Terms of reference for the MINECOFIN Technical Assistance.

Position: Firm to support Development and Implementation of Assets and Inventory Management (AIM) Tool for Schools.

About DAI

DAI is an employee-owned global development company. For 40 years, we have worked on the frontlines of international development, tackling fundamental social and economic development problems caused by inefficient markets, ineffective governments, and instability. Currently, DAI is delivering results that matter in some 60 countries. Our integrated development solutions turn ideas into impact by bringing together fresh combinations of expertise and innovation across multiple disciplines—crisis mitigation and stability operations, democratic governance and public sector management, agriculture and agribusiness, private sector development and financial services, economics and trade, HIV/AIDS and disease control, water and natural resources management, and energy and climate change. Our clients include international development agencies, international lending institutions, private corporations and philanthropies, and national governments.

About Rwanda TAF

The Rwanda Technical Assistance Facility (TAF) is a four-year (2021-2025) FCDO-funded project and a component of the Strengthening Public Financial Management and Revenue Collection (SPARC) programme, which broadly aims to support the Government of Rwanda (GoR) on a range of priorities across the public sector policy revision agenda. The TAF aims to support the GoR through provision of short- and longer-term technical expertise to support institutional change and human capital development as critical parts of implementing Rwanda's second generation of reforms focused on improved outcomes on service delivery, economic growth and poverty reduction. The project works with the FCDO and GoR to

I. identify politically savvy technical assistance opportunities.
II. manage and deliver high quality technical assistance via short-term assignments or longer-term embedded advisory support; and
III. monitor delivery and evaluate the impact of the technical assistance.

Context

Public Financial Management (PFM) refers to the set of practices, processes, and systems used by governments and public sector organizations to manage and control their financial resources effectively. It involves planning, budgeting, accounting, revenue management, procurement, and reporting to ensure transparency, accountability, and efficiency in the use of public funds.

Rwanda's public schools are already supported by a centralized school Data Management System (SDMS) that is used for budget preparation, accounting, revenue collection, accounting and financial reporting. In addition to financial modules, the system has features for students'

registration, capitation grants, school feeding and TVET consumable computation and requests for government-owned and government-aided primary and secondary schools.

The implementation of International Public Sector Accounting Standards (IPSAS) has been identified by the Government of Rwanda (GOR) as one of critical success factors in increasing compliance with Public Finance Management (PFM) rules and procedures, and ensuring public resources are used appropriately.

Rwanda is transitioning to accrual-based International Public Sector Accounting Standards (IPSAS), which emphasize accurate accounting and management of public assets. In the education sector; one of the largest recipients of public fund, asset and inventory tracking remains largely manual or fragmented, leading to inefficiencies, loss of property, and limited accountability. The current manual and spreadsheet-based systems lack real-time tracking capabilities, offer minimal data visibility, and are prone to errors, inefficiencies, and data inconsistencies across the 4,000+ public schools.

It is in this regard, MINECOFIN, through FCDO support under the RTAF, wishes to recruit a consulting firm to develop and deploy a digital **Assets and Inventory Management (AIM) tool**. The AIM tool should integrate seamlessly with the existing School Data Management System (SDMS) featuring mobile and barcode/RFID functionalities. School accountants will be able to record and track the Lifecyle of assets (acquisitions, allocation, maintenance, disposals) and inventory movements, while central dashboards will provide the Ministry with real-time information on resource usage, condition, and location.

Objective

The overall objective is to design, develop, test, and deploy a scalable, user-friendly, and secure Assets and Inventory Management (AIM) tool to digitize and centralize the management of school assets and inventory, ensuring full transparency, accountability, and lifecycle tracking of physical and consumable resources. The tool will be integrated with the existing School Data Management System (SDMS) and include mobile and barcode/RFID functionalities.

Specific Objectives:

- Improve real-time visibility of school assets and inventories.
- Digitize asset lifecycle tracking (acquisition, allocation, maintenance, usage, transfers, disposals)
- Enable school accountants to record asset and inventory data through mobile devices.
- Provide dashboards and reporting tools to all related stakeholders.
- Support compliance with IPSAS requirements regarding public asset management and financial reporting.

Key Features:

- ✓ Asset Registration
- ✓ Inventory Management
- ✓ Asset Allocation
- ✓ Disposal & Decommission
- ✓ Stock Alerts & Notification
- ✓ Audit & Reporting
- ✓ Barcode/RFID Tagging
- ✓ Integrations with SDMS and PFM Cashless Mobile App

Rationale and contribution to TAF results

This intervention contributes to Outcome 1.1-Number of government systems/processes/programmes enhanced following policy development and/or review supported by TAF by enhancing the Government of Rwanda's asset and inventory management processes through the development and deployment of a fully digital, integrated AIM tool for public schools. It also contributes to Output 2-MDA staff capacity in policy planning and implementation strengthened, through targeted capacity-building for IFMIS/SDMS Business Team and Software Developers, ensuring practical utilization, ownership of the new system and sustainability.

Scope of the Assignment

The selected firm will be responsible for the end-to-end development and implementation of the AIM tool. The scope of the work is mentioned below but ii not limited to the following:

Requirements Collection & System Design

Under the supervision of the Financial System Development Program (FSDP), the consulting firm shall conduct the need assessment and design as follows:

- Conduct a detailed requirement analysis with stakeholders from MINECOFIN, MINEDUC and selected school administrators (head teachers and accountants).
- Provide a detailed documentation of the current asset & inventory management practice in schools and identify challenges within the current practice.
- Review the current SDMS infrastructure and API for integration compatibility.
- Propose system architecture and design specifications.
- Develop a comprehensive and detailed software requirements specification for the design of an innovative digital AIM tool that will enforce the good PFM practices and proper asset and inventory management in primary schools, while factoring in identified gaps and highlighted challenges of environment, human and technologies.
- Define user roles and access levels.

System Development

The consulting firm will be responsible for the development of the designed AIM tool with the following features:

- Asset Registration: The AIM tool should allow addition of new assets upon acquisition, with key details (type, model, serial, supplier, purchase date, value).
- Inventory Management: Track consumables (e.g., chalk, printer cartridges, books) with stock-in/out functionality.
- Assignment Tracking: Assign fixed assets (e.g., computers, desks) to student, staff, or rooms
- Disposal & Decommission: the new AIM tool should manage asset disposal following policy, including reason and approval workflows by school administrators.
- Stock Alert & Notification: Automated alerts for low stock levels, maintenance schedules, stock audits should be generated from the system, Emails or SMS should be used.
- Incorporate barcode and RFID scanning functionalities.
- Authentication: Implement Single Sign-On (SSO), users currently in SDMS should be able to access the AIM tool using the same credentials and roles.
- Develop a web-based and mobile-enabled AIM tool.
- The AIM tool must ensure integration with SDMS via secure APIs to support real-time data synchronization.
- The consulting firm will not be responsible for the development of SDMS Application Programming Interfaces (APIs).
- During the development the source code will be stored to IFMIS code repository.
- The source code will be property of MINECOFIN during development and go-live implementation.
- The source code must be properly documented with clear and detailed documentation of the APIs for integrating the AIM tool with other systems.
- The AIM tool shall be designed with features associated with simplicity, speed, good, flexibility, security, search options, bright and bold colour schemes, push notifications, user feedback and updates.
- Setup and maintenance of production environment when features become production ready
- The consulting firm must focus on simplicity, great performance and attractive design. Must adhere to platform specific UI standards provided by Apple and Google respectively.
- The AIM should be web-based (desktop) and have a mobile-friendly interface
- The architecture of the AIM tool should be modular and must use REST APIs to communicate with SDMS and PFM Cashless Mobile App.
- The consulting firm must use the same technology stack as IFMIS and SDMS to reduce development and maintenance costs.

Pilot Testing & Deployment

- Deploy the developed AIM tool for a pilot test to a representative sample of schools (10 – 20 schools)
- Collect user feedback, fix bugs, and optimize performance.
- Ensure installation/configuration of required hardware and software for both UAT environment and productions. In addition, provide the specification of the barcode readers.

Training

The firm will develop and execute change management and training for IFMIS/SDMS Business Team and Software Developers. The change management and training approach should consist of multiple methods as well as training task plan.

Training methods but limited to the following

- Job shadowing
- Coaching
- Demonstration

Warranty, Support, Maintenance & Change management

- The consulting firm must provide post implementation free support for a period of 6 months from the time of acceptance testing of the AIM tool by MINECOFIN.
- During the warranty period, the consulting firm will be responsible for making necessary changes as well as fixing bugs, if any.
- Regular Maintenance of the entire system.
- The changes will be considered major if the change brings about a major impact on the database or adds more input screens and navigations.
- Provision of ongoing and regular maintenance services during the support contract period for the application including, but not limited to, the following:
  (i) Capacity monitoring
  (ii) Performance monitoring and tuning
  (iii) Design updates and minor changes
  (iv) Technical troubleshooting.

Deliverables, Reporting and Coordination

The firm will produce the following deliverables;

Deliverable:1. Inception report and detailed workplan

Deliverable:2. Software requirements specification (SRS document), Detailed project plan (Preferably in MS Project) with milestones, activities, and tasks, including progress and payment milestone and Technical documentations i.e.: High level conceptual framework, system architecture design, functional and user guide documentation.

Deliverable:3. Fully functional AIM tool with seamless integration with SDMS

Deliverable:4. Source code of the system both front-end and back-end and documentation of the source code

Deliverable:5. Training and coaching activities provided to FSDP Business Team and Software Developers with a training report.

Deliverable:6. End-user and Technical support manuals.

Reporting and Coordination- The firm Experts will report to the Coordinator of IFMIS in MINECOFIN or his delegate.

Following approvals of deliverables, invoices shall be sent to the Team Leader of the Rwanda Technical Assistance Facility (RTAF) for payment.

Requirements: Qualifications and Experience

Firm profile

- The consulting firm must be a Software Development firm with a minimum 5 years of active existence in software design and development especially large-scale digital systems, preferably in education, finance, or public sector domains.
- The consulting firm should have prior experience with IPSAS-compliant systems or public asset tracking solutions.
- The company must have experience in digitization services and have at least digitized more than 20 services.
- The company must have experience in designing, deployment complex digitization infrastructure with hyper converged network, hybrid storage and private cloud scalable to 10 TB.
- The firm must have a team capable of executing a large digitization project and in short period of time.
- Minimum 2 large scale financial or educational system developed by the firm. The consulting firm must submit a copy of Work Order/Completion, Certificate/Acceptance Letter from clients as proof.
- Minimum of 2 local technical resource persons with minimum 3 years of work experience in Java, Spring Boot and Angular application development. Must submit signed CVs of employees along with required certificates.
- The consulting firm must have at least one completion certificates of similar work in Rwanda.
- The consulting firm need to have competent full-time manpower/consultants in the team that includes Business Analyst, PFM/Fiscal Decentralization Expert, Solution Architect, Java Developers, Web System Development Expert, UX Expert, Technical Writer and dedicated Support Engineers having individual experience in the relevant ICT area.

Profile of key staff

The consulting firm must have a team composed of the following key personnel:

Team Leader

- **Education:** Master's degree in Information Technology, Computer Science, Project Management, or related fields.
- **Experience:**
  - At least 10 years of experience in managing software development projects, especially in the financial sector or educational institutions.
  - Proven track record in leading cross-functional teams and delivering complex IT solutions on time and within budget.
- **Skills:**
  - Strong leadership, communication, and stakeholder management skills.
  - Proficiency in project management methodologies (e.g., Agile, Waterfall).
  - Ability to oversee technical and non-technical aspects of the project.
- **Certifications:** PMP, PRINCE2, or other relevant project management certifications are preferred.

Software Developers (Front-end & Back-end)

- **Education:** bachelor's degree in computer science, Software Engineering, or a related field.
- **Experience:**
  - Minimum of 5 years of experience in software development using Java & Spring Framework.
  - Proven experience in developing and deploying web applications
  - Experience in developing and integrating APIs, databases, and payment gateways.
  - Experience in developing financial applications or apps with integrated payment systems.
- **Skills:**
  - Proficiency in programming languages such as Java, Angular, React Native, flatter.
  - Knowledge of developing API using REST and JWT.
  - Strong understanding of database management systems (e.g., PostgreSQL).
  - Strong understanding of service-based architecture and UI/UX design principles.
  - Familiarity with security best practices in web app development.
- **Certifications:** Relevant software engineering certifications (e.g., Java, Python) are preferred.

Business Analyst

- **Education:** bachelor's degree in business administration, Finance, Information Systems, or a related field.
- **Experience**:
  - Minimum of 5 years of experience in business analysis, particularly in IT projects.
  - Experience in the education sector or public financial management systems is highly desirable.
  - Proven experience in requirements gathering, process modelling, and stakeholder management.
- **Skills:**
  - Proficiency in business analysis tools (e.g., JIRA, Confluence, MS Visio).
  - Strong analytical and problem-solving skills.
  - Excellent communication skills, with the ability to bridge the gap between technical teams and non-technical stakeholders.
- **Certifications:** CBAP (Certified Business Analysis Professional) or other relevant certifications are advantageous.

PFM/Fiscal Decentralization Expert

- **Education:** Master's degree in Public Finance, Economics, Public Administration, or a related field.
- **Experience:**
  - At least 10 years of experience in public financial management, with a focus on fiscal decentralization.
  - Experience in working with educational institutions or government agencies on financial management projects.
  - Strong understanding of IPSAS, PFM systems, budget management, and financial regulations.
- **Skills:**
  - In-depth knowledge of fiscal decentralization policies and their application in public institutions.
  - Ability to provide strategic advice on financial management practices in the education sector.
  - Excellent analytical, research, and policy formulation skills.
- **Certifications:** Relevant certifications in public financial management or fiscal decentralization are an advantage.

Contract duration and Level of effort:

The assignment will run from 6th October 2025 to 28th November 2026.

During this contract period, the required level of effort will be a maximum of 45 working days.