TERMS OF REFERENCE FOR CONSULTANCY SERVICES
for the
Scholarships and Grants Information Management System

[KENYA]

Project Name: **The Regional Scholarship and Innovation Fund (RSIF) for Applied Sciences, Engineering and Technology**

Reference No: KE-ICIPE-155036-CS-QCBS

Grant No.: __D347-3A____

Expected start date: April 15, 2020 for a duration of 6 months.

Application deadline: February 7, 2020

A. Background

The Regional Scholarship and Innovation Fund (RSIF)1, the flagship program of the Partnership for skills in Applied Sciences, Engineering and Technology (PASET), is an initiative by African governments to address systemic gaps in skills and knowledge necessary for long-term, sustained economic growth in sub-Saharan Africa (SSA). PASET was launched in 2013 by the governments of Senegal, Ethiopia and Rwanda. The governments of Kenya and Ivory Coast have since joined the initiative, while several others have expressed commitment to enter the partnership.

The RSIF aims to (a) support competitively selected host universities in sub-Saharan Africa to establish high-quality PhD training, research and innovation environments in priority sectors, and to develop their institutional capacity for the benefit of the whole region; (b) provide a model for inter-Africa study, pan-African and international collaboration and knowledge exchange; (c) support the use of transformative technologies to tackle the continent`s most pressing challenges; and (d) build a critical mass of highly skilled science and engineering leaders, innovators and entrepreneurs, including more women. The program responds to the need for skills to drive growth in key sectors, particularly ICTs including big data and artificial intelligence; food security and agribusiness; minerals, mining and materials engineering; energy including the renewables; and climate change. RSIF will implement PASET's vision to train 10,000 PhDs at African Host Universities in the next 10 years.

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1 For more information on PASET and the RSIF please visit https://www.rsif-paset.org/

The program is funded by African governments. Other key partners and contributors are the World Bank and the Government of South Korea, and with other contributing partners expected to join. RSIF Regional Coordination Unit (RCU) is the International Center of Insect Physiology and Ecology (*icipe*) located in Nairobi, Kenya.

The objective of the RSIF program is to strengthen the institutional capacity for quality and sustainable doctoral training, research and innovation in transformative technologies in Sub-Saharan Africa. To enhance the capacity development for the operation and management of doctoral training scholarships in selected African universities and research grants in ASET fields RSIF requires a scholarship and grants application system developed.

B.   Objectives and Scope of Work
The goal of this assignment is to develop a fully functional scholarship and grants application system for the RSIF to support RSIF implementation. The Application is will be hosted by *icipe*, with continuous maintenance and support by the consultant. The consultant is expected to deliver a web portal (in English and French) and a backend application that will enhance the scholarship and grant application process, management operations, notification and disbursement. The application should be three (3) tiers with separation of presentation, application and data layers.

The overall purpose of this Consultancy is to support RSIF RCU improve the current processes (Windows 1,2 &3) by:

1.   Defining requirements for an integrated online three (3) tier scholarship and grants management system accessible to different stakeholders across the globally with varying levels of access, to enhance accessibility to PASET RSIF services/programs;
2.   Designing and developing the system that enables solicitation, management for scholarship and grants for prospective students, grantees and the RCU as well as reporting on the same;
3.   Implementation of a robust notification system for all user levels
4.   Clearly defining roles and responsibilities for the system users identified as key stakeholders; and
5.   Building the capacity of the relevant staff to manage the system on a sustainable basis through specific training, help documents and tutorials.

Key tasks for the Consultant:
- Present a proposed plan with development methodology for implementation of the RSIF Scholarship and Grants Management System;
- Review Software Requirements Specifications (SRS) document and map out the solution product
- Prepare all necessary design documents as per the development methodology proposed
- Develop a relevant prototype(s)
- Facilitate data migration and verification
- Maintain an inventory of deliverables, arising bugs and mitigation measures

- Develop an online 24x7 application submission and management system, to facilitate submission, management, reporting, monitoring, evaluation and learning (MEL) from anywhere for grants and scholarships
- Enable of applicants to track status of their application online
- Publish beneficiaries details online
- To enable the key stakeholders at different levels to access the data online for verification and other purposes.
- Design the architecture and modules of the proposed system
- Provide an Application Programming Interface (API) for interlinkage to other internal software systems
- Provide relevant training for different users on how to use the system. These will be complemented by training modules, help systems and technical documents prior to handover.

More Specifically the system should have the following Functionality

1. Call Issuing – Announcements of open calls to enable acceptance of applications;
2. Application – data capture and document input in different data formats linked to a special call;
3. State saving – Enable part completion of the application forms, save and continue later;
4. Reviewing – Review of all submitted applications, with proper documentation of the findings and feedback of the reviewers submitted online;
5. Role-based user dashboards with easy-to-use data visualization and highlighting role-based tasks that require attention;
6. Reporting – parameter related view of reports, graphs and ad-hoc custom reporting capability;
7. Data capture and management (including MEL); and
8. Communication and notifications – Interlinkage with mailing systems (and or SMS systems) to enable process level notification to system users or on key programme updates.

The system features should include:
1. A web-based front-end portal using appropriate and efficient web technologies for all data interactions;
2. Have relevant import / export capabilities to enable content/attachment addition as well as data export to templates or external databases;
3. Present dashboards showing progress towards individual application status;
4. Provide administrators with tools for monitoring status change as well as communication with the registered users;
5. Provide a database administration module, allowing for advanced user management, with a staggered set of privileges for different users as well as user authorization, audit trail/tracking/authorizing changes to application status process, database download, online backup and other monitoring-based features; and

6. Provide integration capabilities to a knowledge management / repository platform and event planning/notification system, and,
7. Support RCU to manage the scholarships and grants efficiently.

Overview of the proposed system
The proposed software should (in addition to the above features and functionalities):
- Provide an online platform to connect prospective students to apply for scholarships,
- Reviewers to assess eligibility of the applicants, be able to, search for suitable candidates in the database, sort list, schedule and interview the candidates while providing feedback through this system.
- RSIF host University Faculty and Staff to perform administrative services as well as generate reports.
- RSIF RCU to monitor progress and support reporting related to fund disbursements and enhance management.

RSIF Reviewers:
- View, sort, search assigned scholars/applicants
- Review applicants and provide feedback
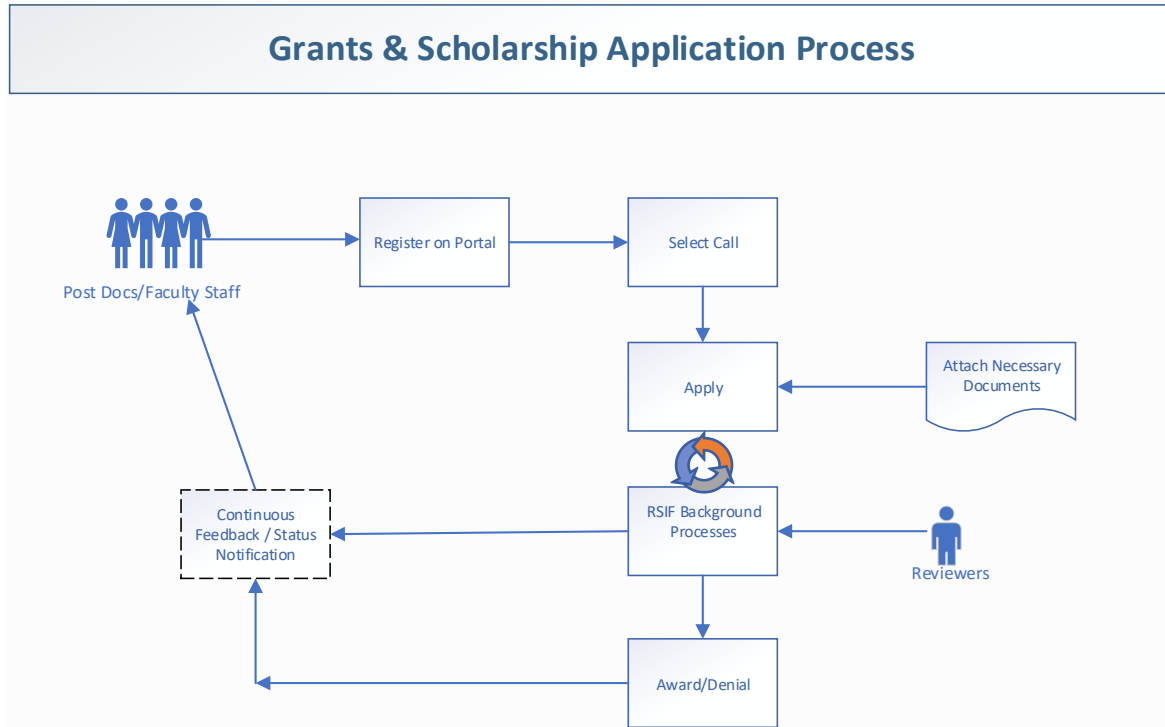- Monitor progress of assigned applicants

Scholars/Scholarship Applicants:
- Can post their profile
- Can search for Scholarships and view Host universities criteria and related information
- Can apply to a posted scholarship call
- Can update, view, download and print own CV, profile and uploaded documents
- Can Submit reports/complaints

RSIF Staff:
- Register to the system (Approval and role assignation as administrator)
- Prepare, view and publish calls
- Can search potential scholar, grantees and fund status
- Can send invites to potential scholars
- Can sort and schedule interview potential scholars (with date of contact and notes)
- Can view reports on scholars, applicants review minimal applicants match status on application to specific Host universities
- Can configure the system
- Can create Host Universities and related information
- Can mass mail system users
- Can manage users, roles and access
- Can import/export bulk data via Excel/CSV
- Can manage contents of the site by adding/editing categories and pages
- Can manage contents like notices, news, photo gallery, slide shows, etc

Workflows

Grants & Scholarship Application Process

Deliverables
1. An inception report highlighting how the task will be implemented:
2. A fully functional system with features and modules stated above and specified from the Systems Analysis report and System Requirements Specification documents.
3. Available API, fully functional
4. A draft report including:
   o A system analysis satisfactory mapped from the Systems Requirements Specification document
   o Functional Specification document.
   o System and Database Physical Design
   o Prototype model and report
5. Training report for the different users on system interactions, training modules, help systems and technical documents, and handover completed
6. A final report to the satisfaction of the RCU including:
   o user manuals and source code on the stated deliverables.

Duration of Assignment
The Consultant will report directly to the RCU Manager with guidance of the ICT Specialist. A total of 180 person days is provided for this assignment.

Task	Person Days
Project Inception	5
Scope out and Analysis	25

Diagram requirements for initial sprint	20
Sprint Based Development	125
Training	5
Support (Post Implementation)	6 months

C. Qualifications

Icipe is seeking for a firm with the following qualification:

- At least five (5) years of progressive experience with open source software development environment
- A solid understanding of web apps, API interfacing, relational database design and User Interface design;
- Expertise in Structured Query Language (SQL), and other high-end Database Management suites.
- Demonstrate previous implementations of 3-tier applications
- Experience with Agile software development methodologies;
- Experience with development of competitive and other granting systems.

The Key Expertise of the firm should include:

1. Project Manager
   - Relevant Bachelor's degree, Project management certification will be an added advantage
   - Experienced in the delivery of projects in an agile environment
   - Experience in the use of tools and techniques to facilitate effective project delivery
   - Application experience in all phases of software development projects including analysis, systems design, development and testing approaches
2. Database Designer and Administrator
   - Bachelor's degree with experience exceeding 3 years in developing and managing databases within the non-profit sector, with expertise on MySQL and MSSQL.
   - Database certification and knowledge of other Relational Database Management Systems will be an added advantage
3. Software Developer
   - Relevant certification in computer programming, computer science, or a related field with experience exceeding 3 years, who has worked in the system architecture design and development in at least three different projects within the non-profit sector
   - Programming expertise in PHP, Java, Python and/or .Net,
   - Expertise in Linux and Windows based operating systems
   - Strong understanding of the web development cycle and programming techniques and tools.

D. Application guidelines

All interested firms to send proposals, stating the assignment with the following documents:

- Detailed cover letter expressing interest in this assignment, including full contact details (name, tel. e-mail), and physical address) and firm's profile;
- Technical Proposal presenting methodology of work and approach;
- Detailed work plan, including time frames
- Professional references on previous systems developed
- A financial quotation based on the terms of reference above
    i. Provide a competitive and detailed cost breakdown (fee quote in US$) to perform the assignment, including all the chargeable taxes.
    ii. Terms of payment
- Should be in English language.

E. Criteria for selection of the best offer

The Consultant will be selected in accordance with the criteria laid down in "Selection Based on Quality and Cost Based Selection (QCBS) method set out in the World Bank's Procurement Regulations for IPF Borrowers July 2016, Revised November 2017 and August 2018 which can be found at the following website: www.worldbank.org