

TC ABSTRACT

I. BASIC PROJECT DATA

• Country/Region :	REGIONAL/IDB
• TC Name :	Broadband 2.0: Diagnosis and Recommendations for Sustainable BBD Development in Paraguay, Honduras and Argentina
• TC Number :	RG-T2785
• Team Leader/Members :	Antonio García Zaballos, Team Leader (IFD/CMF); Cecilia Bernedo (IFD/CMF); Suk Nam (IFD/CMF); Enrique Iglesias Rodríguez (IFD/CMF); Inkyung Jeun (IFD/CMF); Manuel Pablo Fernandini; Christian Schneider Talavera; José Francisco Demichelis; Rodolfo Graham (LEG/SGO); Glogia Lugo (IFD/CMF).
• Indicate if : Operational Support, Client Support, or Research & Dissemination:	Client Support
• Reference to Request:	N/A
• Date of TC Abstract:	08 Jun 2016
• Beneficiary:	Paraguay, Honduras y Argentina
• Executing Agency and contact name:	Inter-American Development Bank (IDB) - Antonio Garcia Zaballos
• IDB Funding Requested:	\$ 1,500,000.00
• Local counterpart funding, if any:	\$ 0.00
• Disbursement period (which includes execution period):	36 months
• Required start date:	N/A
• Types of consultants:	Firms
• Prepared by Unit:	Cap Mkts & Fin Institutions
• Unit of Disbursement Responsibility:	INSTITUTIONS FOR DEVELOPMENT
• Included in Country Strategy (y/n):	No
• TC included in CPD(y / n):	No
• Strategic Alignment:	Infrastructure for competitiveness and social welfare

II. OBJECTIVE AND JUSTIFICATION

- 2.1 The TC will have the following specific objectives: (i) provide an in-depth analysis on international connectivity alternatives in order for Paraguay to reduce the connection cost remarkably; (ii) provide the practical method to spur initial-demand through the design of a national datacenter in Honduras; and (iii) increase accessibility of broadband in rural areas of Argentina as well as improving digital inclusion and promoting new services. Another objective is about planning broadband services and applications for stimulating demand and enhancing public awareness in each country.
- 2.2 Broadband infrastructure itself (access or penetration) does not guarantee its effective use automatically. Without well-designed applications (broadband-enabled e-services such as e-agriculture, e-healthcare and e-learning etc.), only the infrastructure might be of no use. In this context, Broadband 2.0 aims to bundle the infrastructure and the services as a sort of total solution for the widespread usage of broadband across the LAC region. In doing so, the packaged

infrastructure and applications, functioning as stimulus both in 'supply' and 'demand' side, would trigger the virtuous circle of sustainable digital economy.

III. DESCRIPTION OF ACTIVITIES AND OUTPUTS

- 3.1 Expected Outputs: As a result of this project, the GoP will have a better understanding of how to access international traffic gateways at affordable prices, eventually leading to lower prices and higher quality services to consumers. Likewise, the GoH will command the way of deploying cloud infrastructure, accelerating broadband services provision and use in the country. Moreover, the GoA will have increased connectivity in the rural areas, increasing competitiveness and national social-economic integration.

A. Outcomes

- 3.2 Name: Increased government awareness and understanding of the current status of BBD in the country and additional related action to accelerate the penetration, adoption and use of broadband services, and better understanding on how broadband could be a catalyst for regional integration.

B. Components

- 3.3 **PARAGUAY - Component 1: Diagnosis of the current situation on international connectivity.** This component will analyze the available international connections in Paraguay with bordering countries – Argentina and Brazil, the demand of international traffic, the availability of infrastructures and operators in bordering countries in order to connect Paraguay to the nearest IXP and submarine cables and a benchmark on international prices, models and regulations on infrastructure rental.

PR Component 1: Market Study = No. of Documents to be produced = 1

- 3.4 **PARAGUAY - Component 2: Technical analysis of international connectivity alternatives.** This line of action will identify the technical considerations for the deployment of international connectivity infrastructure, including the structure of the network and the different technological alternatives through the development of a technical study.

PR Component 2: Technical Study = No. of Documents to be produced = 1

- 3.5 **PARAGUAY - Component 3: Financial analysis and its corresponding sensitivity analysis.** Based on the analysis conducted in Component 2, a financial study will be accompanied, estimating the deployment investments (CAPEX) and operating costs (OPEX) associated with each part of the network and for each of the technological alternatives.

PR Component 3: Financial and Economic Analysis = No. of Documents to be produced = 1`

- 3.6 **HONDURAS - Component 1: Diagnosis and analysis of backbone and cloud-computing infrastructure for broadband development.** The objective of this component is to conduct a market assessment of demand and supply of

government broadband supported services to all the population, public and private sectors in Honduras.

HO Component 1: Market Study = No. of Documents to be produced = 1

- 3.7 **HONDURAS - Component 2: Design and modeling of recommended cloud-computing and additional infrastructure investments related to the backbone network.** Based on the previous sections, the objective of this component is to evaluate technical and physical feasibility of the migration of existing independent datacenters into a consolidated cloud network, determining the inter-operability standards.

HO Component 2: Technical Study = No. of Documents to be produced = 1

- 3.8 **HONDURAS - Component 3: Financial and economic analysis of cloud-computing infrastructure.** Description: A financial, economic, sensitivity and cost benefit analysis will be conducted estimating the deployment investments (CAPEX) and operating costs (OPEX) associated with the proposed infrastructure in the component 2 for HO. The result is also to enable more effective delivery of datacenter infrastructure to government, business and citizens while at the same time yielding substantial cost savings.

HO Component 3: Financial and Economic Analysis = No. of Documents to be produced = 1

- 3.9 **ARGENTINA - Component 1: Market diagnosis and analysis of backbone and last-mile infrastructure focused on rural area.** Description: The objective of this component is to improve the understanding of the market dynamics in the selected rural region(s) of Argentina, by preparing a market study, including an analysis of the socio-demographic and economic conditions of the different geographic areas and how these impact broadband availability.

AR Component 1: Market Study = No. of Documents to be produced = 1

- 3.10 **ARGENTINA - Component 2: Technical study of proposed rural infrastructure deployment.** Description: Based on the previous sections, the objective of this component is to identify and evaluate the technical considerations for deploying the rural infrastructure (backbone, backhaul and last-mile), including the structure of the network and the different technological alternatives.

AR Component 2: Technical Study = No. of Documents to be produced = 1

- 3.11 **ARGENTINA - Component 3: Financial and economic study.** The result of the consolidated financial indicators will determine the amount of necessary subsidy to make the rural broadband project feasible. The component will also include a cost-benefit analysis (CBA) by identifying all the economic and social benefits (quantitative and qualitative) that will be derived from an eventual project that deploys the proposed infrastructure, as well as sensitivity analysis.

AR Component 3: Financial and Economic Analysis = No. of Documents to be produced = 1

- 3.12 **TRANSVERSAL - Component 4: Adoption and utilization study for broadband services and applications.** The objective of this component is to analyze and define an adoption and usage strategy that guarantees the

effective usage of the infrastructure by citizens and government with a special focus on capacity building programs and broadband services pilot projects.

Component 4: Adoption and Utilization Study - No. of Documents to be produced = 3

- 3.13 **TRANSVERSAL - Component 5: Design of broadband services pilot projects.** Description: For each country, a tailored application model will be developed. Through this component, policy measures to facilitate the pilot projects would be provided as well; policies to subsidize the demand to purchase internet services or devices.

Component 5: Pilot Projects Suggestion - No. of Documents to be produced = 3

IV. BUDGET

Indicative Budget

Activity/Component	IDB/Fund Funding	Counterpart Funding	Total Funding
PARAGUAY - Component 1: Diagnosis of the current situation on international connectivity.	US\$70,000.00	US\$0.00	US\$70,000.00
PARAGUAY - Component 2: Technical analysis of international connectivity alternatives.	US\$200,000.00	US\$0.00	US\$200,000.00
PARAGUAY - Component 3: Financial analysis and its corresponding sensitivity analysis.	US\$100,000.00	US\$0.00	US\$100,000.00
HONDURAS - Component 1: Diagnosis and analysis of backbone and cloud-computing infrastructure for broadband development.	US\$70,000.00	US\$0.00	US\$70,000.00
HONDURAS - Component 2: Design and modeling of recommended cloud-computing and additional infrastructure investments related to the backbone network.	US\$200,000.00	US\$0.00	US\$200,000.00
HONDURAS - Component 3: Financial and economic analysis of cloud-computing infrastructure.	US\$50,000.00	US\$0.00	US\$50,000.00
ARGENTINA - Component 1: Market diagnosis and analysis of backbone and last-mile infrastructure focused on rural area.	US\$75,000.00	US\$0.00	US\$75,000.00
ARGENTINA - Component 2: Technical study of proposed rural	US\$255,000.00	US\$0.00	US\$255,000.00

Activity/Component	IDB/Fund Funding	Counterpart Funding	Total Funding
infrastructure deployment.			
ARGENTINA - Component 3: Financial and economic study.	US\$75,000.00	US\$0.00	US\$75,000.00
TRANSVERSAL - Component 4: Adoption and utilization study for broadband services and applications.	US\$315,000.00	US\$0.00	US\$315,000.00
TRANSVERSAL - Component 5: Design of broadband services pilot projects.	US\$90,000.00	US\$0.00	US\$90,000.00

V. EXECUTING AGENCY AND EXECUTION STRUCTURE

- 5.1 The Inter-American Development Bank through the IFD/CMF Division is the executing agency, which will operate in coordination with the staff of Comisión Nacional de Telecomunicaciones (CONATEL) of the Paraguay, Secretaría de Estado Coordinador General de Gobierno, Comisión Nacional de Telecomunicaciones (CONATEL) of Honduras and the Ministry of Communications and National Authority for Communications (ENACOM) of Argentina.

VI. PROJECT RISKS AND ISSUES

- 6.1 (i) lack of institutional capacity to design, implement and monitor policy and regulatory reforms, such as the ones to be recommended in the project; and (Mitigated by having IDB execute TC; and (ii) that the results of the project are not taken into account to increase broadband connectivity due to a lack of formal commitment to deploy infrastructure or service once the project is finished.

VII. ENVIRONMENTAL AND SOCIAL CLASSIFICATION

- 7.1 The ESG classification for this operation is C.