TECHNOLOGY INNOVATIONS IN URBAN PLANNING AND TRANSIT

RG-T3266

CERTIFICATION

I hereby certify that this operation was approved for financing under the **ORDINARY CAPITAL STRATEGIC DEVELOPMENT PROGRAM FOR SUSTAINABILITY (SUS),** through a communication dated August 8, 2018 and signed by Jane Silva. Also, I certify that resources from said fund are available for up to **US$450,000** 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*** 10/09/2018

Sonia M. Rivera
Chief
Grants and Co-Financing Management Unit
ORP/GCM

Date

Approved by: ***Original Signed*** 10/10/2018

Tatiana Gallego Lizon
Division Chief
Housing and Urban Development Division
CSD/HUD

Date

TECHNICAL COOPERATION DOCUMENT

I. Basic Information for TC

▪ Country/Region:	Regional
▪ TC Name:	Technology Innovations in Urban Planning and Transit
▪ TC Number:	RG-T3266
▪ Team Leader/Members:	Zambrano-Barragan, Patricio (CSD/HUD) Team Leader; Armijos, Jean Pol (INE/TSP) Alternate Team Leader; Mojica, Carlos; Granada, Isabel; (INE/TSP); Avila, Francy Dianela; Lemus, Edgar; Uribe, Beatriz; Adler, Veronica; Vera, Felipe; Rajack, Robin; Mashini, Dominique (CSD/HUD); Maharaj, Kavita (CCB/CTT); Basani, Marcello (INE/WSA); Rafael Anta (EVP/EVP); and Chretien, Louis-Francois (LEG/SGO).
▪ Taxonomy:	Client Support
▪ Date of TC Abstract authorization:	August 6, 2018
▪ Beneficiary:	Regional; Ecuador, Chile, Trinidad and Tobago
▪ Executing Agency:	Inter-American Development Bank
▪ Donors providing funding:	Ordinary Capital Strategic Development Program for Sustainability (SUS)
▪ IDB Funding Requested:	$450,000.00
▪ Local counterpart funding, if any:	No local counterpart funding
▪ Disbursement period:	36 months (including execution period)
▪ Required start date:	September 2018
▪ Types of consultants:	Individuals; Firms
▪ Prepared by Unit:	Housing and Urban Development (CSD/HUD) and Transport (INE/TSP) Divisions
▪ Unit of Disbursement Responsibility:	Climate Change and Sustainable Development Sector (CSD)
▪ TC included in Country Strategy (y/n):	No
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Equity and productivity; Social inclusion and equality; Climate change and sustainable development

II. Objectives and Justification of the TC

2.1 The purpose of this Technical Cooperation (TC) is to enable the use of breakthrough technology innovations in the design and implementation of urban development and transit projects in Latin American and Caribbean (LAC) cities. Specifically, this TC seeks to leverage innovative partnerships to support the following activities: (i) carry out dynamic modeling for central neighborhoods to develop recommendations for urban interventions, in collaboration with the MIT Media Lab; (ii) increase inclusion and local knowledge through the development and transfer of open data tools for urban mobility infrastructure, in collaboration with the World Resources Institute and MIT's Civic Data Design Lab; and (iii) implement new digital tools to measure the efficiency of public transit systems.

2.2 **Urban Development and Infrastructure - Current Challenges.** Latin America and the Caribbean (LAC) faces considerable challenges associated with rapid urban and population growth. While over 40% of LAC's population lived in cities in 1950, by

2010 this figure reached 80%, above rates in Asia (50%) and Africa (40%).[1] Soaring urbanization rates reflect the cities leading contribution toward social and economic development--LAC's 10 largest cities contribute 30% of the region's GDP (McKinsey 2013--yet this phenomenon has placed increased demands on adequate housing and infrastructure.

2.3 Regarding adequate housing, LAC faces considerable challenges: 9 million households needed new shelter; 13 million needed improvements in their houses due to poor construction materials or overcrowding; and lack of infrastructure affects 28 million households in the region's cities (Rojas 2018). Over the last twenty years, governments in the region have responded through a variety of supply and demand side supports. However, in LAC cities the lion's share of new affordable houses—regardless of whether they are built by public agencies, private developers, or informally—are located in peripheral areas where households lack many of the services required for a good quality of life, especially access to jobs, health and education services. The shortage of urban amenities forces households to pay more in transportation and face longer commuting times, and to deal with limited access to essential urban services (Libertun de Duren 2018). Simultaneously, most of LAC's cities central areas, which are better served and are often important historic preservation sites, have seen a gradual decline of permanent residents, abandonment, and insecurity (Carrion 2007; IDB - HUD SFD 2016).

2.4 Urban mobility, which strongly affects city growth patterns and accessibility issues, is another critical area affecting the region's development trajectory. LAC has experienced rapid increases in vehicle ownership, coupled with mounting issues in public transportation systems. The motorization rate in the region is above 120 vehicles per 1,000 people, which, while still below rates in OECD countries (500-700 per 1,000), shows a continuous upward trend (IRF 2016; IDB 2013; CAF 2012). In addition, rising demand has been met with insufficient coordination of land use and urban planning, which in turn has resulted in sprawling urban forms, a further decrease in the use of public transportation, increased congestion, and a rise in emissions from land use changes and motorization.[2] Finally, while in some places commuter rail and formal bus services exist as a core to public transport, in many LAC cities, from Georgetown to Port-au-Prince, quasi-formal, flexible (mini) bus services are an important means of moving within and between cities, especially for the poor. For a long time, cities and transportation experts have tried to replace them with formal bus systems, yet, given how entrenched and important these mobility systems are to most people, integration and coordination, rather than replacement, is increasingly seen as more inclusive and desirable. And even among formal systems, the World Bank estimates that globally 35% of the world's largest cities and 92% of the largest low and middle-income cities do not have complete transit maps (Krambeck 2017).

2.5 **Enabling Sustainable and Inclusive Urban and Transport Development.** Effective integration of land use planning, housing development, and urban transport systems is among the most successful policies towards reaching sustainable urban development. The benefits of mass transit are potentiated when cities adopt Transit Oriented Development (TOD) policies, which are associated with fewer number of trips and shorter travel distances--thus reducing emissions, increasing accessibility to

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1 World Urbanization Prospects. 2014.

2 The average passenger in one of the 15 largest LAC cities can spend over an hour in traffic for intra-urban trips (IDB 2016). Regarding emissions, the transport sector is a significant contributor in LAC, accounting for 32% of all emissions--higher than the OECD's average of 28% (WRI 2015).

urban services, and contributing to more efficient and compact urban forms as well as to the preservation of LAC historic assets.

2.6 Regarding cities that rely on unregulated and informal systems, these can represent a form of dynamic entrepreneurship and innovation. As the technology revolution in urban mobility moves forward, more flexible bus services and shared transport services are emerging all over the world. These systems, however, still face serious challenges, including high suboptimal routing and in some cases poor passenger service. How to leverage technology to improve public transport services in general and to include upgraded minibus services in high quality urban transit systems are critical questions. The so-called "Fourth Industrial Revolution" (WEF 2017) and the spread of new forms of data and technology offer opportunities to create missing public transport data, drawing from previous experiences. Several efforts have emerged in African, Asian, Middle Eastern, and LAC cities to leverage digital technology to provide open source data about stops, routes and schedules.[3] However, these efforts remain sporadic and episodic, and mostly unknown in LAC cities, due to the limited distribution of knowledge on how to use digital and mobile methodologies. Public and private actors must design contemporary systems that ensure hard infrastructure can work seamlessly with operational and digital technologies, to develop the service relationships between existing and new actors, and to finance and operationalize urban systems.

2.7 **Innovative Partnerships for Urban and Transit Development.** In late 2016, the IDB became a member of the MIT Media Lab, with the goal of exploring the potential application of a variety of technology innovations in Latin America and the Caribbean. The IDB's Housing and Urban Development (HUD) division has since engaged with the Media Lab's City Science Group[4] to deploy its digital platforms in support of urban development projects in LAC cities. Following discussions with the Transport (TSP) and Water and Sanitation (WSA) divisions, the IDB has proposed Quito, Ecuador, as the target site for a first pilot deployment (see 3.1), as the city shows Mayoral commitment to innovation, pressing urban development issues to address, availability of granular and dynamic datasets, and alignment with ongoing in-country projects. Regarding priority projects, since 2012, the IDB has provided financial and technical support for the City of Quito's flagship urban infrastructure project: the construction of the first Metro System. This first line (US$2 billion, financed in part by the IDB[5]), which runs 22 km along the north-south axis, is expected to serve close to 400,000 daily passengers; increase efficiency, safety and speed; and, more importantly, improve urban form through transit-oriented development and a more inclusive public transit systems.[6] In particular, at the heart of the new metro line lies the San Francisco station, located not only at the joint of Quito's north and south regions, but also at the heart of the city's Historic District. The new metro presents important challenges and opportunities for future urban development--an idea setting for dynamic modeling that can help Quito harness this new infrastructure while facilitating participatory planning

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3 Examples include DigitalMatatus, Accramobility, Mapanica.net (Managua), Transport for Cairo, DhakaBusMaps (Urban Launchpad) and the list is expanding as more actors learn and start mapping work across the globe.

4 https://www.media.mit.edu/groups/changing-places/overview/

5 (2882/OC-EC; EC-L1111) and (EC-L1124;2882/OC-EC-1).

6 Per Quito's 2040 Vision, these centralities include, along a north-south axis: Quitumbe, in the city's fast-growing southern areas; the Historic District; La Mariscal; La Carolina, Bicentenario (site of the old airport); and Cotocollao, among others. These centralities overlap with the proposed Metro line. See http://impu.quito.gob.ec/twenty-second/.

exercises. This first pilot would lead to cost-effective replication of the platform. In addition, in late 2017, the IDB engaged with MIT's Civic Data Design Lab[7], which has been at the forefront of these efforts. In 2014, with support from the Rockefeller Foundation, the Lab completed the first comprehensive mapping of minibuses in Nairobi: DigitalMatatus.[8] By making this data open through use of a standard transport data protocol (General Transit Feed Specification - GTFS), local entrepreneurs were able to make new routing apps for Nairobi as well as to deliver the data through Google maps. Following this successful experience, in November 2017, the *Agence Française de Développement* (AFD), in partnership with Digital Matatus, AccraMobility, Transport for Cairo, La Fabrique de la Mobilité, and the World Resources Institute, held a workshop to identify opportunities for additional pilots and to generate formal resources to mainstream innovation in urban transit—pointing to a need to expand open data systems on urban areas in the LAC region.

2.8 This TC seeks to leverage these partnerships to address the urban and transit development issues described. It seeks to reaffirm the Bank's commitment to collaborate with partners to help translate the SDGs and the New Urban Agenda into meaningful country level targets, policies, and programs and support their effective implementation, particularly SDG Goal 11[9] and the NUA's commitment to innovative transport technologies to enable cities to improve their service delivery. This TC, its components, activities, and expected outcomes, are consistent with the Corporate Results Framework 2016-2019 (GN-2727-6) and the Updated Institutional Strategy of the Bank 2010-2020 (AB-3008). By benefitting vulnerable urban populations who use informal transit modes, the TC is aligned with the development challenge of Social Inclusion and Equality, and, by enabling transit-oriented development to promote non-motorized mobility and low-emissions urban development, it is also aligned with the Productivity and Innovation challenge as well as with the cross-cutting theme of Climate Change and Environmental Sustainability. Finally, the TC is aligned with the objectives of the Ordinary Capital Strategic Development Program for Sustainability (SUS) through the development of new and innovative knowledge aimed at improving urban sustainability and low-emission transit options.

III. Description of Activities/Components and Budget

3.1 **Component I. Dynamic Modeling of Urban Transit Systems (US$300,000)**. The objective of this component is to carry out the pilot implementation of MIT's *CityScope* platform[10] to model future development scenarios on the City's Historic District, which is also the site of a new stop from the IDB-financed metro system for the city (loans (2882/OC-EC; EC-L1111 and 2882/OC-EC-1; EC-L1124). This exercise will allow the Municipality of Quito and MIT's researchers to gather and understand existing datasets[11]; establish partnerships with academia and civil society; and develop a

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7 www.civicdatadesignlab.org

8 www.digitalmatatus.com/about.html

9 "Make cities and human settlements inclusive, safe, resilient and sustainable."

10 The platform combines dynamic modeling with 'live', tactile interaction through a physical lego model. Users can change the physical aspects of the model and instantly see the potential changes in areas such as residential occupancy, traffic, access to public spaces, and other indicators. For a sample demonstration in a Chinese city, see http://bit.ly/CityScope_China.

11 These include datasets made available by both the Municipality of Quito and the Bank, which include: anonymized call detail records (CDRs) used by the Bank in support of origin destination matrices in Quito; vector-based GIS datasets for all buildings and infrastructure in the historic district; household living conditions survey data (2017) collected by Quito's Instituto de la Ciudad; among others.

guiding hypothesis/question for dynamic modeling, particularly increased trips and their impacts on future residential and commercial development. In addition, the pilot deployment will explore modules including water consumption (enabling a three-way partnership with HUD, TSP, and WSA), help define basic quality and data interoperability standards. The component will result in the publication of the model following open-data standards, thus enabling future and more affordable deployments in other cities in the region. Potential future partners include Santiago de Chile, where the municipality is interested in modeling housing options in neighborhoods with a high influx on migrants, and Trinidad and Tobago's Port-au-Spain, which seeks ways to model the potential location and impact of new smart parking areas.

3.2 **Component II. Open Data Resource Center for Urban Mobility (US$100,000).** The component will contribute to the establishment of a Resource Center, developed in partnership with MIT's Civic Data Design Lab and WRI. The Center would be an active online platform, hosted by WRI, to aggregate existing open data, knowledge and support, tools and methodologies, and serve as a public forum to assist urban infrastructure mapping in LAC. Specifically, the activities contemplated include: 1) carry out a regional assessment of the use and availability of data for urban mobility in LAC; 2) based on the results of this assessment, *select a pilot city* to carry out participatory data generation in the region, and 3) use the results from the pilot and training materials to develop Spanish-language tools for the Center.

3.3 **Component III. Digital Tools for Efficient Urban Transit (US$5,000).** The component will fund the concept design of a smart-phone based system to monitor public transport performance. Public transport operations have traditionally underinvested in systems to monitor travel outcomes for customers and passengers. In recent years, the introduction of GPS and digital on-board technologies have improved the understanding of vehicle-based indicators such as speed and location. However, passenger experience is yet under analyzed and key quality indicators such as individual travel times, wait times and crowding are not yet easily monitored with off-the-shelf tools. The emergence of smart phones and associated technologies (e.g. bluetooth, wi-fi connectivity, NFC) has the potential to convert the passenger experience as the principal element of analysis, as opposed to the vehicle itself (it is expected that this component will seek future co-financing opportunities in 2019 to finance the development of the application and its back-office system).

3.4 **Component IV. Technical and Knowledge-Sharing Support (US$45,000)**. This component will support coordination and cross-sectoral knowledge-sharing for the TC's innovations and pilots. Specifically, it will finance support activities and individual consulting engagements, including: (i) expert technical support for ongoing data management and data quality control through individual contractual support; and (ii) other knowledge-sharing activities, such as participation of government counterparts in regional urban and mobility dialogues. Specific target activities for knowledge-sharing include counterpart participation in MIT's City Summit, held annually, as well as IDB-specific presentations; participation in the annual "State of the Map" summit, sponsored by the openstreetmap foundation; and participation of the results from Component 2 in the annual Transforming Transportation Conference.

3.5 The total funding for this TC will be US$450,000.00, financed by the Ordinary Capital Strategic Development Program for Sustainability (SUS).

Indicative Budget

Activity/ Component	Description	IDB/Fund Funding (US$)	Total Funding
Dynamic Modeling of Urban Transit Systems	Pilot implementation of MIT's CityScope platform in Quito's historic district and development of open-source tools for scale-up in additional LAC cities	US$300,000.00	US$300,000.00
Open Data Resource Center for Urban Mobility	Establishment of an online resource center for informal transit and implementation of pilot transit digital mapping	US$100,000.00	US$100,000.00
Digital Tools for Efficient Urban Transit	Development of a smart-phone based system to monitor public transport performance	US$5,000.00	US$5,000.00
Technical and Knowledge-Sharing Support	support coordination and cross-sectoral knowledge-sharing for the TC's innovations and pilots	US$45,000.00	US$45,000.00
	Total	**US$450,000.00**	**US$450,000.00**

IV. Executing Agency and Execution Structure

4.1 The Bank will execute the operation through the Housing and Urban Development Division (CSD/HUD) and the Transport Division (INE/TSP). This executing strategy will allow the Bank to facilitate effective dialogue between in-country partners and academic partners such as MIT's Media Lab and the Civic Data Design Lab, while also working toward scalability and eventual implementation in cities beyond Quito.

4.2 The operation will finance activities detailed in the Procurement Plan. The hiring processes will be made in accordance with Bank policies (AM-650 for individual consultants; GN-2765-1 and OP-1155-2 for consulting firms; and GN-2303-20 for logistics and other related services.

4.3 **Sustainability Strategy**. In all cases, as mentioned in the description for each component, the IDB will ensure that all datasets and platforms follow open-data protocols. Specifically, MIT's CityScope platform will be made available to the public domain, which would ensure scalability and allow for continual improvement of the pilot deployments. Similarly, in the case of Component 2, urban transit data collected will follow the GTFS, originally develop to assimilate transit information into Google Maps and now widely used as an open, interoperable data standard. Regarding hosting and management, the engagement with MIT's Civic Data Design Lab and WRI, who are already collaborating on similar activities in Africa and Asia, will allow for long-term support from partners beyond the scope of the specific component, thus ensuring continued open access to datasets to the Bank and its partners.

V. Major Issues

5.1 The primary risk associated with digital innovations is their ongoing sustainability, from an operational and financial perspective, given that maintaining digital platforms such as online data repositories requires technical and financial commitment from local actors. To minimize this risk, the work proposed with our academic and municipal actors specifically involve the development of open-source datasets that operate with existing systems, such as openstreetmaps.org, that minimize the reliance on proprietary and costly technologies, while also involving the development of training materials and knowledge-transfer activities.

VI. Exceptions to Bank Policy

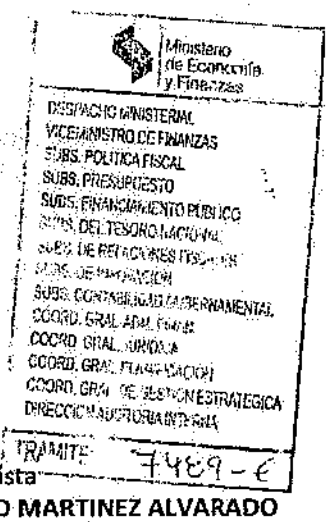
6.1 No exceptions to Bank policy have been identified.

VII. Environmental and Social Strategy

7.1 This TC has been classified as “C” based on the Safeguard Screening and Classification Toolkit (SSF Report and SPF Report). No adverse environmental or social impact is expected.

Required Annexes:

- Annex I: Request from the client
- Annex II: Results Matrix
- Annex III: Terms of Reference - Summary
- Annex IV: Procurement Plan



QUITO 40 años | PATRIMONIO CULTURAL DE LA HUMANIDAD

QUITO ALCALDÍA

Oficio Nro. 0001703

Quito, D.M. 29 MAY 2018

Economista
RICHARD MARTINEZ ALVARADO
Ministro de Finanzas
Ministerio de Finanzas del Ecuador
Av. Amazonas entre Pereira y Unión Nacional de Periodistas
Plataforma Gubernamental de Gestión Financiera. Pisos 10 y 11
En su despacho.-

ASUNTO: Proyecto de Cooperación Técnica Regional "Innovaciones digitales para el desarrollo y tránsito urbano"

Señor Ministro:

Como parte de las actividades previstas en el Plan de Gestión del Municipio del Distrito Metropolitano de Quito; el Instituto Metropolitano de Patrimonio (IMP) se encuentra implementando acciones que permiten ejecutar el proceso de actualización del Plan Parcial del Centro Histórico de la Ciudad; para tales efectos se han generado sinergias con otras instituciones tanto municipales como internacionales y de este modo desarrollar iniciativas, elementos, estrategias, procesos y productos que facilitan la referida actualización.

Una de las propuestas de mayor interés es la del Grupo "Changing Places" del Banco Interamericano de Desarrollo (BID), asociado al Media Lab del Massachusetts Institute of Tecnology (MIT), cuyo objetivo es facilitar procesos de planificación a partir de la visualización dinámica de datos municipales de planificación urbana e infraestructura en el Centro Histórico; para lo cual se implementará la herramienta "City Scope" que guiará las acciones urbanísticas y de ordenamiento de suelo.

Esta colaboración piloto con el Media Lab se enmarcaría en la cooperación técnica regional "Innovaciones digitales para el desarrollo y tránsito urbano", cuyo monto total asciende a USD.730.000 y en el que participarían 3 ciudades de países de la región, entre ellas Quito, cuyo presupuesto específico asciende a USD. 350.000.

Dicha asistencia permitirá llevar a cabo una modelación dinámica del Centro Histórico de Quito, con un enfoque específico en la zona de influencia de la estación "San Francisco", con base a indicadores de habitabilidad y accesibilidad, generándose escenarios de planificación que permitan catalizar las mejoras en el transporte público para revertir el proceso de pérdida de población en el centro y contribuir a la mejora del hábitat urbano.

En este contexto Señor Ministro, me es grato manifestarle el gran interés del Instituto Metropolitano de Patrimonio del Municipio de Quito (IMP) de recibir la asistencia técnica no-reembolsable del Banco Interamericano de Desarrollo descrita en líneas anteriores.

Segura de contar con su apoyo, hago válida la ocasión para expresar a Usted mis sentimientos de la más alta consideración y estima.

ANGÉLICA ARIAS B.
Directora Ejecutiva

ACCION	RESPONSABLE	SIGLA UNIDAD	FECHA	SUMILLA
Elaboración	Adriana Rodríguez	CS	2018.05.29	
Revisión	María Fernanda Acosta	CS	2018.05.29	

Cc:

Señor
FERNANDO QUEVEDO
Representante en Ecuador
Banco Interamericano de Desarrollo
Avda. 12 de Octubre N24-528 y Cordero
Edificio World Trade Center – Torre II, Piso 9
En su despacho.-

Señor
GUSTAVO PALMERIO
Subgerente Principal de Operaciones
Banco Interamericano de Desarrollo
Avda. 12 de Octubre N24-528 y Cordero
Edificio World Trade Center – Torre II, Piso 9
En su despacho.-

Ilustre Municipalidad de **SANTIAGO**

CARTA Nº 1432

Santiago, 30 AGO 2018

Referencia: Proyecto de Cooperación Técnica Regional "Innovaciones tecnológicas para el desarrollo y tránsito urbano" (RG-T3266)

Asunto: Participación en la cooperación técnica de referencia.

Señores
Dirección de Presupuestos - DIPRES
Ministerio de Hacienda
Presente

De mi consideración:

Junto con saludarles, me permito dirigir a Uds., para informarles que en mi calidad de Alcalde de Santiago, comunico nuestro interés en participar en la cooperación técnica regional no-reembolsable **"Innovaciones Tecnológicas para el Desarrollo y Tránsito Urbano"** (RG-T3266) del Banco Inter-Americano de Desarrollo, la cual cuenta con un monto global de US$730,000. Dicha asistencia permitirá realizar un piloto de colaboración con el Media Lab del Massachusetts Institute of Technology y realizar una modelación dinámica de centralidades urbanas en tres ciudades de la región. En el caso específico de Santiago de Chile, dicha modelación buscaría generar escenarios de planificación en zonas urbanas con altos flujos migratorios, y así contribuir al diseño de estrategias de diseño urbano de mayor sostenibilidad e inclusión.

Sin otro particular, reiterando mis saludos y agradeciendo sus gestiones y apoyo, se despide atentamente.

FELIPE ALESSANDRI VERGARA
Alcalde
I. Municipalidad de Santiago

HFD/CRR/gmp.
IDOC 3445571
2618

Dirección de Presupuestos

Gobierno de Chile

QQ 179-c- 18 / 04.09.18

Santiago, 21 SEP 2018

REF.: Lo que se indica.

ANT.: Carta N° 1.432, de fecha 30 de agosto de 2018, del Sr. Alcalde de la I. Municipalidad de Santiago.

Señora
Carolyn Robert
Representante del BID en Chile
Presente

En atención a lo solicitado por el Sr. Alcalde de la I. Municipalidad de Santiago en su carta del Antecedente, agradeceré considerar su participación en la Cooperación Técnica Regional No Reembolsable, por un monto de USD 450.000, que ese Banco se encuentra desarrollando, en apoyo del Proyecto "Innovaciones Tecnológicas para el Desarrollo y Tránsito Urbano" (RG-T3266).

En armonía con lo anterior, se otorga desde ya la No Objeción a la citada CTNR en los términos solicitados, en el entendido que no presentará impacto en el Presupuesto del Sector Público durante los años de ejecución del Proyecto.

Sin otro particular, saluda atentamente a usted,

DIRECCION DE PRESUPUESTOS - Ministerio de Hacienda - DIRECTOR

Rodrigo Cerda Norambuena
Director de Presupuestos

DIRECCION DE PRESUPUESTOS - DIVISION FINANZAS PUBLICAS - MINISTERIO DE HACIENDA

C.C.:
Sector Crédito Público, DIPRES.

DIRECCION DE PRESUPUESTOS - ASESOR LEGAL - Ministerio de Hacienda

MINISTRY OF PLANNING AND DEVELOPMENT
OFFICE OF THE PERMANENT SECRETARY

Level 14, Eric Williams Financial Building, Independence Square, Port-of-Spain, Trinidad and Tobago, WI
Tel: 612 9700 ext. 2016/1329 Fax: 623 8123.

File Ref: 11/4/74

September 17th, 2018

Ms. Carina Cockburn
Chief of Operations
Country Office of Trinidad and Tobago
Inter-American Development Bank
17 Alexandra Street, St. Clair
Port of Spain

Dear Ms. Cockburn

Re: Non-objection to Trinidad and Tobago's Participation in the Regional Technical Cooperation – Technology Innovations in Urban Planning and Transit (RG-T3266)

I refer to your correspondence dated August 24, 2018 requesting the non-objection to include Trinidad and Tobago as one of the beneficiary countries for the *Technology Innovations in Urban Planning and Transit* project which will be executed by the Bank.

The Ministry of Planning and Development is cognizant of the objective of the project which is geared towards the use of breakthrough technology innovations in the design and implementation of urban development and transit projects in Latin American and Caribbean (LAC) cities. Furthermore, Trinidad and Tobago can greatly benefit given that the IDB will be partnering with the Massachusetts Institute of Technology (MIT) Media Lab to provide opportunities to improve long term planning of urban infrastructure and services.

In light of the above, the Ministry of Planning and Development has no-objection to Trinidad and Tobago's participation in the project.

Sincerely

Jeanne Deoraj

Permanent Secretary
Ministry of Planning and Development

Inter-American Development Bank

CCB/CTT-777/2018

August 24, 2018

Mrs. Joanne Deoraj
Permanent Secretary
Ministry of Planning and Development
Level 14, Eric Williams Financial Complex
Independence Square
Port of Spain

Dear Mrs. Deoraj:

Re: Request for Non-Objection to Participate in Regional Technical Cooperation "Technology Innovations in Urban Planning and Transit" RG-T3266

We are pleased to advise that the Inter-American Development Bank (IDB) is preparing the above referenced Technical Cooperation (TC) project, "Technology Innovations in Urban Planning and Transit" (RG-T3266). This regional project, with total funding of US $450,000, seeks to enable the use of breakthrough technology innovations in the design and implementation of urban development and transit projects in Latin American and Caribbean (LAC) cities. The IDB will be partnering with the Massachusetts Institute of Technology (MIT) Media Lab to deploy MIT's digital platforms to model urban development and transit dynamics in specific city districts, thus providing opportunities to improve long-term planning of urban infrastructure and services.

This project will be piloted in Ecuador and the results and experience of this initial pilot will be utilized to develop a pilot project for Trinidad and Tobago. Please note that this will be an IDB executed TC and counterpart funding will not be required from participating countries. A copy of the TC document with further details is attached for ease of reference.

In this regard, we wish to formally request your non-objection to include Trinidad and Tobago as one of the beneficiary countries for this project. We kindly request confirmation by September 7, 2018; please do not hesitate to contact us with any questions.

Sincerely,

17 Alexandra Street St. Clair. P.O. Box 68. Trinidad and Tobago W.I
Telephone: (868) 822-6400, Fax: (868) 622-6047
E-Mail: IDBTRINIDAD@IADB.ORG

Carina Cockburn
Chief of Operations

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Operation Number: **RG-T3266**
TCM Cycle: **TCM Period 2018**
Last Update: **9/13/2018**

Inter-American Development Bank - IDB

Results Matrix

Outcomes

Outcome:	1 Tactical Interventions of public place to improve socio-spatial network and increase accessibility of the families in LAC countries	CRF Indicator

Outputs: Annual Physical and Financial Progress

1 1. Dynamic Modeling of Urban Transit Systems

Outputs	Output Description	Unit of Measure	Baseline	Baseline Year	Means of verification		Physical Progress 2018	Physical Progress 2019	Physical Progress 2020	Physical Progress EOP		Financial Progress 2018	Financial Progress 2019	Financial Progress 2020	Financial Progress EOP	Theme	Fund	Flags
1.1 Management information systems (MIS) implemented	Dynamic urban model - Management information systems (MIS) implemented: Pilot application of MIT's CityScope	Systems (#)	0	2018	Final report, including associated databases	P		1		1	P	75000	70000		145000	Sustainable Cities	SUS	
						P(a)				0	P(a)				0			
						A					A							
1.2 Management information systems (MIS) designed	Open source modeling platform - Management information systems (MIS) designed: Open-source code for MIT's CityScope model for future deployment in an	Systems (#)	0	2018	Code uploaded to open-source platform (GitHub)	P		1		1	P	75000	70000		145000	Sustainable Cities	SUS	
						P(a)				0	P(a)				0			
						A					A							
1.3 Institutions trained	Open-source code for MIT's CityScope model for future deployment in an additional LAC city	Institutions (#)	0	2018	Final report, including aide memoire from trainings with participant list	P		2		2	P		10000		10000	Institutional Development	SUS	
						P(a)				0	P(a)				0			
						A					A							

2 2. Open Data Resource Center for Urban Mobility

Outputs	Output Description	Unit of Measure	Baseline	Baseline Year	Means of verification		Physical Progress 2018	2019	2020	EOP		Financial Progress 2018	2019	2020	EOP	Theme	Fund	Flags
2.1 Diagnostics and assessments completed	Regional assessment of the use of open data for urban transit	Diagnostics (#)	0	2018	Final publishable report	P		1		1	P		25000		25000	Sustainable Infrastructure	SUS	
						P(a)				0	P(a)				0			
						A					A							
2.2 Virtual platforms designed	Open Data Resource center - platform: Development of LAC-specific online center for open data resources on urban mobility	Platforms (#)	0	2018	Platforms	P		1		1	P		25000		25000	Institutional Development	SUS	
						P(a)				0	P(a)				0			
						A					A							
2.3 New databases created	Implementation of an open-mapping exercise in one pilot LAC city: Diagnostics study completed and operational manuals developed	Databases (#)	0	2018	Datasets uploaded to online platform (GTSF format)	P		1		1	P		50000		50000	Sustainable Infrastructure	SUS	
						P(a)				0	P(a)				0			
						A					A							

3 3. Digital Tools for Efficient Urban Transit

Outputs	Output Description	Unit of Measure	Baseline	Baseline Year	Means of verification		Physical Progress 2018	2019	2020	EOP		Financial Progress 2018	2019	2020	EOP	Theme	Fund	Flags
3.1 Virtual platforms designed	Open-source app to measure transit rider: Beta version of open-source app to measure transit ride	Platforms (#)	0	2018	Code uploaded to open-source platform (GitHub)	P		1		1	P		5000		5000	Sustainable Infrastructure	SUS	
						P(a)				0	P(a)				0			
						A					A							

4 4. Technical and Knowledge-Sharing Support

Outputs	Output Description	Unit of Measure	Baseline	Baseline Year	Means of verification		Physical Progress 2018	2019	2020	EOP		Financial Progress 2018	2019	2020	EOP	Theme	Fund	Flags
4.1 Seminars organized	Seminars organized	Seminars (#)	0	2018	Aide memoire including participant list	P		1	1	2	P		25000	20000	45000	Sustainable Cities	SUS	
						P(a)				0	P(a)				0			
						A					A							

Other Cost

Total Cost

CRF Indicator

Standard Output Indicator

	2018	2019	2020	Total Cost
P	$150,000.00	$280,000.00	$20,000.00	$450,000.00
P(a)				
A				

Summary of Terms of Reference

Component 1. Pilot implementation of MIT CityScope in Quito, Ecuador EZSHARE-947569163-5	To enable data-driven decision-making and inclusive urban planning processes in Latin American and Caribbean (LAC) Cities, by carrying out a pilot deployment of MIT's CityScope platform in Quito, Ecuador and build a scalable, open-source version of the platform for future deployment.
Component 2. Open Resource Center for Urban Mobility EZSHARE-947569163-6	To establish the Latin American and Caribbean branch of the Resource Center by establishing a Resource Center for digitization of open source and participatory public transport networks in the region's cities.
Component 3. Digital Tools for Efficient Urban Transit – Phase I EZSHARE-947569163-7	To develop a beta version of a smart-phone based system to monitor public transport performance. This consultancy will address the first necessary steps before full app development.
Component 4. Technical and Knowledge-Sharing Support EZSHARE-947569163-17	To support the design and implementation of the RG-T3266 components, with a specific emphasis on data management, quality control, and analytical activities.

Inter-American Development Bank
ORP/GCM

PROCUREMENT PLAN FOR BANK EXECUTED OPERATIONS

Country: Regional	**Executing Agency: IDB**	**UDR: CSD**
Project number: RG-T3266	**Title of Project: Climate Resilience Support for the Adequate Housing and Urban Accessibility Program in Georgetown, Guyana**	
Period covered by the Plan: 48 months	**Total Project Amount:** $ 450,000	

Component	Procurement Type (1) (2)	Service type (1) (2)	Description	Estimated contract cost (US$)	Selection Method (2)	Type of Contract	Source of Financing and Percentage				Estimated date of the procurement notice	Estimated contract start date	Estimated contract length	Comments
							IDB/MIF		Other External Donor					
							Amount	%	Amount	%				
Component 1	A. Consulting services	Consulting Firm (GN-2765)	Dynamic Modeling of Urban Transit Systems. SSS contract justified due to the uniqueness of the service offered by MIT Media Lab, which is the only provider of the dynamic and tactile CityScope model, made available to the IDB and its partners thanks the Bank's membership.	$ 300,000	SSS	Lump Sum	$ 300,000	100%	$ -	0%	15-Sep-18	30-Sep-18	14 months	
Component 2	A. Consulting services	Consulting Firm (GN-2765)	Open Data Resource Center for Inclusive Urban Transport. SSS contract justified due to the uniquess of the service offered by the combined working group of WRI, MIT's Civic Data Design Lab, and Columbia University, which are the partners that have launched the unique urban transit platform and group for other developing regions (Africa).	$ 100,000	SSS	Lump Sum	$ 100,000	100%	$ -	0%	15-Sep-18	30-Sep-18	12 months	
Component 3	A. Consulting services	Individual Consultant (AM-650)	Digital Tools for Efficient Urban Transit	$ 5,000	IICQ	Lump Sum	$ 5,000	100%	$ -	0%	1-Oct-18	15-Jan-19	3 months	
Component 4	A. Consulting services	Individual Consultant (AM-650)	Technical and Knowledge-Sharing Support	$ 45,000	SCS	Lump Sum	$ 45,000	100%	$ -	0%	15-Sep-18	30-Sep-18	12 months	
Prepared by:			**TOTALS**	**$ 450,000**			**$ 450,000**	**100%**	**$ -**	**0%**				

(1) Grouping together of similar procurement is recommended, such as publications, travel, etc. If there are a number of similar individual contracts to be executed at different times, they can be grouped together under a single heading with an explanation in the comments column indicating the average individual amount and the period during which the contract would be executed. For example: an export promotion project that includes travel to participate in fairs would have an item called "airfare for fairs", an estimated total value od US$5,000, and an explanation in the Comments column: "This is for approximately four different airfares to participate in fairs in the region in years X and X1".

(2) (i) **Individual consultants:** ICQ: Individual Consultant Selection Based on Qualifications; SSS: Single Source Selection. Selection process to be done in accordance with AM-650.

(2) (ii) Consulting firms: Per GN-2765-1, Consulting Firm selection methods for Bank-executed Operations are: Single Source Selection (SSS); Simplified Competitive Selection (<=250K) (SCS); Fully Competitive (>250K) (FCS); and Framework Agreement Task Order (TO). All Consulting Firm selection processes under this policy must use the electronic module in Convergence.

(2) (iii) Goods: Per GN-2765-1, par. A.2.2.c: "The procurement of goods and related services, except when such goods and related services are necessary to achieve the objectives of the Bank-executed Operational Work and are included in the consulting services contract and represent less than ten percent (10%) of the consulting services contract value."