledge within communities, and provide them with access to trade finance and market opportunities between urban and rural areas, and across borders and between countries. In addition, the Platform will enable the women entrepreneurs to develop market intelligence skills to stay abreast of business development trends within their contexts, regionally and globally to ensure sustainability of their businesses. The project is initially being implemented in 38 countries that are members of COMESA, ECOWAS and EAC regions.

The development of the Platform was completed, and it is currently being operationalized after being launched in November 2019. The EAC Secretariat would like to engage a technology firm to design and integrate an SMS-based verification functionality to the 50 Million African Women Speak Networking Platform (50MAWSP) using OTP authentication.

1. **Objective of the assignment**

The objective of the assignment is to integrate in the 50MAWSP Platform a functionality that delivers a phone-based verification using a time-based, one-time passcode sent over SMS during creation of an account on the Platform and password reset.

1. **Current Platform design features**

The 50MAWSP Platform is currently composed of a web portal that was built based on Liferay Portal technology based on Java EE and a mobile application that runs on both Android and iOS platforms using a REST service layer as the core of this platform. All requests, coming either from the website or the mobile app, get data from the REST API.

Below is a snapshot of the technologies used to build the Platform:

* Web Portal
  + Development platform: Liferay Portal 7.0 Community Edition
* Database:
  + PostgreSQL 9.4
  + Application server: Tomcat 8
  + Java SE Development Kit 8
* Web server:
  + Nginx with proxy and ssl modules
  + NFS server
  + Elasticsearch
* Mobile App
  + Development platform: Xamarin (Microsoft)
* Operating System
  + CentOS 7.5

The web portal is accessible across Mozilla Firefox, Google Chrome, Internet Explorer, Safari and other internet browsers. In addition, the platform is used on different kinds of mobile phones.

The current system requires the use of email for verification of a user who is signing up (creating an account) or resetting a password. Given that there are many people who don’t use email very often, this is a limitation.

A complete System Requirements Specifications and System Design Document will be provided to the bidders.

1. **Scope of Work**

The firm will be required to extend the verification process of the Platform by providing a user who is creating an account with an option of using SMS to send a verification code that the user then uses to complete the sign-up process. The firm will integrate in the Platform a functionality that delivers a phone-based verification using a time-based, one-time passcode sent over SMS or email .

The work will involve the integration of the OTP to the existing 50MAWSP Platform and setting up the user messaging service. Specifically, the firm will ensure that the following process is achieved:

* When signing up or resetting password, the user will provide phone number among other fields;
* The system will then send a Request to the Platform backend;
* The Platform generates a unique OTP and sends to user via SMS;
* User receives OTP via SMS.;
* SMS delivery should be on reverse billing basis and cost of sms will be incurred by SMS integrator; and
* User enters OTP to the site to complete sign up process/password reset.

Working closely with the current system developers, the firm is required to design and implement the OTP SMS based verification module with the following key inherently designed features:

* Secured access
* Simple infrastructure
* Swift delivery. The whole cycle of OTP begins and ends in accepted delivery time.

As a pilot phase, the firm will initially target to support a total of 100,000 users from all the 38 countries of EAC, COMESA and ECOWAS regions.

1. **Duration and Deliverables**

**Phase One (4 weeks) – integration of the OTP SMS based functionality in the 50MAWS Platform**:

* + An Inception Report that will include a concrete plan for the execution of the assignment;
  + Integration of the OTP functionality in the 50MAWS Platform;
  + Testing of the module;

**Phase Two (4 weeks) – Set up and operationalization of user messaging service**:

* + Collaborate with mobile network operators in the 38 countries;
  + Set up and operationalize the messaging service;
  + Submit Draft Final Report;
  + Submit Final Report which captures comments to the Draft report as well as evaluates the preliminary impact of the added module.

1. **Qualifications and Experience Requirements:**

The consulting firm will need to have a team of appropriately qualified personnel with a broad range of skill sets that allow it to deliver on the tasks identified above. The consulting firm shall demonstrate the following capabilities.

* Experience in conducting assignments similar in size, context and complexity;
* Experience in designing and executing SMS integration assignments in Africa;
* The consulting firm must have a continental reach including countries in the 3 regions of COMESA, EAC and ECOWAS. They should preferably be having knowledge of local context and systems especially in the telecom markets in Africa.

Below are the required qualifications & experience of key professional staff:

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| **Position** | **Years of Professional Experience** | **Academic Qualifications** |
| Project Manager/Team Leader (1) | 10 years of relevant experience in IT project management | University degree in Computer Science, Computer Engineering, IT, Information Systems, or related and relevant field;  Project Management Professional (PMP) / PRINCE II certification is a plus |
| Software Developers (2) | 5 years of relevant experience | University Degree in Computer Science, Computer Engineering, IT, Information Systems, or related and relevant field; |

1. **Reporting Structure**

The consulting firm will report to the PIU Project Coordinator at COMESA and on the technical matters the firm will contact Principal IT Officer at EAC Secretariat and Software Developer and Systems Engineer at COMESA but will work very closely with the SPIUs Project Coordinators and Content Managers of the 50MAWS Project at EAC, ECOWAS and the Content Manager at COMESA.