[Suggested structure]

Selection process #::::::::

TERMS OF REFERENCE

ASSESSMENT OF DIGITAL INFRASTRUCTURE IN THE TOWN OF ARIMA

Trinidad and Tobago

TT-T1115

https://www.iadb.org/en/project/TT-T1115

Smart Town Arima

1. Background and Justification

1.1. TT-T1115 aims to support the design of an urban regeneration solution in the town of Arima in Trinidad & Tobago, centered on smart urban infrastructures to improve local economic activity, mobility and accessibility, and social interactions. At the heart of the proposed initiative is an emphasis on the urban planning concept of placemaking. Placemaking attempts to uncover the potential of public spaces to attract and welcome all people to spend time in safe, comfortable, vibrant, accessible, digitally connected, and aesthetically pleasing surroundings. There is a focus on designing and catering to all social groups, away from designing urban spaces around the needs of automobile drivers and passersby.

1.2. The town of Arima, with 34,000 inhabitants at the 2010 Census, and located at the eastern end of the main public transport route and a mere 8 km from the Piarco International Airport, has a rich cultural heritage, diverse ethnic makeup, is home to the nation's First Peoples, and boasts some unique public facilities in the sporting and health arenas. These include the Larry Gomes Stadium, the Arima Velodrome, the Arima Health Facility, and a state-of-the-art Arima General Hospital. The hospital aside, in recent decades, public spaces, services, and infrastructure have seen little investment or adaptation to respond to changing demographics and economic and climatic factors, despite flash flooding in low-lying areas at the foothills of the Northern Range being a growing concern. This was reflected in the 2022 Survey by about a third of respondents whose dominant view of the town was that the infrastructure and assets need better protection and maintenance. The Survey also demonstrated an appetite for a more pedestrian-focused, walkable environment in downtown Arima with 80% of respondents in support of at least experimenting with solutions that involve slower vehicular speeds, and more walking and cycling. These preliminary indicators require more detailed investigations in scoping an urban regeneration initiative for the Borough.

1.3. According to the 2022 Public Perception Survey, most people like Arima but few love it. Most respondents to the 2022 Survey (49%) indicated that they mostly visit Arima to shop or do business. Even so, only about one in five respondents who sometimes go through Arima for a connecting bus or maxi-taxi, frequently conduct any other business or shop in the town. Relatively few visitors come for social or recreational reasons, including for sporting events, despite existing sporting infrastructure – again indicative of untapped potential. More Culinary, Cultural, and Recreational activities were strongly desired by 2022 Survey respondents. Better understanding of what is currently offered as well as patronage patterns and motivations is important to developing a plan to capitalize on the untapped demand.

1.4. Despite being an intersection point for main transit routes along the most-populated

corridor in the country, the East-West Corridor, the Arima city center lacks a dedicated transit hub. Prior studies have shown that public transportation use is highest on that corridor and the 2022 Survey confirmed that public transportation is widely used by visitors to Arima with only 57% of the respondents indicating that they usually use a private car when they visit. Most of the public transportation to and from the town is provided by private mini-buses (maxi-taxis) which operate on an unscheduled basis and without a dedicated facility – for example there are no dedicated public washrooms or pick up/drop off platforms for passengers. Addressing these deficiencies is an important to successful urban regeneration, as mobility facilitated by well-functioning public transportation and public spaces, is a key ingredient of successful placemaking.

1.5. Smart city solutions by businesses and government services in the town are not widely adopted. As a baseline, only 19% of Micro, Small, and Medium-size Enterprises (MSMEs) in Arima had access to the internet in 2014. The 2022 Survey confirmed strong interest in free public Wi-Fi in the downtown area with more than half of respondents expressing a strong preference for this feature in redevelopment activities. Although fewer than 10% of respondents to the Survey expressed a sense of feeling either unsafe or very unsafe when visiting the town, a significant proportion (41%) were undecided. Moreover, the business community and farmers in the outlying areas of the Borough regularly cite the need for increased security, including closed-circuit television (CCTV), most recently in a February 2022 Public Consultation.

1.6. Gender, Diversity, and Inclusion is a significant concern in the town. Although local statistics do not exist on its prevalence, the fear brought by street harassment negatively influences the decisions of women and girls on appearing alone in public, using public transportation, and affects equal access to recreational and livelihood opportunities in outdoor public spaces. A 2018 IDB study indicated that nationally, close to one in three women experienced sexual violence, including rape, attempted rape, unwanted touching, and reported sexual violence. Although men and women in the 2022 Survey did not express significantly different perceptions of their security when visiting the town, such disparities are likely to surface with deeper analysis that considers, for example, nighttime vs daytime visits, safety in different parts of the town, and public transportation vs private car users. Beyond safety, gender inequalities are observed with a more detailed analysis of participation in business, access to training, knowledge, technology, access to finance, and unpaid care work. In 2013, 23% of adult men were trying to start a business or owned a young business compared to 16% of adult women. These differences involve not having the required knowledge/skills to start a business and the fear of failure. More training for women is needed in terms of entrepreneurship skills, mentoring, and start-up financial support guidance. Also, a systematic assessment of infrastructure and public spaces, and public services from a universal accessibility perspective is also needed and is made more pertinent with an aging national population. Around 4.9% of the adult population of the country lives with a disability. Additionally, the Borough is home to the nation's First Peoples and historically to significant Spanish-speaking migrant populations, both requiring careful consideration in designing project interventions aimed at strengthening inclusion in the urban realm.

1.7. The national and local governments are committed to addressing these constraints, emphasizing digital transformation through an urban regeneration program called Connected Arima. In this regard, the agendas of three national Ministries converge. The Ministry of Planning and Development and the Ministry of Digital Transformation are keen on the success of Arima both as well as a pilot for a broader smart city and community connectivity agenda being planned by the Government, as part of its Vision 2030. The

Ministry of Housing and Urban Development, as executing agency for the Urban Upgrading and Revitalization Program, is also committed to the success of this urban regeneration sub-project both from the perspective of the Program's outcomes as well as from the perspective of its broader mandate for urban development.

1.8. The chances of success for Smart Town Arima can be enhanced by learning from the experiences of other countries, of which the Korean experience is very pertinent. Korea has significant expertise in addressing the challenges of developing new towns and innovating with smart city solutions, especially those solutions directed at improving mobility, accessibility, and connectivity in dense urban areas. The Bank has collaborated with Korea on the issue of smart cities since 2011 through KSP Programs and in 2015 when the Korean Research Institute for Human Settlements (KRIHS) and the IDB co-sponsored the Knowledge Sharing Forum on Comparative Development Experiences from Korea and Latina American and the Caribbean. This initial collaboration was followed by financing key smart city feasibility studies and knowledge sharing. A stronger collaboration on smart city solutions and urban regeneration was consolidated by establishing the Korea-IDB Urban Development Academy (KIUDA) which engages urban professionals from Korea and LAC in peer-to-peer knowledge exchanges. The Korean experience is valuable given that Korea addressed its urban regeneration and smart city solutions needs by a systematic consolidation of several agencies (MOLIT, LH, LX, KRIHS, Korean Association of Spatial Information, Surveying & Mapping (KASM)) dedicated to geomatics and developed the prototype of the Digital Twin City, which allows for better urban planning and management. This outstanding experience could be applied to smart urban regeneration in Arima.

1.9. A preliminary report, prepared by the Telecommunications Authority of Trinidad and Tobago, on broadband internet access, identifies 8 communities in the borough of Arima and 3 communities on the outskirts. According to this assessment, all the communities have coverage from at least one mobile, one fixed, and one fixed wireless provider.

2. Objectives

2.1. The objective of this project is to assess the existing broadband infrastructure in Trinidad and Tobago with a special focus on Arima and measure the existing gap and the required investment to enable the town's digital transformation.

3. Scope of Services

3.1. The selected firm will assess the status of broadband infrastructure in Arima, and Trinidad and Tobago analyses develop recommendations for the deployment of new digital infrastructure that will contribute to the digital transformation. The recommendations will include detailed technical (with GIS maps), and financial and governance analyses.

4. Key Activities

Component 1: Better understanding of market dynamics and review of international best practices

4.1. **Activity 1.1: Market study.** The scope to be implemented within this analysis will be: (i) study of the supply side: identify the current supply of telecommunications services in the country, with a special focus on the town of Arima; and (ii) study of the demand side: estimate the current demand for those services and forecast, considering the political, economic, socio-demographic and cultural circumstances of the town and the country. The study should provide estimations for households, public institutions, and SMEs.

4.2. **Activity 1.2: International best practices.** This activity aims to gather various cases across the globe and draw lessons learned related to the design, deployment, operation, and governance of broadband networks. The results of this study will serve as reference models for the technical and economic study to be carried out in the following component.

Component 2: Technical study

4.3. **Activity 2.1: Map broadband infrastructure.** The objective of this activity is to develop a map with the inventory of broadband infrastructure in Trinidad and Tobago at all network segments (backbone, backhaul, and last mile). The activity will incorporate and expand the existing information regarding broadband coverage in Arima, including parameters related to quality of service and measuring the capacity of the existing networks to absorb increases in demand.

4.4. **Activity 2.2: Digital infrastructure deployments.** Taking into consideration the demand identified in activity 1.1 and the mapped existing infrastructure, this activity will determine the need for additional digital infrastructure in the town of Arima.

Component 3: Financial assessment and governance model

4.5. **Activity 3.1: Financial analysis.** This study includes the estimation of the required investment and annual maintenance costs for the proposed digital infrastructure deployments.

4.6. **Activity 3.2: Implementation and governance model.** Evaluation and recommendations for the proposed implementation and governance model for the broadband infrastructure deployments.

5. Expected Outcome and Deliverables

5.1. The consultancy will provide a detailed analysis of the status of digital infrastructure in Arima and an estimate of the required investment (and action plan) to enable the town's digital transformation.

5.2. The expected deliverables are:

- 1. Market Study
- 2. International best practices study
- 3. Map with the existing broadband infrastructure in the country (shapefile and explanatory document)
- 4. Map with the proposed digital infrastructure deployments (shapefile and explanatory document)
- 5. Financial analysis (excel file and explanatory document)
- 6. Implementation and governance model

6. Project Schedule and Milestones

6.1. The proposed timeline for this project is 6 months

7. Reporting Requirements

7.1. The selected firm will schedule biweekly follow-up meetings in which they will present the status of the deliverables.

8. Acceptance Criteria

8.1. The firm will have extensive experience in the telecommunications sector, with Senior

team members involved in projects in LAC and other developing regions. A specific domain of domestic and international broadband infrastructure is required. The firm must have a proven capability to deliver detailed and accurate market, technical and financial studies.

9. Other Requirements

9.1. Type of consultancy: Firm, the duration of this consultancy is for 6 months, and travel is required.

9.2. During this period, the firm is expected to participate in a total of two (2) coordination.

9.3. Meetings with IDB Specialists in Headquarters (Washington DC) and (2) presentation meetings with officials from Arima and Trinidad and Tobago.

10. Supervision and Reporting

10.1. Supervision and coordination of the consultant's work will be the responsibility of Antonio Garcia Zaballos (IFD/CMF) Team Leader, antoniogar@iadb.org

11. Schedule of Payments

11.1. Payment terms will be based on project milestones or deliverables. The Bank does not expect to make advance payments under consulting contracts unless a significant amount of travel is required. The Bank wishes to receive the most competitive cost proposal for the services described herein.

11.2. The IDB Official Exchange Rate indicated in the RFP will be applied for necessary conversions of local currency payments.

Payment Schedule	
Deliverable	**%**
1. Work plan	30%
2. Market study, international best practices study	20%
3. Technical study	30%
4. Financial Assessment and Governance Model	20%
TOTAL	100%

[Suggested structure]

Selection process #::::::::

TERMS OF REFERENCE

Consultancy for urban mobility study in Arima's town Center

Trinidad and Tobago

TT-T1115

https://www.iadb.org/en/project/TT-T1115

Smart Town Arima

1. Background and Justification

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1.2. According to the 2022 Public Perception Survey, most people like Arima but few love it. Most respondents to the 2022 Survey (49%) indicated that they mostly visit Arima to shop or do business. Even so, only about one in five respondents who sometimes go through Arima for a connecting bus or maxi-taxi, frequently conduct any other business or shop in the town. Relatively few visitors come for social or recreational reasons, including for sporting events, despite existing sporting infrastructure – again indicative of an untapped potential. More Culinary, Cultural and Recreational activities were strongly desired by 2022 Survey respondents. Better understanding what is currently offered as well as patronage patterns and motivations, is important to developing a plan to capitalize on the untapped demand.

1.3. Despite being an intersection point for main east-west transit routes along the most-populated corridor in the country, the East-West Corridor, the Arima city center lacks a dedicated transit hub. Prior studies have shown that public transportation use is highest on that corridor and the 2022 Survey confirmed that public transportation is widely used by visitors to Arima with only 57% of the respondents indicating that they usually use a private car when they visit. Most of the public transportation to and from the town is provided by private mini-buses (maxi-taxis) which operate on an unscheduled basis and without a dedicated facility – for example there are no dedicated public washrooms or

pick up/drop off platforms for passengers. Addressing these deficiencies is important to successful urban regeneration, as mobility facilitated by well-functioning public transportation and public spaces, is a key ingredient of successful placemaking.

1.4. The national and local governments are committed to addressing these constraints, emphasizing digital transformation through an urban regeneration program called Connected Arima. In this regard, the agendas of three national Ministries converge. The Ministry of Planning and Development and the Ministry of Digital Transformation are keen on the success of Arima both as well as a pilot for a broader smart city and community connectivity agenda being planned by the Government, as part of its Vision 2030. The Ministry of Housing and Urban Development, as executing agency for the Urban Upgrading and Revitalization Program, is also committed to the success of this urban regeneration sub-project both from the perspective of the Program's outcomes as well as from the perspective of its broader mandate for urban development.

2. Objectives

2.1. The overall objective of this consultancy is to conduct a study covering the mobility around, accessibility of, and connectivity within, Arima's town center. This will be done by assessing the below points:

(i) Characterize the mobility and accessibility of public transportation users in, and around, the Arima town center paying special attention to the needs of persons with disabilities (locomotive, visual, auditive, mental), seniors, and children.

(ii) Parking options for persons driving private vehicles.

(iii) Transformation of the current-car oriented roadways into streetscapes that prioritizes spaces for people with dedicated pedestrian zones, along the lines of the Global Street Design Guide.

(iv) Active (low carbon) modes of transportation options such as park and ride, cycle lanes, and continuous pedestrian pathways with abundant shading.

(v) Digitally connected facilities which allow for smart street lighting, air pollution monitoring sensors, and cashless payment options.

(vi) Solar-powered and/or wind-powered devices that can provide amenities to pedestrians.

(vii) Traffic calming measures around the town center, including green and shade spots such as plazas, rotundas, and other type of natural green barriers.

(viii) Smart, green drainage and water retention infrastructures in open.

3. Scope of Services

3.1 This Terms of Reference will be used to select and hire a consultant to prepare studies and specifications to understand the transportation landscape in the Arima Town Center. The scope of the services to be provided during this consultancy project are as follows:

(i) To identify the most efficient way to incorporate parking options for private vehicles wishing to enter the Town Center (this includes the creation of new parking facilities and payment schemes).

(ii) To determine how well the public transport in Arima services pedestrians (inclusive of differently abled persons) with respect to accessibility and mobility. This point will provide an analysis of (but not limited to) the following: access to transport hubs, amenities such as lighting, CCTV, adequate seating areas, payment methods, and washroom facilities.

(iii) Defining activities that will transform the existing car-oriented roadways into streetscapes which promote walking, cycling, and the use of public transportation. Zero-emission zones would be introduced.

(iv) To define commercial strategies to achieve the development of areas that promotes social interactions and community engagements.

(v) To take the citizens and visitors' perspective into account to ensure that the town center is designed in such a way that is easily accessible and welcoming to all persons.

(vi) Investigate the use of low carbon modes of transport and propose alternatives to private vehicle usage. Example – Development of a dedicated cycling lane which will promote a healthier and more sustainable center which attracts both citizens and investment.

(vii) To investigate the prospect of digitally connected facilities. That is – both a back-end and a user interface which offers users of the system a wide range of mobility services such as route planning, ticket purchasing, and cashless fare payment. Smart sensors to incorporate lighting and pollution monitoring should also be considered.

(viii) Traffic calming measures usage in, and around, the town center inclusive of (but not limited to) – speed humps, raised crosswalks, pavement markings, and warning signage.

(ix) Analysis of the drainage and stormwater facilities.

(x) Adaptive traffic signals based on the volume of vehicles present at major intersections.

(xi) Final Report on the aforementioned study.

4. Project schedule, deliverables, and milestones

Products/milestones	Timeframe[1]
Review TOR and development of workplan	
Conduct urban mobility study	
Presentation of study	
Total	

5. Reporting requirements

5.1 Key project deliverables and milestones must be delivered or executed on the dates proposed by the consultant in the work plan. Any changes to the project schedule must have the express approval of the Beneficiary country and the IDB.

5.2 The consultant shall maintain close coordination and communication with the Beneficiary regarding the execution of activities and events for dissemination.

6. Acceptance criteria

6.1 All deliverables must be submitted to English, using electronic files compatible with MS Office formats.

6.2 For the final version of the reports, the Consultant shall consider and address all the comments received from the key stakeholders.

7. Schedule of Payments

7.1 Payment terms will be based on project milestones or deliverables. The IDB does not expect to make advance payments under consulting contracts, given that most of the work should be conducted remotely, due to the ongoing COVID-19 pandemic.

Payment Schedule	
Deliverable	**%**
Review TOR and development of work plan	10%
Conduct urban mobility study	70%
Presentation of study	20%
Total	100%

[1] Time counted from the signature date of the contract.

[Suggested structure] Selection process #::::::::

TERMS OF REFERENCE

Consultancy for an Urban Economy Diagnostic of Arima

Trinidad and Tobago

TT-T1115

[Technical Cooperation Number]

https://www.iadb.org/en/project/TT-T1115

Smart Town Arima

1. Background and Justification

1.1. The town of Arima, with 34,000 inhabitants at the 2010 Census, and located at the eastern end of the main public transport route and a mere 8 Km from the Piarco International Airport, has a rich cultural heritage, diverse ethnic makeup, is home to the nation's First Peoples, and boasts some unique public facilities in the sporting and health arenas. These include the Larry Gomes Stadium, the Arima Velodrome, the Arima Health Facility, and a state-of-the-art Arima General Hospital. The hospital aside, in recent decades, public spaces, services, and infrastructure have seen little investment or adaptation to respond to changing demographics and economic and climatic factors, despite flash flooding in low-lying areas at the foothills of the Northern Range being a growing concern. This was reflected in the 2022 Survey by about a third of respondents whose dominant view of the town was that the infrastructure and assets need better protection and maintenance. The Survey also demonstrated an appetite for a more pedestrian-focused, walkable environment in downtown Arima with 80% of respondents in support of at least experimenting with solutions that involve slower vehicular speeds, and more walking and cycling. These preliminary indicators require more detailed investigations in scoping an urban regeneration initiative for the Borough.

1.2. According to the 2022 Public Perception Survey, most people like Arima but few love it. Most respondents to the 2022 Survey (49%) indicated that they mostly visit Arima to shop or do business. Even so, only about one in five respondents who sometimes go through Arima for a connecting bus or maxi-taxi, frequently conduct any other business or shop in the town. Relatively few visitors come for social or recreational reasons, including for sporting events, despite existing sporting infrastructure – again indicative of an untapped potential. More Culinary, Cultural and Recreational activities were strongly desired by 2022 Survey respondents. Better understanding what is currently offered as well as patronage patterns and motivations, is important to developing a plan to capitalize on the untapped demand.

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visitors to Arima with only 57% of the respondents indicating that they usually use a private car when they visit. Most of the public transportation to and from the town is provided by private mini-buses (maxi-taxis) which operate on an unscheduled basis and without a dedicated facility – for example there are no dedicated public washrooms or pick up/drop off platforms for passengers. Addressing these deficiencies is an important to successful urban regeneration, as mobility facilitated by well-functioning public transportation and public spaces, is a key ingredient of successful placemaking.

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2. Objectives

2.1 The overall objective of this consultancy is to conduct a study that includes and urban economy analysis including women's participation in economic activities and entrepreneurship, financial assessments of a sample of prominent business locations, and proposed investments intended to stimulate local economic development, including possible adjustments to land use and land assembly regulations. The Study will also include an analysis of the available recreational opportunities in the intervention area, spatial patterns of preferred recreational activities, typical levels of patronage and the gaps in available opportunities from an active user demand perspective. This study will also include an analysis of the current and projected demand for broadband services, at commercial and institutional levels. These objectives will be addressed by the following activities:

a. Create an inventory and map of all formal and informal business locations within the agreed-upon study area within Arima Town Center, including a one-page profile of each business unit in a representative sample of businesses. The profiles should include, but are not limited to:
   - Address and physical location (geo-referencing of properties)
   - Background information (type of business, estimated sales, number of employees, number of women employees, gender of the owner, area occupied, socioeconomic characteristics of clientele, characteristics of surrounding impact/influence area)
   - Adjacent land uses
   - Current use and (appraised) property and land value if available
   - If a building/structure:
     i. Age
     ii. Current condition / occupation / use
     iii. Historic value / would it qualify for historic preservation

- Tenure/ownership status: publicly or privately owned
- Type and level of occupation including designation as vacant or derelict if appropriate
- Current zoning classification
- Existing and missing utilities serving the property
- Functional relationship, if any, with other adjacent properties

Note: The inventory created should be presented in an “open map” format, utilizing public domain software. The software to be utilized should be agreed with MHUD and the IDB.

b. Review studies and data on local economic development both nationally and for the Arima area, including but not limited to the data and reports maintained by Chambers of Commerce and other business and farmers associations, in order to ascertain the types of economic activities that occur in Arima and its surroundings, economic trends, and the comparative advantages that the town has compared to other economic centers.
c. Using information from the above review and feedback from proprietors, systematic observations and other data sources, create a map of recreational and business-patronage patterns of those who visit Arima – this should include an assessment of the relative levels of patronage during different days and time periods of a typical week as well as available data on these patterns during holiday/festival periods. The analysis should identify and rank key clusters of economic and social activity.
d. Using a recognized methodology/techniques including spatial analysis elements, assess the accessibility, quality and quantity of notable public spaces in Arima including parks, sporting infrastructure, public institutions and major recreational venues. Special attention should be paid to the how inclusive those spaces and places are in practice in terms of usage by women, children, the elderly and persons with disability.
e. For a representative sample of businesses and institutional service providers, assess the state of current business practices including but not limited to level of business training of the proprietor, business planning, inventory management, customer tracking, customer feedback, employee training, marketing, e-commerce, and accounting.
f. For a representative sample of businesses and institutional service providers, analyse the current and projected demand for broadband services.
g. Based on findings of the above activities, articulate a cohesive Draft Business Plan fand Implementation Strategy or privately and publicly financed urban improvements directed at local businesses, including as appropriate, the utilization and activation of occupied and vacant properties and public spaces, and identifying feasible urban investments
h. Identify any legal, planning, economic, engineering, or environmental gaps and requirements needed for economic reactivation, urban regeneration and new urban investments
i. Identify land use and zoning adjustments that may be needed to make feasible the proposed urban investments;
j. Identify and propose updates to legal, regulatory, and public policy frameworks to ensure implementation of an urban regeneration strategy in the Arima Town Centre;
k. Identify and engage these key stakeholders in a series of consultations around the proposed investments
l. Prepare a Final Business Plan and Strategy that prioritizes and refines the proposed investments based on criteria such as stakeholder feedback, potential synergies, and the

level of difficulty to coordinate facilitating factors, and which makes recommendations on coordination actions to make feasible the implementation of urban regeneration investments by MHUD, MDT, and the Arima Municipal Corporation and private actors among others.

m. Develop a Monitoring and Evaluation Framework for the Final Business Plan and Strategy and facilitate transfer of knowledge, training and capacity building and recommend measures for institutional strengthening to support urban regeneration and implementation of agreed investments.

3. Scope of Services

3.1 This Terms of Reference will be used to select and hire a consultant to prepare a local business reactivation plan for Arima Town Centre. The scope of the services to be provided during this consultancy project are as follows:

The contractual will produce the following deliverables (in English).

1. **Inception Report**. Presented to the IDB and MHUD in an electronic file (zip files are not accepted). It shall contain the finalized schedule for the implementation of the consultancy including the detailed work program, schedule of activities and schedule of presentation of all deliverables. The report should also include cover, main document, and all annexes.
2. **Completed inventory** of occupied/vacant / abandoned /underutilized properties in the selected and agreed upon study area, to include property **profiles** and **open map**, as described in Activity (i) above.
3. **Draft Business Plan and Strategy for implementation of Economic Reactivation, Urban Regeneration, and Urban Investments in Arima Town Centre**. This will contain the preliminary findings of the consultancy, the supporting evidence, a full description of the methods used to meet the objectives of the business plan, and preliminary recommendations.
4. **Final Business Plan and Implementation Strategy**. This will incorporate the contractual's responses to the clients' comments on the Draft Report (Business Plan), the final recommendations, and the basic visual aids (maps, diagrams, etc.) to illustrate the spatial/physical effects of such recommendations on Arima.
5. **Monitoring and Evaluation Framework:** for monitoring achievements, outcomes and implementation of the Economic Reactivation Strategy and Business Plan.

4. Project schedule, deliverables, and milestones

Products/milestones	**Timeframe**[1]

[1] Time counted from the signature date of the contract.

Review TOR and development of inception report with workplan	**2 weeks**
Complete open map local business inventory	**4 weeks**
Presentation of draft business plan and strategy	**6 weeks**
Delivery of Final Business Plan and strategy	**4 weeks**
Delivery of final business plan	**4 weeks**
Delivery of monitoring and evaluation framework	**4 weeks**
Total	**24 weeks**

5. Reporting requirements

5.1 Key project deliverables and milestones must be delivered or executed on the dates proposed by the consultant in the work plan. Any changes to the project schedule must have the express approval of the Beneficiary country and the IDB.

5.2 The consultant shall maintain close coordination and communication with the Beneficiary regarding the execution of activities and events for dissemination.

6. Acceptance criteria

6.1 All deliverables must be submitted to the English, using electronic files compatible with MS Office formats.

6.2 For the final version of the reports, the Consultant shall consider and address all the comments received from the key stakeholders.

7. Schedule of Payments

7.1 Payment terms will be based on project milestones or deliverables. The IDB does not expect to make advance payments under consulting contracts, given that most of the work should be conducted remotely, due to the ongoing COVID-19 pandemic.

Payment Schedule	
Deliverable	**%**
Review TOR and development of inception report with workplan	10%
Final business plan	70%
Delivery of M&E framework	20%
Total	100%

[Suggested structure] Selection process #::::::::

TERMS OF REFERENCE

Consultancy for 3D urban design of Arima Town Center

Trinidad and Tobago

TT-T1115

[Technical Cooperation Number]

https://www.iadb.org/en/project/TT-T1115

Smart Town Arima

1. Background and Justification

1.1. The town of Arima, with 34,000 inhabitants at the 2010 Census, and located at the eastern end of the main public transport route and a mere 8 Km from the Piarco International Airport, has a rich cultural heritage, diverse ethnic makeup, is home to the nation's First Peoples, and boasts some unique public facilities in the sporting and health arenas. These include the Larry Gomes Stadium, the Arima Velodrome, the Arima Health Facility, and a state-of-the-art Arima General Hospital. The hospital aside, in recent decades, public spaces, services, and infrastructure have seen little investment or adaptation to respond to changing demographics and economic and climatic factors, despite flash flooding in low-lying areas at the foothills of the Northern Range being a growing concern. This was reflected in the 2022 Survey by about a third of respondents whose dominant view of the town was that the infrastructure and assets need better protection and maintenance. The Survey also demonstrated an appetite for a more pedestrian-focused, walkable environment in downtown Arima with 80% of respondents in support of at least experimenting with solutions that involve slower vehicular speeds, and more walking and cycling. These preliminary indicators require more detailed investigations in scoping an urban regeneration initiative for the Borough.

1.2. According to the 2022 Public Perception Survey, most people like Arima but few love it. Most respondents to the 2022 Survey (49%) indicated that they mostly visit Arima to shop or do business. Even so, only about one in five respondents who sometimes go through Arima for a connecting bus or maxi-taxi, frequently conduct any other business or shop in the town. Relatively few visitors come for social or recreational reasons, including for sporting events, despite existing sporting infrastructure – again indicative of an untapped potential. More Culinary, Cultural and Recreational activities were strongly desired by 2022 Survey respondents. Better understanding what is currently offered as well as patronage patterns and motivations, is important to developing a plan to capitalize on the untapped demand.

1.3. Despite being an intersection point for main east-west transit routes along the most-populated corridor in the country, the East-West Corridor, the Arima city center lacks a dedicated transit hub. Prior studies have shown that public transportation use is highest on that corridor and the 2022 Survey confirmed that public transportation is widely used

by visitors to Arima with only 57% of the respondents indicating that they usually use a private car when they visit. Most of the public transportation to and from the town is provided by private mini-buses (maxi-taxis) which operate on an unscheduled basis and without a dedicated facility – for example there are no dedicated public washrooms or pick up/drop off platforms for passengers. Addressing these deficiencies is an important to successful urban regeneration, as mobility facilitated by well-functioning public transportation and public spaces, is a key ingredient of successful placemaking.

1.4. The national and local governments are committed to addressing these constraints, emphasizing digital transformation through an urban regeneration program called *Connected Arima*. In this regard, the agendas of three national Ministries converge. The Ministry of Planning and Development and the Ministry of Digital Transformation are keen on the success of Arima both as well as a pilot for a broader smart city and community connectivity agenda being planned by the Government, as part of its Vision 2030. The Ministry of Housing and Urban Development, as executing agency for the Urban Upgrading and Revitalization Program, is also committed to the success of this urban regeneration sub-project both from the perspective of the Program's outcomes as well as from the perspective of its broader mandate for urban development.

2. Objectives

2.1. The overall objective of these terms of reference is to hire a firm/consultancy to conceptualize the transformation of the Arima town center using recommendations and diagnostic assessments done in an Urban Mobility Study of the area. The specific objectives are as follows:

(i) Provide conceptual renders and architectural urban designs for infrastructure inclusive of (but not limited to):

a. Dedicated pedestrian zones and corridors that consider adequate sidewalk widths, all travel modes, lighting, utilities (signal poles, lighting poles, fire hydrants, garbage disposal units, parking meters), shading vegetation/arborization, and furniture (benches and other seating). The needs of different pedestrians including disabled persons (wheelchair and other mobility devices), seniors, and visually impaired persons should be taken into consideration.

b. Cycling lanes – multiple transit accommodations should be incorporated into a smart, urban town center. This would allow for the selection of multi-modal streets and soft mobility for the first and last mile that emphasize walking, cycling, resting, and the use of public transportation. Bike rental and bike parking should also be included for the convenience of the cyclists.

c. Public transportation hubs and multi-function transport stops that provide seamless access to all persons. Where possible, avoid long and indirect access to these hubs. Provide transit passengers with sufficient amenities such as Wi-Fi, lighting, CCTV, seating, and route information.

d. Adequate drainage and stormwater green/natural solutions to reduce the effects of natural elements that harmonizes with the surrounding urban infrastructure

whilst adhering to the rules and regulations of the Ministry of Rural Development and Local Government and the Water and Sewerage Authority (WASA).

e. Vehicular corridors – Improve existing vehicular corridor. The consultant should consider the right of way for multi-modal transit, medians, and traffic calming measures. Also, areas for pedestrian corridors should be proportionally larger than those for vehicular corridors (place-making).

f. Visible landmarks – Feature art or statues of famous persons with ties to Arima and signaling (plaques, billboards, etc.) with information about landmarks. This will provide points of references and photo opportunities and aid in the overall beautification of the area.

g. Green areas to promote low carbon emission zones, carbon capture, maximum drainage, and water runoff re-utilization where possible.

2.2. The above additions would be incorporated into the existing infrastructure.

3. Scope of Services

3.1 Consultants will meet the following service requirements for the successful development of the consultancy:

(i) Review and analysis of the urban mobility study, other relevant technical documents, and secondary sources of information.

(ii) Base map data collection using LiDAR or UAV/drone.

(iii) Provide 3D models and architectural visualizations to reimagine the future of the Arima town center with realistic renderings of the following:

a. Terrain surfaces, existing buildings, sites, and vegetation
b. Reimagined public transportation network and hubs
c. Green spaces for zero-emissions
d. Cycling lane
e. Pedestrian zones and corridors
f. Adequate drainage
g. Vehicular corridors (for public and private transport)
h. Landmarks and other beautification factors
i. Digital connectivity network and nodes

(iv) Preparation of written documents, plans, maps, and images to describe in a clear and visual way the models and renderings produced in (iii).

(v) Spaces for debate and discussion of the conceptual renderings developed with the technical staff at the IDB and the key decision-makers in the town of Arima.

4. Expected Outcome and Deliverables

4.1. The above activities can be broken down into the following phases:

Phase 1: Review

4.2. The firm must analyze the Urban Mobility Study results, Arima public perception survey, economic summaries of the Area, and the Connected Arima project documents. The

following information should also be reviewed: urban zoning ordinances, land property public registries, population surveys, GHG emissions and air pollution data, road accidents statistics, among other relevant documents.

4.3. The firm must also liaise with the current Mayor and other governing bodies to understand the history and previous work carried out in the town center. Verification of the pre-existence of urban master plans or partial plans should be conducted. The consultants must also conduct interviews (videoconference or face-to-face) with the relevant staff from the mobility sector, and other sectors such as – planning, security, finance, culture, etc.). The coordination of these activities will be between the firm and the local team.

Phase 2: Base data collection

4.4. The firm is responsible for the base data collection. This can be done using either LiDAR or unmanned aerial vehicles (UAV)/drones for creating 3D base maps of the area. The data can be in the form of 3D point cloud or images. The base data must then be further processed into a realistic 3D rendering of the Arima town center with details on measurements, locations, attributes, and buildings.

Phase 3: Conceptual design scenarios

4.5. Based on the diagnosis and review of the Urban Mobility study. The 3D renderings must include the points highlighted in (iii) in the scope of services. The firm must consider the land use in the town center and the adjacent streets, the main economic activities, and the assets of cultural and heritage interests that exist (First Peoples) in Arima. The firm will also consider the quality and urban potential of the town center, as well as the pedestrian flows expected to propose design and greenspace changes to promote the town center as a resilient and attractive public space. The solution must contemplate the infrastructure of public transport (the maxi taxis, traditional taxis, PTSC, and private cars), private vehicles, cycle lanes, and green spaces.

Phase 4: Presentation of scenarios from Phase 3

4.6. The firm will present the scenarios from Phase 3 for feedback from key stakeholders. The scenarios should be consolidated utilizing an open-source geographic information system (GIS) tool.

Phase 5: Selection of accepted scenario.

4.7. After deliberation, a design will be selected by the key stakeholders. The firm will then provide all architectural and engineering designs and source files.

5. Project Schedule and Milestones

Products/milestones	Timeframe[1]
Phase 1	1 month
I. Review of existing studies and other relevant documents	

[1] Time counted from the signature date of the contract.

Products/milestones	Timeframe[1]
II. Liaise with local officials	
Phase 2	3 months
Phase 3	1 month
Phase 4	2 weeks
Phase 5	1 month
Total	6.5 months

6. Reporting requirements

6.1. Key project deliverables and milestones must be delivered or executed on the dates proposed by the consultant in the work plan. Any changes to the project schedule must have the express approval of the Beneficiary country and the IDB. The 3D renderings must be delivered in a neutral file format which can work cross-platform (e.g., STL, OBJ, 3MF)

6.2. The consultant shall maintain close coordination and communication with the Beneficiary regarding the execution of activities and events for dissemination.

7. Requirements

7.1. The firm interested in developing the solution proposed in these Terms of Reference must comply with the profile detailed below:

- Education: Civil, industrial, or environmental engineer, architect, geography, GIS,or any other related careers.
- Experience: Professional in engineering or architecture with a master's degree or equivalent experience. Must have a minimum of seven (7) years of professional experience in infrastructure modeling and rendering and topics related to urban regeneration planning.
- Language: English
- Competencies:
    - Ability to analyze problems related to urban mobility
    - Diagnose problems and propose reliable solutions
    - Ability to prepare reports and visualizations
    - Project management
    - Budget management

8. Acceptance criteria

8.1 All deliverables must be submitted to English, using electronic files compatible with MS Office formats.

8.2 For the final version of the reports, the Consultant shall consider and address all the comments received from the key stakeholders.

9. Schedule of Payments

9.1 Payment terms will be based on project milestones or deliverables. The IDB does not expect to make advance payments under consulting contracts, given that most of the work should be conducted remotely, due to the ongoing COVID-19 pandemic.

Payment Schedule	
Deliverable	**%**
Phase 1	10%
Phase 2	30%
Phase 3	40%
Phase 4	10%
Phase 5	10%
Total	100%

[Suggested structure]

Selection process #::::::::

TERMS OF REFERENCE

CONSULTANCY FOR CAPACITY DEVELOPMENT ON E-COMMERCE FOR ARIMA

Trinidad and Tobago

TT-T1115

https://www.iadb.org/en/project/TT-T1115

Smart Town Arima

1. Background and Justification

1.1 The town of Arima, with 34,000 inhabitants at the 2010 Census, and located at the eastern end of the main public transport route and a mere 8 km from the Piarco International Airport, has a rich cultural heritage, diverse ethnic makeup, is home to the nation's First Peoples, and boasts some unique public facilities in the sporting and health arenas. These include the Larry Gomes Stadium, the Arima Velodrome, the Arima Health Facility, and a state-of-the-art Arima General Hospital. The hospital aside, in recent decades, public spaces, services, and infrastructure have seen little investment or adaptation to respond to changing demographics and economic and climatic factors, despite flash flooding in low-lying areas at the foothills of the Northern Range being a growing concern.

1.2 According to the 2022 Public Perception Survey, most people like Arima but few love it. Most respondents to the 2022 Survey (49%) indicated that they mostly visit Arima to shop or do business. Even so, only about one in five respondents who sometimes go through Arima for a connecting bus or maxi-taxi, frequently conduct any other business or shop in the town. Relatively few visitors come for social or recreational reasons, including for sporting events, despite existing sporting infrastructure – again indicative of an untapped potential. More Culinary, Cultural, and Recreational activities were strongly desired by 2022 Survey respondents. Better understanding of what is currently offered as well as patronage patterns and motivations is important to developing a plan to capitalize on the untapped demand.

1.3 Smart city solutions by businesses and government services in the town are not widely adopted. As a baseline, only 19% of Micro, Small, and Medium-size Enterprises (MSMEs) in Arima had access to the internet in 2014. The 2022 Survey confirmed strong interest in free public Wi-Fi in the downtown area with more than half of respondents expressing a strong preference for this feature in redevelopment activities. Although fewer than 10% of respondents to the Survey expressed a sense of feeling either unsafe or very unsafe when visiting the town, a significant proportion (41%) were undecided. Moreover, the business community and farmers in the outlying areas of the Borough regularly cite the need for increased security, including closed-circuit television (CCTV), most recently in a February 2022 Public Consultation.

1.4 Gender, diversity, and inclusion is a significant concern in the town. Although local statistics do not exist on its prevalence, the fear brought by street harassment negatively influences the decisions of women and girls on appearing alone in public, using public transportation,

and affects equal access to recreational and livelihood's opportunities in outdoor public spaces. A 2018 Inter-American Development Bank (IDB) study indicated that nationally, close to one in three women experienced sexual violence, including rape, attempted rape, unwanted touching, and reported sexual violence. Beyond safety, gender inequalities are observed with more detailed analysis of participation in business, access to training, knowledge, technology, access to finance and unpaid care work. In 2013, 23% of adult men were trying to start a business or owned a young business compared to 16% of adult women. These differences involve not having the required knowledge/skills to start a business and the fear of failure. More training for women is needed in terms of entrepreneurship skills, mentoring, and start-up financial support guidance.

1.5 The national and local governments are committed to addressing these constraints, emphasizing digital transformation through an urban regeneration program called Connected Arima. In this regard, the agendas of three national Ministries converge. The Ministry of Planning and Development and the Ministry of Digital Transformation are keen on the success of Arima as a pilot for a broader smart city and community connectivity agenda being planned by the Government, in keeping with its Vision 2030 mandate. The Ministry of Housing and Urban Development, as executing agency for the IDB-financed Urban Upgrading and Revitalization Program, is also committed to the success of this urban regeneration sub-project both from the perspective of the Program's outcomes as well as from the perspective of its broader mandate for urban development.

1.6 Preliminary discussions with key stakeholders have underscored the need for the IDB to join these partners to address the skills development barrier to fully engage in e-commerce. Moreover, the solution to addressing this deficiency must be sustainable and institutionalized to develop alongside the expected increase in demand for capacity building from micro, small and medium-sized enterprises (MSME) in Arima, as envisaged by the larger investment operation.

1.7 This consultancy will facilitate the delivery of training in the use of e-commerce resources and business practices by MSMEs operating in the Borough of Arima. The consultancy will deliver a train-the-trainer model to local stakeholders in Arima that will provide capacity development in entrepreneurial skills as well as coaching in the development of an online presence and use of online tools for promoting one's business.

2. Objectives

2.1 The general objective of this consultancy is twofold. First, it will provide support to the Ministry of Housing and Urban Development (MHUD) in creating a model for comprehensive, digital enterprise development at the community level that can be institutionalized and sustained through Public-Private partnerships. Secondly, it will strengthen the technical capacity of the Arima Business Association (ABA) and Arima Borough Corporation (ABC) to serve as catalysts for economic recovery through digital innovation in the aftermath of COVID-19.

3. Scope of Services

2.2 Consultancy category and modality: Firm

2.3 Estimated duration: Four (4) month period

2.4 Place(s) of work: External location and Arima Business Association offices

2.5 The consulting firm will design and deliver a training programme to equip personnel from the ABA and ABC personnel to facilitate the entry of Arima's MSME into the digital space. The programme should allow MSMEs to interact with and integrate their customers into their business model in a more direct and modern manner.

2.6 The consulting firm will deliver capacity development to MSMEs through at least two modalities – (i) a classroom-like delivery of training content over an extended period using both virtual and in-person communication methods; and (ii) an applied learning approach that involves supervision of ABA and ABC personnel in the delivery of at least two pilot training exercises. These two modalities will be complemented by the documentation of the capacity building exercise via training resources- a training manual for MSME engagement in e-commerce and recordings of the trainings that can be used for subsequent MSME cohorts in accordance with applicable government standards and requirements.

2.7 The training content should be delivered in a modular manner that blends theory with applied practices regarding e-commerce. At a minimum, this content should include:

i. an introduction to e-commerce and its advantages compared to traditional commerce.
ii. theoretical and practical insights on key aspects of and entrepreneurship and e-commerce such as: business models (B2B, B2C, C2C and B2G); website strategies; logistics (internet basics, supply chain, digital marketing and shipping); aftersales (returns and dispute settlement); quality assurance standards; payment modalities (credit cards and mobile wallets); and digital security.
iii. a step-by-step guide on how to develop an e-commerce platform for one's business using cost-effective, open-source applications.

3.1. The consulting firm must ensure that the training modality and content must specifically cater to women-owned MSMEs - due consideration must be given to the heads of these agencies regarding their recruitment, learning styles, psychosocial needs and challenges faced in navigating a traditionally male-dominated paradigm.

4. Key Activities

4.1. Review documentation, to gain an understanding of the business landscape in Arima. Such documentation includes previous diagnostic studies and records of the ABA.
4.2. Conduct an e-commerce training needs assessment of Arima MSMEs. The assessment should be dynamic in nature, examining the interplay between MSME's and their clients towards identifying deficiencies in e-commerce skills and competencies that must be addressed in the immediate and near-term.
4.3. Produce the conceptual design of the training, inclusive of recruitment strategy, training content delivery method and opportunities for certification, where possible.
4.4. Deliver training to ABA and ABC personnel.
4.5. Coach and guide ABA and ABC personnel in their planning, execution, and reporting of two (2) pilot training with MSMEs.
4.6. Consolidate learning and disseminate new knowledge by developing a training manual that draws on the lesson learned from the pilots.
4.7. Produce a final report, post-pilot, assessing the results and challenges of the overall consultancy as well as recommending additional capacity-building exercises.

5. Expect Outcomes and Deliverables

The consulting firm shall prepare and submit the following reports in English:

5.1. An inception report that describes the consultancy work plan, including, among others, the methodologies to be used, details on the training content and a timeframe with the development of the training activities. In addition, the report should also include the findings from the training needs assessment.
5.2. The execution of a comprehensive e-commerce train the trainer course, as evidenced by a post-training report that communicates details on the training process, an empirical measure of capacity development by training participants, and evaluative feedback from participants on the training experience, as well as provides copies of training materials.
5.3. Customized e-commerce training manual for Arima MSMEs.
5.4. A final report and presentation summarising details of the capacity building activities under this consultancy and sharing lessons learned during the support of ABA and ABC staff in conducting the pilot training exercises.

6. Project Schedule and Milestones

6.1 The consulting firm will be free to propose their specific working methods and schedules in their submission. However, the consulting firm should anticipate combination of milestones and routine reporting in the conduct of the consultancy and submission of deliverables. The proposed project schedule for submitting deliverables under this consultancy is as follows:

DELIVERABLES		
No.	**Description**	**Timeline**
1	Inception Report	Within four (4) weeks of contract signing
2	E-Commerce Train the Trainer Training Report	By the end of eight (8) weeks
3	E-commerce Training Resources	By the end of twelve (12) weeks
4	Final Report and Presentation	By the end of sixteen (16) weeks

7. Reporting Requirements

7.1. All reports shall be delivered electronically, with all supporting documentation in editable format.
7.2. At a minimum, the consulting firm must confer with the IDB Sector Lead Specialist for Housing and Urban Development or his designate on a bi-weekly basis, either by email or telephone correspondence.
7.3. The IDB, ABA and ABC will be required to provide feedback to the consulting firm, in writing, within 10 working days after receiving each report.

8. Other Requirements

8.1. The first deliverable of an inception report should provide an accurate description of the preparatory and implementation processes for the training. When the work plan is reviewed there must be clear descriptions of the training workshop – the schedule of training sessions; the topics to be covered during each session; the learning outcomes for the session; its relationship to the planned pilot trainings and the modality by which the

content will be delivered in light of public health safety precautions. The inception report must also include a training needs assessment of MSME owners and employees that gauges their current competency levels and experiences with e-commerce and focus areas for capacity building. Additionally, the inception report should detail any pre-training assignments and assessment tools to be completed by training participants. A draft inception report will be reviewed by the IDB Sector Lead Specialist for Housing and Urban Development and, upon his approval, the approved inception report can be submitted by the consulting firm to facilitate the first payment under this contract. Both submission and approval of the draft inception report can be done via electronic correspondence. The approved inception report must be submitted in soft copy to the IDB Sector Lead Specialist for Housing and Urban Development, who will provide his acceptance of the deliverable via electronic correspondence.

8.2. The second deliverable of a training report should be in accordance with the approved inception report. The consulting firm should provide an accurate description of the preparatory and implementation processes for the training. To further verify the execution of the training sessions there should be daily log sheets taken at the end of each training day as well as an evaluation of the skill and/or knowledge acquisition of training participants based on their responses to a standardised assessment tool that was approved previously by the IDB Sector Lead Specialist for Housing and Urban Development. The IDB Sector Lead Specialist for Housing and Urban Development will provide his acceptance of these submissions via electronic correspondence.

8.3. The third deliverable of e-commerce training resources must be customised to reflect the unique circumstances of the respective organisation's mandate, structures and processes for engagement with MSMEs; while reflecting international requirements and best practices in the conduct of e-commerce capacity building. In addition, examples of exercises completed during the delivery of the training sessions and video footage during the training should also be submitted to the IDB Sector Lead Specialist for Housing and Urban Development via electronic correspondence. The draft training resources will be reviewed by the IDB Sector Lead Specialist for Housing and Urban Development and, upon his approval, the approved resources that reflect all comments from the Bank and the respective training partners will be submitted to facilitate the third payment for this consultancy. The approved resources must be submitted in soft copy to the IDB Sector Lead Specialist for Housing and Urban Development, who will confirm his acceptance via electronic correspondence.

8.4. The fourth deliverable of a final report and presentation should incorporate feedback from participating MSME staff as well as recommendations on key next steps for continued institutionalization of e-commerce capacity-building practices. The final report must contain a general summary of the conduct and effectiveness of support activities completed under this consultancy that is a minimum of twelve (12) pages in length and covers the key processes and decisions made related to establishing the respective organization's operational effectiveness in conducting e-commerce training, as evidenced by the pilots. The post-pilot final report should also include recommendations for future e-commerce refreshers or capacity building exercises needed in support of the respective

institutional mandate, with a clear description of the rationale for said activities, proposed delivery modaliti,es and suggested sources for additional reference information. The draft final report and presentation will be reviewed by the IDB Sector Lead Specialist for Housing and Urban Development and, upon his approval of the draft final report and presentation, an approved final report and presentation that reflects all comments from the Bank and the two training organizations will be submitted to facilitate the final payment under this contract. The approved final report must be submitted in soft copy to the IDB Sector Lead Specialist for Housing and Urban Development, who will provide his acceptance of the deliverable via electronic correspondence.

9. Other Requirements

9.1. The consulting firm must provide consultants who speak English fluently.

9.2. The consulting firm must retain the relevant expertise in e-commerce at the managerial level and demonstrated knowledge of training methodologies.

9.3. The consulting firm is expected to have a good understanding of the MSME business landscape in Trinidad and Tobago and a thorough understanding of issues regarding the promotion of female participation in commerce.

10. Payment Schedule

10.1. Payments will be based on the submission of key documentation and the completion of technical assistance as approved by the Bank. Any feature of the deliverables not meeting the Bank's satisfaction will have to be reworked at no additional cost to the Bank. The proposed payment schedule for this consultancy is as follows:

DELIVERABLES		
No.	**Description**	**Payment Percentage**
1	Inception Report	20%
2	E-Commerce Train the Trainer Training Report	25%
3	E-commerce Training Resources	25%
4	Final Report and Presentation	30%

11. Supervision

11.1. The consulting firm will work under the direct supervision of the IDB Sector Lead Specialist for Housing and Urban Development serving as Technical Lead for the Technical Cooperation Agreement, in coordination with the President of the Arima Business Association and the Mayor of Arima.

[Suggested structure] *Selection process #::::::::*

TERMS OF REFERENCE

Consultancy for the Design and Delivery of the Borough of Arima Digital Experience

Trinidad and Tobago

TT-T1115

[Technical Cooperation Number]

https://www.iadb.org/en/project/TT-T1115

Smart Town Arima

1. Background and Justification

1.1. The Royal Chartered Borough of Arima, with 34,000 inhabitants at the 2010 Census, and located at the eastern end of the main public transport route and a mere 8 km from the Piarco International Airport, has a rich cultural heritage, diverse ethnic makeup, is home to the nation's First Peoples, and boasts some unique public facilities in the sporting and health arenas. These include the Larry Gomes Stadium, the Arima Velodrome, the Arima Health Facility, and a state-of-the-art Arima General Hospital. The hospital aside, in recent decades, public spaces, services, and infrastructure have seen little investment or adaptation to respond to changing demographics and economic and climatic factors, despite flash flooding in low-lying areas at the foothills of the Northern Range being a growing concern.

1.2. According to the 2022 Public Perception Survey, most people like Arima but few love it. Most respondents to the 2022 Survey (49%) indicated that they mostly visit Arima to shop or do business. Even so, only about one in five respondents who sometimes go through Arima for a connecting bus or maxi-taxi, frequently conduct any other business or shop in the town. Relatively few visitors come for social or recreational reasons, including for sporting events, despite existing sporting infrastructure – again indicative of an untapped potential. More Culinary, Cultural and Recreational activities were strongly desired by 2022 Survey respondents. Better understanding what is currently offered as well as patronage patterns and motivations, is important to developing a plan to capitalize on the untapped demand.

1.3. Smart city solutions by businesses and government services in the town are not widely adopted. As a baseline, only 19% of Micro, Small, and Medium-size Enterprises (MSMEs) in Arima had access to the internet in 2014. The 2022 Survey confirmed strong interest in free public Wi-Fi in the downtown area with more than half of respondents expressing a strong preference for this feature in redevelopment activities. Although fewer than 10% of respondents to the Survey expressed a sense of feeling either unsafe or very unsafe when visiting the town, a significant proportion (41%) were undecided. Moreover, the business community and farmers in the outlying areas of the Borough regularly cite the need for increased security, including closed-circuit television (CCTV), most recently in a February 2022 Public Consultation.

1.4. Gender, diversity, and inclusion is a significant concern in the town. Although local statistics do not exist on its prevalence, the fear brought by street harassment negatively influences the decisions of women and girls on appearing alone in public, using public transportation, and affects equal access to recreational and livelihood's opportunities in outdoor public spaces. A 2018 Inter-American Development Bank (IDB) study indicated that nationally,

close to one in three women experienced sexual violence, including rape, attempted rape, unwanted touching, and reported sexual violence. Beyond safety, gender inequalities are observed with more detailed analysis of participation in business, access to training, knowledge, technology, access to finance and unpaid care work. In 2013, 23% of adult men were trying to start a business or owned a young business compared to 16% of adult women. These differences involve not having the required knowledge/skills to start a business and the fear of failure. More training for women is needed in terms of entrepreneurship skills, mentoring, and start-up financial support guidance.

1.5. The national and local governments are committed to addressing these constraints, emphasizing digital transformation through an urban regeneration program called Connected Arima. In this regard, the agendas of three national Ministries converge. The Ministry of Planning and Development and the Ministry of Digital Transformation are keen on the success of Arima as a pilot for a broader smart city and community connectivity agenda being planned by the Government, in keeping with its Vision 2030. The Ministry of Housing and Urban Development, as executing agency for the IDB-financed Urban Upgrading and Revitalization Program (TT-Lxxxx), is also committed to the success of this urban regeneration sub-project both from the perspective of the Program's outcomes as well as from the perspective of its broader mandate for urban development.

1.6. A key element of this urban regeneration sub-project is to transition Trinidad and Tobago towards Sovereign Identity for all citizens by placing the information for more informed choices directly in their hands. Mobile apps have great potential to facilitate such a transition – by providing marketing opportunities for businesses in Arima as well as raising the profiles of and making linkages between nearby cultural and heritage attractions. More specifically, mobile apps have been shown through numerous case studies to facilitate more linked-bookings, promote e-commerce expansion, generate new business opportunities, improve mobility, reinforce accessibility, increase safety, and help to create a sense of a common place – placemaking.

1.7. To effectively develop such applications for Arima will require diagnostic studies and consultation processes to surface the pain points felt by visitors, firms and residents and elucidate possible solutions. The assessment and benchmarking exercise can be greatly aided by using the expertise of countries with demonstrated capacity to create smart cities, such as Korea. Korea's significant expertise in addressing the challenges of developing new towns and innovating with smart city solutions, coupled with their long-time partnership with the IDB on urban regeneration projects has created meaningful learning collaborations in the region such as the Korea-IDB Urban Development Academy (KIUDA) that engages urban professionals from Korea and LAC in peer-to-peer knowledge exchanges.

1.8. This consultancy will seek to harness the desire for change from local stakeholders combined with the technical expertise of Korean counterparts[1] to produce a comprehensive proof on concept for how digital tools can aid Arima in realizing its full potential for collective action and socio-economic development.

2. Objectives

2.1 The overall objective of the consultancy is to design and deliver a Borough of Arima digital experience that facilitates access to mobile applications that support the delivery of visitor

[1] In addition to KIUDA, technical support for this consultancy will be sought from the Korea Research Institute for Human Settlements (KRIHS), the Korea Institute of Civil Engineering (KICT), the Korea Land and Housing Corporation (KLH), and Korea's Ministry of Land, Infrastructure and Transport (MOLIT).

and resident products and services, as identified through community consultations and diagnostic assessments (see 1.7 above). The specific objectives of Consultancy are to:

2.2 To develop and design a mobile application accessible to both locals and visitors that will facilitate mobile applications showcasing the heritage property as well as the cultural and commercial features of Arima.

2.3 To create a visually appealing Business to Customer (B2C) mobile application which should effectively and efficiently support the overall goal of a Smart Arima.

2.4 To increase the marketability of the Borough of Arima using smartphone technology.

3. Scope of Services

3.1 Consultancy category and modality: Firm

3.2 Estimated duration: Eight (8) month period

3.3 Place(s) of work: External location

3.4 The Consulting firm will work across the entire application life cycle, from concept, design, content management, building, deployment, testing, and release to app stores. The application must leverage cost-effective and cutting-edge technology to assist efforts to drive economic and social activity forward in Arima.

3.5 The Consulting firm will work on a day-to-day basis with a Steering Committee, comprising representatives from the IDB, the aforementioned national Ministries, the Arima Business Association, the Arima Borough Corporation, KIUDA and community-based organizations. The consulting firm will play an awareness-building and technical advisory role to support the Committee in its deliberations on the appropriate user experience design for the mobile app, by providing examples of similar digital solutions and identifying salient design points from the aforementioned diagnostic studies. This collaborative process will ensure (i) greater awareness of the benefits of a digital platform for the community; (ii) stakeholder engagement in the long-term strategy for deploying the digital experience as a means of attracting private investment and promoting cultural retention; and (iii) digital solutions originating from the exercise directly engage on the issues deemed most critical to Arimians.

3.6 The Consulting firm will create the mobile application, which, at a minimum, will serve as a central point of accessing other mobile applications that provide community-related services and information to visitors and local residents of Arima. An initial group of Arima-centric mobile applications will be developed via a hackathon hosted by the Consulting firm. The hackathon event will allow computer programmers to compete in the creation of minimally viable products that support community development within a range of domains such as transportation; health care; agriculture; municipal service delivery; public safety; sports and leisure; and e-Commerce

3.7 The winning programmers will then receive technical support and coaching from the Consulting firm as well as KIUDA subject matter experts towards refining their products for launch on the Borough of Arima digital experience application. The Consulting firm will then launch the mobile app officially before submitting a sustainability plan for the application.

4. Key Activities

By the end of the assignment, the Consulting firm will have completed activities leading to:

4.1 Meaningful consultations with community stakeholders

4.2 Successful hosting of hackathon

4.3 Arima digital experience open code application launched on two mobile platforms (Android and iOS), both phone and tablet versions, and web.

4.4 Recommendations for future scale-up, financing and content management of the Arima digital experience app

5. Expected Outcome and Deliverables

At the end of the assignment the Consulting firm must deliver the following:

5.1 Approved Inception report including proposed methodology and work plan.

5.2 Post-event report on the Hackathon including details on activities, challenges experienced, lessons learned and next steps.

5.3 Post-launch checklist.

5.4 Functional application, codes for publishing and all manuals.[22]

5.5 Final report on the consultancy, providing information on critical success factors and challenges for maintaining the application, as well as recommendations and tools with a specific focus on sustainability.

6. Project Schedule and Milestones

6.1 The Consulting firm will be free to propose their specific working methods and schedules in their submission. However, the consulting firm should anticipate a combination of milestone and routine reporting in the conduct of the consultancy and submission of deliverables. The proposed project schedule for submitting deliverables under this consultancy is as follows:

DELIVERABLES		
No.	**Description**	**Timeline**
1	Approved Inception report: including proposed methodology and work plan	Within two weeks of contract signing
2	Post-event Report on Hackathon	By the end of twelve (12) weeks
3	Application completed & launched	By the end of twenty-eight (28) weeks
4	Final report & Recommendations	By the end of thirty-two (32) weeks

7. Reporting Requirements

7.1. All reports shall be delivered electronically, with all supporting documentation in editable format.

7.2. At a minimum, the Consulting firm must confer with the IDB Sector Lead Specialist for Housing and Urban Development or his designate on a bi-weekly basis, either by email or telephone correspondence.

7.3. The IDB and the Steering Committee will be required to provide feedback to the Consulting firm, in writing, within 10 working days after receiving each report.

8. Acceptance Criteria

[22] Codes will be published on the IDB's code for development website (https://code.iadb.org/en).

Phase 1: Collaborative Conceptualization

8.1. Review project documentation and engage with key stakeholders to ensure a comprehensive understanding of overall context, past activities, current plans, and future opportunities for urban renewal in Arima.

8.2. Work with the Steering Committee to identify and engage key stakeholders.

8.3. Make recommendations on the scope, approach, and methodology of the mobile application design.

Phase 2: Hackathon Execution

This stage encompasses all activities related to the planning of a successful event:

8.4. Determine and make recommendations for pre and post hackathon events meetups to brief teams on hack day requirements.

8.5. Marketing and promotion of the hackathon and other related events via social media and press coverage.

8.6. Lead with venue preparation, making recommendations for all hardware and software needs to ensure that teams have full access to internet and all necessary resources.

8.7. Strong pre-event promotion, using company resources and outside partners, to ensure that participation meets expectations.

8.8. Selection of appropriately qualified judges.

8.9. Recommend and assemble a team of volunteers for use on the day of the hackathon (if necessary).

8.10. Clearly communicate to participants the expected results and ownership of ideas developed.

8.11. Ensure coverage of event on hack day on social media platforms.

8.12. Provide clear guidance to hack teams to ensure that teams (i) focus on usability features; (ii) have the ability to develop mobile applications for multiple mobile OS; and (iii) write coherent, organized code; integrate UI with backend services and existing websites; and optimize performance of the apps.

Phase 3: Application Completion & Launch

8.13. Work with winning team of developers to refine code, test and launch the application(s) after the event.

8.14. Ensure release of the mobile application to respective app stores.

8.15. Design/develop promotional materials including content management for the app.

8.16. Provide a report on the consultancy, reporting on the process, lessons learnt, recommendations.

9. Other Requirements

9.1. The Consulting firm must provide key personnel who speak English fluently.

9.2. The Consulting firm must have at least 5 years of experience executing mobile application development projects.

9.3. The Consulting firm must retain the relevant expertise in system user experience design; urban development; project management; marketing and mobile technology.

9.4. The Consulting firm is expected to have a good understanding of the development context of Caribbean communities and a thorough understanding of issues regarding stakeholder mobilisation.

10. Supervision and Reporting

10.1. The Consulting firm will work under the direct supervision of the IDB Sector Lead Specialist for Housing and Urban Development serving as Technical Lead for the Technical Cooperation Agreement, in coordination with the President of the Arima Business Association and Mayor of Arima.

11. Schedule of Payments

11.1. Payments will be based on the submission of key documentation and the completion of technical assistance as approved by the Bank. Any feature of the deliverables not meeting the Bank's satisfaction will have to be reworked at no additional cost to the Bank. The proposed payment schedule for this consultancy is as follows:

DELIVERABLES		
No.	**Description**	**Payment Percentage**
1	Approved Inception report: including proposed methodology and work plan	20%
2	Launch and host Hackathon event	25%
3	Application completed & launched	25%
4	Final report & Recommendations	30%