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The Federal Democratic Republic of Ethiopia

DIGITAL ETHIOPIA FOUNDATIONS PROJECT

TERM OF REFERENCE (TOR)

To

Hire an Individual Consultant to provide technical assistance to the FDRE Ministry of Innovation & Technology (MInT) on National Data Development & Administration projects.

September 2025

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1. Introduction

The Government of the Republic of Ethiopia, during the last two decades, has been relentlessly pursuing ICT application for socio-economic development and public sector governance reform as a strategic part of its long-term plan for growth and development. The 10-year Innovation and Technology sector development plan aims to increase electronic government services from 176 to 5000, through increasing the coverage of e-services from 2% to 85%, increase the number of e-commerce services providers to 3,500. The government has shown a clear dedication to utilize the power of digital means to realise its development goals and particularly to improve the way with which government services are delivered and how the government interacts with its citizens and businesses.

One of the goals of the Home-Grown Economic Agenda is to 'increase the satisfaction of citizens by building competent, impartial and independent public service systems, enhancing the efficiency of government and ensuring good governance which aims at improving the eGovernment delivery and make it efficient, effective and citizen centric.

The newly developed e-Government Strategy & Government Enterprise Architecture for Ethiopia and its implementation roadmap proposed a number of national data development initiatives including

1. Establish National Data Sets / Implement Ethiopian National Data Warehouse
2. Establish a data governance and sharing framework
3. Make data open via an open platform
4. Increase data analytics and use
5. Adopt law providing for open data
6. Revise and adopt a draft data protection law that outlines data legitimacy, data minimization, accuracy, storage, security, etc.
7. Initiation of data and digital literacy for decision-makers

The Ministry of Innovation & Technology has initiated, based on relevant strategies and plans, some of these projects which are relatively complex and knowledge intensive by their very nature. Under the National E-Gov Development & Administration CEO, a team (Desk) has been organized that overlook the national data development and Administration. The team deals with a large number of projects on national data development and/or related activities.

The National Data Development & Administration Desk deals with development & Administration of national database systems & infrastructure, analytics, data governance, etc.

Some of the current major projects which are under the procurement or implementation stages are:

1. *Implementation of the Ethiopian National Data Warehouse*
2. *Development & Implementation of national Digital Addressing Platform*

The MInT would like to receive the services of an experienced, capable consultant that could support the implementation of the above-mentioned projects along with other national data ecosystem development and e-Gov development initiatives.

Implementation of the Ethiopian National Data Warehouse (ENDW)

The major function of the project "Implementation of Ethiopian National Data Warehouse (ENDW)" is to develop Ethiopian Government Data Warehouse, which will be used as a master data element across ministries. These can be used by all inter-ministerial applications as well as channels of delivery for electronic services. The warehouse will be used as the single source of truth for government applications.

The major business functions are:

1. **Data Extraction Service** to read data from these input files and extract them to a Staging Server.

2. **Data Transformation and Load Service** to transform and load data from Staging Server to a Data Warehouse Server.

3. **Business Intelligence and Analysis Service** to process data mart data into Transactional and Summary Dataset Views.

4. **Portal and API Service** to provide Data Interface to processed Datasets to Consumers.

5. **User Management Service** to ensure role-based access to datasets and views.

6. **Data Security:** ensure data is secured and cannot be tampered.

2. Objectives

The objective of this project is to hire an individual consultant that is proficient in the areas of:

- National Data Development, Data Management & Data Governance

The individual consultant shall be equipped with international expertise and experience in data warehouse development, data analytics, project management, and architecting related solutions. The consultant will be responsible for reviewing the Ethiopian National Data Warehouse requirements and deliverables, designing and developing projects for improving the national data ecosystem, preparing bid documents (Terms of Reference and Request for Proposals), and supporting the MInT in all data development and related initiatives.

The individual consultant shall work with the National Data Development and Administration Desk of the MinT in order to design/ architect solutions, develop detail requirements and specifications, develop ToRs/ SPDs, manage/ monitor projects and evaluate deliverables of any data development initiatives/ undertakings by MinT. He/she shall also advise on designing potential solutions and data literacy initiatives of MinT and help implement them.

3. Scope of Services, Tasks and Expected Deliverables

The main tasks to be carried out by the individual consultant will include the following tasks and deliverables but are not limited only to these.

Deliverable 1: Support the Ethiopian National Data Warehouse Implementation Project

(a) Study the Ethiopian National Data Warehouse Implementation Project requirements (ToR and RFP) and suggest changes on the design and implementation of the solution.

(b) Carefully evaluate all project deliverables submitted by the solution provider including

- Project Plan of the solution provider for completeness.
- Requirement Specification document
- Solution Architecture and Design document.
- Document on Network, Bandwidth and Hardware requirement for the system.
- Developed system Documentation as per the requirement of the ministry.

- Original training manual (for end users and professionals)
- Co-management, Support and maintenance document.
- Pilot Implementation Guideline.
- Submission of Complete and full documentations for all functions and processes, operational manuals, guidelines and high level document for the system future expansions.
- Submission of Complete and full documentation for standardized data backup and system recovery procedures.

(c) Monitor and evaluate the Ethiopian National Data Warehouse Implementation project

- Prepare negotiation points and draft/ evaluate contract agreement before signing.
- Test hardware, software and other solution components.
- Test the final solution.
- Prepare different types of test reports, Test case for UAT test, status reports and minutes of meeting.
- Prepare lessons learned document after conducting exit interviews with all stakeholders involved;
- Documentation of professional quality on how to set-up, configure, operate and monitor the system.
- Prepare Project Exit Report

Deliverable 2: Support the Ethiopian National Digital Addressing System project

(a) Study the Ethiopian National Digital Addressing System project requirements (ToR and RFP) and suggest changes on the design and implementation of the solution.

(b) Carefully evaluate all project deliverables submitted by the solution provider including

- Project Plan of the solution provider for completeness.
- Requirement Specification document
- Solution Architecture and Design document.
- Solution development quality assurance including but not limited to
    - Surveying
    - Aerial Surveying
    - Photogrammetry

- o Mapping
- o Cartography and web mapping
- o Road Network Analysis and Navigation
- o Address Geocoding
- o Geospatial quality control and standardization
- o Digital Addressing System Development
- o Addressing data and system administration

- Document on Network, Bandwidth and Hardware requirement for the system.
- Developed system Documentation as per the requirement of the ministry.
- Original training manual (for end users and professionals)
- Co-management, Support and maintenance document.
- Pilot Implementation Guideline.
- Submission of Complete and full documentations for all functions and processes, operational manuals, guidelines and high level document for the system future expansions.
- Submission of Complete and full documentation for standardized data backup and system recovery procedures.

(c) Monitor and evaluate the Ethiopian National Digital Addressing System project

- Prepare negotiation points and draft/ evaluate contract agreement before signing.
- Test hardware, software and other solution components.
- Test the final solution.
- Prepare different types of test reports, Test case for UAT test, status reports and minutes of meeting.
- Prepare lessons learned document after conducting exit interviews with all stakeholders involved;
- Documentation of professional quality on how to set-up, configure, operate and monitor the system.
- Prepare Project Exit Report

Deliverable 3: Propose and design national data development initiatives in accordance with the national strategic plans and support their implementation

- In consultation with the National Development and Administration Desk of MinT, propose and initiate new data development initiatives
- Design/ architect the proposed and approved solution and suggest the best acquisition strategy
- Prepare bidding document (ToR & SPD) for implementing the solution/ project
- Monitor and evaluate the project until completion
- Work with and mentor the MinT counterpart project management team equipping team members with appropriate skills for managing similar projects
- Evaluate all deliverables for quality and completeness
- Test the solution and prepare reports
- Prepare lessons learned and exit reports

Deliverable 4: Develop and provide capacity building and data literacy development schemes to MinT staff and stakeholders

- Design capacity building schemes for MinT and stakeholders staff (basic to intermediate levels)
- Design and help implement national data literacy initiatives
- Implement capacity building/ training for MinT & stakeholders staff as per the minimum requirements and further agreements between the consultant and MinT.

Deliverable 5: Support (mentor/ advise) data development initiatives of the different MDAs/ stakeholders

- Provide support to MDAs on data development initiatives which are identified during the assessment phase of the consultancy service or later when requested in the consultancy period.
- Create awareness on national data development initiatives and regulations to respective MDAs through workshops and trainings.

Deliverable 6: Support the regulation of the national data ecosystem

- Propose, design and support the implementation of data ecosystem regulations such as the personal data protection proclamation
- Support the implementation of data governance initiatives
- Support the design and implementation of other regulations (directives, rules, strategies, etc.) for the national data ecosystem.

Deliverable 7: Provide high level support and advice on the Ministry's engagement in national data related initiatives such as:

➢ The National Data Exchange (The EthioConnect Enterprise Service Bus) Project
➢ The National Digital ID program

4. Capacity Building

The consultant shall provide training on basic data management and data governance skills, as well as on-the-job skills transfer to MInT National Data Development and co-ordination Desk staff. He/she shall provide mentorship and technical support on the national data development initiatives in different MDAs in collaboration with MInT. He/she shall also be involved in delivering data literacy training for various stakeholders.

The consultant shall provide clear objectives for the training to be offered, the staff to receive training, duration, and the training methods. The training shall have a combination of formal sessions and on-the-job skills transfer with a clear curriculum and shall be delivered by a combination of the consultant himself and contracted or sub-contracted individuals and organizations, to be proposed in the consultant's initial Work Plan and agreed with the MInT. The training description table below provides the consultant with guidance on the training areas to be focused on and the required scale and documentation:

Table -1 Training Contents

Unit	Training Titles	Duration	Description	Training Resources for trainees
1	Decision Making and Data	2 days	With case studies	Training materials soft or hard copy
2	Data Planning, Collection and Management	2 days	With case studies	Training materials soft or hard copy
3	Data Processing and Analysis	5 days	With case studies	Training materials soft or hard copy
4	Data Visualization	5 days	Training materials	Training materials soft or hard copy
5	Data Driven Business Strategy	3 days	with real case studies	Training materials soft or hard copy
6	Data Protection and Governance	5 days	with real case studies	Training materials soft or hard copy

7	• Digital Addressing Platform Development: ➢ Surveying ➢ Aerial Surveying ➢ Photogrammetry ➢ Mapping ➢ Cartography and web mapping ➢ Road Network Analysis and Navigation ➢ Address Geocoding ➢ Geospatial quality control and standardization ➢ Digital Addressing System Development ➢ Addressing data and system administration	10 days	with real case studies	Training materials soft or hard copy

5. Major Deliverables

The consultancy service on National Data Development and Administration is a 12-month project. The following are the major deliverables expected from this consultancy. The list shall be confirmed in the Consultant's Inception Report / Work Plan, and agreed with the MInT project management team:

Table -2 deliverables

No.	Deliverables	Timeframe	Remark
1	Inception Report and Work Plan.	Two weeks after the project signing	Work Plan and Work Breakdown.
2	A desk review and assessment report on the National Data Ecosystem and data development initiatives	Based on the performance of the Consultant	The desk review and assessment shall be conducted on the initial phase of the consultancy service
3	Flexible data literacy and data management capacity building schemes	Based on the performance of the Consultant	The program shall be designed after conducting a review of the national strategic plans and assessment of the national data ecosystem situations.

The document should provide a detailed description of methods and objectives for meeting the data related capacity building goal of MInT. |
| 4 | Solution Architecture and Bidding Documents (ToR, SPD) for every supported project | Based on the performance of the Consultant | After identifying and initiating data development initiatives, the consultant shall design/ architect the solution and develop the necessary procurement documents. |
| 5 | Follow-up Report on the Consultancy Services | Monthly follow-up report. | Assist MInT in monitoring and evaluation of data development projects until completion including separate reports on each project:

➢ Report on the Ethiopian National Data Warehouse Implementation project. |

			➢ Report on the Ethiopian National Digital Addressing System project.
6	Evaluation reports on each project deliverable	2-3 Weeks after submission of deliverables	The report should include a comprehensive assessment of the deliverable against the requirements and minimum quality standards. The data to be collected serves as input data for the National eGov Development CEO for appropriate decision making.
7	Procurement documents (ToR and RFP/SPD) for the identified data development initiatives of MInT.	4-6 weeks after approval.	After identification and approval of data development initiatives, the procurement document preparation must be finalized within 4-6 weeks (Terms of Reference & Standard Procurement Documents preparation)
8	Test Plan and Reports	Based on the performance of the Consultant	After the solution is fully developed, the consultant shall develop a test plan with complete test cases and test the system against the minimum requirement and provide necessary test reports.
9	MDA Support/ Mentoring Service Reports	Based on the performance of the Consultant	The consultant shall report on details of support services provided to MDAs on data development initiatives. The services shall encompass mentoring & competency development of MInT Data Development staff.

10	Project Lessons Learned and Project Exit Report		Based on inputs from the implementation project reports, an exit report including problems encountered and lessons learned shall be provided.
11	Monthly Progress Report and Project accomplishment summary report at the end of the project.		Project accomplishment summary report at the end of the project.

6. Qualification and Experience

The individual consultant should be able to offer all, or at least most, of the following qualifications and experience:

a) A Master's degree in a field relevant to Data Science, Information Science, Computer Science or equivalent.

b) At least 10 years of experience relevant to the field of data science (data management and governance). Working for a government agency, an international organization, a consultancy, a business enterprise, etc.;

c) Previous experience working in Africa is essential and experience of working in Ethiopia, or a good knowledge of the country, is desirable;

d) Experience of similar projects enterprise level data warehouse implementation;

e) Specific experience in the field of data management and data governance;

f) The ability to supplement personal experience by other consulting specialists, as required, in fields such as e-Government, e-Services, designing enterprise solutions, managing IT projects, etc.

g) Excellent communications skills; and Willingness to make frequent visits to Ethiopia as necessary for co-working, local travel, and dialogue, and to offer training and skills transfer to the MInT staff and other stakeholders associated with the program.

h) The required activities in the Scope of Work are expected to be delivered over a 12-month period from the date the contract is signed. Extension beyond the first 12 months shall be at the discretion of MInT and the need for ongoing advisory services

i) The consultancy service remuneration is therefore based on an agreed maximum budget based on expected full commitment over the 12 months. Invoicing shall be based on the following terms:

Minimum – 10 days per month are required to ensure an appropriate level of support to MInT at all times throughout the contract. In addition, on-demand days are required, up to a total maximum of 10 additional days (20 days total) in any month, to fulfill necessary requirements and deliverables.

The individual consultant to be hired under this contract may sub-contract some activities to other individual consultant under the responsibility of the contracted consultant. Any Sub-contractors should be approved by the MinT project management team.

7. Project consultation Duration

The duration of the project consultation is **Twelve months** till finalization of the Ethiopian National Warehouse Development project that is renewed every three months based on performance and availability of resources.

ANNEX A: Consultant's Reporting Obligations

Consultant's Reporting Obligations

1. **Work plan for the contract period:** The Consultant will prepare a Work Plan for the period clearly identifying the detailed deliverables, based on the table in Scope Sub-section F, with clearly established milestones of activities, to effectively deliver the Services within the Contract period. This will be approved by the coordinator and submitted to Ministry of Finance for follow up of the same.

2. **Documents**: The Consultant will prepare required documents as per the Scope of Services Sub-section F and the agreed milestone of activities and deliverables as set forth on the approved Work Plan.

3. **Monthly Performance Report**: The Consultant shall submit a monthly performance report based on deliverables set forth in the detailed work plan along with time sheet for the confirmation of time spent for the service.

ANNEX B: Technical Proposal Evaluation

Form 1: Personnel Competencies		Points
A. International Consultant (Team Leader)		**300**
1	**Relevant qualifications (Masters Degree or above in Information Technology or related disciplines)**	15
2	**Relevant Experiences/ knowledge**	
2.1	Understanding of national e-Government plans, digital strategies and the data development and data governance initiatives of Ethiopia	45
2.2	Similar Assignments in consulting management of national data development and data governance initiatives from architecting solutions through implementation of projects toward closure.	75
2.3	Experiences in developing Technical Specifications (Technical Bid Documents) and evaluation of technical bid proposals	45
2.4	Experience working with multiple governmental stakeholders in developing countries and Sub-Saharan Africa	60
2.5	Practical experience on planning & managing the implementation of data development, data management and data governance projects, Preparing project management documents, solution architectures, project concept notes (PcP), solution test plan documents, etc.	45
2.6	Practical experience on providing basic and professional training in the specified areas	15

	B. Senior National Consultant (Team Leader)	300
1	**Relevant Qualifications (Master's Degree in Information Technology or related disciplines)**	30
2	**Relevant Experiences/ Knowledge**	
2.1	Understanding of national e-Government plans, digital strategies and the e-Services platforms and initiatives of Ethiopia. Knowledge and practical experiences on planning, architecting & managing e-Government solutions especially data development & data governance initiatives.	50
2.2	Experience in conducting researches and other analytical works on data science subjects.	50
2.3	Experience in developing Technical Bid Specifications, Technical Proposals, Project Concept Papers, etc and evaluation of Technical Bid Proposals	40
2.4	Practical Experiences in Data Warehouse development, other data development initiatives and relevant project management experiences	50
2.5	Experience working with multiple governmental stakeholders in the areas of national data warehouse development and related initiatives	40
2.6	Fluency in Spoken and Written Amharic, good skills of presentation and writing reports	40
Form 2: Technical Proposal		**Points**
	Proposed Methodology	
2.1	Understanding of the objectives of the assignment	60
2.2	Understanding of the difficulties/ challenges of the tasks	100
2.3	Approach/ methodology for carrying out the task and obtaining expected outputs	200
2.4	Implementation Plan	40
Total		400