

TC Document

I. Basic Information for Technical Cooperation (TC)

▪ Country/Region:	TRINIDAD AND TOBAGO
▪ TC Name:	Fast Pass: Scaling-Up Smart Technologies to Reduce Congestion and Improve Social Responsibility of Public Transportation
▪ TC Number:	TT-T1123
▪ Team Leader/Members:	Guerrero, Pablo (INE/TSP) Team Leader; Persaud, Christopher (INE/TSP) Alternate Team Leader; Agostini, Dorri Michelle (CCB/CTT); Arti Ramdhanie (INE/TSP); Indo Lazaro (INE/TSP); Kim, Daehyun (INE/TSP); Lopez Aragon, Carmen Carolina (VPC/FMP); Louis-Grant, Paula (VPC/FMP); Mix Vidal, Richard Alexander (INE/TSP); Sara Vila Saintetienne (LEG/SGO); Seungyeon Kim (INE/TSP) Dorri Michelle (CCB/CTT); Arti Ramdhanie (INE/TSP); Indo Lazaro (INE/TSP); Kim, Daehyun (INE/TSP); Lopez Aragon, Carmen Carolina (VPC/FMP); Louis-Grant, Paula (VPC/FMP); Mix Vidal, Richard Alexander (INE/TSP); Sara Vila Saintetienne (LEG/SGO); Seungyeon Kim (INE/TSP) Dorri Michelle (CCB/CTT); Arti Ramdhanie (INE/TSP); Indo Lazaro (INE/TSP); Kim, Daehyun (INE/TSP); Lopez Aragon, Carmen Carolina (VPC/FMP); Louis-Grant, Paula (VPC/FMP); Mix Vidal, Richard Alexander (INE/TSP); Sara Vila Saintetienne (LEG/SGO); Seungyeon Kim (INE/TSP)
▪ Taxonomy:	Client Support
▪ Operation Supported by the TC:	.
▪ Date of TC Abstract authorization:	31 Aug 2022
▪ Beneficiary:	Government of Trinidad and Tobago / Ministry of Works and Transport
▪ Executing Agency and contact name:	Ministry Of Works And Transport
▪ Donors providing funding:	Korea Poverty Reduction Fund(KPR)
▪ IDB Funding Requested:	US\$500,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	36 months (34 months of execution)
▪ Required start date:	1 March 2023
▪ Types of consultants:	Consulting Firms and Individual Consultants
▪ Prepared by Unit:	INE/TSP-Transport
▪ Unit of Disbursement Responsibility:	CCB/CTT-Ctry Off Trinidad & Tobago
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	Yes
▪ Alignment to the Update to the Institutional Strategy 2020-2023:	Productivity and innovation; Institutional capacity and rule of law; Environmental sustainability; Gender equality

II. Objectives and Justification

- 2.1 **Objective.** The primary objective of this TC is to improve the efficiency of public transportation and travel speed during peak hours in Trinidad and Tobago.
- 2.2 **Justification.** Within recent years, rising household incomes have made car ownership more accessible to a broader share of the population, more of whom traverse urban areas and their peripheries to access jobs, services, and shopping. For example, the concentration of administrative, financial, and commercial activity in Port-of-Spain (POS) results in increased congestion levels during the peak AM and

PM. Drivers spend up to 35 minutes to cover an 8.9 km distance, that will otherwise take nine minutes.

- 2.3 High motorization¹ rates and low-quality transit² have reduced public transport demand³ in Trinidad while cramping available road space. Following a trend that is not subsiding, there are over 500 vehicles per 1,000 inhabitants in the country. Congestion is perennial on key road corridors with long travel times and poor air quality. While the rapid rise in private vehicle ownership enhances citizens' mobility and convenience, it exacerbates the widespread congestion problem. The growth in the national fleet – up from 518,831 in 2010 to 786,202 in 2021 – has outpaced road capacity and improvements in public transportation, which has experienced a steady decline in patronage, decreasing by 26% between 1996 and 2005. As a result, private cars account for 88% of the national vehicle fleet in Trinidad, compared to just 56% on average for Latin America and the Caribbean region.
- 2.4 On Trinidad's main corridors, most vehicles – 55% to 66% – have just one occupant⁴, exacerbating congestion at peak travel hours in high-demand roads accessing POS, topping 285,000 vehicles per day. For example, a 9.3 km drive from the POS Ferry terminal to the Churchill Roosevelt/Uriah Butler Interchange takes 10 minutes with free-flow speeds, but during peak periods, the drive is 35 minutes. In response to the need to better manage scarce road space, the country is pursuing new policy directions and interventions – such as the roll out High Occupancy Vehicles (HOV) lanes – and seeks to complement this effort with congestion pricing legislation to curb congestion and increase revenue⁵.
- 2.5 As one of the principal efforts to develop public transport system, the country has dedicated transit infrastructure in the form of a 29.4 km Priority Bus Route (PBR) that goes from POS in the Northwest to Arima in the Northeast. However, the lack of designated bus stops, synchronized traffic lights, and active enforcement to prevent private cars from using the PBR has severely hindered the expected impact on public transport operational speed. Also, the National Traffic Management Control Center (NTMCC) in POS has played a pivotal role in managing traffic issues like monitoring and administration of traffic signals, design and implementation of traffic management issues, emergency and accident analysis, collection of traffic data, etc. The Ministry of Works and Transport (MOWT) has developed plans to upgrade its capacity to meet future traffic management initiatives.

¹ Fast growth in motorization rate is linked to low quality public transport service, poor accessibility to transport infrastructure, low fuel prices, and private cars financing. [International Monetary Fund, 2016](#).

² [Report of the Audit General of T&T, Jun 29, 2016](#): "PTSC has failed to provide an adequate service to all of its routes. Analysis done by PTSC showed that in 2014, it was provided an average of 69% of service on its 154 routes."

³ [Ibid](#): From 2010 to 2014 the annual passengers transported declined from 12.6 million to 7.6 million.

⁴ The TC "Mass Transit System" (TT-T1065) carried out in October 2019 revealed that one vehicle occupancy in the corridor East-West has ranged between 56% (O'Meara-Piarco sector) and 66% (Curepe-Grand Bazaar sector); and in the corridor north-south has ranged between 56% (San Fernando-Chaguanas sector) and 62% (Grand Bazaar-Chaguanas sector).

⁵ The country has also suffered major flooding and disruptions to the road network in November 2022 after long periods of sustained rainfall which triggered flooding in low-lying communities centered near rivers and swamp land. Approximately 46% of lands classed as 'agricultural' were converted to housing settlements between 1984-2012 which has accounted for flooding in many areas due to rapid surface-run off. In the event of extreme weather events, the disruption to transportation networks can pose a threat to economic activity and human safety. This underscores the need for sustainable and reliable infrastructure and proper planning.

- 2.6 In terms of gender gaps, only 51% of women in Trinidad and Tobago participate in the formal labor market compared to 73.7% of men. Transport is central to facilitating access to opportunities, such as education and employment, but women and girls have greater safety concerns about using public transportation⁶. Improving public transport services and increasing the efficiency of the transit corridor can bridge the gender gap by providing easier access to job opportunities in POS, easier access to health care services and enhanced overall safety.
- 2.7 This project aims to add value to Trinidad and Tobago's transport infrastructure and services through application of innovative, harmonized technologies, policies and private sector enabled financial structures to improve efficiency, effectiveness and, thus, usage, of public transportation, as well as increase overall travel speeds during peak times. The project objective will be pursued through a three-pronged approach focused on improving the efficacy of the existing PBR and introducing multimodal transit hubs, further develop Priority Vehicle Lanes (PVLs) and supporting the development of the NTMCC, and by providing capacity building to the MOWT.
- 2.8 First, the project will seek to continue improving the efficacy of the existing PBR by enhancing enforcement of usage restrictions and improving traffic management while reducing congestion by setting up early detection of disruptive incidents and deploying technological upgrades for traffic control, recognition, and electronic ticketing. The project will also advance the development of multimodal transit hubs to allow for the inter-connection between transport modes (PTSC, Maxi-taxis, taxis, and non-motorized transport such as bicycle and walking). Second, the project will support the introduction of PVLs, segregated or preferred lanes for high occupancy vehicles, public transport service providers who can move a larger number of passengers or fuel-efficient vehicles along existing highways as well as developing legislation for congestion-charge zone as an effective measure for traffic mitigation in Trinidad. Access to PVLs may also be granted to other vehicle categories – single occupant vehicles, for example – for a demand-responsive fee during peak travel times. The project will also support a revamped NTMCC that will include support increase technology access, deployment of updated digital tools for traffic management and control. Lastly, the project will finance and organize capacity building workshops and site visits for Trinidad and Tobago's government officials to share South Korea's experience and knowledge regarding transportation innovation and smart technologies. It is envisaged that IDB staff will participate on some of the training.
- 2.9 **Strategic alignment.** This TC is aligned with the Update to the Institutional Strategy (UIS) 2020-2023 (AB-3190-2) in the development challenge of productivity and innovation, by improving efficiency, effectiveness and, thus, usage, of public transportation, as well as increasing overall travel speeds during peak times. It also aligns with the cross-cutting issues of: (i) climate change and environmental sustainability, by promoting a more efficient and less polluting transport system; (ii) institutional capacity and rule of law, by supporting organizational and normative changes for governmental agencies and transport regulations; and (iii) gender equality and diversity, by considering a gender perspective in the development of transportation studies and designs. This TC is also aligned with the IDB Country Strategy with Trinidad and Tobago 2021-2025 (GN-3071), in the objective of

⁶ [UNDP \(2021\). Trinidad and Tobago Gender Analysis.](#)

enhancing the digital delivery of services and the cross-cutting issue of gender equality.

- 2.10 It is also consistent with the Transportation Sector Framework Document (GN-2740-12) by: (i) promoting efficient, inclusive, sustainable, and quality mobility for urban and interurban passengers; (ii) strengthening sector institutions and regulations; and (iii) promoting technological transformation in the sector. Lastly, it is aligned with the IDB Infrastructure Strategy of Sustainable Infrastructure for Competitiveness and Inclusive Growth (GN-2710-5) in: (i) the financing and technical assistance for infrastructure that supports economic growth, provides access, and fosters regional and global integration; and (ii) planning, building, and maintaining infrastructure for the delivery of quality services that promote sustainable and inclusive growth. The TC will also contribute to the Corporate Results Framework (CRF) 2020-2023 (GN-2727-12), through the indicators “emissions avoided (annual tons of CO₂ equivalent)” and “agencies with strengthen digital technology and managerial capacity.”
- 2.11 The TC is also aligned with the objective of the Korea Poverty Reduction Fund (KPR), as it contributes to improving basic transportation rights and mobility of vulnerable groups through the strengthening of public transport service, as well as reducing social costs and developing the local economy through traffic congestion relief.

III. Description of activities/components and budget

- 3.1 This TC will aim to implement the following activities:
- 3.2 **Component I: Improving the Priority Bus Route (PBR) and Multimodal Transit Hubs (US\$230.000).** This component will finance all engineering studies required to identify technology-enabled solutions to discover and penalize unauthorized users of the PBR, as well as passively measure and collect data on speed of travel on the PBR. A comprehensive engineering analysis of the PBR, including designs for investments required to increase traffic flows, enhance and upgrade public transportation stops, upgrade traffic light signals, among others. In addition, it will finance engineering studies to develop multimodal transit infrastructure with gender perspective that allows diverse transport options and a seamless public transportation experience. The proposed locations for these hubs include the location of Arima among others and will be designed to support travel options for PTSC buses, Maxi-taxis, taxis, and pedestrians and non-motorized vehicles. Finally, the component will finance the development of specific electronic enforcement legislation to ensure the effectiveness of technology-enabled solutions to enforce PBR bus-only lane.
- 3.3 **Component II: Priority Vehicle Lanes (PVLs), Congestion Charge Zone, and Traffic Control Center (US\$200.000).** This component will develop technical specifications, investments need, and all engineering studies required to implement PVL in already existing lanes and develop an implementation plan to facilitate seamless toll-collection without interrupting traffic flow. It will also finance a study for the introduction of congestion charge zone in POS in terms of institution, technology, and policy updates and will set an investment plan for the introduction of PVLs and congestion charge zone in downtown. It will also finance consulting services to develop a plan to set up a traffic control center in POS for better traffic management and congestion mitigation.
- 3.4 **Component III: Capacity Building and Knowledge Disseminations (US\$70.000).** This component supports the development of Components I and II to maximize its effects by studying relevant South Korean cases regarding technology and congestion

mitigation policies. This component will finance in-person capacity building workshops in South Korea for Trinidad and Tobago's government officials, so to share Korea's experience and knowledge regarding related transportation innovation and smart technologies. It will also cover all the costs related to the dissemination and communication activities of the project (possible publications, translations, events organizations, etc.). The topics covered include: (i) bus-only lane operation and management for highways and roads in downtown areas; (ii) congestion charge zone in Seoul and examples from other global metropolitan areas; (iii) traffic observatories for traffic management and congestion mitigation; and (iv) state-of-the-art smart technologies to mitigate traffic congestion.

- 3.5 **Indicative Budget.** The total cost of the project is US\$500,000, which will be financed with resources from the Korea Poverty Reduction Fund (KPR).

Indicative Budget

Activity/Component	Description	IDB/KPR Fund	Total Funding
Component I	Improving the Priority Bus Route (PBR), and Multimodal Transit Hub	US\$230,000.00	US\$230,000.00
Component II	Priority Vehicle Lanes (PVLs), Congestion Charge Zone, and Traffic Control Center	US\$200,000.00	US\$200,000.00
Component III	Capacity Building and Knowledge Disseminations	US\$70,000.00	US\$70,000.00
Total		US\$500,000.00	US\$500,000.00

- 3.6 **Supervision.** The Transport Division (TSP) with the support of the Country Office of the Bank in Trinidad and Tobago (CCB/CTT) will be responsible for the supervision of the TC. This will facilitate the supervision of project implementation, as well as foster a good communication with local counterparts.

IV. Executing agency and execution structure

- 4.1 The MOWT will be the executing agency for this operation. CCB/CTT will support the execution of the TC. TSP/CTT in collaboration with the Infrastructure and Energy Sector (INE/INE) and the Environmental and Safeguard Unit Solutions (VPS/ESG) will coordinate project implementation.
- 4.2 The TC will be implemented by MOWT through the hiring of consultants to carry out each study. In this sense, the MOWT will be responsible for: (i) identifying the studies and technical work necessary to structure the project; (ii) select and hire consultants to provide the necessary services; and (iii) manage the execution and delivery of consulting services.
- 4.3 MOWT will hire consultants or companies in accordance with the Policies for the selection and contracting of consulting services, works or goods financed by the Bank (GN-2349-15 and GN-2350-15). Given that the Government will execute the TC, the team does not envisage the need for ITE to participate in the preparation or execution of the TC.
- 4.4 The MOWT is one of the largest government organizations in Trinidad and Tobago. MOWT is responsible for providing the physical infrastructure and transport services

necessary for the social and economic development of the country. The Ministry is authorized to manage roads and highways, traffic management, national transportation, ports, public transportation, bridges, and the construction of all national transport infrastructure. The Bank has previously supported the MOWT on similar areas (TT-T1109), including PBRs, deployment of technology, and policy and regulations, among others.

- 4.5 All knowledge products derived from this Technical Cooperation will be the Bank's intellectual property.

V. Monitoring and Evaluation

- 5.1 INE/TSP, led by the team leader of this TC, and the CTT will work closely with the MOWT to ensure that the deliverables of this TC are met within the proposed timeline. Monthly update meetings with the MOWT and TSP/CTT will be scheduled.
- 5.2 The MOWT will submit to the Bank semi-annual progress reports regarding implementation of the activities of the TC within two months after the end of each semester. In addition, a final report is expected to be submitted within six months after the completion of the last activity. The final report will present to the Bank the degree of fulfillment of the output indicators and progress toward the outcomes of the Results Matrix. The financial audit report of the TC is to be submitted within three months of the disbursement expiration date.

VI. Major issues

- 6.1 A risk of delay in the execution of the operation has been identified as a result of the low capacity of the MOWT to coordinate the activities and administer the studies. To mitigate this risk, the Bank will provide support through TSP/CTT on the coordination of the activities, as well as on the execution of the TC through CCB/CTT.

VII. Exceptions to Bank policy

- 7.1 No exceptions to the Bank policy are considered for this TC.

VIII. Environmental and Social Strategy

- 8.1 This TC does not intend to finance pre-feasibility or feasibility studies for specific investment projects or environmental and social studies associated with them; therefore, the requirements of the Bank's Environmental and Social Policy Framework (ESPF) do not apply to this TC.

Required Annexes:

[Request from the Client - TT-T1123](#)

[Results Matrix - TT-T1123](#)

[Terms of Reference - TT-T1123](#)

[Procurement Plan - TT-T1123](#)