



REQUEST FOR EXPRESSIONS OF INTEREST **CONSULTING SERVICES**

Selection # as assigned by e-Tool: RG-T3536-P001

Selection Method: Full competitive

Country: Regional

Sector: IFD/CMF

Funding – TC #: ATN/OC-17689-RG

Project #: RG-T3536

TC name: Financial Structuring and Regulatory Homogenization for the Reduction of the Digital Gap in Central America

Description of Services: The goal of this Consultancy is to support the Governments of Central American countries to develop a sustainable environment for the efficient and effective use of broadband services. The specific objectives are: (i) assess the needs and develop the pre-feasibility studies for the deployment of digital infrastructure (broadband networks and cloud-computing infrastructure); and (ii) strengthen the regulatory framework and develop innovative public policies for the development of the digital ecosystem.

Link to TC document: <https://www.iadb.org/en/project/RG-T3536>

The Inter-American Development Bank (IDB) is executing the above mentioned operation. For this operation, the IDB intends to contract consulting services described in this Request for Expressions of Interest.

Expressions of interest must be delivered using the IDB Portal for Bank Executed Operations (<http://beo-procurement.iadb.org/home>) by: May 8th, 2020, 5:00 P.M. (Washington D.C. Time).

The consulting services (“the Services”) includes supporting the Governments of Central American countries to develop a sustainable environment for the efficient and effective use of broadband services. The specific objectives are: (i) assess the needs and develop the pre-feasibility studies for the deployment of digital infrastructure (broadband networks and cloud-computing infrastructure); and (ii) strengthen the regulatory framework and develop innovative public policies for the development of the digital ecosystem. Specifically, the consulting firm is expected to implement the following activities:

- **Diagnostic and studies for the deployment of digital infrastructure**

The objective of this activity is to determine the need for digital infrastructure to develop new broadband services.

- **Institutional framework.**

The objective of this activity is to review and propose updates to, the IT institutional, legal and regulatory frameworks to advance the adoption and use of broadband services and cloud computing.

The expected deliverables will be:

- i. Diagnostic of supply and demand for broadband services,
- ii. Diagnostic of supply and demand for cloud-computing network services,
- iii. Study with the technical design and proposed solution to deploy broadband networks in key touristic areas,
- iv. Study with the technical design and proposed solution to deploy cloud computing infrastructure,
- v. Study with the design and Identification of technology, data center infrastructure, network and Services for cloud-computing service deployment,
- vi. Financial and economic analysis,
- vii. Roadmap for the implementation of the proposed projects,
- viii. Diagnostic and recommendations to improve the institutional framework in Central America,
- ix. Set of recommended public policies

Eligible consulting firms will be selected in accordance with the procedures set out in the Inter-American Development Bank: [*Policy for the Selection and Contracting of Consulting firms for Bank-executed Operational Work*](#) - GN-2765-1. All eligible consulting firms, as defined in the Policy may express an interest. If the Consulting Firm is presented in a Consortium, it will designate one of them as a representative, and the latter will be responsible for the communications, the registration in the portal and for submitting the corresponding documents.

The IDB now invites eligible consulting firms to indicate their interest in providing the services described below in the draft summary of the intended Terms of Reference for the assignment. Interested consulting firms must provide information establishing that they are qualified to perform the Services (brochures, description of similar assignments, experience in similar conditions, availability of appropriate skills among staff, etc.). Eligible consulting firms may associate in a form of a Joint Venture or a sub-consultancy agreement to enhance their qualifications. Such association or Joint Venture shall appoint one of the firms as the representative.

Special requirements according to the Donor Trust Fund (DTF), if applicable.

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**REGIONAL
IFD/CMF**

**Estructuración financiera y homogeneización regulatoria para la reducción de la brecha digital en Centroamérica
(RG-T3536)**

Component 1. Identification of the Infrastructure gap to connect public institutions

and

Component 3. Identification of the governance model and update of regulatory framework

TERMS OF REFERENCE

I. BACKGROUND

There is evidence that the acceleration of broadband penetration, adoption and effective use brings clear social and economic benefits. In particular, it is estimated that increases of 10% in broadband penetration in Latin American and Caribbean (LAC) countries, on average, have associated increases of 3.19% in GDP, 2.61% in productivity and a net generation of more than 67,000 jobs.¹

Central America is one of the regions that faces the greatest challenges to effectively harness the benefits brought about by broadband connectivity, as it is characterized by: (i) low levels of penetration;² (ii) low broadband quality, in terms of speed³; and (iii) high prices⁴. Not surprisingly given this context, the use of Information and Communications Technologies (ICT) in Central America is also low compared to international standards.⁵

¹ García-Zaballos, A. / López-Rivas, R.: Governmental control on socio-economic impact of broadband in LAC countries. IDB, 2012.

² ICT World Indicators Database, International Telecommunications Union (June, 2012).

³ Galperín, H.: Broadband prices and quality in Latin America (2012). Data for 2010.

⁴ Ibid.

⁵ According to the ICT utilization indicator by the World Economic Forum (2012) usage by government,

In this line, the main barriers found in Central America increase broadband services penetration, adoption and use are: (i) limited awareness of the benefits that broadband and ICTs have particularly regarding their potential for innovation and competitiveness in sectors such as health, education, government, trade, finance and SMEs, as well as a general lack of skills for their adoption by public officials, policy makers, entrepreneurs and citizens; (ii) need to continue pushing, implementing and monitoring specific policies promoting the adoption and effective use of ICTs for all the population; (iii) outdated regulatory frameworks that fail to adequately attend the recent evolution of the telecommunications sector; and (iv) inadequate deployment of infrastructure and technology with scarce participation by the private sector in the investment and provision of technology.

In light of the many challenges observed to promote broadband in Central America, particularly regarding the lack of understanding of the broadband status quo given the absence of appropriate data, the Region has requested technical and financial support from the Inter-American Development Bank (IDB) to address these issues through this technical cooperation. This technical cooperation will support technical work to be carried out for the design of a national broadband cloud-computing infrastructure, and regulatory frameworks.

II. CONSULTANCY OBJECTIVE(S)

The goal of this Consultancy is to support the Governments of Central American countries to develop a sustainable environment for the efficient and effective use of broadband services. The specific objectives are: (i) assess the needs and develop the pre-feasibility studies for the deployment of digital infrastructure (broadband networks and cloud-computing infrastructure); and (ii) strengthen the regulatory framework and develop innovative public policies for the development of the digital ecosystem.

III. MAIN ACTIVITIES

The consultant will be in charge of delivering various services and products described below:

Component 1: Diagnostic and studies for the deployment of digital infrastructure

The objective of this component is to determine the need for digital infrastructure to develop new broadband services. To that goal, the following activities will be developed:

Activity 1.1 Demand estimation. Develop an estimation and forecast (five years) demand for both broadband services and cloud computing. The study will consider all possible beneficiaries: citizens, private companies (multisector analysis) and public institutions.

Activity 1.2 Supply analysis. Analyze the current and future supply of broadband networks (backbone, backhaul and last mile) and ICT enabled services (needs for data storage, processing and security). Diagnose the gaps between the supply and demand of

businesses and individuals is well below the average levels found in LAC and OECD countries.

broadband networks and government broadband services to citizens, private companies (multisector analysis) and public institutions.

Activity 1.3 Technical study. Identify the key design criteria and technical specifications for the both the broadband networks (backbone, backhaul and last mile) and the overall cloud-computing infrastructure and services related to the technology into the public institutions such as schools, hospitals and public squares. Assess different technological alternatives considering the identified needs.

Provide design specifications to deploy new broadband networks and bridge the existing gaps. Develop a map that includes existing backbone and backhaul networks and the proposed new routes. Provide design specifications for the different last mile network alternatives proposed.

Analyze the main and back-up data centers and conceptualize the cloud-computing facility in diagram format, detailing the components and systems that will comprise the project investment.

Activity 1.4 Financial and economic analysis. Quantify all the investments described in the previous three items, and the associated OPEX for the first five years of the operation. Calculate the revenues and operational expenditures for the first five-year period. Formulate a five-year operating and commercial management strategy. The study will be separated in two sections: (i) broadband networks and (ii) cloud computing infrastructure.

Evaluate the investment and analyze the economic return associated with the different alternatives for deploying cloud-computing infrastructure, taking into account the different deployment scenarios. The study will also include an estimation of the Net Present Value (NPV) and Rate of Return (IRR) associated with the 2 investments.

Activity 1.6 Roadmap for implementation. For each of the two described investments (broadband networks and cloud computing infrastructure), create a roadmap for project schedule and development of services, expanding on stages for detailed design and engineering, construction, operations, service introduction, monitoring etc. Define key milestones and measurable targets. Identify who should be responsible for each activity.

Activity 1.7 Workshop to present and validate results. Develop a workshop to validate and disseminate the results from the previous activities. Participants will include all key stakeholders and the project team will take into account their feedback to update or modify the project deliverables if necessary.

Component 2: Institutional framework.

The objective of this component is to review and propose updates to, the IT institutional, legal and regulatory frameworks to advance the adoption and use of broadband services and cloud computing. This component is particularly relevant as the decision of investing by the government and private sector requires a stable and predictable regulatory framework that creates the conditions to facilitate investments, as well as a coordinated government investment policy and administrative arrangements. This component includes the following activities:

Activity 2.1 Review of the administrative, regulatory and legal frameworks related to digital infrastructure. Review and analysis of the current telecommunications and IT administrative, regulatory and legal frameworks related to network deployment.

Activity 2.2 Public policies. Development of a set of public policies to foster the growth of the digital ecosystem in the Region. The scope will include not only specific actions directed to develop the offer and demand for ICT services but also recommendations to

enable digitization in other sectors and services such as small enterprises, agriculture, finance, education or health.

IV. REPORTS / DELIVERABLES

1. Diagnostic of supply and demand for broadband services,
2. Diagnostic of supply and demand for cloud-computing network services,
3. Study with the technical design and proposed solution to deploy broadband networks in key touristic areas,
4. Study with the technical design and proposed solution to deploy cloud computing infrastructure,
5. Study with the design and Identification of technology, data center infrastructure, network and Services for cloud-computing service deployment,
6. Financial and economic analysis,
7. Roadmap for the implementation of the proposed projects,
8. Diagnostic and recommendations to improve the institutional framework in Central America,
9. Set of recommended public policies

V. PAYMENT SCHEDULE

Payment shall be made as per the following schedule, upon approval by the Team Leader responsible for this TC (See item VII below).

Schedule of payments:

- a. 20% upon delivery and approval of the Work Plan;
- b. 30% upon delivery and approval of Products 1, 2, 3 and 4;
- c. 30% upon delivery and approval of Products 5, 6, 7 and 8;
- d. 20% upon delivery and approval of Products 9.

VI. QUALIFICATIONS

The firm will have extensive experience in the telecommunications sector, with senior team members involved in projects in LAC and other developing regions. Specific domain of broadband infrastructure is required, including but not limited to backbone and last mile networks and data centers deployment. The firm must have a proven capability to deliver detailed and accurate financial, economic and environmental studies.

VII. CHARACTERISTICS OF THE CONSULTANCY

Type of consultancy: Firm and individual consultants

Start date and duration: Estimated duration period: 10 months.

Place of work /travel: Place of residence. Travel required. During this period, the firm is expected to participate in coordination meetings with IDB Specialists in Headquarters (Washington DC) as well as in presentation meetings with government representatives.

Coordination: Supervision and coordination of the consultant's work will be the responsibility of Antonio García Zaballos (IFD/CMF), Team Leader, antoniogar@iadb.org, Telephone (202) 623-2980.

