# General Guideline to use this document

All yellow paragraphs need to be replaced with own content. They provide only a description of the content expected in this chapter.

Some chapter structures can be copied as per request (e.g., In the document only “Iteration 1,2, 3” are described – in case you need further iterations, these sections need to be copied and filled with content).

Repetitive sections can be removed in case they are not needed (e.g., “Component 3” can be removed if not needed.

GOVERNMENT OF RWANDA

Rwanda Information Society Authority

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# Summary

**Subject:** Terms of Reference for Project Title

**Date**: Date

**Supervisor(s):** e.g.,Rwanda Information Society Authority – RISA

**Location**: e.g., Kigali - Rwanda

# Introduction and Background

To be provided.

# Expected detailed results

To be provided (more detailed and technical description of the expected solution).

##  General description of the targeted solution.

Please provide a general description.

## Targeted Architecture

Provide a picture of the targeted architecture:

The targeted architecture of the intended solution is organized into the following modular components:

### Component 1

#### **Business Background**

Please describe the business background of this component.

#### Business Processes

Please describe the business processes and business rules covered by this component. The description can be in text or diagram.

#### Structure and size of data

tbd

#### **Minimum intended integration to back-end systems and/or source files**

tbd

#### **Intended front-end visualization**

tbd

#### **different user groups (like users, designers) and the size of user groups**

tbd

#### **Additional information**

tbd

### Component 2

#### **Business Background**

Please describe the business background of this component.

#### Business Processes

Please describe the business processes and business rules covered by this component. The description can be in text or diagram.

#### Structure and size of data

tbd

#### **Minimum intended integration to back-end systems and/or source files**

tbd

#### **Intended front-end visualization**

tbd

#### **different user groups (like users, designers) and the size of user groups**

tbd

#### **Additional information**

tbd

### Component 3

#### **Business Background**

Please describe the business background of this component.

#### Business Processes

Please describe the business processes and business rules covered by this component. The description can be in text or diagram.

#### Structure and size of data

tbd

#### **Minimum intended integration to back-end systems and/or source files**

tbd

#### **Intended front-end visualization**

tbd

#### **different user groups (like users, designers) and the size of user groups**

tbd

#### **Additional information**

tbd

# Expected Deliverables

## Overarching iterations

The future solution should be implemented in iterations. Each iteration would be expected to take no longer than 2-3 months. Final setup of iterations will be aligned with proposed solution approach by provider. The development approach will follow the described methodology as in the annex.

## Overarching Requirements

### Default GoR Requirements

The default GoR requirements are described in the attachment “Requirements self-assessment sheet of GoR default requirements”.

### Specific General Project Requirements

Please describe here overarching project specific requirements which are not covered in the default requirements.

## Iteration 1: Name of Iteration 1

#### Description

Brief overview description of deliverables for this iteration.

#### To be implemented Features

Detailed description of the functionality to be delivered in this iteration.

#### Deliverables

An **inception report** is to be submitted two (2) weeks after the commencement of the assignment detailing but not limited to the project implementation plan, timeline, schedule, detailed roles, responsibilities and activities of each party based on mutual agreement. It includes:

* Detailed project work plan with timeframes, outlining what must be done to have a fully implemented solution with iterations, features, user stories, resources and roadmap with specific, clear and detailed milestones according to the iterations with their respective implementation, deployment timelines to ensure timely system delivery.
* The chosen approach should support agile project management and usage of GoR project management landscape (OpenProject, GitLab, etc.).
* Knowledge transfer (methodology and strategy) during the implementation period
* Overall understanding of need of the GoR reflected in the proposal addressing of risks identified that may affect implementation and operations.

The **complete release package** of the solution for this iteration, including the source code produced as part of customization or development.

* A well developed and **working system** as per the customer’s requirements
* **Training** for users and system administrators
* **Licenses** as per solution proposal
* A **final report** of the work done during iteration
* **Test reports**
* A **requirements traceability matrix** which shows, how the requirements were implemented for the current iteration

Documentation which should include but not limited to:

* **Functional specifications document** (specification of all user stories and features) that will guide development work on the solution for the iteration.
* **Data Model**
* **Technical Specifications and Software Architecture** with detailed diagrammatic drawings of the implemented system for the iteration.
* **Detailed equipment inventory**, products catalog and information sheets (technical “data sheets” or “cut sheets”) for all hardware and software used in the delivery of the solution.
* A detailed and documented **operational manual** for the system according to the scope of iteration
* **Build, deployment and configuration guides** for each components of the solution according to the scope of iteration
* **Training material (**PowerPoints, webinars, etc.)

## Iteration 2: Name of Iteration 2

#### Description

Brief overview description of deliverables for this iteration.

#### To be implemented Features

Detailed description of the functionality to be delivered in this iteration.

#### Deliverables

An **inception report** is to be submitted two (2) weeks after the commencement of the assignment detailing but not limited to the project implementation plan, timeline, schedule, detailed roles, responsibilities and activities of each party based on mutual agreement. It includes:

* Detailed project work plan with timeframes, outlining what must be done to have a fully implemented solution with iterations, features, user stories, resources and roadmap with specific, clear and detailed milestones according to the iterations with their respective implementation, deployment timelines to ensure timely system delivery.
* The chosen approach should support agile project management and usage of GoR project management landscape (OpenProject, GitLab, etc.).
* Knowledge transfer (methodology and strategy) during the implementation period
* Overall understanding of need of the GoR reflected in the proposal addressing of risks identified that may affect implementation and operations.

The **complete release package** of the solution for this iteration, including the source code produced as part of customization or development.

* A well developed and **working system** as per the customer’s requirements
* **Training** for users and system administrators
* **Licenses** as per solution proposal
* A **final report** of the work done during iteration
* **Test reports**
* A **requirements traceability matrix** which shows, how the requirements were implemented for the current iteration

Documentation which should include but not limited to:

* **Functional specifications document** (specification of all user stories and features) that will guide development work on the solution for the iteration.
* **Data Model**
* **Technical Specifications and Software Architecture** with detailed diagrammatic drawings of the implemented system for the iteration.
* **Detailed equipment inventory**, products catalog and information sheets (technical “data sheets” or “cut sheets”) for all hardware and software used in the delivery of the solution.
* A detailed and documented **operational manual** for the system according to the scope of iteration
* **Build, deployment and configuration guides** for each components of the solution according to the scope of iteration
* **Training material (**PowerPoints, webinars, etc.)

## Iteration 3: Name of Iteration 3

#### Description

Brief overview description of deliverables for this iteration.

#### To be implemented Features

Detailed description of the functionality to be delivered in this iteration.

#### Deliverables

The **final release package** of the solution, including the source code produced as part of customization or development.

* A well developed and **working system** as per the customer’s requirements
* **Training** report for users and system administrators
* **Licenses** as per solution proposal
* A **final report** of the work done during iteration
* **Test reports**
* A **requirements traceability matrix** which shows, how the requirements were implemented

Final documentation which should include but not limited to:

* **Functional specifications document** (specification of all user stories and features) that will guide development work on the solution for the iteration.
* **Data Model**
* **Technical Specifications and Software Architecture** with detailed diagrammatic drawings of the implemented system for the iteration.
* **Detailed equipment inventory**, products catalog and information sheets (technical “data sheets” or “cut sheets”) for all hardware and software used in the delivery of the solution.
* A detailed and documented **operational manual** for the system according to the scope of iteration
* **Build, deployment and configuration guides** for each components of the solution according to the scope of iteration
* **Training material (**PowerPoints, webinars, etc.)

# Qualification & Technical Expertise of key staff

The selected bidder should provide CVs of key staff relevant to fulfill the requirement by implementing a state-of-the-art architecture. CVs of key staff should include recent references for projects similar in scope and complexity using the proposed technology; these are for both main software providers and any third-party partners if they are directly involved to fulfill the contract.

RISA will expect similar standards where there may be needed to reassign staff, the consulting company is required to provide CVs for the following personnel categories if relevant for the proposed targeted solution.

The company can use a pooling approach for the relevant skills.

## Project Manager

The proposed Project Manager should:

* At least possess a bachelor’s degree in Computer science, Information technology/management, Software engineering or another relevant field.
* Have at least five (5) years’ experience in project management. This experience must include at least three (3) years implementing large scale IT projects of similar nature (scope and complexity) to this project.
* Have implemented country level government projects.

## Technical Architect

The proposed Technical Architect should:

* Possess a master’s or Post Graduate Degree in Computer Science, Information Systems or related technical field.
* Have at least five (5) years’ experience in system architecture, and the experience must include three (3) years’ experience in the implementation of a solutions similar in nature, scope and complexity to this tender.
* Be knowledgeable in the main areas of this tender namely:
	+ tbd

## Developer

The proposed developer should:

* Possess a bachelor’s degree in Computer Science, Information Systems or related technical field.
* Have hands-on experience with:
	+ Development of tbd
	+ Proven 3 years skill in the proposed solution including the to be integrated technologies

## Business Analyst

The proposed Business Analyst should:

* Have a bachelor’s degree in Computer Science, Information Systems or related technical field.
* Have experience in requirements gathering & management plus development
* Have minimum three years in Business Analysis or related fields.
* Have excellent analytical and conceptual thinking skills
* Have excellent skills in process and data modelling techniques and methods
* Have excellent documentation skills.
* Have excellent skills in stakeholder's analysis.

## UX Designer

The proposed UX Designer should:

* Have a bachelor’s degree in Computer Science, Information Systems or related technical field.
* Have 3 years of demonstrated experience in creating and implementing a UX design
* Have proficient with visual design programs such as Adobe Photoshop and others
* Have ability to work effectively in a collaborative environment to create top-performing interfaces for clients
* Have experience with coding and ability to troubleshoot using HTML, CSS and comparable languages
* Have experience creating storyboards and website mapping

# Key Information expected from proposal and application procedure

## Application Procedure

Qualified and interested firm/Consultants are hereby requested to apply. The application should contain the following:

* A detailed technical proposal with brief description of why the Consulting Firm/Consultants would be considered as the most suitable for the assignment, relevant expertise in GCC, and a detailed clear methodology, on how they will approach and complete the assignment.
* The detailed technical proposal should also contain key staff CV(s) indicating education background/professional qualifications, all past experience, as well as the contact details (email and telephone number) of the candidate.
* Detailed Financial Proposal that indicates the all-inclusive total contract price, supported by a detailed breakdown of costs.
* Having a local company as a partner to deliver this project would be an added advantage. The bidder should provide clear separation of roles and responsibilities with the local partners.

## Key Information expected from proposal for Iteration 1

To be provided. (example: Fixed price proposal for solution as described, license costs, training for future staff, infrastructure requirements).

## Key Information expected from proposal for Iteration 2

To be provided. (example: Fixed price proposal for solution as described, license costs, training for future staff, infrastructure requirements).

## Key Information expected from proposal for Iteration 3

To be provided. (example: Fixed price proposal for solution as described, license costs, training for future staff, infrastructure requirements).

# Warranty time

The vendor should provide warranty for the delivered solution for a period of 12 months after acceptance.

# Submission of Bids

Interested Consulting Firm/Consultants are requested to submit their offers documents (technical and financial) and should clearly be related to the assignment advertised i.e. **“Development of tbd“** in separated sealed envelopes latest by: ………………………

# Evaluation criteria

The evaluation of bidders will mainly take into consideration regarding the bidders fulfilling as a minimum the following key elements

* Qualification criteria, including client references are met
* Assessment of the proposed solution
* Assessment based on self-assessment of the solution and training concept based on attached requirements sheet fit requirements fits requirements.
* Planned onsite presence has to fit the solution approach (e.g. business analyst expected to be onsite a reasonable amount of time) fits requirements
* Staff CVs meet requirements

# Attachments

## Requirements self-assessment sheet of GoR default requirements

The attached sheet with GoR default requirements needs to be answered how the vendor would comply.

./current/attachments/requirements scenarios.xlsx

## Iteration 1 – screenshots for UI and other material

./attachments/iteration1/screenshots&other

## Iteration 2 – screenshots for UI and other material

./attachments/iteration2/screenshots&other

## Iteration 3 – screenshots for UI and other material

./attachments/iteration3/screenshots&other

# Abbreviations

MINECOFIN – Ministry of Economy and Finance

GoR - Government of Rwanda

PS – permanent secretary

DG – Director general

AVB - General terms and conditions of contract (‘Terms and Conditions’) for supplying services and work

CD - Capacity development

CV - Curriculum Vitae

DSSD - Digital Solutions for Sustainable Development

ETL- Extract-transform-load

GCC - Government Command Center

GoR - Government of Rwanda

ICT - Information and Communications Technology

KPI - Key Performance Indicators

MINECOFIN - Ministry of Finance and Economic Planning

MVP - Minimum Viable Product

OS - Operating System

OLAP - Online Analytical Processing

OTP - Office of the President

PMO - Prime Minister Office

REG – Rwanda Energy Group

RISA - Rwanda Information Society Authority

TCO - Total Cost of Ownership

ToR -Terms of reference

UI - User interface

WASAC – Water and Sanitation Corporation

# Annex

## Annex 1: Development Methodology

The project management methodology uses the SCRUM approach as proven agile methodology. This methodology will be used for project management inside the overarching iterations. The following main artefacts/roles will be used.

### Sprint

Each sprint is a time boxed development phase which will be used to deliver ready to use products. The intention is, to add small features and user stories in each sprint to deliver an incrementally improved product. Current sprints at RISA use a one-week time box. The duration of the standard sprints can be adjusted as part of the retrospective.

### Feature/User Story

Features and user stories are the artefacts which define the deliverables inside a sprint. They need to be described and documented. The team has to agree on the “definition of done” for an agreement of completion of the respective artefacts. The difference between “user story” and feature for RISA is mainly the distinction between deliverables with a concrete impact on users (resp. user stories) like implementation of a specific dashboard or workflow or deliverables with no specific impact on users (resp. features) like implementation of a core data model.

### Backlog

The Backlog covers the list of all features and user stories which are in scope or will be in scope for implementation. It acts as the pipeline for to be implemented artefacts.

### Daily Stand-ups

Daily stand-ups are a standard approach as part of the SCRM methodology. The collocated team meets at a dedicated fixed and short time slot (usually 15 minutes) and answers one by one the following questions:

* What did I do yesterday?
* What will I do today?
* What are obstacles on my way?

Based on experience we have the DO’s and DON’T DO’s:

DO’s

* Create and support an open environment and atmosphere
* Schedule follow ups for identified obstacles
* Be firm, be brief, be open

Don't DO’s

* Don’t use it for individual tracking
* Don’t expand the timeslot by going too much into the details (rather schedule follow up)
* Don’t blame.

### Retrospective, Review & Planning

As the iterations in RISA are quite short, best practice has been established to combine retrospective, review and planning session. During this session the following activities are to be performed:

* Review the result of the features planned for the current sprints based on the “definition of done”
* Accept or reject completion status
* Review the “definition of done”
* Review the preparation of features in the backlog
* Plan features or user stories for the current sprint
* Adjust the approach if necessary

### Scrum team

The scrum team is the team which will deliver the final solution. As per the currently planned (to be revised setup) it consists of members of:

* Implementation team of the consulting team
* Implementation team of Customer
* RISA team (please adjust)
* etc

### Product owner

The RISA project manager acts as the product owner for this project. He will provide priorities for project artefacts and finally accept or reject the implemented features or user stories.

### PM-System

The customer uses “OpenProject” (please adjust) for project tracking and planning. This system shall be used for project planning and reporting by the vendor.

### CI/CD Environment

The customer uses Gitlab (please adjust) for versioning and CI/CD. This should be used as a code repository.

## Annex 2: Acceptance procedure

All deliverables which are part of a fixed price solution shall be accepted by a formal acceptance procedure aka “user acceptance test”. The set of the tests will be mutually agreed during the project phase. They are mainly a subset of the vendors functional end-to-end-tests but can be extended by the customer with own test cases. All test cases have to be based on the described iterations and the requirements. Each iteration finishes with an acceptance of the deliverables of this iteration.

### Severity of failed test results

Failing test results will be classified with the following severities:

* **(1) Critical:**
	+ Failing test critically affects the primary business service, major application or function
	+ Characteristics of a Severity 1 case include but are not limited to:
		- Business service or function is not operational
		- Production system crashes
		- Data integrity at risk
		- Production backup and recovery operations fails
* **(2) Major:**
	+ The business service, major application, function, or system is seriously affected
	+ No acceptable workaround is available
	+ Documentation not available
* **(3) Medium:**
	+ The business service, major application, function or system is moderately impacted
	+ No data has been lost
	+ The business service, application, or system is still functioning
	+ Documentation needs an explanation
	+ The case may be temporarily circumvented using an available workaround
* **(4) Minor:**
	+ Non-critical cases
	+ Minor documentation cases
* **(5) Service Requests:**
	+ Enhancement requests

### Acceptance criteria

Acceptance shall be granted as per the following criteria:

| Deliverable | Acceptance criteria |
| --- | --- |
| Solution as per iteration 1,2,3 | User acceptance test with not more than:* 0 (zero) critical test fails
* 0 (zero) major test fails
* 3 (three) medium test fails
 |
| Training as per iteration 1,2,3 | Training as per mutually agreed training plan |
| Licenses | Licenses purchased as mutually agreed and proposed |

### Bug fixes during warranty period

The vendor is expected to fix all bugs of severity 1-4 during the warranty period for the product.