

TC DOCUMENT

I. BASIC INFORMATION

▪ Country/Region:	Regional - Central America
▪ TC Name:	Strengthening the ICT border connectivity in borders in Central America
▪ TC Number:	RG-T3044
▪ Team Leader/Members:	Antonio Garcia Zaballos (Team Leader, IFD/CMF); Enrique Iglesias (Alternate Team Leader, IFD/CMF); Inkyung Jeun (IFD/CMF); Irasema Infante Barbosa (CID/CID); Roberto Miranda (CID/CID); Cecilia Bernedo (IFD/CMF); Alvaro Sanmartín (LEG/SGO) and Margarita Libby (TIN/CPN).
▪ Taxonomy:	Client Support (CS)
▪ Date of TC Abstract authorization:	August 24, 2018
▪ Beneficiary:	Central America region (Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panama)
▪ Executing Agency:	Inter-American Development Bank (IDB)
▪ Donors providing funding:	Knowledge Partnership Korea Fund for Technology and Innovation (KPK)
▪ IDB Funding Requested:	US\$700,000
▪ Local counterpart funding:	None
▪ Disbursement period:	24 months (execution period: 18 months)
▪ Required start date:	Oct, 2018
▪ Types of consultants:	Individual consultants and consulting firms
▪ Prepared by Unit:	Capital Markets and Financial Institutions Division (IFD/CMF)
▪ Unit of Disbursement Responsibility:	IFD/CMF
▪ TC Included in Country Strategy:	N/A
▪ TC included in CPD:	N/A
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	(i) strengthen the capacity of the state; (ii) provide inclusive infrastructure services; (iii) establish smart institutional frameworks; and (iv) improve regional infrastructure.

II. JUSTIFICATION

- 2.1 Inefficient border crossing management is one of the most significant factors affecting Central America's logistic performance and competitiveness. The use of inefficient control procedures and inadequate infrastructure increases costs and waiting times and reduces predictability in the movement of people and goods throughout the region.
- 2.2 For some years, the Bank has been supporting countries in the region to address these challenges. In 2014, the Bank supported the Council of Ministers of Economic Integration (COMIECO) in the design of the "Central American Strategy for Trade Facilitation and Competitiveness with an emphasis on Coordinated Border Management." Since the approval of the Strategy by COMIECO in October 2015, the Bank has been supporting countries in the implementation of the trade facilitation measures identified therein. Currently, through technical cooperation

resources ([ATN/MR-14890-RG](#)), progress is being made in the implementation of short-term measures.¹ To address medium- and long-term measures, some countries have made progress in the preparation and implementation of border reform programs, such as Nicaragua, Costa Rica and Panama ([3484/BL-NI](#), NI-G1010, [3488/OC-CR](#) and [4517/OC-PN](#) currently being executed).

- 2.3 However, to ensure the benefits of the installation of non-intrusive technology, modernization of equipment and border infrastructure, and the improvement of single windows and interoperability, it is necessary to improve the poor state of connectivity² faced by border control agencies.
- 2.4 The connectivity problems faced by national customs systems, migration, health and safety systems translate into frequent crashes and instability in data transmission. For example, in the last year, numerous connectivity issues have been reported in the customs system of El Salvador, which have affected both exporters and importers in that country, as well as those of neighboring countries that transit their merchandise through the Salvadoran territory. These problems at the national level are aggravated by the unreliability of regional information platforms that deal with intraregional trade processes. For example, the International Merchandise Transit System (TIM), experienced in July 2016 a three-day connectivity fall that caused serious congestion at the border crossings in the region. In a similar situation, connectivity issues reported in September 2017 limited the impact of establishing a Customs Union framework between Guatemala and Honduras.
- 2.5 As a result, many operators prefer to carry out paperwork when the means of transport arrives at the border point, rather than in advance through national and regional information systems. This practice, widely extended in Central America, contributes to the formation of clusters and long queues at the border crossings of the region.
- 2.6 Upcoming trade facilitation initiatives at the regional level will place greater pressure on national and regional information systems and will demand consistent and reliable transmission of data from border control agencies. For example, the Central American countries will start utilizing a Single Customs Document (DUCA)³ for all commercial transactions in 2018. This will imply an increase in the volume and frequency of documents transmitted electronically. In addition, the Central American Digital Commerce Platform (PDCC)⁴, currently being implemented, will enable information exchange among border control authorities (customs, migration, health and safety) of all countries. Its functionality will depend on reliable connectivity from all agencies.
- 2.7 One of the main historical factors causing the inadequate Information and Communications Technology (ICT) connectivity in Central America is the lack of availability of adequate backbone infrastructure and regional interconnection points. To address this issue, six Central American countries (Guatemala,

¹ Anticipated transmission of border control documents, coordination of migratory controls, transmission of electronic sanitary and phytosanitary certificates, registration of cargo units by radiofrequency identification devices and use of camera systems at border crossings).

² Connectivity is understood as the level of consistency and reliability of quality data transmission.

³ Which merges various customs and transit documents currently being utilized Including the Central American Single Customs Form (FAUCA), the Single Transit Document (DUT) and the Declarations of Goods for Imports/Exports

⁴ Bank is supporting, in cooperation with the European Union (RG-T3007)

Honduras, El Salvador, Nicaragua, Costa Rica and Panama) created the consortium called REDCA (*Red Centroamericana de Telecomunicaciones*) as a broadband regional operator in 2013, with the aim of using the infrastructure of the electrical regional network; SIEPAC (*Sistema de Interconexión Eléctrica de los Países de América Central*). Since that moment, REDCA has started provided wholesale telecommunication services in the region.

III. OBJECTIVE

- 3.1 The objectives of this TC are: (i) identifying gaps in infrastructure, equipment, Information Technology (IT) Security and border surveillance technologies, software and procedures necessary to improve connectivity and data transmission reliability of border control agencies and regional institutions in Central America; (ii) designing a safe border management infrastructure to enhance security of critical information and enhance the control environment at the border crossings; and (iii) develop a short- and medium-term action plan to identify priorities, responsibilities and cost of interventions to improve the connectivity of border control agencies.
- 3.2 This TC is aligned with the priorities identified in the IDBs Update to the Institutional Strategy 2010-2020 (AB-3008). Specifically, it is aligned with the following strategic policy objectives: (i) strengthen the capacity of the state; (ii) provide inclusive infrastructure services; (iii) establish smart institutional frameworks; and (iv) improve regional infrastructure. Additionally, this TC is expected to contribute to the following Corporate Results Framework (CRF) indicators: (i) telecommunications Infrastructure, contributions directed to develop extension and quality of telecoms infrastructure, including infrastructure; and (ii) public policy in telecommunications; contributions directed to increase the level playing-field competition and the transparency of the regulatory policy and reforms within the telecom sector.
- 3.3 **Strategic alignment.** The TC is aligned with the priorities identified in the IDB's Update to the Institutional Strategy 2010-2020 (AB-3008). Specifically, it is aligned with the following strategic policy objectives: (i) strengthen the capacity of the state; (ii) provide inclusive infrastructure services; (iii) establish smart institutional frameworks; and (iv) improve regional infrastructure. Additionally, this TC is expected to contribute to the following Corporate Results Framework (CRF) indicators: (i) telecommunications Infrastructure, contributions directed to develop extension and quality of telecoms infrastructure, including infrastructure; and (ii) public policy in telecommunications; contributions directed to increase the level playing-field competition and the transparency of the regulatory policy and reforms within the telecom sector.

IV. DESCRIPTION OF ACTIVITIES

- 4.1 **Component I. Assessment of challenges.** This component will assess the status of the customs, migration, health, agriculture and safety information systems involved in trade and border management of all the beneficiary countries, as well as the regional information platforms installed in SIECA. This diagnosis will include an analysis of the infrastructure, equipment, technology, software and procedures that have an impact on the transmission of information. As a result, the main

connectivity challenges that need to be addressed to improve consistency and reliability in the transmission of information, both nationally and regionally, will be identified.

- a. **Data transmission.** This activity will gather information regarding the number and severity of connectivity issues reported by border control agencies and regional trade platforms in Central America.
- b. **Broadband infrastructure.** This activity will gather data regarding existing and projected telecommunication and broadband networks in Central America, with the aim of having a better understanding of the current situation.
- c. **Border control agencies equipment and data systems.** This activity will analyze the existing infrastructure, equipment, data centers, software and procedures of border control agencies and regional institutions that have an impact on the transmission of information. With this **information**, the current and forecasted demand for broadband internet at the borders will be estimated.
- d. **Regulatory frameworks and policies.** This activity will review the existing regulatory frameworks and public policies for ICT development in Central America. The review will focus on identifying **possible** barriers to network development along with opportunities for new public policies or regulations both at the national and the regional level.
- e. **Gap analysis and technical study.** Considering results from previous activities, this activity will finance a comprehensive gap analysis, highlighting main challenges to improve connectivity and **reliability** of data transmission. In addition, a technical study will be developed to present different technological alternatives to bridge this gap and improve ICT connectivity in the long term. The technical study will pay special attention to the use of the existing REDCA infrastructure, which offers a great opportunity to reduce deployment costs.

4.2 **Component II. Design of border broadband technology protection plan.** Considering the importance of data being processed at the border, this component will identify critical information and systems and design a plan to enhance cybersecurity, resilience and data security and transmission.

- a. **Data warehouse.** This activity will identify important information stored in data centers of the border control agencies/regional institutions and analyze their capacity and security. This will include an analysis of encryption method used when important data is stored and transmitted.
- b. **Critical technological infrastructure/systems.** This activity will identify critical systems, which store or transmit key data at the border area, pinpointing those systems that **require** consistent, seamless service.
- c. **Security threat.** This activity will finance the analysis of threats and vulnerabilities on identified critical infrastructure systems, including technological issues (e.g. unauthorized access, service failure), and managerial issues (e.g. information security policy, awareness).
- d. **Technological infrastructure protection measures.** This activity will finance the identification of recommendations to strengthen each of the

critical infrastructure **systems** identified previous assessment. These recommendations will include the design of response strategy against external attacks and system failure, cybersecurity resilience system, and capacity building for the safety of critical infrastructure systems.

4.3 **Component III. Development of the action plan.** Based on the diagnosis generated by the previous components, a short- and medium-term action plan will be developed to improve the connectivity and data transmission reliability of border control agencies and regional platforms, identifying priorities, responsibilities and cost of interventions.

a. **Action plan.** This activity will develop of a comprehensive plan to address the challenges identified in component I and II and deploy the proposed network segments. This plan will include recommendations regarding potential public-private partnerships, the funding strategy and environmental considerations.

b. **Policy and regulatory recommendations.** This activity will develop identify public policy and **regulatory** recommendations for the Central American countries. These recommendations will contribute to lowering deployment costs and improving regional cooperation

4.4 **Component IV. Financial analysis and its corresponding sensitivity analysis.** The objective of this component is to develop the financial analysis of the proposed roadmap for their execution.

a. **Network design and financial study.** This activity will develop a financial study of the action plan, taking into consideration the most cost-efficient technologies to deploy the improved connectivity. This study will include the cost (CAPEX and OPEX) associated with the proposed deployment.

b. **Environmental and social impact management plans (EMPs).** This activity will develop the EMPs for the project, consistent with the Central American counties and IDB Environmental and Social **safeguards** and regulations.

c. **Dissemination.** Finally, this activity will support the coordination of reports and promotion materials, as well as the organization of two regional workshops to validate results from all studies with stakeholders.

Table 1: Budget of Reference

Components	Funding(US\$)
Component 1: Assessment of challenges <ul style="list-style-type: none"> • Data transmission • Broadband infrastructure • Border control agencies and data systems • Regulatory frameworks and policies • Gap analysis and technical study 	250,000
Component 2: Design of border broadband infrastructure protection plan <ul style="list-style-type: none"> • Data warehouse • Critical technological infrastructure / systems • Security threats • Technological infrastructure protection measures 	150,000

Components	Funding(US\$)
Component 3: Development of the action plan <ul style="list-style-type: none"> Action plan Policy and regulatory recommendations 	150,000
Component 4: Financial analysis and its corresponding sensitivity analysis <ul style="list-style-type: none"> Network design and financial study Environmental and social impact management plans Dissemination 	150,000
Total	700,000

V. EXECUTING AGENCY AND EXECUTION STRUCTURE

- 5.1 The executing agency will be the Bank through Connectivity, Markets and Finance (IFD/CMF). The justification for this execution structure is: (i) the Bank has the technical experience to coordinate and executive the different activities included in the technical cooperation; (ii) the technical cooperation will need extensive partnership with international organizations, academic institutions and private firms. (iii) the beneficiaries requested the Bank to be the executor given the technical difficulties related to the project. The Bank will work together with the Customs Directors of Central America, in coordination with COMIECO and REDCA during the TC's execution.
- 5.2 **Procurement.** The Bank will contract individual consultants, consulting firms and other services in accordance with current Bank procurement policies and procedures. Specifically, Section AM-650 of the Administrative Manual "Complementary Workforce" will be applied in the case of individual consultants, the Policy for the Selection and Contracting of Consulting Firms for Bank-executed Operational Work (GN-2765-1) and its Operational Guidelines (OP-1155-4) for hiring consulting services of intellectual nature and the Corporate Procurement Policy (GN-2303-20) for other services.

VI. PROJECT RISKS AND ISSUES

- 6.1 This project presents two risks that could affect the impact, quality or sustainability of the expected results: (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 (ii) that the results of the project are not taken into account to due to a lack of formal commitment to legislate new policies or deploy infrastructure once the project is finished.
- 6.2 The first risk will be mitigated by the fact that the project will be executed by the IFD/CMF Division, as per the government's request. In addition, the project will include a monitoring process throughout the implementation of the project to allow for the different institutions to get involved from the beginning to the end of the project.

VII. ENVIRONMENTAL AND CLASSIFICATION

- 7.1 Given that the current TC revolves around a study, there are no social or environmental risks associated with it. This operation is classified as a Category “C” according to the classification toolkit of the Bank (See: [Safeguard Policy Filter Report](#) and [Safeguard Screening Form](#)).

Required Annexes:

- Annex I: [Request Letter](#)
- Annex II: [Results Matrix](#)
- Annex III: [Terms of Reference](#)
- Annex IV: [Procurement Plan](#)

STRENGTHENING THE ICT BORDER CONNECTIVITY IN BORDERS IN CENTRAL-AMERICA

RG-T3044

CERTIFICATION

I hereby certify that this operation was approved for financing under the **Knowledge Partnership Korea Fund for Technology and Innovation (KPK)**, through a communication dated August 24, 2018 and signed by Byoung Kim. Also, I certify that resources from said fund are available for up to **US\$700,000** in order to finance the activities described and budgeted in this document. This certification reserves resource for the referenced project for a period of four (4) calendar months counted from the date of eligibility from the funding source. If the project is not approved by the IDB within that period, the reserve of resources will be cancelled, except in the case a new certification is granted. The commitment and disbursement of these resources shall be made only by the Bank in US dollars. The same currency shall be used to stipulate the remuneration and payments to consultants, except in the case of local consultants working in their own borrowing member country who shall have their remuneration defined and paid in the currency of such country. No resources of the Fund shall be made available to cover amounts greater than the amount certified herein above for the implementation of this operation. Amounts greater than the certified amount may arise from commitments on contracts denominated in a currency other than the Fund currency, resulting in currency exchange rate differences, representing a risk that will not be absorbed by the Fund.

Certified by:	Original Signed	10/05/2018
	Sonia M. Rivera	Date
	Chief	
	Grants and Co-Financing Management Unit	
	ORP/GCM	

Approved by:	Original Signed	10/22/2018
	Juan Antonio Ketterer	Date
	Division Chief	
	Connectivity, Markets and Finance Division	
	IFD/CMF	