

# **TERMS OF REFERENCE FOR IT CONSULTANCY TO DEVELOP AN OPEN BUDGET PORTAL FOR THE MINISTRY OF FINANCE AND ECONOMIC PLANNING (MINECOFIN)**

## **MINECOFIN – OPEN BUDGET PORTAL PROJECT**

### **I. Introduction**

With the changing world, technology is quickly dominating and replacing traditional ways of doing business. ICT is easily facilitating ways information is accessed and a tool to facilitate participation and promote transparency. Save the Children in collaboration with MINECOFIN and with funding from the European Union has come up with a proposal to introduce ICT in promoting access to public budget information in Rwanda by introducing an Open Budget Portal.

The Government of Rwanda continues to foster good governance by promoting transparency, participation, accountability, equity and inclusiveness, efficiency, effectiveness and economy principles in public finance management. Citizens including young people and stakeholders have to make sense of the national budget by understanding it and knowing where public money will be allocated for the benefits of citizens and for the country development.

For this to be achieved in Rwanda, **the Ministry of Finance and Economic Planning (MINECOFIN) in partnership with Save the Children and the European Union** are in the process of developing an Open Budget Portal to disseminate easily interpretable budget information. The Open Budget Portal aims at providing budget information in a digitalized, interactive and user-friendly style which allows citizens and stakeholders to navigate and understand allocations and actual spending in specific sectors of interests and by administrative settings (central or districts).

### **II. Purpose of the assignment**

The main purpose of this assignment is to establish an online open budget portal for MINECOFIN that will be embedded in MINECOFIN's website, where budget data for both Central and Local Government (draft budget, approved budget as well budget execution information) will be published and accessed by the public by providing:

1. Access to suitable high standard budget data visualizations;
2. User friendly and easy to use data navigation and data sharing;
3. Provide the public with an option for feedback on the published budget data.

**To support this endeavor, MINECOFIN in partnership with Save the Children, is looking for a firm to:**

- Design and develop the open budget portal that will be embedded in MINECOFIN's website;
- Design and develop budget plan data model;

- Clean and model legacy budget data;
- Integrate GigaSpaces database with the Open Budget Portal database;
- Train MINECOFIN staff and key stakeholders.

### **III. Key Duties and Responsibilities of the Open budget Portal Developer**

The responsibilities of the consulting firm shall include but not limited to the following:

#### 0. INCEPTION PHASE:

- Developing and regular fine-tuning a timetable for implementation of the assignment;
- Performing a “gap and overlap analysis” of the current system and data accessibility applications;
- Gather initial requirement of the Open Budget Portal by meeting with MINECOFIN team and any other related stakeholders;
- Identify possible risks, challenges and propose an initial mitigation plan.

#### 1. REQUIREMENT ELICITATION:

- Conduct a complete requirement Analysis of the current system and data used;
- Perform and document a full understanding of the user requirement and business rules of the Open budget portal;
- Document the open budget portal technical requirement and all use cases;
- Revise, propose and document the suitable technology stack to be used during the implementation.

#### 2. SYSTEM DESIGN PHASE:

- Design the Open Budget Portal system and its functionalities;
- Revise, design and present the proposed system architecture;
- Design the Budget plan data model structure;
- Design and propose the system hosting infrastructure (optimized) and it’s specifications

#### 3. IMPLEMENTATION PHASE:

- Develop and present the UI/UX of the system and perform and design user test with a fully functional prototype;
- Setting up development, testing and production;
- Perform a Database analysis & Structure to validate the proposed Data model structure and design;
- Set up the Budget Plan Database and integrate this with the MINECOFIN GigaSpace data source;
- Define and develop all types of the Data source format and scripts that would read agreed different data format (XML, JSON, CSV, ORACLE DB, POSTGRESS, ETC...);
- Perform the legacy Budget data clean-up, structuring and migration to the set up database in order to have the previous budget data deployed in the DB;
- Implement the business intelligence (dashboards and reports) tool for the budget data visualization to the public.

- Implement all the needed integrations for better data accessibility and system performance.

#### 4. DEPLOYMENT PHASE:

- Perform the quality assurance;
- Testing the interface and functionalities, guiding test users, preparing test reports with steps for further improvements throughout the assignment;
- Deploy the tested and revised final system to the production Environment.

#### 5. TRAINING PHASE AND MAINTAINANCE:

- Training for MINECOFIN users in managing and updating the interface and functionalities;
- Develop all the system documentation and user manual for further reference.

### **IV. Qualifications of Consulting Firm and Key Staff**

Interested Consulting firms should clearly demonstrate their relevant expertise in developing strong data analysis portal and web applications using at least one popular Java web framework (Struts, JSF, Spring MVC, or ZK). The assignment requires experienced Consulting firm capable of communicating effectively with the Management of MINECOFIN and Save the Children.

The firm shall employ well qualified and competent professional staff at all times in the execution of the assignment and shall therefore propose a team of experts that is capable to deliver the services in accordance with the requirements defined in this TOR. The firm shall submit a proposal that will show the methodology and technical approach to be used while conducting this assignment, clear time lines in which to perform the assignment, CVs for all key staff in their proposed team. All CVs must meet the minimum requirements as indicated in the skills and competencies.

#### **❖ Skills and Competencies**

- Thorough understanding of Software Development Life Cycle (SDLC) and been involved in various phases of Software Development: Requirements, Gathering, Analysis/Design, Development, Integration, Testing, Deployment, and Software Support.
- Practical knowledge/experience with software development methodologies (e.g. Agile or any other best practice)
- Capable of understanding and contributing to the MINECOFIN Budget Planning and Data publishing technical solution from design through to code level.

#### **Web-based:**

- Fluent coding in Java and JavaEE technologies such as EJB, JSP, JMS, JNDI, JDBC, etc.
- Exposure to web technologies, such as XML, HTML, CSS, JavaScript, Bootstrap, Ajax and jQuery.

- Expert in Object-oriented analysis and design using common design patterns and UML2.
- Exposure to use of Object-Oriented Programming using Java
- Expert in Data analysis and visualization tools such as ZK, Power-BI, Tableau, R, etc.
- Have a good understanding and experience with different database management technologies such as PostgreSQL, Oracle, Etc.
- Working knowledge of java frameworks such as spring, Struts, JSF, ZK, and Hibernate.
- Experience with Web Services (SOAP and REST)

#### **Other IT:**

- Practical experience with unit and performance testing
- Adequate and Practical knowledge of Relational Database Technologies through additional professional training in Advanced Database Systems (Oracle, MySQL, PostgreSQL or SQL Server).
- Comfortable working in Windows and Linux environments
- Ability to quickly assimilate new and complex technologies and concepts;
- Expert in build utilities like Maven, Ant, etc;
- Ability to perform independent code reviews and execute unit tests on modules developed by self and other team members on the project.

#### **Other skills:**

- Ability to work independently and as a part of a wider team;
- Ability to prioritize and adjust to change in priorities as necessary;
- Ability to communicate and present solution to non-tech users;
- Ability to operate on scheduled 9-hour, and beyond on-call basis.

#### **V. Expected Deliverables**

- Inception report
- System requirement specification report
- A prototype of the system
- Regular progress reports
- A fully functional open budget portal with source code
- System user manual and system documentation
- Training reports

#### **VI. Supervision and Reporting Arrangements**

- The consulting firm will work under overall supervision of MINECOFIN and Save the Children.
- Regular reports will be shared with MINECOFIN and Save the Children

#### **VII. Timeframe and duration of the Consultancy**

The assignment is expected to be completed within a timeframe of seven (7) months. A detailed plan will be developed by the developing firm and confirmed by MINECOFIN and Save the Children.

### **VIII. How to submit your application**

Interested competent firms should submit their bids/applications at [ESA.Tenders@savethechildren.org](mailto:ESA.Tenders@savethechildren.org) not later than **4.00pm 23<sup>rd</sup> August 2019**

Applications should include:

1. A well written technical proposal with Curriculum Vitae (CVs) of proposed team members;
2. A detailed financial proposal;
3. Company registration certificate/proof;
4. Proof of Electronic Billing Machine (EBM) for Rwanda based firms only;
5. Evidences of similar work performed (All that apply).
6. Client references worked with for similar services