MINISTRY OF COMMUNICATION, TECHNOLOGY AND INNOVATION

REPUBLIC OF SIERRA LEONE

SIERRA LEONE DIGITAL TRANSFORMATION PROJECT
IDA- E1130-SL

Terms of Reference

for

Recruitment of a Consulting Firm for the Last Mile Connectivity Feasibility Studies

SL-MOF-498597-CS-QCBS

June 2025

Terms of Reference
Recruitment of a Consulting Firm for the Assessment

I. Introduction

The Government of Sierra Leone (GoSL) has committed to transforming its economy based on a more inclusive and human-centric digital growth and development approach. A high-level vision for the digital economy is articulated in the new National Digital Development Policy (NDDP), which was approved by the Cabinet in December 2021 setting the GoSL's vision to transform Sierra Leone into an inclusive digital economy and society and to leverage digital technology to support the GoSL to deliver on its national development plan effectively and efficiently.

The Sierra Leone Digital Transformation Project (SLDTP) aims to expand access to broadband internet, increase digital skills and improve government capacity to deliver public services digitally. The project will support the development of a strong enabling environment for the nation's digital transformation and digital development agenda as articulated in the National Digital Development Strategy.

To support this goal, a Last Mile Connectivity Feasibility Study will be conducted to determine the technical and financial feasibility of connecting public institutions currently unserved or underserved. This activity builds on a recently completed Institutional Assessment and Last-Mile Pre-Feasibility Study, which surveyed 672 institutions across the country. The dataset from this assessment—comprising detailed geographic, infrastructure, and readiness information—will be made available to the consulting firm and must be integrated into the feasibility analysis.

Moreover, this study is strategically linked to and complements the Government Wide Area Network (GWAN) and Government Local Area Network (GLAN) deployment. These two infrastructure projects are being implemented to interconnect and upgrade MDAs nationwide. The last-mile feasibility should ensure that the proposed connectivity designs can be seamlessly integrated into the broader GWAN and GLAN architecture and facilitate end-to-end government digital service delivery.

II. Project Background

The Sierra Leone Digital Transformation Project (SLDTP) is a five-year International Development Association (IDA)-funded project supported with a US$50 million grant. The project's main implementing agency is the Ministry of Communication, Technology and Innovation (MoCTI). The proposed Project Development Objective (PDO) is to expand access to broadband internet, enhance digital skills and improve government capacity to deliver public services digitally.
The SLDTP proposes four integrated and mutually reinforcing components, with a fifth component dedicated to contingent response to future emergencies (*Contingent Emergency Response Component*, *CERC)*.

- Component 1 – Expanding Digital Access and Increasing Resilience of the Digital Environment;
- Component 2 – Digital Skills Development and Innovation
- Component 3 - Laying Key Foundations for Digital Government Services and Systems
- Component 4 – Project Management and Implementation Support; and

- Component 5 - Contingency Emergency Response Component (CERC).

The proposed activities integrated into Components 1, 2, and 3 are designed to support the Government in building resilient and inclusive policies by strengthening its legal and regulatory frameworks, scaling up the citizen-centric digital public service delivery by reinforcing the government portal and relevant Ministries, Departments, and Agencies (MDAs) capacity. By enhancing the service delivery infrastructure and platforms, the project will support ensuring the continuity of public services in times of crisis.

The Project is being implemented by a Project Coordination Unit (PCU) in MoCTI. MoCTI is the primary stakeholder of ICT-related policies and oversees the development, review, and implementation of the Government's communication, technology and innovation agenda.

Component 1: Expanding Digital Access and Increasing Resilience of Digital Environment, will support improvements in broadband market competition, expand access to broadband internet, and address existing digital divides in Sierra Leone. The country continues to experience challenges in strategic parts of the broadband value chain, from the first mile where the internet enters the country to the last mile where it reaches end users. A combination of financing and technical assistance (TA) is expected to strengthen regulatory capacity and instruments, increasing competition, lowering prices, and facilitating more private sector investments in underserved areas.

The Subcomponent 1.2. Last Mile Connectivity Access for Public Institutions will provide last-mile connectivity to selected public institutions, including MDAs, local government offices, hospitals and health clinics, and schools, at the central and regional levels in Freetown and secondary cities that currently lack broadband access. Access to reliable broadband internet in priority government offices and public institutions is critical to improving coordination and management among MDAs. The connectivity support will enhance the broader adoption of public financial management (FM) systems and platforms and enhance government-wide communication and response in national emergencies.

The approach being applied for last-mile connectivity under the project is demand aggregation and prepurchase of capacity for the Government institutions to be connected under the project. This approach ensures value for money, through competitively tendered contracts with the private sector that guarantee medium- to long-term supply agreements with the Government, which is enabling MFD.

III. Objectives

The objective of the Last Mile Connectivity Feasibility Study is twofold. Firstly, it is to understand technical and financial feasibility of connecting to and providing high-speed connectivity service for pre-identified public institutions (priority public institutions throughout the country, including Ministries, Departments, and Agencies (MDAs), government offices, public service centers, primary and secondary schools, and health centers, etc.). Secondly, it is to formulate and prepare the technical specifications, financial analysis, and procurement support necessary for the deployment of last-mile connectivity solutions for the selected institutions.

The objectives will be divided into two focus areas to enable the consulting firm ("Consultant") to deliver on the overall SLDT project's general and specific objectives, as below:

A. **General Objectives**
- Support the Government of Sierra Leone's vision to expand broadband access and bridge the digital divide through strategic last-mile connectivity investments.
- Contribute to the development of a scalable and sustainable digital infrastructure that supports efficient public service delivery nationwide.

B. **Specific Objectives**
The Specific objectives of this activity include:

- Build upon the recently completed institutional readiness assessment for last-mile connectivity by analyzing the existing dataset to inform the feasibility study.
- Determine the technical and financial feasibility of extending broadband connectivity to a prioritized list of public institutions across Sierra Leone, based on the assessment data.
- Ensure strategic alignment and integration of last-mile connectivity with the GWAN and GLAN deployments, thereby supporting a unified and secure government digital infrastructure.
- Propose technology solutions and investment models, including Public-Private Partnership (PPP) frameworks, that ensure long-term sustainability and scalability of broadband access. Conduct a comprehensive feasibility study and provide PPP transaction advisory services, including detailed estimations of the projected bandwidth demand, site locations, network deployment cost, and the overall impact, as well as a market assessment to identify and attract potential bidders;
- Review of the PPP options and payment methods following the activities above;
- Support the preparation of bidding documents and technical specifications for the implementation of the last-mile connectivity infrastructure.

It is envisioned that the Government of Sierra Leone will serve as an anchor client to the PPP partner(s), aggregating demand for bandwidth and connectivity services across government. This is expected to not only meet the government's connectivity needs, but also to incentivize the PPP partner(s) to undertake new investments in network infrastructure and/or upgrading and expansion of existing networks. The PPP partner(s) will be expected to operate the network on an open access basis, non-discriminatory basis, enabling shared use of the infrastructure by other telecommunications services providers.

IV. Scope of Assignment - The Last Mile Connectivity Feasibility Study

The Consultant will be expected to assist the PCU/MoCTI in the implementation of the SLDTP sub-activity with the scope of work focused on The Last Mile Connectivity Feasibility Studies with the detailed tasks including but not limited to the following:

A. Market Study and Demand Forecast
The objective of this component is to gain a complete understanding of the last mile market dynamics, and for each specific service to be provided, by preparing a market study, including

an analysis of current supply and demand of the target telecommunication and related services and a forecast of the demand for each of them.

i. Study of the current and planned supply of infrastructure/services
The consultant shall make sure that the market analysis includes a complete study of the current supply, current providers, prices, infrastructure, infrastructure owners, technologies used, networks, technologies and capacities installed, capacity utilized, bandwidths, areas covered, etc.…

The study shall also identify any planned infrastructure, owner, service providers and services planned, and shall provide a detailed estimated deployment calendar for every new last-mile infrastructure planned.

ii. Current Market Demand
The study will estimate the current demand for the list of institutions identified by the Government, specifying services to be provided, bandwidth (Mbps) or other parameter consumption.

iii. Market Demand Forecast
Forecast of the demand for current and new/planned/foreseen services, bandwidth and last-mile infrastructure. The study shall also provide a forecast of applicable prices to be paid to operators providing bandwidth and services.

This detailed information shall be later used as an input in the Financial Study.

B. Technical Study
The objective of this component is to identify all the technical aspects and solutions for connecting all the institutions identified by the Government, as well as the estimated CAPEX and OPEX for each of the alternatives considered.

i. Network Design, Technological Alternatives and Recommendation
Network design shall take into account the results of the Market Study, particularly the output of Activity 1.3, in terms of volumes projected.

In addition, the consultant will make sure that technological alternatives associated to the physical design are identified, indicating the advantages and disadvantages of each of them, with a recommendation of the best technology to be used in each case.

Detailed estimate of the required investment (CAPEX) and operation and maintenance costs (OPEX) for the proposed network and implementation schedule. This detailed information shall be later used as an input in the Financial Study.

ii. Operation and Maintenance, Network Reliability and Availability
Identification and provision of international best practices in terms of: (i) operation and maintenance of the network, including team structure, staffing, support agreements, etc., and (ii) reliability and availability of these networks and services, including key

parameter reference values used in Service Level Agreements (SLA) for these types of services.

iii. Implementation plan and recommendations
The consultant will recommend a detailed estimated deployment calendar for all the projected last-mile connections, including a set of recommendations that would facilitate the deployment.

C. Financial Study
The objective of this component is to analyze the economic and financial feasibility of the project. This study will consider at least two separate financial analysis: per country and at regional (4 countries) level.

i. Financial Analysis and Cost-Benefit Analysis
The financial analysis will take into consideration: (i) any revenues generated by the demand and prices projected in Activity 1.3, and (ii) the investment and operating costs (CAPEX and OPEX) estimated and projected in Activity 2.1. As a result of the financial analysis, the following financial estimates of the sustainability and feasibility of the project shall be provided: detailed P&L, Balance Sheet and Cash Flow projections, estimate of funds needed, Net Present Value (NPV), Internal Rates of Return (IRR), and break-even point, given the estimated cash flows, for each of the scenarios analyzed.

In addition to the financial analysis of the project, as detailed above, the Consultant will develop a Cost-Benefit Analysis (CBA), identifying all the potential economic and social benefits, direct and indirect, that will be derived from this project (quantitative and qualitative) and adding them to the financial projections of the financial analysis.

The Consultant will firstly define the methodology for the development of the CBA. Once the Consultant will agree with the World Bank team on the methodology, the Consultant will (i) estimate and calculate any additional economic and social quantitative benefits that can be incorporated to the CBA; (ii) combine them with the financial projections of the financial analysis; (iii) use the combined (i) and (ii) projections to perform a CBA, including calculations of specific indicators, such as economic rate of return (ERR) and economic NPV; (iv) identify the anticipated qualitative benefits (i.e. indirect benefits and positive externalities) that, although not incorporated to the numeric study, are relevant, such as economic growth, productivity, job creation, etc.

ii. Financial Model
A customized Financial Model will be created for the financial analysis. The Financial Model will allow for the calendarization of inputs on specific dates, deployments of new infrastructure, etc. in accordance with demand and infrastructure deployment calendars identified in Components 1 and Component 2.

The financial model shall allow the simulation of different scenarios and sensitivity analyses based on multiple parameters, such as prices, costs, demand volumes, growth rates, etc.

The Consultant will deliver to the World Bank team the customized financial model and a detailed explanation of its structure and logic as part of the products to be provided at the end of the consultancy.

D. Procurement Assistance and Bidding Process Support
Based on the work conducted above and decisions reached with the PIU regarding the optimal list of the institutions to be connected, the consultancy must prepare technical specifications, technical selection criteria and assist PIU in developing RFB package per World Bank's requirements. Among others, the consultancy must prepare the service contract agreement and SLA templates for the parameters earlier defined and assist the PIU to complete the RFP tendering, evaluation and contract finalization processes, including conducting pre-bid meetings, responding to clarifications and other queries and rendering such other support as may be required towards successfully selecting the winning bidder, etc.

V. Reporting, Time Schedules, and Payment Schedules

The Consultant is expected to complete the assignment in full within 16 weeks. The Consultant will regularly report to the Director of Communication or any Technical designated Lead on all aspects of the agreed activities and report to the SLDTP Project Coordinator.

The deliverables comprise the following:

No	Deliverable	Timeline	Indicative payment schedule
0.	Inception Report and Work Plan: Workplan detailing methodology, use of institutional dataset, and alignment with GWAN/GLAN	Commencement + 2 week	10%
1.	Market Study/Demand Study, including institutions to be connected, services and bandwidth to be provided	Commencement + 4 weeks	10%
2.	Technical Study, current supply of infrastructure, infrastructure needed to satisfy demand, technical feasibility study, including bandwidth and technologies to be used for each of the institutions to be connected, associated CAPEX and OPEX, deployment plan and schedule, , and technical feasibility aligned with GWAN/GLAN	Commencement + 10 weeks	20%
3.	Financial Model, Financial Analysis and PPP Options, plus proposed PPP models	Commencement + 14 weeks	20%

4.	Procurement and Bidding process related assistance and documents (RFP and other bidding documents)	Commencement + 16 weeks	10%
5.	Final Report: Consolidated feasibility study including implementation roadmap, and a report on supporting services required from the Government to facilitate implementation	Commencement + 18 weeks	30%

VI. Qualification and Experience

The contractor should be a consultancy firm;

The performance of the abovementioned activities requires professionals that have good academic and professional multi-disciplinary knowledge and experience of all or a subset of the following fields:

(1) Proven experience in the telecommunications sector (at least 10 years), in developing regions (at least 5 years).

(2) Experience in development of market studies is required, specifically development of supply, demand and financial, including cost-benefit, analysis for telecommunications sector projects.

(3) Experience in development of technical studies for the planning and deployment of telecommunications infrastructure is required.

(4) Experience in design of analytical financial models considering several technological alternatives is required.

(5) The firm must have a proven experience in delivery of detailed and accurate recommendations for telecommunications sector projects development including good understanding of sector trends.

(6) Proven experience in similar engagements required.

(7) Work experience in the Western Africa region is an advantage.

(8) Excellent knowledge of data collection and validation methods, including the ability to produce a comprehensible, clear, and well-written text equipped with graphical elements.

(9) Excellent project management skills, including quality assurance.

(10) Very good communication skills in English.

The assignment calls for a team of at least five (5) persons who will possess the following qualifications, skills, and experience:

Key Position	Experience	Qualifications
Project Team Lead	• A master's degree or higher in a relevant field, such as economy, finance, engineering, telecommunications, or legal.	• At least 12 years' experience in the field of ICT of which at least 7 must have been spent leading network deployment

	- Strong project management skills, understanding of telecommunications sector (both public and private, institutional development, and digital transformation in the context of emerging markets. - Excellent communication and team leadership skills.	projects, leading detailed feasibility studies, providing transaction advisory services and/or implementing PPP transactions in various sectors. - Experience across a range of developing countries including in Africa. Experience in Sub-Saharan; Africa countries is desirable. - must reflect a history of successful network development and commercial operation in the public or/and private sector; - The Team Leader shall have successfully accomplished at least 3 similar assignments. Credentials and client reference coordinates must be supplied for cited experience; - Should have good communication, written, presenting and analytic skills.
PPP Transactions Specialist	- A master's degree or higher in public administration, organizational development, or a related field. - Strong knowledge of governance principles, administrative processes, human resource skills assessment and management and functional review.	- At least 10 years' experience ○ The candidate must be able to demonstrate experience in a lead role of at least 5 successfully completed PPP transactions. Credentials and client reference coordinates must be supplied for cited experience. - Experience of having been involved in a leadership role in the transactions is highly desirable; - Experience in developing countries especially Africa is

		an added advantage; and ● Should have good communication, written, presenting and analytic skills.
Financial Specialist	● A master's degree or higher in finance, economics, or a related field. ● Expertise in financial modeling, revenue generation, and cost optimization.	● At least 10 years' experience of which at least 7 must have been spent on drafting/reviewing financial models for investment decisions. Previous participation in detailed feasibility studies and transaction advisory services is a pre-requisite. ● The candidate must be able to demonstrate experience in at least 5 PPP assignments. Credentials and client reference coordinates must be supplied for cited experience. ● Experience in developing countries especially Africa is an added advantage. ● Should have good communication, written, presenting and analytic skills.
Technical Specialist	● A master's degree or higher in telecommunications engineering, IT, or a related field. ● In-depth knowledge of telecommunications technologies, equipment, and standards.	● At least 10 years' experience of which at least 7 must have been spent on designing broadband networks and roadmaps. Involvement in designing similar broadband PPP transactions will be a major advantage. ● The candidate must be able to demonstrate experience in at least 5 successfully completed assignments that involve providing technical advisory services on telecom networks development.

		• Proven track record in assessing technical gaps and recommending infrastructure improvements. • Should have good communication, written, presenting and analytic skills.
Legal Specialist	• A master's degree or higher in a relevant field, such as Telecommunication Law, IT Law or regulatory policy. • Strong understanding of telecommunications sector (both public and private, institutional development, and digital transformation in the context of emerging markets.	• At least 10 years' experience of which at least 7 must have been spent on drafting/reviewing PPP contracts and providing legal input to detailed feasibility studies and transaction advisory services. Credentials and client reference coordinates must be supplied for cited experience. • The candidate must be able to demonstrate experience in at least 5 PPP assignments. Credentials and client reference coordinates must be supplied for cited experience. • Experience in developing countries especially Africa is an added advantage. • Should have good communication, written, presenting and analytic skills.

VII. Facilities Data and Information to Be Provided by Client

The Ministry of Communication, Technology and Innovation shall provide office space with Air Conditioner, electricity and Internet connection for the successful consulting firm to facilitate the smooth implementation of the assignment. The following shall be provided to the Consultant by the Employer:

i. facilitate the provision of access to relevant documents and data available which may be supportive to the Consultant, and
ii. prepare a letter introducing the consulting firm to operators in the telecommunications sector and other relevant institutions, wherever required in performing the assignment.

The firm shall provide all the administrative, technical professional and support staff needed to carry out the assignment efficiently. The Consultants shall also be responsible for providing all other necessary facilities and logistical support for its staff/teams, including accommodation, vehicles/transportation, office equipment, field survey and investigation equipment, laboratory testing, communications, utilities, office supplies and other miscellaneous requirements wherever applicable to render their services. The firm shall nominate and make available a contact person for regular meetings with the Project Coordination Unit and MoCTI teams.

VIII. Working Language

The working language for the consultancy service shall be English.

IX. Conflict of Interest

The successful consulting firm shall declare any conflict of interest, especially if any or all of the consultants is/are currently carrying out consultancy work for other stakeholders including licensed operators or service providers in the telecommunications sector in Sierra Leone.

X. Confidentiality of Information

The firm shall protect the confidentiality of the data or information received to conduct this assignment and shall sign a confidentiality agreement with MoCTI. No data, information, or deliverables from this assignment will be released to third parties without the written approval of MoCTI. The Consultant shall surrender all data and other materials to the Regulatory Authority and shall not retain any information or materials after the closure of the assignment.