SECTION V: TERMS OF REFERENCE

Background

Water Sector Trust Fund (WaterFund) is a State Corporation under the Ministry of Water and Sanitation and established under the Water Act, 2016, with the mandate to assist in financing the provision of water services to areas of Kenya without adequate services. WaterFund has continued to invest in the implementation of Water, Sanitation Services and Water Resource Management activities through the following investment programmes:-

1. **Rural Investments:** These are programmes applied towards financial support to Implementing Agents in the underserved rural areas to apply for, manage, implement and maintain their own water and sanitation facilities. The main stakeholders are the Community Based Organisations and Rural Water Services Providers in collaboration with the County Governments.

2. **Urban Investments:** These are programmes applied towards improvement of access to underserved Low Income Areas in Urban Areas in Kenya. The key implementing partners in this approach are the Water Service Providers in collaboration with the County Governments.

3. **Water Resources Investments:** These are programmes for supporting Water Resource Users Association (WRUAs), promoted by the Water Resources Management Authority, to manage their water resources within sub catchments.

4. **Results-Based Financing:** In this investment programme, Water Services Providers and other implementing partners obtain project loans from commercial banks against bankable proposals. WaterFund then subsidises the implementer for the loan at an agreed percentage once deliverables / milestones are attained.

Introduction: WaterFund's Integrated Information System

As a financing institution, WaterFund is responsible to ensure that the fiduciary risks are minimised through effective operation of an efficient project management and monitoring system. The WaterFund has planned to develop an integrated information system to further strengthen its capacity to effectively and efficiently plan and implement programmes. This will include project management, work plan tracking, monitoring and evaluation of projects as well as various office automation modules. In order to augment its capacity and ensure realisation of the proposed system within the specified timelines and quality metrics, the WaterFund plans to procure a professional software development company for the process of system development.

In the past, the WaterFund has implemented various systems to manage data for different programmes and for enhanced reporting. However, these software applications as intangible assets have depreciated in value and applicability over time and there have been changes in the WaterFund's business requirements. The WaterFund has in the past carried out corrective and adaptive maintenance in order to improve the software applications or to improve operability. This entailed adjustments of the database, application architecture, and/or source code to perform system workflows in completely new ways to enable the systems to generate the required reports.

In the last several years, some areas of improvement and new functionalities have been identified that should be integrated to embrace recent developments in ICT and implement innovative ways that can enhance service delivery. After thorough system analysis, the teams at WaterFund have concluded that the previously developed systems for project management are not meeting business requirements and need to be replaced with an enhanced system to also factor in the contemplated efficiencies to be realized through the work plan and office automation applications.

It is thus envisioned that all previous project management systems will be replaced with a common project management information system, and hence the need for a **systems integration project (SIP)**, culminating migration of data into, and rollout of the new system across the institution.

This Terms of Reference (ToR) aims to provide a framework for the engagement of a professional firm that will develop and install the information system to the satisfaction of the WaterFund.

The scope of the provisions and expectations of this ToR is further elaborated in the detailed System Requirements Specification (SRS) document (Attached). It is understood that the SRS is a fundamental and core component of this ToR.

The SRS provides a detailed description of the modules, procedures and general inputs and outputs of the ideal system that is up to date with the current institutional framework, utilizing world-class technology and will be used by the WaterFund in the foreseeable future (for at least 5 years). It is anticipated that the proposed system will be easily adaptable to future business and technological changes and enhancements.

Objectives and Scope of the Assignment

Within its statutory mandate of the WaterFund in providing conditional and unconditional grants to counties, and assisting in financing the development and management of water services in marginalised or underserved areas, the WaterFund plans to develop a Management Information System to enhance systematic programme management, monitoring evaluation and reporting, and additionally the work plan and office automation system.

The project system is expected to promote a consistent and common approach to overall project planning, implementation, monitoring and reporting across the investment programmes. This section details the objectives, purpose and scope of this consultancy.

Objectives

The purpose

The purpose of this consultancy is to procure a professional software development company for the process of system development and rollout of the **integrated information system.** It is expected that the firm will update the project implementation team on required actions and follow through on resolutions to ensure that the system is developed and completed within the stipulated timelines, and in compliance with the stipulated quality standards provided for in the SRS.

On inception, the firm will be expected to review the proposed SRS for compliance to required standards whilst ensuring that the objectives of the system development are fully realized.

Specific Objectives

a) Review of the System Requirements Specification (SRS)

i. Review the existing SRS as proposed by the WaterFund team highlighting potential areas for amendment based on data requirements, availability and efficiency in acquisition or any critical assumptions

b) Systems development

i. Modular system development and piloting (including beta testing and customization of each module)

ii. Where applicable, support the data migration from WaterFund's legacy project systems

c) User acceptance testing (UAT)

i. Conducting UAT to ensure that the developed system is fit for purpose

ii. Addressing change requests arising from the UAT (if any)

d) Systems rollout and training

i. Systems deployment / rollout

ii. Training of all applicable user groups: administrators, auditors, general users, etc

iii. User manuals and guidelines for all user groups including Admins

Scope of the Assignment and Project Management System

The scope of the system will involve the designing and development of a web-based integrated information system i.e. project management, work plan and office automation information system and requisite mobile application(s).

The project management system will cover the WaterFund's project cycle from proposal development, project implementation and post implementation stage as shown in the project cycle diagram in the SRS.

The project management system scope is as follows:

i. Design of a Web-enabled system to track project status - The database and data model should be structured intelligently and appropriately to ensure ease of entry, quality management, access control, processing, visualisation, and reporting that includes a GIS / mapping system to provide spatial perspective to the project status data.

ii. Design and development of a mobile application for Android and iOS based devices with a provision for collecting data and working offline.

iii. The system will have appropriate security arrangements (e.g. for data backup, data security, and allocation of access rights etc.).

iv. Design of an online dashboard in order to ensure that the parameters tracked are captured, conveyed, stored, processed, visualised, and reported in an adequate and timely manner to support project status review and adaptive decision-making.

v. The dashboards for reporting should be in easy-to-understand layouts to facilitate status reporting to a wide range of stakeholders. It should include tables, charts, maps, summary text and descriptions / comments and comparison of current status with historical progress and targets. The system admin should have access to raw data.

vi. The system should have an application programming interfaces to receive financial information from SAP Business One and another to output the GIS databases for visualisation of project information on an external dashboard based on Carto DB.

vii. Design of a system to track work plans and contribute to performance contract, taking into account the institution's Strategic Goals, Key Results Areas, Strategies, Activities and Outputs

viii. Design of various office automation modules that include Petty Cash Request, Imprest Application, Imprest Surrender, Travel Request, Stores Request, Leave Management, Performance Management (Quantitative & qualitative), Training Request, Institutional Calendar, IT Helpdesk

ix. Comprehensive system documentation and provision of source code as part of business continuity planning.

x. The system should be implemented using modular system development approaches, which will include piloting, beta testing, customisation of each module, and user acceptance testing.

Development and Deployment Strategy

The methodology for this assignment should be based on a clear understanding of this TOR, the scope of work, and the wider local and international systems development issues.

The system shall be developed in a phased approach as follows.
During **Phase 1,** the developer shall translate the proposed SRS into system design. This shall include the definition of architectures, design of the system wireframes, the definition of testing procedures and design of scaling procedures. Once all details of the design are well defined and approved, the consultant shall proceed to Phase 2.

During **Phase 2**, the developer shall develop, test the system and document. Priority must be given to the Project Management module, as the delivery of other steps will be contingent on successful delivery and demonstration of an effective project management system. The WaterFund shall evaluate the deliverables of Phase 2 for compliance with the executive design and using the test procedure agreed to in Phase 1 to customise the system further. Successive investment programmes will be tested through the system and feedback for further improvement implemented by the consultant. After the successful completion of Phases 1 and 2, the consultant shall initiate Phase 3.

Under **Phase 3**, tasks include piloting, applicable data migration and user acceptance testing. The system will then be fully deployed for the current WaterFund programmes

during the financial year within which the system is completed. This will be accompanied by training.

In **Phase 4**, the developer shall provide for a six-month warranty period that shall include system maintenance such as fixing bugs, customising additional required dashboards and reporting formats and completing non-compliant System features discovered after the User Acceptance Testing.

The deliverables for all Phases shall include detailed documentation and **the source code** of the product, which will be given in an appropriate format to the WaterFund during the system handover. This shall give the WaterFund assurance on the quality of the products in terms of readability and programming style and ensure high quality throughout the duration of the project. It will also provide the WaterFund with a fall back plan in case of bottlenecks in the system as well as provide possibility of future improvements in the system and agility in required reviews further enhancing the system's shelf life.

Quality Assurance and reporting

a) Quality Assurance Plan for the development of the overall system

b) Statement of Works for tracking implementation

c) Weekly progress reporting to the project implementation team

d) Business continuity plan to prevent failure and recovery plan to deal with potential threats

e) Issues documentation, management and follow-up

Expected Deliverables

a) A comprehensive inception report clearly specifying how tasks will be carried out, methodology, the work plan and tentative delivery date as part of the application

b) Phase 1 deliverables (translation of the proposed SRS into design) and Phase 2 deliverables (Systems development, beta testing, customisation and piloting)

c) Phase 3 deliverables including piloting, applicable data migration and deployment, accompanied by training

d) Phase 4 deliverables, comprising the six-month warranty (handholding period) that shall include system maintenance such as fixing bugs, customising additional required dashboards and reporting formats, delivery of **all system documentation**, **the source code**, and official handing over

e) Periodic (bi-weekly) system implementation status reports in email and hard copy format

f) A working system with all the features specified in the SRS

g) A comprehensive final report

Duration
Starting Period
The expected starting date of the assignment is **1st February, 2023.**

Expected Duration
The developer will need to provide the Services requested including final reporting within six calendar months from the starting date. Expected finishing date of the contract **July 31st 2023.**

ASSIGNMENT

Instructions

1. Identify all the activities which need to be done for the integrated system (for all the modules)
2. Identify possible risks and mitigation measures
3. Identify the skill sets / competencies required for the project team to implement this project successfully
4. Do a write up on the number 1 and 2 above
5. This can be done in groups