

TERMS OF REFERENCE

TELECOM DATA MOBILITY ANALYSIS

1. Background and Justification

1.1. Established in 1959, the Inter-American Development Bank (“IDB” or “Bank”) is the main source of financing for economic, social, and institutional development in Latin America and the Caribbean. It provides loans, grants, guarantees, policy advice, and technical assistance to public and private sectors of its borrowing countries.

1.2. Jamaica’s National Development Plan – [Vision 2030](#) – recognizes that a well-organized and accessible transportation sector, capable of moving people and goods efficiently, safely, and affordably, while minimizing the impact on the environment and society, is indispensable to economic progress. For the 75% of households in Jamaica without a private car, equitable access to efficient, safe, affordable public transportation services determines their access to education and employment opportunities, as well as healthcare and other public services and thus, is critically important to their ability to contribute to and benefit from inclusive growth and sustainable development.

1.3. However, several of Jamaica’s foundational transport sector policies are badly out of date and, as a result, the transport sector continues to develop in the absence of a coherent, data-driven policy to guide investment decisions. Even as road networks expand, they continue to be designed primarily to facilitate motorized transportation and do not facilitate inter-modal connectivity, and often without adequate consideration for the safety of other road users or the potential short- and long-term impacts of climate change on infrastructure design and maintenance or to facilitate inter-modal connectivity.

1.4. The Ministry of Transport and Mining (MTM) is currently undertaking a long-overdue update of the [2007 National Transport Policy \(NTP\)](#), which is over a decade old, but lacks accurate, comprehensive data on travel demand and usage to inform and guide this critical policy. Further, the specific needs of women, children, the disabled and other vulnerable groups are not adequately considered.

1.5. The IDB together with the Jamaican Government are aiming at understanding accessibility, affordability, safety, and modal split constraints in the island’s transport. To this end, the proposed analysis will be based on already available telecom-data from which many urban and inter-city mobility insights of great statistical soundness can be inferred.

2. Objectives

2.1.1. The objective of this consultancy is to assess and monitor traffic flows, travel time, and congestion indexes on the road network within the Kingston Metropolitan Transport Region (KMTR) – Kingston, St. Andrew, St. Catherine (Spanish Town and Portmore) – and between the secondary cities of Jamaica, using the complete telecom dataset available, in order to help the Jamaican government devise data-driven policies and prioritize its future investments.

3. Scope of Services

3.1.1. The key experts required for the Consultant’s team, and their minimum qualifications and experience are the following:

3.1.2. Project Director

Education: Master's in economics, data analysis or related field

Experience: More than 7 years of experience on monitoring analytical projects involving Big Data approaches and algorithms and managing relations with key stakeholders.

3.1.3. Project manager

Education: Master's in economics, project management, data analysis or related fields.

Experience: More than 5 years of experience managing projects involving Big Data approaches and access agreements with Telecom operators.

3.1.4. Data scientist (#1)

Education: Master's in engineering, data science or related fields

Experience: More than 2 years of experience on designing and implementing algorithms to estimate key mobility indicators and development of data algorithms deriving insights about traffic from mobile operator's data.

3.1.5. Data scientist (#2)

Education: Master's in engineering, data science or related fields

Experience: More than 2 years of experience on designing and implementing algorithms to estimate key mobility indicators and development of data algorithms deriving insights about traffic from mobile operator's data.

4. Key Activities

4.1. Secure access to the telecom data. This activity will entail developing analytics to define the scope of data to be acquired, interact with the mobile service provider and develop data connectors to get the feed of CDRs (call detailed records) from local provider and/or telecom operator. The data required for the transport analysis will aim at reaching a 5-year data coverage to properly define and analyze transport flows. This will also involve establishing and supporting data anonymization process required to respect any privacy regulation.

4.2. Adjust and Implement the overview algorithms and visualization tools. This activity will develop algorithms and visualization tools to identify basic mobility insights including: flows of population; economic centers and residential areas; population distribution at different times of the day/week/month/year; mix of modes of transport within the metropolitan area of Kingston and other key urban areas and at different moments of the day/week/month/year. It will develop first insight on potential gender biases of transportation patterns.

4.3. Adjust and Implement Advanced Algorithms. The analysis will focus on the KMTR area. Nevertheless, the dashboard will also be available at national level between secondary cities for activity 4.1.7. Results should show changes depending on different moments of the day and the week. This activity will develop algorithms and adjust existing algorithms to better identify advanced mobility insights covering the following features:

4.3.1. Statistically assign mobility of population to the road network.

4.3.2. Measure of traffic per road segment (number of people/h) and average speed (km/h) on main roads of the network.

- 4.3.3.** Calculate road capacity of the network to identify segments that are over and under their maximum capacity.
 - 4.3.4.** Calculate congestion index and time lost per road segment and identify most congested spots within the city of Kingston and other key cities.
 - 4.3.5.** Isolate and segregate different modes of transport (motorized vs non-motorized) using signaling data in combination with ground truth data from household surveys and GPS data from buses, trucks or taxis tracking if available.
 - 4.3.6.** Compute the catchment areas for different points of interest (for example markets, health centers and clinics, schools, hotels, business areas and schools) and evaluate the accessibility of these areas. This include markets located near key roads in the country).
 - 4.3.7.** Identify missing road links between counties, parishes and cities and prioritize construction of missing road sections.
- 4.4.** Develop Sound Visualization Tools. This activity will develop sound visualization tools to better identify mobility insights and to help the government prioritize their future investment including:
- 4.4.1.** Visualize mobility of people on the road network in term of traffic flows and average speed.
 - 4.4.2.** Visualize congested index per road segment and prioritization of road that are under or over their capacity.
 - 4.4.3.** Visualize the catchment areas and identify transport needs for additional markets, hospitals, or industrial areas, for example.
 - 4.4.4.** Visualize the missing links between parishes and secondary cities/inter-cities.
 - 4.4.5.** Visualize the impact of roadwork or event in term of traffic and time lost before and after the construction or event.
- 4.5.** Develop Cross Analysis. Based on the insights from the visualization tools and depending on the availability of other data sources (households survey, census data, and GPS data from mobile sources), generate visual and quantitative scenarios and answer the following questions:
- Where to prioritize investment (short term and long term) to improve mobility?
 - Which are the congested roads?
 - This implies developing a congestion index, that will compute population, users, and travel speed.
 - Where are the congested sections or intersections (in urban areas)?
 - How to improve the “slow” sections of the traffic?
 - Is it an issue of actual congestion, bad infrastructure, or challenging topography?
 - Short Term: where to locate traffic control officers to facilitate vehicle flow and what alternative routes can be identified?
 - Direction of roads: can inverting or converting two-way roads in one-way road modifies and change traffic patterns and speed.
 - Long term: where to prioritize the future investments for roadwork?
 - Where to add secondary or inter-city roads and connections?
 - Where to prioritize interventions of parishes, secondary and tertiary network
 - Where to locate large transport-enabled activities such as industrial hubs,

universities, markets, or hospitals to improve accessibility?

4.6. Combine data of hospital and school location to identify travel patterns and accessibility index along the country

4.6.1. Identify where to further develop the offer (in terms of lines, pricing, frequency/capacity) of public transport and improve matching with potential demand?

4.6.2. What could be priorities, e.g. potential public transport corridors?

4.7. Training and capacity building

The team will make sure to be regularly present on site to organize feedback session with the Ministry of Mining and Transport Public (MMT) and with the Bank.

Each one of the activities will be presented to the MMT on recorded sessions during the consultancy.

Several training sessions will take place with the MMT and the Bank on how to use the different applications developed and a user manual will be delivered as well.

After the completion of the project, the team will still support the MMT and the Bank for any issue or questions regarding the usage of the tools.

5. Expected Outcome and Deliverables

5.1. Maps and dashboards as mentioned in 4.2, 4.3 and 4.4

5.2. A report and a Power Point Presentation on every activity 4.1, 4.2, 4.3 and 4.4. Each activity above should have a separate report in English.

5.3. All reports will include rationale and analysis for the results obtained from the analyzed telecom data.

6. Project Schedule and Milestones

6.1. Deliverable 1. The Draft Report and Power Point Presentation for activities 4.1.1, 4.1.2, 4.2.1 will be submitted maximum six (6) weeks after the contract signature date.

6.2. Deliverable 2. The Draft Report and Power Point Presentation for activity 4.1.3, 4.1.4, 4.1.5 and 4.2.2 will be submitted maximum ten (10) weeks after the contract signature date.

6.3. Deliverable 3. The Draft Report and Power Point Presentation for activity 4.1.5, 4.1.6, 4.2.3 and 4.2.3 will be submitted maximum thirteen (13) weeks after the contract signature date.

6.4. Deliverable 4. The Draft Report and Power Point Presentation for activity 4.1.7, 4.1.8, 4.2.5 and 4.3 will be submitted maximum eighteen (18) weeks after the contract signature date.

6.5. Deliverable 5. The Draft Report and Power Point Presentation for activity 4.4 and the user manual for activity 4.5 will be submitted maximum twenty-two (22) weeks after the contract signature date.

6.6. The duration of the consultancy will be seven (7) months after the signature of the contract.

7. Reporting Requirements

7.1. Every report must be submitted to the MTM and the Bank in an electronic file.

7.2. The report should include cover, main document, and all annexes.

8. Acceptance Criteria

8.1. The acceptance of each deliverable will be submitted by the team leader via email to the consultant partner.

9. Supervision and Reporting

9.1. All activities will be coordinated by the IDB project Team Leader Christopher Persaud (CHRISP@IADB.ORG) in coordination with Pablo Guerrero, INE/TSP (PABLOGU@IADB.ORG) and Alana Fook, TSP/CJA (ALANF@IADB.ORG).

10. Schedule of Payments

Deliverable	%
1. Signature	30
2. Acceptance of Deliverable 1	10
3. Acceptance of Deliverable 2	10
4. Acceptance of Deliverable 3	15
5. Acceptance of Deliverable 4	10
6. Acceptance of Deliverable 5	10
7. Final report and Power Point Presentation on advanced insights and the visualization tools and results obtained from the analyzed telecom data	15
TOTAL	100

Consultancy for Building the Enabling Environment for Transport Sector Modernization Jamaica JA-T1187 | Modernizing Jamaica's Transport Sector to Improve Sustainability, Safety and Efficiency

1. Background and Justification

- 1.1 Jamaica's National Development Plan – [Vision 2030](#) – recognizes that a well-organized and accessible transportation sector, capable of moving people and goods efficiently, safely, and affordably, while minimizing the impact on the environment and society, is indispensable to economic progress.
- 1.2 In 2019, there were 435 road fatalities in Jamaica – the highest in 23 years – resulting in a fatality rate of 16.1 per 100,000 population, which is up by 30% since 2013. A critical component of enhancing safety of Jamaica's transport sector hinges on increasing compliance with existing traffic regulations and the effectiveness of enforcement actions such as ticketing are reflected in the road safety statistics. The Vision 2030 Transport Sector Plan identified the absence of enabling legislation to permit the use of appropriate monitoring technology and lack of adequate support for road safety among the key factors hindering the development of the sector.¹ In the absence of a coordinated, technology-enabled approach to traffic enforcement and an efficient way to monitor payment, motorists are able to amass vast numbers of unpaid paper-based tickets with virtual impunity, which has greatly compromised the effectiveness of traffic tickets as an enforcement measure. It is not uncommon for Public Passenger Vehicle (PPV) operators, such as taxi and mini-bus drivers, to have hundreds of unpaid tickets. In recent times, the Public Safety and Traffic Enforcement Branch (PSTEB) of the Ministry of National Security (MNS) have arrested individuals with over a thousand unpaid traffic tickets and several arrest warrants.² While these are extreme cases, they do signal a systemic weakness in the current approach. The GOJ is currently implementing a pilot for electronic ticket issuance (hand-held devices for traffic cops) and have installed 758 traffic cameras island wide. The Government believes that electronic enforcement will free up resources allow it to redirect traffic enforcement resources to more productive use such as traffic management, as well as eliminate inefficiencies caused by historical reliance on manual paper-based ticketing and data entry.
- 1.3 The use of technology – such as red light and speed detection cameras – has the potential improve the efficiency and effectiveness of traffic enforcement, while minimizing the burden on security forces and the justice system to tackle traffic enforcement, and increasing revenue collection and transparency by reducing opportunities for point of service corruption. The recent passage of the Road Traffic Act, 2018, which created the Island Traffic Authority as the entity in charge of regulating and controlling traffic on the roads, established the framework for electronic enforcement and reflects Jamaica's commitment to modernizing the transport sector, but the regulations necessary for implementation are yet to be developed.

¹ [Vision 2030 - Transport Sector Plan](#) (Transport Task Force, 2009).

² [Bus Driver, Taxi Operator, Arrested for 1,100 Outstanding Traffic Tickets](#) (The Gleaner, 14 September 2019) and [Two taxi operators held with over 1,400 outstanding tickets](#) (Loop News, 20 November 2018).

2. Objectives

The overall objective of this consultancy is to develop a robust regulatory framework and provide coordination support to implement electronic enforcement in Jamaica. The outputs to include a set of strategies, tools, public policies, and legislative instructions to address the following specific objectives:

- i. Improve the overall quality of service for all road users through enhanced safety.
- ii. Facilitate enforceability of the Road Traffic Act by supporting the drafting/finalization of electronic enforcement regulation.
- iii. Increase enforcement actions to reduce traffic related incidents.
- iv. Modernization of enforcement mechanisms.

3. Scope of Services

This Terms of Reference will be used to select and hire a Consultant for building an enabling environment for the modernization of road transport safety and security. The scope of the services includes but is not limited to:

- i. Shaping of the policy and legal framework to promote electronic traffic enforcement.
- ii. Reform of measures to ensure effectiveness of enforcement.
- iii. Development of enforcement mechanism building on existing and planned infrastructure.

4. Activities

The firm shall perform the following tasks as part of achieving the objectives of the contract, without detriment to those other tasks that in their judgment and experience the teams considers relevant to achieving those objectives.

More specifically, activities will include.

- i. Reviewing draft regulations, coordinating the review process within the MTM and preparing drafting instructions for the necessary updates to regulations to make electronic enforcement enforceable under the [Road Traffic Act, 2018](#).
- ii. Documenting and proposing improvements to the current information and financial flows associated with traffic ticket issuance, payments and adjudication to improve the efficacy of traffic tickets as an enforcement measure to influence road user behavior, such as preventing renewal of driver's licenses, fitness certification or motor vehicle registration with unpaid traffic tickets, making it easier for police to check if a driver has outstanding tickets.
- iii. Conducting a needs assessment to identify gaps in legal and regulatory framework, evaluate institutional readiness and technical capacity within the GoJ, and identify physical/technological infrastructure investments required to effectively implement electronic enforcement.
- iv. Propose an institutional arrangement (and draft MoU) for the entities involved in implementing electronic enforcement, and identify opportunities to build on existing GoJ modernization initiatives, such as accessing data feed from existing and soon-to-be implemented cameras for the security strengthening efforts, integration of Traffic Ticket

Management System (TTMS) with new Case and Record Management Systems within the Ministry of National Security.

5. Project schedule, deliverables, and milestones

Products/milestones	Timeframe ³
1. Review of existing information	2 weeks
2. Public policies and legislation governing road traffic	4 months
3. Enforcement Mechanisms	6 months
4. Final Report	8 months

6. Reporting requirements

- i. Key project deliverables and milestones must be delivered or executed on the dates proposed by the consultant in his/her revised work plan. Any changes to the project schedule must have the express approval of the Beneficiary and the IDB.
- ii. The consultant shall maintain close coordination and communication with the Beneficiary regarding the execution of activities and events for dissemination.

7. Acceptance criteria

- i. All deliverables must be submitted to the English, using electronic files compatible with MS Office formats.
- ii. For the final version of the reports, the Consultant shall consider all the comments received from the key stakeholders.

8. Qualification Requirements

The consultancy will require the service of a team of experts with skills and experience in urban/public transport policy analysis and development, urban planning/project preparation and public administration. The Consultant needs to comply, at least, with the following key technical personnel:

- **A project manager:** The Project Manager shall have specific experience in working with transport policy and legislation in developing countries. Master's degree in Economics, Urban Transport, Civil Engineering, City Planning, or related fields with a related professional experience of at least 10 years and specific experience assessing development countries at least five years.
- **A specialist in intelligent transport systems:** University degree in, Engineering or related disciplines with at least Master's degree in assessment and design of intelligent transport systems, and with at least 10 years of practice experience and must have served in similar capacity in at least two assignments of similar nature.

³ Time counted from the signature date of the contract

9. Supervision and Reporting

The IDB Transport Division will be responsible for the supervision of this contract. The Ministry of: Transport and Mining; Finance and Public Service; National Security and Justice will approve the respective contract products prior to payment for these products are made. IDB is responsible for making payments once approval has been granted.

10. Schedule of Payments

Payment terms will be based on project milestones or deliverables. The IDB does not expect to make advance payments under consulting contracts unless a significant amount of travel is required.

Payment Schedule	
<i>Deliverable</i>	%
1. Review of existing information	20%
2. Public policies and legislation governing road traffic	30%
3. Enforcement Mechanisms	30%
4. Final Report	20%
TOTAL	100%

MODERNIZING JAMAICA'S TRANSPORT SECTOR TO IMPROVE SUSTAINABILITY, SAFETY AND EFFICIENCY (JA-T1187)

CONSULTANCY FOR KNOWLEDGE PRODUCT DEVELOPMENT AND DISSEMINATION

1. CONTEXT

Macroeconomic and public-sector context. As the three-year term for its US\$1.6bn Precautionary Stand-By Arrangement (SBA) with the IMF drew to a close in September 2019 – the 3rd consecutive IMF arrangements, the first of which began in 2010 – Jamaica has made great strides in improving its fiscal position. In April 2020, the public debt to GDP ratio fell below 100% for the first time in nearly two decades, down from a high of over 140%, net international reserves hovered around US\$3bn, inflation stabilized at around 3.5%, GDP growth was marginally positive. While maintaining fiscal discipline and continued emphasis on improving public sector efficiency, the GoJ has expressed commitments to explore growth-enhancing interventions to realize the benefits of austerity measures imposed over the past decade. To this end, Jamaica has embarked on an aggressive [public sector transformation agenda](#) aimed at [transforming Jamaica into a digital society](#).

Good macroeconomic performance has made car ownership more accessible to a wider share of the population, more of whom must navigate within and between urban areas and their peripheries. While the growing number of vehicles on Jamaica's roadways⁴ enhances citizens' mobility and convenience, it further exacerbates the widespread problem of congestion in urban areas.

Without the requisite investment in good-quality public transportation, owning and operating a personal vehicle is seen as a status symbol. This is because the available public transportation is insufficient to meet the needs of the commuting public and is of poor quality, often characterized by lack of information for users, lack of connectivity between different modes of transportation and high degrees of congestion, which makes for long, unpleasant, and often unpredictable journeys. The sector is also characterized by a high degree of informality, which introduces safety concerns for users.

Achieving this objective will require a number of complementary and synchronized efforts, such as improving the availability and attractiveness of public transport choices, promoting more energy-efficient transport modes, powering the transport sector with cleaner fuels and technologies, reducing road traffic crash-related injuries and deaths, and improving enforcement of traffic laws among others.

The urgent need for transport data. Jamaica's National Development Plan – [Vision 2030](#) – recognizes that a well-organized and accessible transportation sector, capable of moving people and goods efficiently, safely, and affordably, while minimizing the impact on the environment and society, is indispensable to economic progress. For the 75% of households in Jamaica without a private car, equitable access to efficient, safe, affordable public transportation services determines their access to education and employment opportunities, as well as healthcare and

⁴ According to the Vision 2030 Transport Sector Plan, the number of vehicles certified fit to operate on the island's roadways was 420,265 during fiscal year 2007/2008 – an 11% increase over the previous fiscal year 2006/2007.

other public services and thus, is critically important to their ability to contribute to and benefit from inclusive growth and sustainable development.⁵

However, several of Jamaica's foundational transport sector policies are out of date and, as a result, the transport sector continues to develop in the absence of a coherent, data-driven policy to guide investment decisions. The MTM is currently undertaking a long-overdue update of the [2007 National Transport Policy \(NTP\)](#), which is over a decade old, but lacks accurate, comprehensive data on travel demand and usage to inform and guide this critical policy. Further, the specific needs of women, children, the disabled and other vulnerable groups are not adequately considered.

The efficiency gains of improving traffic enforcement. In 2019, there were 435 road fatalities in Jamaica – the highest in 23 years – resulting in a fatality rate of 16,1 per 100.000 population, which is up by 30% since 2013. A critical component of enhancing safety of Jamaica's transport sector hinges on increasing compliance with existing traffic regulations and the effectiveness of enforcement actions such as ticketing are reflected in the road safety statistics. The Vision 2030 Transport Sector Plan identified the absence of enabling legislation to permit the use of appropriate monitoring technology and lack of adequate support for road safety among the key factors hindering the development of the sector.⁶ In the absence of a coordinated, technology-enabled approach to traffic enforcement and an efficient way to monitor payment, motorists are able to amass vast numbers of unpaid paper-based tickets with virtual impunity, which has greatly compromised the effectiveness of traffic tickets as an enforcement measure. It is not uncommon for Public Passenger Vehicle (PPV) operators, such as taxi and mini-bus drivers, to have hundreds of unpaid tickets. In recent times, the Public Safety and Traffic Enforcement Branch (PSTEB) of the Ministry of National Security (MNS) have arrested individuals with over a thousand unpaid traffic tickets and several arrest warrants.⁷

The GOJ is currently implementing a pilot for electronic ticket issuance (hand-held devices for traffic enforcement) and have installed 758 traffic cameras island wide. The Government believes that electronic enforcement will free up resources allow it to redirect traffic enforcement resources to more productive use such as traffic management, as well as eliminate inefficiencies caused by historical reliance on manual paper-based ticketing and data entry.

The need for technology-enabled solutions. The use of technology – such as red light and speed detection cameras – has the potential to improve the efficiency and effectiveness of traffic enforcement, while minimizing the burden on security forces and the justice system to tackle traffic enforcement, increasing revenue collection, increase transparency and accountability, and to generate databases of traffic offenders. The recent passage of the Road Traffic Act, 2018, which created the Island Traffic Authority⁸ (ITA) as the entity in charge of regulating and controlling traffic on the roads, established the framework for electronic enforcement and reflects Jamaica's commitment to modernizing the transport sector. However, regulations to make the Act enforceable are still pending.

⁵ [Vision 2030 - Transport Sector Plan](#) (Transport Task Force, 2009).

⁶ [Vision 2030 - Transport Sector Plan](#) (Transport Task Force, 2009).

⁷ [Bus Driver, Taxi Operator, Arrested for 1,100 Outstanding Traffic Tickets](#) (The Gleaner, 14 September 2019) and [Two taxi operators held with over 1,400 outstanding tickets](#) (Loop News, 20 November 2018).

⁸ Established by the Road Traffic Act, 2018, the ITA performs several key functions which are essential to the efficient and effective regulation of road traffic, including ensuring fitness, road-worthiness and compliance with safety standards for vehicles, testing and certifying the competence of drivers, and maintaining records of traffic offenses committed by drivers, road traffic crashes and the resulting injuries and/or deaths, among others. Source: Ministry of Transport and Mining (MTM) [website](#).

COVID-19. Jamaica confirmed its [first case](#) of COVID-19 March 10, 2020. Within days, and before Jamaica recorded even the [first coronavirus-related death](#), the Government of Jamaica (GoJ) issued the first [Disaster Risk Management A \(Enforcement Measures\) Order, 2020](#), introducing measures intended to encourage [social distancing](#) – the primary weapon in the fight against COVID-19 in the absence of a safe and effective vaccine, or drug to eliminate the virus once contracted – by placing restrictions on individual movement. While effective, these measures – encouraging work from home, avoiding non-essential trips, and placing [restrictions on carrying capacity and hours of operation](#) for public transport operators – have had a major impact on the land transportation sector.⁹ The COVID-19 pandemic has placed immense pressure on public sector resources and highlighted the urgency of advancing digitization of government services to ensure continued access. Further, since 75% of households depend on public transportation, accurate data on demand for and usage of these services will be essential to design and delivery of fit-for-purpose transportation services as the country and the sector recover from the COVID-19 health crisis.

2. OBJECTIVE

The general objective of this Technical Cooperation (TC) is to support the Government of Jamaica (GoJ) to improve the sustainability, safety, and efficiency of land transportation in Jamaica. The specific objectives are to (i) support the Ministry of Transport and Mining (MTM) to gather and analyse data on travel patterns to facilitate data-driven policy making, implementation and assessment, and (ii) build the enabling environment to implement technology-enabled traffic enforcement measures to improve road safety.

The objective of this consultancy is to support the elaboration of multiple knowledge product and dissemination efforts related to the results and outputs of the technical cooperation. The results and outputs are outlined in the annex I. The activities related to this term of reference must establish a clear relationship between the information presented in the technical cooperation and conclusions that can be drawn from the technical cooperation. The consultancy looks to elaborate on the development of specialized knowledge products – such as demo videos, blogs, and technical notes – and the production of an event¹⁰ to document and disseminate the outputs and lessons learned during the execution of the TC within Jamaica and the English-Speaking Caribbean region.

3. SCOPE OF WORK

The following activities describe the scope of work:

1. The technical notes must use information learned during the execution of the TC and must extract information from the deliverables produced with the TC and other similar activities.
2. The technical note would respond concretely to the challenges identified during the preparation and execution of the TC, such as does described above (e.g. macroeconomic and public-sector context; the urgent need for transport data; the efficiency gains of improving traffic enforcement; and the need for technology-enabled solutions).
3. Carry out research for the estimation of new data and the elaboration of new indicators that are necessary for the elaboration of the knowledge products. This includes research work for background information and best practices in the activities carried out with the TC.

⁹ [Mobility in the time of Coronavirus: Implications for the Jamaican Transport](#) Sector (Alana Fook, IDB Transport Blog, May 1, 2020).

¹⁰ Depending on regulations concerning local and international travel and gatherings with relation to COVID-19, the event would be held online.

4. Develop content the meets the following characteristics:
 - a. Know the main characteristics of transport and the urban areas it serves, including a specific section on gender gaps in urban mobility and road safety.
 - b. Improve the capacity of urban transport policy formulation and management by local bodies involved in investment, production, and social control.
 - c. Promote the exchange of information and good practices between transport systems.
 - d. To guide discussions on the subject and allow the participation of relevant actors.
 - e. To act as a catalyst for actions to support cities in financing projects and strengthening their capacities.
 - f. There is a section of methodological notes, in addition to the delivery of the databases with the information.
5. Support the planning and execution of an event with relevant stakeholders related to the TC and the elaboration of materials related to the conclusions of the event.

4. DELIVERABLES AND ACTIVITIES

- **Deliverables and activities:**
 1. Work Plan, which incorporates the previously mentioned scopes of work
 2. Draft technical note, which incorporates the previously mentioned scopes of work
 3. Technical note
 4. Agenda and minutes for event
 5. Database

5. PAYMENT SCHEDULE

To develop the detailed activities, a period of 12 months from the date of subscription of the contract is estimated.

Product	%	Schedule
Product 1	10%	30 days
Product 2	20%	5 months
Product 3	50%	8 months
Product 4	10%	12 months
Product 5	10%	9 months
	100%	

6. SUMMARY OF OPPORTUNITY

Experience: Consultant with at least five to seven years of professional experience in urban mobility, transportation, public transportation, transportation-related public policy development, emissions, legal assistance and/or related areas.

- Experience and knowledge in mobility disruption and its impact in mobility patterns.
- Data analysis and management skills in geographic information systems (GIS).
- Proven experience in collecting mobility and transportation data through digital methods.
- Fluency in English.
- Experience with the planification of events.

Type of contract and modality: Lump Sum.

Duration of the contract: 12 months.

Start date: January 2022.

Person responsible: The work, as well as the supervision and approval of reports will be coordinated by Christopher Persaud, Team Leader (CHRISP@IADB.ORG), in coordination with Pablo Guerrero, INE/TSP (PABLOGU@IADB.ORG) and Alana Fook (TSP/CJA) (ALANF@IADB.ORG).

Requirements: The consultants of the firm participating in the project must be citizens of one of the 48 member countries of the IDB and must not have family members currently working in the IDB Group.