

## TC Document

### I. Basic Information for TC

▪ Country/Region:	MEXICO
▪ TC Name:	Support to the Digital Transformation and Social Inclusion in Mexico
▪ TC Number:	ME-T1436
▪ Team Leader/Members:	Garcia Zaballos, Antonio (IFD/CMF) Team Leader; Iglesias Rodriguez, Enrique (IFD/CMF) Alternate Team Leader; Barragan Crespo, Enrique Ignacio (LEG/SGO); Bernedo, Cecilia (IFD/CMF); Gonzalez Murillo, Lidice Alexa (IFD/CMF); Kim, Kyoung Woo (IFD/CMF); Marquez, Claudia M (IFD/CMF); Park, Soontae (IFD/CMF); Porras Herrera, Fanny Eliana (IFD/CMF); Villalba Castrillon, Harold (SPD/SDV) Garza Cortina, Miriam y Rodriguez Perez, Ariel Enrique (VPC/FMP)
▪ Taxonomy:	Operational Support
▪ Operation Supported by the TC:	ME-L1297
▪ Date of TC Abstract authorization:	26 Feb 2020
▪ Beneficiary:	<i>Secretaría de Comunicación y Transporte</i>
▪ Executing Agency and contact name:	Inter-American Development Bank (IDB)
▪ Donors providing funding:	Knowledge Partnership Korea Fund for Technology and Innovation(KPK)
▪ IDB Funding Requested:	US\$700,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	24 months (execution period: 20 months)
▪ Required start date:	May, 2020
▪ Types of consultants:	Firms and Individual Consultants
▪ Prepared by Unit:	IFD/CMF-Connectivity Markets and Finance Division
▪ Unit of Disbursement Responsibility:	CID/CME-Country Office Mexico
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	Yes
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality; Productivity and innovation; Institutional capacity and rule of law

### II. Description of the Associated Loan/Guarantee

- 2.1 This TC is associated with the Program ME-L1297. The general objective of this program is to increase citizens' access to the internet through the transformation and digital inclusion of Mexico, which allows the country to move towards the fourth industrial revolution. To achieve this, the following specific objectives need to be met: (i) to promote the telecommunications infrastructure on critical and high performance networks; (ii) to promote digital inclusion through the development of digital capacities and skills, especially in marginalized and remote areas; and (iii) promote institutional strengthening that favors digital transformation and inclusion.

### III. Objectives and Justification of the TC

- 3.1 **Objectives.** The general objective of this Technical Cooperation (TC) is to support the digital transformation and social inclusion in México by developing a strategy to increase broadband connectivity and developing policies that would facilitate new trends of broadband services. The Government of Mexico has prioritized digital transformation as a lever for social development and has requested Bank support to

implement projects that contribute to universal digital inclusion. The Sub Secretariat of Communications (SSC) has the mission of developing and conducting public policies that favor the development of enablers that promote digital infrastructure and has established the “Together for Digital Transformation and Inclusion 2019–2024” program, whose objective is to promote the digital infrastructure prioritizing five strategic axes: (i) infrastructure boost of critical and high performance networks; (ii) promotion of social coverage and internet access for welfare and social inclusion; (iii) development of models for the digital transformation of individuals and institutions; (iv) promotion of digital transformation and inclusion; and (v) design and evaluation of public policies in coordination with all actors in society.

- 3.2 **Justification.** In March 31s of the current year, in the context of the “extraordinary actions to attend to the health emergency”, the Government of Mexico declared telecommunications as an essential activity and a fundamental sector of the economy. The Covid-19 pandemic has highlighted the importance of affordable access to high capacity telecommunications services. In places with broadband access, people and companies have been able to use digital resources to continue studying, working conducting bank transactions, and using health applications. Gaps in access to and use of information and communication technologies have limited the use of telemedicine services, such as remote consultations, online education, by the most vulnerable population (older adults, low-income households, and inhabitants of rural areas).Or to carry out work activities from home.
- 3.3 Enhancing the connectivity of broadband is well known as an enabler of socio-economic development since it could spur economic growth by contributing to the enhancement of national competitiveness, the increase of productivity and efficiency as well as the creation of jobs. Regarding the economic impacts of broadband, it has been estimated that a 10% growth in penetration would raise Gross Domestic Product (GDP) of high-income countries by 1.21% and that of low-income countries by 1.38% (World Bank, 2009). In particular the Latin American and the Caribbean (LAC) region, it is calculated that an increase of 10% in penetration, on average, has been associated with the increase of 3.19% in GDP; 2.61% in productivity and a generation of more than 67,000 jobs.<sup>1</sup>
- 3.4 According to McKinsey, greater penetration of Information Technology and Communications (ICT) would imply an additional growth of between 7% and 15% of the GDP of the country by 2025. However, in Mexico, 38.6 million people still do not use this service and approximately 44% of the population living in rural locations (11.38 million people) lack mobile data coverage. The problem of limited internet access by the population is mainly due to three major obstacles: (i) lack of infrastructure; (ii) lack of digital training; and (iii) absence of public policies to promote the development of digital infrastructure solutions.
- 3.5 Currently the government participates in the *Red Compartida*, which will provide 4Gmobile services to 92.2% of the population in 2024 and created CFE Telecommunications and Internet for all, which will take internet access to priority

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

areas without coverage. It also has the Mexican Satellite System (MEXSAT), which can be used alternately for areas where other types of coverage are not technically or economically feasible. Despite this, it is necessary to deploy a high-performance backbone network that allows the provision of high-capacity internet services in 1,257 sites that are currently not connected and reduce the annual cost of its management by 25% thanks to the interconnection of Internet traffic exchange centers and their associated ecosystems.

- 3.6 Currently the main uses of computers and the internet are for entertainment and communication purposes. Only 31% of the Mexican population use the internet to interact with the government, 19.7% to buy products online and 15.4% to conduct banking operations. This is due to their lack of knowledge, the difficulty of accessing a device and the lack of digital solutions in different strategic sectors.
- 3.7 The TC is expected to contribute to the preparation of the program and the implementation of the first activities related to the initial execution of the Program ME-L1297.
- 3.8 **Strategic Alignment.** The TC is consistent with the Institutional Strategy Update (UIS) 2020-2022 (AB-3190-2) and is strategically aligned with the development challenges of: (i) Productivity and Innovation, by supporting the use of digital infrastructure; and (ii) Social Inclusion and Equality, by increasing access to broadband and improving service quality. The TC also aligns with the cross-cutting themes of: (i) Institutional Capacity and Rule of Law, through the strengthening of operational capacity and contributes to the Corporate Results Framework (CRF) 2020-2023 (GN 2727-8) through the indicator government agencies benefiting from projects that strengthen technological and management instruments to improve the provision of public services. The TC is aligned with the IDB Group Strategy with Mexico 2019-2024 (GN-2982) through the strategic objective of contributing to a more balanced and sustainable territorial development through investment in telecommunications infrastructure, promoting greater penetration of broadband in urban and rural areas, digitization and deployment of advanced networks and specifically contributing to the goal of climate finance thanks to the deployment of sustainable digital infrastructure that will contribute to reducing the carbon footprint thanks to the savings in displacement and the improvement of the efficiency of the processes where digital infrastructure solutions will be used.

#### **IV. Description of activities/components and budget**

- 4.1 **Component 1. Feasibility study for the deployment of digital infrastructure to improve the connectivity of critical and high-performance infrastructure.** This component seeks to strengthen connectivity and expand coverage of high-bandwidth networks throughout the country, especially for public universities, high-specialty hospitals, mission-critical sites (such as airports and ports) and priority areas of attention for the Mexican Government.
- 4.2 **Activity 1.1. Diagnosis of existing backbone backhaul and last-mile infrastructure.** The activity attempts to have a better understanding of broadband market dynamics in Mexico. Through this, a market study report will be prepared, including the analysis of socioeconomic and demographic conditions and their impact on broadband availability and affordability.

- 4.3 **Activity 1.2. Demand estimation and identification of major infrastructure gaps.** Focused on rural areas, identified as the place where the private sector may not be financially interested in deploying infrastructure, the demands of broadband services and the infrastructure gaps compared with the existing facilities, are calculated.
- 4.4 **Activity 1.3. Financial and economic analysis.** A financial, economic, sensitive and cost-benefit analysis is conducted to estimate the Capital Expenditure (CAPEX) and the Operational Expenditure (OPEX) associated with the proposed infrastructure deployment, which will determine the economic and social benefits (quantitative and qualitative), too.
- 4.5 **Activity 1.4. Recommendation for regulatory changes.** After the administrative examination, regulatory and legal framework, necessary changes to guarantee open and fair access to the newly deployed infrastructure and further development of the ICT industry would be proposed as well. Among others, limited wholesale competition scarce Internet eXchange Points (IXPs) and tax burden on ICT equipment/service deserve prioritized consideration.
- 4.6 **Component 2. Roadmap for a digital transformation in the provision of public services in Mexico.** Through this component, the strategy to improve the Digital Inclusion Centers will be reviewed to support the implementation and sustainability of the program ME-L1297 and will also be prioritized training and capabilities for digital transformation and inclusion throughout the country.
- 4.7 **Activity 2.1. Assessment on the status of current Mexican Broadband related service policies.** To devise appropriate plans, evaluation on the environment surrounding the country's broadcasting landscape needs to be explored first. Special attention should be paid to barriers which might disturb the deployment of Internet of Things (IoT) services, national differences, such as policy barriers. Review on the national and regional environment.
- 4.8 **Activity 2.2. Development of a roadmap to help Mexico establish nationwide cutting-edge technologies.** In accordance with the analysis in activity 2.1, this activity is supposed to elaborate a tailored roadmap and detailed action plan for adopting new technologies in México. In particular, the roadmap will include a detailed description of the different phases and activities that should be implemented to scale up the technologies that have been proved to be potentially beneficial for the country. For instance, it will describe the steps to be taken to implement digital solutions based on IoT, cloud, AI, etc. Including the governance model and the sustainability model.
- 4.9 **Component 3. Capacity building for implementing institutions.** The purpose of this component is to support the SSC, which will execute the connectivity of critical and high-performance infrastructures as well as the design of public policies that promote the spread of new technologies. In doing so, this component will contribute to improving the possibility of smooth operation and eventually successful implementation of those projects. This component includes two activities.
- 4.10 **Activity 3.1. Training program.** As part of this activity, a short-term training program will be developed and provided, targeting Mexico's officials and concerned people who are involved in the related projects. If necessary, the program incorporates study tour or site visit on key reference countries, including South Korea.

- 4.11 **Activity 3.2. Dissemination of the deliverables.** This will entail the dissemination of the product developed through this TC and the creation of policy dialogues, by way of: (i) a publication; and (ii) the organization of workshops in order to present the result of the study. Especially, policy dialogues to discuss specifically new technology adoption and risk management needs to be planned, together with all the related stakeholders.
- 4.12 **Expected Results.** Consequently, the project will provide technical assistance to:
1. Reviewing and proposing new strategic policies and regulatory reforms to facilitate the digital transformation in Mexico, particularly, in aspects related to improving the connectivity of critical and high-performance infrastructure and the spread of new technologies that contribute to reduce the social divide, taking advantage of international best practices.
  2. Identifying technical considerations for the cost-effective analysis and policy development, including the design of desirable network configuration and the comparison of other countries' situations and technologies.
  3. Conducting financial and economic analysis of proposed investment for upgrading broadband and broadcasting facilities.
  4. Recommending roadmaps and action plans for implementation and governance framework as well for new trends of technologies.
  5. Capacity building program and knowledge sharing through visiting well developed countries including Korean organizations.
- 4.13 The total budget for the TC will be US\$700,000.00 distributed as per following table and found supporting the financing will be the knowledge partnership Korea Found for Technology and Innovation (KPK).

**Indicative Budget (US\$)**

<b>Component</b>	<b>Description</b>	<b>IDB/Fund Funding</b>	<b>Counterpart Funding</b>	<b>Total Funding</b>
<b>Component 1</b>	Feasibility study for the deployment of digital infrastructure to improve the connectivity of critical and high-performance infrastructure.	300,000	0	300,000
<b>Component 2</b>	Roadmap for a digital transformation in the provision of public services in Mexico.	250,000	0	250,000
<b>Component 3</b>	Capacity building for implementing institution.	150,000.00	0	150,000
<b>Total</b>		<b>700,000</b>	<b>0</b>	<b>700,000</b>

## V. Executing agency and execution structure

- 5.1 The Inter-American Development Bank, through the Connectivity, Markets and Finance Division (IFD/CMF) will be the executing agency, which will operate in coordination with the staff of the SSC from Mexico. The reasons behind of this arrangement are aligned with Appendix 10 of the Operating Guidelines for TC

Products (GN-2629-1): (i) the digital republic program comprises different areas of intervention with different stakeholders that have different roles; and (ii) this technical cooperation has two main areas, one which is a feasibility study on the infrastructure needs to support the enhancement of the broadband connectivity and another one related to the review of the regulatory framework on spectrum and (iii) it was explicitly requested by the Mexican Government.

- 5.2 IDB execution would be carried out in accordance with the Operational Guidelines for Technical Cooperation Products (GN-2629-1) and its Appendix 10. All activities to be executed under this TC have been included in the Procurement Plan (see Annex IV) and will be contracted in accordance with Bank policies as follows: (i) AM-650 for Individual consultants; (ii) GN-2765-1 and Guidelines OP-1155-4 for Consulting Firms for services of an intellectual nature and; (iii) GN-2303-20 for logistics and other related services.

## **VI. Major issues**

- 6.1 This project presents several risks: (i) Although the SSC, which belongs to the SCT, has extensive experience in executing digital connectivity projects, it has a lack of experience in executing operations with the Bank, and (ii) lack of specific resources and policies to guarantee the sustainability of the solutions proposed.
- 6.2 This first risk will be mitigated by the fact that the project will be executed by the IFD/CMF Division in collaboration with the IDB Representation in Mexico bringing, when needed, technical expertise from Korean Institutions. To mitigate the second risks part of the activities of the TC we plan to develop a sustainability plan with a suggestion of specific actions that could be defined and implemented by the SCT.

## **VII. Exceptions to Bank policy**

- 7.1 There are no exceptions to the policy of the Bank.

## **VIII. Environmental and Social Strategy**

- 8.1 Given that the current TC revolves around a study, there are no social or environmental risks associated with it. Based on the Environmental and Social Safeguard Compliance Policy (OP-703), this TC has been classified as a Category “C” according to the classification toolkit of the Bank (see: [Safeguard Policy Filter](#) and [Safeguard Screening Form](#)).

### **Required Annexes:**

[Request from the Client\\_57453.pdf](#)

[Results Matrix\\_89255.pdf](#)

[Terms of Reference\\_83881.pdf](#)

[Procurement Plan\\_78184.pdf](#)

