

**TERMS OF REFERENCE FOR ADVISORY SERVICES FOR INVESTMENT
ATTRACTION FOR INTERNATIONAL CONECTIVITY (INCLUDING THE DIGITAL
HUB AND REGIONAL DATA CENTER IN GEORGIA)**

A. INTRODUCTION

1. Project name:
Log-In Georgia
2. Employer:
Open Net NNLE
3. Position title:
Firm for advisory services for investment attraction for international connectivity
4. Consultant will deliver outputs to:
Head of the Telecommunication, Information and Modern Technologies Department of the MoESD
5. Contract duration:
12 Months
6. Project Description:
<p>The Government of Georgia has signed a Loan Agreement for financing the implementation of Log-in Georgia Project (“Project”) with the World Bank (WB). The proposed Project development objective is to increase access to affordable broadband internet, and to promote its use by individuals and enterprises, in targeted rural settlements.</p> <p>The Project Consists of the following key components and subcomponents:</p> <ul style="list-style-type: none"> • <u>Component 1: Increasing access to broadband</u> – this Component will help expand access to broadband internet in rural settlements across Georgia and improve the enabling environment for digital development. <ul style="list-style-type: none"> ○ <u>Subcomponent 1.1: Supporting the Open Net Program</u> – the Open Net Program will develop a national infrastructure to offer open access, wholesale, broadband telecommunications services. ○ <u>Subcomponent 1.2: Improving the enabling environment for digital infrastructure</u> – this subcomponent will support activities to improve the enabling environment for digital infrastructure development in Georgia. This will support the development of legal, policy, and regulatory instruments, and design of investment attraction measures in accordance with the national broadband development strategy (adopted in 2020). • <u>Component 2: Promoting the use of broadband-enabled digital services</u> – this Component will support the development of Georgia’s digital economy through a

strengthened enabling environment, promoting digital use-cases of broadband, and addressing barriers to the participation of individuals in the digital economy.

- **Subcomponent 2.1: Enabling environment for digital economy development** – this subcomponent will support activities to improve the enabling environment for digital economy development in Georgia.
- **Subcomponent 2.2: Promoting use-cases** – the subcomponent will promote specific use-cases of improved broadband connectivity in targeted rural settlements.
- **Subcomponent 2.3: Increasing digital inclusion** – this subcomponent will finance targeted interventions to boost the use of the internet and digital services by women, social minorities, and persons with disabilities in targeted settlements.
- **Component 3: Project implementation support** – this component will support the management and implementation of the Project and associated activities.

The Project will be implemented over a five-year period by the Open Net NNLE as the implementing entity, with the oversight of the Ministry of Economy & Sustainable Development (MOESD) of the Government of Georgia (GoG). Open Net NNLE will be the Project Implementing Entity (PIE) to support the implementation of the Project.

7. Background of the assignment:

Apart from becoming a regional transport and logistic hub, Georgia has the ambition to host a regional digital hub, which will help improve international data connectivity and development of domestic IT capabilities. It is one of the strategic priorities under the “National Broadband Development Strategy of Georgia and its implementation action plan for 2020-2025” (NBDS), which was adopted by the Government of Georgia (GoG) on January 10, 2020. Herewith, the Government of Georgia explores the possibility to host a regional digital hub and attract investments in the development of Digital Connectivity Corridors and Data Centres, which could serve as a regional hub for South Caucasus and neighboring regions and gateway between the EU and Asia.

Georgia can serve as a conduit between Europe, Middle East, and South Asia, and the other to Central and East Asia. The existing situation with regards to digital infrastructure along international connectivity routes provide opportunity for Georgia to develop its position in the regional and global international IP connectivity and data centers market, with the long-term objective of developing itself as a major connectivity and digital hub for Europe-Asia international connectivity.

The increasingly important role of large content providers in the international connectivity market should be an opportunity by operators in the region, particularly in Georgia. The large content providers are investing in international submarine infrastructure and datacenters globally to create interconnected networks. These investments are driven by the need to be closer to consumption centers, to offer higher quality services to end users.

B. FUNCTIONS

I. Objective and Purpose of the Assignment:

Preparation of detailed feasibility study which will fully describe the conditions (Technical, legal, economic, social, etc.), bottlenecks and relevant actions from different stakeholders to develop the regional digital hub and attract infrastructure investments in the development digital transit corridor and establishment of large datacenters in Georgia, including green datacenters to minimize the industry's carbon footprint, enabling Georgia to have a global comparative advantage.

II. Key duties of this position:

Developing Georgia as a regional digital hub will entail, among others, improved international connectivity to the South Caucasus region, and adequate nodal infrastructure (datacenters and IXPs) to support data hosting and computing needs for a digital economy. This consultancy aims to support Government of Georgia develop the necessary analytical underpinning, market sizing and forecasts, investment attraction materials, and advisory on implementing the consultant's recommendations to realize the Government's objective of developing Georgia as a digital connectivity and services hub.

On improving international connectivity, the Consultancy firm shall:

- 1) Identify possible regional and inter-regional connectivity routes, participating countries (including Black Sea countries) and possible network topologies, traffic exchange models, including pros and cons of those topologies/models, CAPEX and OPEX of the Georgian section of the network (Existing networks and planned in the black see), forecast of revenues of IP transit and data services in various scenarios (Possible regional and inter-regional connectivity routes, existing traffic, traffic growth, related infrastructure development and other to be confirmed by MOESD following discussions with the selected consultant) based on successful international experience, to develop a digital transit corridor through Georgia; including:
 - a) Identifying how Georgia can to develop a digital transit corridor, assessing the competitiveness of the digital connectivity transit corridors with other alternative corridors and identifying activities of different (Government, private sector) stakeholders to increase competitiveness of Georgian digital corridor;
 - b) Estimating existing demand of IP traffic of the Region (including in Georgia itself) and Middle East, Central Asia, South Asia, and East Asia countries and forecast the volume of IP traffic in the short, medium and long term period;
 - c) Estimating IP transit prices in the possible transit countries involved in the connectivity corridors to enable greater accuracy of traffic and market size forecasts;
 - d) Conduct an analysis of terrestrial cross-border connectivity (identifying the cross border areas that require the laying of new optical fiber cable or the upgrading of existing connectivity infrastructure (South Caucasus Region (including in Georgia itself) and Middle East, Central Asia, South Asia, and East Asia countries) to be able to adequately serve the estimated IP traffic and data services in the short, medium and long term period)) and identify investment needs.

- 2) Review policies and regulations of Georgia (including tariff regulation on the IP transit), permits and identifying gaps that might hinder the development of a digital transit corridor, taking into account cyber security, personal data and critical infrastructure protection;
- 3) Define the optimal financing, business, and operating model for new international fiber infrastructure (private property, consortium, public-private partnership) and the role of stakeholders, pros and cons of the various models considered;
- 4) Prepare recommendations to attract investment in international connectivity and to attract inter-regional traffic from tier 1 carriers and network operators via Georgia, and during the period of the contract to support the MOESD in outreach and engaging with interested parties;
- 5) Prepare financing options, potential business models for key segments (regional connectivity, carrier hotels), and related international examples;
- 6) Advise Government of Georgia on identifying and establishing coordination mechanisms with foreign governments and private companies (such as, through regional and/or global industry events);
- 7) Preparing investment attraction materials (including high-quality presentations and memos in English) for potential investors to demonstrate the attractiveness of establishment a transit corridor via Georgia.

On attracting investment into datacenters (including green datacenters to minimize the industry’s carbon footprint in Georgia) and IXPs, the consultant shall:

- 1) Assess the competitiveness of the Georgia with other alternative big international datacenters locations in region, Europe and Asia, identifying activities of different (Government, private sector) stakeholders to attract international datacenter providers;
- 2) Review policies and regulations of Georgia that hinder establishment of large data centers in Georgia, taking into account cyber security, personal data and critical infrastructure protection;
- 3) Estimating existing demand of data services of the Region (including in Georgia itself) and Middle East, Central Asia, South Asia, and East Asia countries and forecast the volume data services in the short, medium and long term period;
- 4) Identify activities to support the development of international neutral IXPs in Georgia, including measures to involve telecom operators;
- 5) Prepare financing options, potential business and operating models for development datacenters (including green datacenters) and related international examples;
- 6) Prepare guideline to attract investment in datacenters and identify potential investors;
- 7) Prepare documents (including high-quality presentations and memos in English) for potential investors to demonstrate the attractiveness of establishment data centers in Georgia.

III. Expected Output/Deliverables and Reporting Format:

Output/Deliverables	Timeline

Introductory meeting with MOESD to review and discuss action plan and timelines is provided		1 week after signature
Brief inception report on action plan and timeline prepared		3 weeks after signature
Report 1, including:		2 month from signing the contract
1.	<ul style="list-style-type: none"> a. Identified routes, participating countries and network topologies, including suggestions for use existing fiber optic infrastructure or built new one, traffic exchange models for digital transit corridor through Georgia; b. Pros and cons of this topologies/models; c. CAPEX and OPEX of the Georgian section of the network; d. Forecast of revenues from IP transit in various scenarios. 	
2.	<ul style="list-style-type: none"> a. Competitiveness assessment document of digital transit corridor via Georgia with alternative corridors; b. Proposal of activities of different (Government, private sector) stakeholders to increase competitiveness of Georgian digital corridor and attraction of data centers providers. 	
3.	<ul style="list-style-type: none"> a. Estimation of existing demand of IP traffic of the South Caucasus Region; b. Estimation of existing demand of IP traffic for Middle East, Central Asia, South Asia, and East Asia countries; c. Forecast of demand IP traffic in the short, medium and long term period of above countries; d. Identified the cross border areas that require the laying of new optical fiber cable or the upgrading of existing optical infrastructure. 	
Report 2, including:		3 month from signing the contract

1.	Draft legal acts (if needed) on policy and regulations updates for development of a digital transit corridor via Georgia, including the measures on cyber security, personal data and critical infrastructure protection;	
Report 3, including:		5 month from signing the contract
1.	Recommendations on activities to support the development of international neutral IXPs, including measures to involve telecom operators to the IXPs;	
2.	Recommendations on coordination mechanisms with foreign governments and private companies	
3.	Recommendations on new international fiber optic backbones' governance model (private property, consortium, public-private partnership) and the role of stakeholders, pros and cons;	
4.	Financing options, potential business models for key segments and related international examples;	
5.	Recommendations to attract investment in international connectivity and to attract inter-regional traffic from tier 1 carriers and network operators via Georgia.	
Report 4, including:		7 month from signing the contract
1.	Identification of interested companies/investors, project preparation, determination of funding amount etc.;	
2.	Document/Presentation for potential investors to demonstrate the attractiveness of establishment a transit corridor via Georgia.	
Report 5, including:		9 month from signing the contract
1.	Document on competitiveness assessment of the Georgia with other alternative big international datacenters locations in region, Europe and Asia. Proposed activities of different	

	(Government, private sector) stakeholders to attract international datacenter providers;	
2.	Draft legal acts (if needed) on policy and regulations updates taking into account cyber security, personal data and critical infrastructure protection;	
3.	Estimation of existing demand of data services of the Region (including in Georgia itself) and Middle East, Central Asia, South Asia, and East Asia countries and forecast of the volume data services in the short, medium and long term period;	
4.	Prepared financing options, potential business models for development datacenters (including green datacenters) and related international examples;	
5.	Prepared guideline to attract investment in datacenters and identify potential investors;	
6.	Prepared documents (including high-quality presentations and memos in English) for potential investors to demonstrate the attractiveness of establishment data centers in Georgia;	
7.	Final recommendations how Georgia can support establishment of large datacenters (including green) in Georgia.	
The result of the Regulatory Impact Analysis (RIA) for the draft legal acts (If needed) for development digital transit corridor and establishment of large datacenters in Georgia		10 month from signing the contract
Workshop for MOESD and relevant stakeholders to present findings and recommendations organized		10 month from signing the contract
Monthly progress reports:		Every month, and 12 months from signing the contract (Final report)
The firm shall submit the reports on monthly basis. Reports shall include the list of services carried out during the reporting period. The Consultant shall prepare a final report summarizing the work provided.		

All deliverables must be submitted in English and then translated into Georgian Language	

C. REQUIREMENTS

EXPERTS	QUALIFICATION AND EXPERIENCE REQUIREMENTS
Lead Expert	<p>Master’s degree at least one of the following fields:</p> <ul style="list-style-type: none"> ○ telecommunications engineering; ○ electrical and electronics engineering; ○ telecommunications economics; ○ economics; ○ finance; ○ legal, or related fields. <ul style="list-style-type: none"> ● International experience in similar tasks and management of projects; ● Strong business/financial/economical knowledge and experience; ● Knowledge and experience in telecommunications, engineering, or related fields; ● At least 10 years’ experience in the electronic communications sector in providing consultancy/advisory services, or in network design and/or operations and/or financial modeling, legal advisory, business modeling, including working experience with Policy makers and/or NRAs, in the field of electronic communications; ● Knowledge in international rules and regulations of infrastructure development; ● Ability to work collaboratively in a team and deliver outputs on time; ● Strong analytical and research skills; ● Excellent knowledge of English language.
Technical Expert	<ul style="list-style-type: none"> ● Master’s Degree in telecommunications engineering or another related field. ● International experience in similar tasks; ● At least 10 years of relevant experiences in ICT sector; ● Experience with ICT networks design and operations, including fiber optic cable engineering projects and datacenters; ● Knowledge of technical developments in ICT equipments and technologies; ● Strong analytical and research skills; ● Ability to work collaboratively in a team and deliver outputs on time;

EXPERTS	QUALIFICATION AND EXPERIENCE REQUIREMENTS
	<ul style="list-style-type: none"> • Excellent knowledge of English language.
Legal Expert	<ul style="list-style-type: none"> • Master’s Degree in law and qualifications to practice law; • International experience in similar tasks; • At least 10 years of relevant international experience in telecom sector; • Familiarity with Georgian Law and telecom framework would be considered as an asset; • Strong analytical and research skills; • Ability to work collaboratively in a team and deliver outputs on time; • Excellent knowledge of English language.

Facilities and Services to be provided by the Client

The MoESD shall provide office area and facilities, office equipment and communication necessary to carry out the services. The Client shall also provide all necessary information and documents for that purposes. Facilitating meetings with all relevant stakeholders per Client guidance and Consultant requests.