

CABEI



Central American
Bank for
Economic
Integration

Terms of Reference

**Intelligent Traffic Systems in Santo Domingo
and the National Highways
of the Dominican Republic**

Public Tender

007/2023

February/2023

PÚBLICO

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Institutional Information

The Central American Bank for Economic Integration (CABEI) is a multilateral financial development institution that aims to promote economic integration and balanced economic and social development in the Central American region, which includes the founding countries and the non-founding regional countries, serving and aligning itself with the interests of all its members.

CABEI was founded in 1960 as the financial arm of Central American integration and development; it is a unique organization, both as a result of the breadth of the fields of competence in which it carries out its operations and for its objective and foundational principles. Since then, CABEI has been led by visionaries, whose leadership has brought to fruition the ends for which CABEI was established.

CABEI has 15 member countries:

- Founding countries: Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica.
- Non-founding regional countries: Panama, Dominican Republic and Belize
- Extra-regional countries: Mexico, Republic of China (Taiwan), Argentina, Colombia, Spain, Cuba and Korea

CABEI is headquartered in Tegucigalpa, Honduras with regional offices in Guatemala, El Salvador, Nicaragua, Costa Rica, Panama, Dominican Republic, the Republic of China (Taiwan), South Korea and Argentina. For further information visit the CABEI website, www.bcie.org

Terms of Reference Conditions

This Terms of Reference document is property of CABEI, and their content may not be reproduced by mechanical or electronic means, nor redistributed without the consent of the Institution.

In a reciprocal fashion, CABEI agrees not to reveal, copy or disclose the information provided by the bidders in response to this public tender.

These Terms of Reference do not oblige any natural or legal person to submit a proposal. Likewise, the presentation of proposals by the bidders does not oblige CABEI to enter into any contract.

These Terms of Reference, as well as the technical and economic proposal presented by the selected bidder, will become part of the annexes to the contract to be signed for the required services.

Procurement Timeline

The following schedule reflects this procurement's estimated dates, however, the Bank reserves the right to modify it at its sole discretion:

- | | |
|---------------------------------------|------------|
| • Request for Proposals release | 02/14/2023 |
| • Last day to send questions | 03/07/2023 |
| • Deadline for submitting offers | 03/14/2023 |
| • Expected contract commencement date | 04/11/2023 |

1.1.3. All the cities and municipalities in DR are now accessible through a road network formed by 5,400 kilometers of highways and roads, with additional 12,700 kilometers of local roads, which ranked the country as number one in the region for road infrastructure coverage. Image 2 shows the national road network, consisting of the major highways and roads connecting provinces across the country. However, despite the infrastructure improvements, traffic accidents on the highways follow a pattern similar to those in the capital city. Of the nation's fatal traffic accidents, around 25% occurred on DR's 10 main national highways. In 2020, 3,168 people died in traffic accidents, and 822 of these deaths occurred on the highways. These figures correspond to on-site deaths. The number would rise when considering deaths in medical centers and long-term injuries.



Image 2. Dominican Republic's main national highways

1.1.4. Despite the passage of road safety legislations, road traffic mortality continues to rise due to the country's limited resources to enforce these regulations and maintain surveillance. Efforts were made to enhance the country's traffic surveillance system by implementing GPS to track public buses and installing cameras at traffic lights and major intersections. However, DR has made limited progress in integrating the current digital infrastructure with other traffic-related data to build a comprehensive management system that facilitates the implementation and enforcement of traffic regulations.

1.1.5. Managing urban traffic and ensuring the enforcement of traffic regulations is challenging. Coupled with the exponential demographic growth, the mix of different modes of transportation – formal and informal – makes the challenge even more complex. With the notion that the supply of roads cannot resolve traffic problems, particularly traffic congestion and accidents, the role of Intelligent Traffic System (ITS) has become increasingly important in ensuring the sustainability of cities. ITS is an advanced transport system that collects, processes, and provides real-time traffic information to maximize the efficiency of transport, improve its convenience and safety by efficiently managing traffic flow, detect delays and unexpected accidents, and provide the users with real-time information with which they can determine their optimal route to the destination. Furthermore, integrating ITS with other national systems and traffic-related data providers has been critical for maximizing the utility

of the transportation system. For instance, the integration of ITS with the emergency management system can provide real-time information facilitating access and communication with first responders, police, and firefighter vehicles, allowing them to reduce response time by navigating the roads more quickly and arriving at the destination faster. The integration of ITS with the weather information management system mitigates adverse weather impacts on road mobility by facilitating data forecasting and increasing response automatization.

- 1.1.6. Image 3 illustrates the interoperability of ITS components, from data collection to processing and analysis of the collected data, and dissemination. Real-time traffic data is collected through CCTV cameras and vehicle detection systems installed along roads, then processed and analyzed in the traffic control center to provide real-time traffic information, as well as emergency alerts, to transport users via electronic signs installed along roads, smartphones, navigation systems, social media, and other broadcasting services.

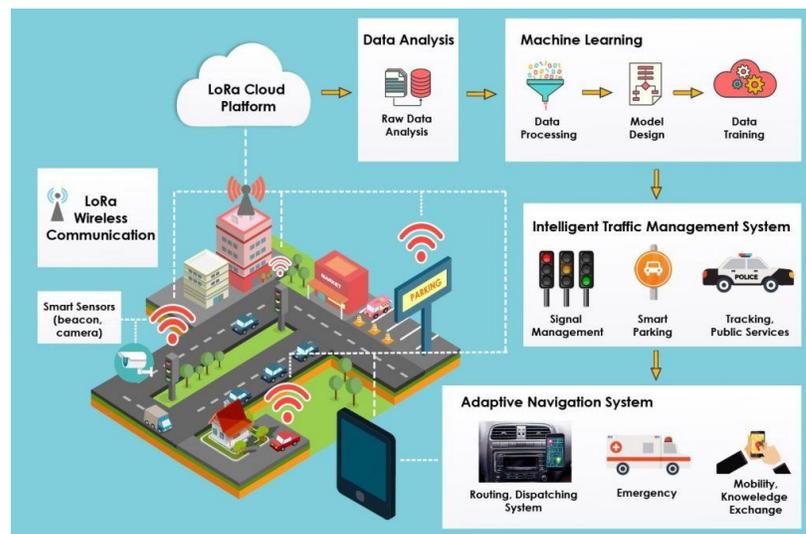


Image 3. ITS services

- 1.1.7. While DR boasts one of the most extensive highways systems in the Caribbean region, and numerous road infrastructure projects and investments have been executed or are underway, implementation of ITS in Santo Domingo as well as national highways could enhance the quality, efficiency, safety of mobility throughout the country.

1.2 Purpose or Objective

- 1.2.1. This Consultancy aims to support the Government of DR to study the feasibility of deploying ITS within the city of Santo Domingo and across the national highway system of the DR.
- 1.2.2. The consulting firm (hereinafter referred to as the “Contractor”) is to conduct a market study and propose appropriate ITS investments and interventions for the city of Santo Domingo

and the national highways to leverage cutting-edge information and communication technologies (ICT) to improve safety, efficiency, effectiveness, accessibility, and sustainability of the transportation network without having to increase the network itself. ITS enables the collection, processing, and provision of real-time traffic data such as traffic flow, traffic incidents and accidents, and road control, which ultimately contributes to the quality of life and mobility through reduced congestion and improved accessibility. This Consultancy also seeks to have a positive impact on the environment by mitigating CO₂ emissions.

1.3 Scope of Work

- 1.3.1. The Contractor shall carry out all the tasks to achieve the Objective of the Service described in Section 1.2, and for this purpose, the project was divided into two (2) components where each concludes with the fulfillment of a milestone or intermediate objective. The Contractor will be responsible for completing the activities of each component as detailed below.
- 1.3.2. **Component 1: Feasibility Study of Intelligent Traffic System for Santo Domingo.** This component aims to conduct a detailed study on the current transport and traffic systems, as well as the digital infrastructure available, in the city of Santo Domingo based on which the optimal design, development, implementation of ITS will be proposed.
- 1.3.3. **Component 1.1. Market Analysis.** This sub-component corresponds to the identification, analysis, and detailed assessment of the existing challenges and opportunities within transport and traffic systems for the design of ITS in the city.
- i. Conduct analysis of the status quo of transportation, both formal and informal modes, in Santo Domingo, including supply and demand, routes, speeds, schedules, travel times, and quality
 - ii. Assess the details of public transportation fleets including their size, passenger capacity, age, and ICT and digital applications
 - iii. Gather and analyze traffic data to identify heavy traffic and congestion areas
 - iv. Coordinate with the Local Implementation Agency (LIA), which is the National Institute of Transit and Land Transportation (INTRANT) as required to collect data on the status of existing ITS assets that will guide ITS design and implementation, and Integrated payment system, with a focus on the payment mechanisms, type of data collected, data processing, financial institutions providing the service, and other relevant data to feed the ITS
 - v. Examine Santo Domingo's current digital infrastructure for ITS data collection, processing, and dissemination
 - vi. Identify the existing ITS infrastructure in Santo Domingo, including but not limited to ITS technology operating in public and individual vehicles and roadside, and the control center and the ITS-related agencies, describing the type of data collected, data processing methods, data communication methods, and the information-sharing

- schemes in place
- vii. Identify response time, vehicle fleet status, communications, interoperability, and technologies operating in the emergency service systems, such as ambulances, police, and firefighters, available in the city
 - viii. Analyze communication devices used inside the city to disseminate traffic-related information, such as smartphone applications, radio stations, Variable Message Signs (VMS) located in intersections or traffic lights, bus and metro stations, among other devices. Evaluate devices' market share, user demographic profile, and accessibility

1.3.4. **Component 1.2. Technical Design and Recommendations.** This sub-component shall propose appropriate interventions that would support the implementation of ITS in Santo Domingo. Additionally, this sub-component will provide recommendations for the optimal design, implementation, operation, and maintenance of ITS. The sub-component comprises the following activities:

- i. Propose preliminary designs of ITS, such as physical and digital infrastructure, hardware, software, considering interoperability with existing systems
- ii. Identify sensor-based traffic monitoring technology's specifics required for the deployment of ITS, such as Closed-Circuit Television (CCTV) and Vehicle Detection System (VDS) to measure traffic-related data
- iii. Determine the best-fit technology for location information and location correction to enhance accuracy, to be implemented on the roadside and onboard units (OBU), as well as information mapping methods to keep the map updated
- iv. Elaborate on the efficiency, scalability, and reliability of ITS communications network and technologies
- v. Recommend an Intelligent Traffic Data Processing System hardware and software to analyze, store, share and manage the previous data collected, ensuring data quality and data privacy
- vi. Elaborate on the best-fit dissemination technologies and devices to expand and enhance pre-trip and in-route information to the traveling public and potential partner agencies, such as fixed and temporary Variable Message Signs (VMS), smartphones apps, online platforms, navigation systems, radio broadcasting
- vii. Review international best practices on ITS design, installation, operation, and maintenance, and benchmark lessons and experiences relevant for Santo Domingo
- viii. Review international best practices on wider application of ICT-related services that are available through ITS infrastructure
- ix. Detail the security requirements for the physical components of ITS that would be deployed in the city
- x. Propose a security management system to secure ITS from cyber-attacks and protect data collection and transmission
- xi. Elaborate on operation and maintenance (O&M) plan for ITS, using stakeholders' inputs and provide recommendations and specific strategies for supporting and coordinating ITS O&M

1.3.5. **Component 1.3: Financial and Economic Analysis.** Based on the findings of the previous components, a financial and economic analysis will be conducted to determine the viability of the proposed intervention for the design of ITS in the city of Santo Domingo.

- i. Identify the best-value-for-money technology alternatives for financial modeling based on the findings of the previous activities
- ii. Elaborate on a detailed economic-financial model with an estimation of the capital expenditure (CAPEX), operating expenditures (OPEX) specifying technology, equipment installation, electricity, infrastructure expansion, among others, internal rate of return (IRR) considering the business opportunities identified in the previous activities, net present value (NPV), the weighted average cost of capital (WACC), and sensitivity analysis
- iii. Conduct a Cost-Benefit Analysis (CBA) considering the direct and indirect benefits of implementing an ITS in the city, including reductions in congestion, emissions, accident rates, costs related to traffic congestion, transportation fares, and the stimulation of the economy in the area of influence, as well as the economic benefit resulting from increased access to employment and other services
- iv. Examine alternative financing sources generated from national and multilateral budgets, as well as public-private partnerships (PPPs)

1.3.6. **Component 1.4: Regulatory Assessment and Governance Structure.** This sub-component will examine and analyze the relevant legal and regulatory framework, as well as existing governance structure to identify gaps, opportunities for reform and modernization. Based on the findings, a report will be developed to propose a set of recommendations to advance the project's development.

- i. Review all relevant laws, regulations, policies and standards specifications, including but not limited to i) smart cities, ii) mobility integration, iii) smart and autonomous technologies, iv) information collection devices, such as CCTV and sensors, v) information provision devices, such as VMS, vi) collection of traffic-related data, vii) data collection, exchange and storage, viii) mobility integration, ix) data security and dissemination, ix) data privacy, and x) PPPs within the transportation sector
- ii. Identify opportunities and gaps that may impact the successful implementation and operation of the project
- iii. Provide recommendations to enhance the current regulatory framework, laws, policies, and standards involved in the implementation and operation of ITS in the city of Santo Domingo based on international best practices
- iv. Assess how the current institutional arrangement can enable or obstruct ITS implementation by evaluating the responsibilities and functions of various entities involved in ITS operation
- v. Propose a governance model for O&M of ITS which defines rules, procedures, roles and division of responsibilities of key stakeholders involved in consideration of the

jurisdiction of the executing agency, organizational structure, human resources requirements, financial and budgeting procedures, and technical standards that are most appropriate for the proposed project

- vi. Present a capacity building plan and propose a human resource strategy including training and staffing needs, job profiles and description, reporting lines, and required qualifications
- vii. Recommend an optimal PPP structure for the investment and financing options for procurement, design, construction, and O&M
- viii. Propose various scenarios and most optimal scheme for project financing via PPPs based on South Korean experience in project finance and international best practices

1.3.7. Component 2. Feasibility Study of Intelligent Traffic Systems for National Highways

This component entails a detailed assessment of the current challenges to mobility on DR's highways, as well as recommendations on preliminary design, technical specifications, financial estimation, regulatory framework, and governance structure for the development of ITS.

1.3.8. Component 2.1. Market Analysis. This sub-component will include identification, analysis, and assessment of the existing challenges and opportunities for the deployment of ITS on DR's highways. The sub-component will consist of the following activities:

- ix. Conduct analysis of the status quo of transportation, both formal and informal modes, on the national highways, including supply and demand, routes, speeds, schedules, travel times, and quality
- x. Assess the details of public transportation fleets including their size, passenger capacity, age, and ICT and digital applications
- xi. Gather and analyze traffic data to identify heavy traffic and congestion areas in different sections of the highway
- xii. Identify critical infrastructure on the national highways and assess the intelligent infrastructure required to develop ITS for the national highways.
- xiii. Examine current internet infrastructure of the national highways for ITS data collection, processing, and dissemination
- xiv. Identify the existing ITS infrastructure on the national highways, including but not limited to ITS technology operating in public and individual vehicles, roadside, resting areas, the control center, and the ITS-related agencies, describing the type of data collected, data processing methods, data communication methods, and the information-sharing schemes in place
- xv. Identify response time, vehicle fleet status, communications, interoperability, and technologies operating in the emergency service systems, such as ambulances, police, firefighters and rescue working on the national highways
- xvi. Analyze communication devices used on the national highways to disseminate traffic-related information, such as smartphone applications, radio stations, VMS, among other devices. Evaluate devices' market share, user demographic profile, and

accessibility

1.3.9. **Component 2.2: Technical Design and Recommendations.** This sub-component consists of identifying specific interventions, elaborating on technology alternatives, recommending best-fit technologies specifications, and evaluating the operation and maintenance of ITS for the national highways. This sub-component will provide recommendations for the optimal design, implementation, operation, and maintenance of ITS.

- i. Propose preliminary designs of ITS such as physical and digital infrastructure, Hardware, Software, considering interoperability with existing systems
- ii. Deliver design specifications for implementing ITS, considering but not limited to collaboration with other national systems and traffic-related data providers, such as emergency management systems and road weather information management systems, among others.
- iii. Identify sensor-based traffic monitoring technology's specification required for the deployment of ITS, such as CCTV and Vehicle Detection System (VDS) to measure traffic-related data.
- iv. Determine the best-fit technology for location information and location correction to enhance accuracy, to be implemented on the roadside and onboard units (OBU), as well as mapping information methods to keep the map updated
- v. Propose preliminary design of the ITS communications network and technologies
- vi. Recommend an Intelligent Traffic Data Processing System hardware and software to analyze, store, share and manage the previous data collected, ensuring data quality and data privacy.
- vii. Elaborate on the best-fit dissemination technologies and devices to expand and enhance pre-trip and in-route information to the traveling public and potential partner agencies, such as fixed and temporary Variable Message Signs (VMS), smartphones apps, online platforms, navigation systems, radio broadcasting
- viii. Review international best practices on ITS design, installation, operation, and maintenance, and benchmark lessons and experiences relevant for DR's national highways
- ix. Review international best practices on wider application of ICT-related services that are available through ITS infrastructure
- x. Detail the security requirements for the physical components of ITS that would be deployed in the national highways
- xi. Propose a security management system to secure ITS from cyber-attacks and protect data collection and transmission
- xii. Elaborate on operation and maintenance (O&M) plan for ITS, using stakeholders' inputs and provide recommendations and specific strategies for supporting and coordinating ITS O&M
- xiii. Propose Project Implementation Plan

1.3.10. **Component 2.3. Financial and Economic Analysis.** Based on the findings of the previous activities, a financial and economic analysis will be conducted to determine the financial viability of the implementation of an ITS on the Dominican Republic's highways.

- i. Identify the best-value-for-money technology alternatives for financial modeling based on the findings of the previous activities
- ii. Elaborate on a detailed economic-financial model with an estimation of the capital expenditure (CAPEX), operating expenditures (OPEX) specifying technology, equipment installation, electricity, infrastructure expansion, among others, internal rate of return (IRR) considering the business opportunities identified in the previous activities, net present value (NPV), the weighted average cost of capital (WACC), and sensitivity analysis
- iii. Conduct a Cost-Benefit Analysis (CBA) taking into account the direct and indirect benefits of implementing an ITS on the national highways, including reductions in congestion, emissions, accident rates, costs related to traffic congestion, transportation fares, and the stimulation of the economy in the area of influence as well as the economic benefit resulting from increased access to employment and other public services.
- iv. Examine alternative financing sources generated from national and multilateral budgets, as well as public-private partnerships (PPPs).

1.3.11. **Component 2.4. Regulatory Assessment and Governance Structure.** This sub-component will examine and analyze the relevant legal and regulatory framework, as well as existing governance structure to identify gaps, opportunities for reform and modernization. Based on the findings, a report will be developed to propose a set of recommendations to advance the project's development

- i. Review all relevant laws, regulations, policies, and standards specifications that can hinder or support the design, implementation, and maintenance of an ITS, including but not limited to: i) smart and autonomous technologies; ii) data-gathering devices, such as CCTV and sensors; iii) information provision devices, such as VMS; iv) collection of traffic-related data; v) data exchange, storage and privacy; vi) PPPs within the transportation sector; and vii) financial data collection, taking into account the intelligent infrastructure proposed, among other regulations associated with another physical component of the transport infrastructure
- ii. Identify legal and regulatory opportunities or gaps that may impact the successful design, implementation, and operation of the project
- iii. Provide recommendations to improve the current regulatory framework, laws and policies to implement and operate an ITS on the DR's highways based on international best practices
- iv. Assess how the current institutional arrangement can enable or obstruct ITS implementation by evaluating the responsibilities, integration level, and functions of various entities involved in ITS operation.

- v. Propose a governance model for O&M of ITS which defines rules, procedures, roles, and division of responsibilities of key stakeholders involved in consideration of the jurisdiction of the executing agency, organizational structure, human resources requirements, financial and budgeting procedures, and technical standards that are most appropriate for the proposed project
- vi. Propose various scenarios and most optimal scheme, PPPs in particular, for project financing, procurement, design, construction, and O&M, based on South Korean experience in project finance and international best practices.
- vii. Present a capacity building plan and propose a human resource strategy including training and staffing needs, job profiles and description, reporting lines, and required qualifications. The LIA's personnel that forms part of the studies must be included in such Capacity Building Plan.

1.3.12. Component 3. Dissemination Meetings. In this component, the final deliverables of the Consultancy will be presented to the key stakeholders including the LIA and other relevant government authorities in DR. The objective is to enable a larger discussion to support the execution of essential interventions for the implementation of ITS in the city of Santo Domingo and the national highways to collect, process and provide real-time traffic data which will contribute to enhancing safety, efficiency, effectiveness, accessibility, and sustainability of the transportation network. Dissemination meetings will be organized in coordination with the LIA over the course of the Consultancy execution to present the deliverables.

1.3.13. Engagement Requirements.

- i. All meetings for the purpose of this consultancy are to be conducted in Spanish or in English with Spanish interpretation, except for those held with CABEI during which only English can be used as the main language.
- ii. It is highly recommended to incorporate a Spanish-speaking technical specialist to support the execution of the project.
- iii. Only key members of all parties should be included in the email chain for the execution of this consultancy.
 - a. The Contractor shall be provided with the contact details of the key members of the Bank and the LIA.
 - b. The Contractor is required to select only the core members of the team to include in the email chain.
- iv. For the first dissemination meeting, the Task Team Facilitator (TTF), KTF team, and the LIA must be present.
- v. For virtual or physical meetings after the start of the consultancy, the TTF or a CABEI official delegated by the TTF must be present at all times.
- vi. For all email communications and exchange of official documentation with the LIA, the Contractor must copy CABEI members, in particular the representative country office and the KTF team members.

- vii. For any communications related to administrative or contractual matters, the Contractor should contact CABEI only.
- viii. CABEI will create an MS Teams channel to facilitate communication amongst stakeholders during the execution of this consultancy.
 - a. The MS Teams channel is to complement emails, which are the official means of communication.
 - b. The Contractor can send reminders on follow up actions described in emails or receive real time responses.
 - c. The TTF, the KTF team, the representatives of the consulting company and the LIA will participate in the channel.

1.4 General and Specific Experience Required from the Contractor

- 1.4.1. **General Experience:** The Contractor serving as the prime bidder must be of South Korean nationality and must have a team of professionals with proven experience and expertise in designing, developing, and implementing intelligent traffic systems. Consultants who work for the Contractor must have availability to work exclusively and full-time during the required period and conduct site visits.
- 1.4.2. **Specific Experience:** The Contractor must present **three (3)** most relevant experiences in consultancy related to smart solutions and ITS for cities and national highways over the past 10 years, with the following conditions:
 - i. Experiences most similar to this project will be highly valued.
 - ii. Experiences in LAC region will be highly valued.
 - iii. Experiences beyond 10 years will not be valued.
 - iv. Specific details of the project activities and outputs to illustrate the Contractor's capabilities will be highly valued.
- 1.4.3. **Consortiums/Joint Ventures (JV):** Forming an association with local, regional, and/or international consulting firms or individual subject matter expert(s) with experience within the sector and local expertise **is recommended for all bidders:**
 - i. Contractors may form consortiums with local, regional, and international firm, with a condition that the South Korean Contractor must serve as the prime bidder.
 - ii. Contractors may subcontract components to local, regional, and international firms or individual consultants and must highlight their activities and contributions.

1.5 Required Experience for the Work Team

1.5.1. The key members of the team to be offered by the Contractor must be composed of the following expert professionals who are fluent in English, including at least one (1) expert who possesses fluent Spanish language skills. In addition, the incorporation of local (residing in the country) experts will be highly valued. **The bidder may offer to incorporate other specialists that are not mentioned below to ensure successful completion of the engagement.**

i. **Project Manager**

- General Experience: 10 years of work experience as a project leader
- Specific Experience: At least three (3) projects on international consultancies

ii. **Public Transport Specialist**

- General Experience: 10 years of work experience in public transport network and/or urban mobility solutions
- Specific Experience: At least three (3) projects on smart systems applied to the transport sector, digital transport infrastructure, digital transformation in roads, among others with focus on cities and highways

iii. **ITS Expert**

- General Experience: 10 years of work experience in system design for system development projects of similar nature and scale as this consultancy
- Specific Experience: At least three (3) projects on technology for managing transport systems

iv. **Geographic Information System Specialist**

- General Experience: 10 years of work experience in design, develop and implementation of systems and data bases to access, process, and store geospatial data.
- Specific Experience: At least three (3) projects on intelligent transportation system, geographic data, urban solution automatization, among others.

v. **Economist and Financial Analyst**

- General Experience: 10 years of work experience within the economic and/or financial sector
- Specific Experience: At least three (3) consultancies and experience on economic and financial analysis for smart solutions

vi. **Legal and Regulatory Expert**

- General Experience: 10 years of work experience related to regulations, policies,

- and laws in public transportation of DR
- Specific Experience: At least three (3) relevant consultancies in Central America

vii. **Local / Regional Public Transport Specialist**

- General Experience: 10 years of work experience in Latin America
- Specific Experience: At least three (3) transport projects conducted directly in Latin America or in collaboration with Latin American companies or individuals

1.6 Deliverables

1.6.1. As part of the description of required services, the expected deliverables produced in professional level English are listed below:

- i. **Deliverable #1** to be submitted two (2) weeks after the Start Order issued by CABEI following the signing of the contract, detailing methodology, workplan, timeline, etc
 - Report 1: Inception report with detailed methodology, workplan, timeline, and information request list
 - Event 1: Virtual dissemination meeting to present Report 1
- ii. **Deliverable #2:** to be submitted within four (4) months after signing the contract consisting **final versions of:**
 - Report 2: Market analysis for Santo Domingo
 - Report 3. Legal and regulatory assessment and governance structure for Santo Domingo
 - Report 4. Market analysis for national highways
 - Report 5. Legal and regulatory assessment and governance structure for national highways
 - Event 2: Virtual or in-person dissemination meeting to present the reports of Deliverable 2
- iii. **Deliverable #3:** to be submitted eight (8) months after signing the contract consisting of **final versions of:**
 - Report 6: Technical design and recommendations for Santo Domingo
 - Report 7: Financial and economic analysis for Santo Domingo
 - Report 8: Technical design and recommendations for the national highways
 - Report 9: Financial and economic analysis for the national highways
 - Event 3: Virtual or in-person dissemination meeting to present reports of Deliverable 3

iv. **Deliverable #4:** to be submitted 10 months after signing the contract consisting of **final versions** of:

- Report 10: Support with CABEL Loan Documentation Preparation. The Contractor may be required to submit an executive summary outlining the findings of the project. A report template will be provided by the Bank
- Event 4: In-person dissemination meeting to present all final deliverables
- Event 5: Support KTF with capacity building workshop in ROK, in which personnel from the LIA will participate.

1.6.2. The Contractor shall ensure that the following requirements are met for all deliverables:

- i. The Contractor may add (not exchange) activities or profiles to the team, not specifically stated in the TOR to ensure successful expected outcome of the deliverables and project.
- ii. The Contractor is prohibited from deleting or modifying activities from the TOR without the written consent of the Bank.
- iii. The Contractor shall ensure all deliverables are submitted with professional level of English to the Bank for review and comments.
- iv. The Contractor is prohibited from submitting deliverables directly to the LIA or to any institution that is not the Bank or to any official that does not work for the Bank.
- v. The Bank may request changes to the deliverables and will not submit the deliverables to the LIA unless it meets the expectations of the Bank.
- vi. The Bank shall officially submit the deliverables to the LIA when they are deemed sufficient for submission.

1.6.3. **Site Visit:** A minimum of three (3) trips is required for the project.

- i. The contractor is expected to travel to DR for site surveys and the presentation of final deliverables
- ii. All travel expenses have been included in the budget of this consultancy.
- iii. Certain activities may require the Contractor to have extended presence on the ground while conducting the study to meet the expectations of the Bank and LIA
- iv. It is advised that the first site visit take place after the first dissemination meeting with the Bank, as well as after a complete Request for Information (RFI) document has been submitted, and partial information has been received.
- v. Prior to each trip, the Contractor must submit a mission plan that specifies the date, location, and the agenda of the mission to ensure meetings with relevant members of the Bank, LIA and relevant stakeholders
- vi. The Bank must provide a non-objection for the trip in advance
- vii. The Contractor will be required to submit a summary report of the mission after the completion of the trip of no more than five (5) pages and in bullet points.

1.6.4. **Bi-weekly Report:** The Contractor will be required to submit a **bi-weekly progress report** to the Bank in English during the contracted period of consultancy.

- i. The report should be a maximum of three (3) pages and **in bullet points**.
- ii. The report must consist of a brief description of the progress made and milestones achieved, challenges or bottlenecks encountered in the performance of the work, and suggestions on how they can be resolved or mitigated. It should also include a list of next steps to be carried out during the following weeks and months.

1.6.5. **Meeting minutes:** The Contractor must provide detailed meeting minutes in English after meetings with the LIA and/or the Bank during project execution.

1.7 Contract Term

1.7.1 The term for the contracted services is for a period of twelve (12) months counted from the last signature date of the Contract by the Parties.

1.7.2 Whenever there are causes of force majeure or fortuitous events that justify it, and there is an agreement between CABEL and the Contractor regarding the causes, the term may be extended for a reasonable time deemed necessary for the Contractor to satisfactorily conclude the contracted services.

1.7.3 The Bank reserves the right to unilaterally conclude the service contract without any responsibility on its part, if it is verified that the Contractor, is not adequately executing any of the tasks set forth in the Technical Proposal and Terms of Reference or when the contracted services do not conform to or comply with them.

1.8 Contract Execution Schedule

This contract is to be executed by a South Korean Contractor. The timeline for each component of this consultancy is as described below:

Timeline for Project Procurement and Execution																	
Component 1.1. Market analysis for Santo Domingo																	
Component 1.2. Technical design and recommendations for Santo Domingo																	
Component 1.3. Financial and economic analysis for Santo Domingo																	
Component 1.4. Regulatory assessment and governance structure for Santo Domingo																	
Component 2.1. Market analysis for the national highways																	
Component 2.2. Technical design and recommendations for the national highways																	
Component 2.3. Financial and economic analysis for the national highways																	
Component 2.4. Regulatory assessment and governance structure for the national highways																	
Component 3. Dissemination seminar																	
Month	-	-	-	-	1	2	3	4	5	6	7	8	9	10	11	12	Duration
Launch RFP																	1 month
Bid Deadline																	1 month
Bid Review																	1 month

1.12.3 The payment indicated in numeral 1.12.1 will be effective by CABEI as shown below:

- i. **Payment No. 1:** Twenty percent (20%) of the total amount, against the delivery and acceptance of deliverables that include the document(s) and the corresponding event in subparagraph (i) of section 1.6.1. of the Deliverables.
- ii. **Payment No. 2:** Thirty percent (30%) of the total amount, against the delivery and acceptance of deliverables that include the document(s) and the corresponding event in subparagraph (ii) of section 1.6.1. of the Deliverables.
- iii. **Payment No. 3:** Thirty percent (30%) of the total amount, against the delivery and acceptance of deliverables that include the document(s) and the corresponding event in subparagraphs (iii) of section 1.6.1. of the Deliverables.
- iv. **Payment No. 4:** Twenty percent (20%) of the total amount, against the delivery and acceptance of deliverables that include the document(s) and the corresponding event in subparagraphs (iv) of section 1.6.1. of the Deliverables.

1.12.4 The bidder may propose an alternative payment arrangement in a separate document within the economic bid, which will be reviewed by CABEI who will decide whether to accept or propose different alternatives.

1.12.5 CABEI fulfills its payments by means of wire transfers; the bidder must provide the name of the banking institution and account number. The authorization will be carried out pursuant to the instructions contained in Annex 2.

1.13 Immunities, Extensions and Privileges

1.13.1 Pursuant to its constitutive agreement, CABEI, its income, and all assets, as well as the operations and transactions that it carries out in accordance with said agreement, will be exempt from all kinds of tax and customs duties or others analogous in nature. It is also exempt from all responsibility related to the payment, withholding or collection of any tax, contribution or right; consequently, the taxes and other contributions that correspond to the Contractor derived from the fees caused will be its own responsibility.

1.14 Service Supervision and Coordination

The coordination and supervision of the services will be carried out by the CABEI Regional Office of Dominican Republic with support of the KTF Team.

2. EVALUATION, CONTENT AND PRESENTATION OF BIDS

2.1 Bid Evaluation Form

The bids will be evaluated using a rating system, where there will be two (2) types of qualification: technical and economic, totaling 100%.

2.2 Technical Evaluation 80%

- 2.2.1 The technical evaluation aims to evaluate CABEI's satisfaction with the compliance of the characteristics of the services to be contracted and the relevant aspects to be met by the Contractor.
- 2.2.2 Although the technical evaluation has a total value of 80%, to obtain the technical qualification, according to the evaluation criteria, the total value of 100% will be used. This result will then be weighted on the value of the technical evaluation (80% of 100%).
- 2.2.3 The criteria and weights to be used to carry out the technical assessment are as follows

Evaluation Criteria (As required)	Percentage
Overall Presentation Quality	10%
Specific Experience	15%
Key Staff qualifications and competence for assignment	25%
Subject matter expertise in the region and language	10%
Technical approach, methodology and work plan	40%
Total Technical Evaluation Score	100%

- 2.2.4 For the offer submitted to be technically acceptable, it must obtain a minimum rating of 80%; i.e. 80%/100% of the total technical assessment; or 64%/80% of the weighted technical rating. A bid that does not meet that score will be disqualified from the process.

2.3 Economic Assessment 20%

- 2.3.1 The economic assessment shall assign the maximum weight of 20% to the lowest cost economic bid.
- 2.3.2 The rest of the proposals will be assigned the weight as follows:

$P_i = (E_m * [20]) / E_i$	P_i = Economic Proposal Score i. i = Bidder. E_i = Economic Proposal i. E_m = Economic Proposal with lowest cost or price.
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2.3.3 The sum of the technical and economic evaluation will result in the final qualification that will serve as the basis for the award.

2.4 Bid Submission Form

2.4.1. The offer must consist of three (3) duly identified sections:

- a. Technical bid
- b. Compliance documentation
- c. Economic bid

2.5 Technical Bid Contents

The technical offer must contain the following documents, which must be submitted in the following order:

- 2.5.1. Letter of Presentation (Annex 1) duly stamped and signed by the legal representative. **If the Bank's template is not used, the offer shall be disqualified.**
- 2.5.2. Payment Instructions Template (Annex 2) duly completed.
- 2.5.3. Technical Offer: **Length of proposal must not exceed a maximum of 80 pages**
 - a. Overview of the Contractor
 - i. Provide here a brief description of the background and organization of your company, and – in case of a JV – of each member for this assignment.
 - b. Experience of the Contractor
 - i. List only **three (3)** relevant projects that highlight your capabilities to execute this project. References must be relevant to this engagement and successfully completed within the previous 10 years. **Experiences beyond 10 years will not be valued. Experiences in Latin America are highly valued.**
 - ii. List only those assignments for which the organization was legally contracted as a company or was one of the JV partners. Assignments completed by the Contractor's individual experts working privately or through other consulting firms cannot be

claimed as the relevant experience of the Contractor that is a primary bidder. Experiences of Consortium member or JV partners may be claimed. The Contractor should be prepared to substantiate the claimed experience by presenting copies of relevant documents and references if so, requested by the Bank.

- iii. Include full contact details (country of assignment, name of the referee, title, organization, address, email, and phone number).
- iv. Provide a detailed description of the performed activities, main deliverables and outputs for the three (3) references to be presented in the proposal.

Name of the project: [e.g., Improvement of ...]			Reference No. 1/3
Sector		Country	
Name of funding organization			
Full contact details	name/title/email/ phone #/address		
Name of the client/ beneficiary			
Full contact details	name/title/email/ phone #/address		
Role in the assignment	[e.g., Lead partner in a JV A&B&C]	Total contract value (USD)	Ie. 100,000
Name of consortium partner	(e.g, Contractor B	Contractor's share of contract value	Ie. 75000
Detailed description of the performed activities:			
Description of the deliverables (outputs):			
Other relevant information:			
E.g., end results, detailed description of consultancies for pilot project, workshops, training, conferences, etc. (if any)			

c. Work Plan

- i. Project Understanding, Technical Approach, and Methodology. [Please explain your understanding of the objectives of the assignment as outlined in the Terms of Reference (TOR), the technical approach, and the methodology you would adopt for implementing the tasks to deliver the expected output(s); the degree of detail of such output; and describe the structure and composition of your team. Please do not repeat/copy the TORs in here.]
- ii. Implementation Plan. [Please outline the plan for the implementation of the main activities/tasks of the assignment, their content and duration, phasing and interrelations, milestones (including approvals by the Bank), and tentative delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and

ability to translate them into a feasible working plan and work schedule showing the assigned tasks for each expert. A list of the final documents (including reports) to be delivered as final output(s) should be included here. The work plan should be consistent with the Project Timeline and Deliverables Form.]

- Provide a timeline for this project with milestone-deliverables end dates with the breakdown for activities, delivery of reports, and benchmarks and other requirements, such as the Bank’s approvals. Advice if any areas of the project timeline are critical path and/or require Bank commitment to a deadline.
- For phased assignments, indicate the activities.
- Include a legend, if necessary, to help read the chart

iii. Staffing & Personnel.

- Team composition, assignment, and key experts’ inputs: Identify the project manager/team leader for this effort, and provide the composition of the proposed team.
- Provide each team member’s name, position, nationality, duration of relevant work experience in the field assigned for this assignment, specific activities undertaken for each relevant project completed in the past, etc.

iv. Comments (on the TOR and on counterpart staff and facilities). Present and justify here any modifications or improvement to the terms of reference you are proposing to improve performance in carrying out the assignment such as deleting some activity you consider unnecessary or adding another or proposing a different phasing of the activities. Suggestions should be concise and to the point. Please also include comments, if any, on counterpart staff and facilities to be provided by the Bank. For example, administrative support, office space, local transportation, equipment, data, background reports, etc.

d. Curriculum Vitae: Resume of the professionals or specialists who will be in charge of the service.

Position Title	[e.g., TEAM LEADER]		
Name of Expert:	[Insert full name]		
Country of Citizenship/ Residence			
Education	List university or other specialized education, dates attended, degree obtained		
Employment record relevant to the assignment: [Starting with present position, list in reverse order your past experience. Please provide dates, name of employing organization, titles of positions held, types of activities performed and location of the assignment, and contact information of previous clients and employing organization(s) who can be contacted for references. Past employment that is not relevant to the assignment does not need to be included.]			
Period	Employing organization and your title/position. Contact information for references.	Country	Summary of activities performed relevant to the assignment.

[e.g., May 2005-present]	[e.g., Ministry of Economy and Finance, advisor / consultant to... For references: Tel. 010-xxx-xxxx/e-mail. xxx@xxx.com; Mr.Bbbbb, deputy minister]		
<p>Summary of specific projects undertaken that best illustrate capabilities to conduct this assignment. List in reverse order the most relevant assignments that the expert has undertaken that will showcase their ability to successfully execute this project. All relevant previous experiences can be listed and experiences beyond 10 years will not be valued. Please provide the project period, location, sector, client, and position held, as well as a detailed description of activities performed to complete the assignment which best illustrates the expert's capability to successfully handle this assignment.</p>			
Assignment 1: [Name of the assignment]			
Sector: ICT	Description of activities performed:	Description of outputs:	
Period/ Duration: Jan'19- Feb '21			
Location:			
Client:			
Assignment 2: [Name of the assignment]			
Sector: ICT	Description of activities performed:	Description of outputs:	
Period/ Duration: Jan'19- Feb '21			
Location:			
Client:			
Language Skills			
Contact information			

Side notes:

- **The Information described in this section must be submitted in its entirety. If the required Information is not submitted, the bidder will lose the score for the specific evaluation criteria taking into consideration that this information is not rectifiable.**
- **If necessary, CABEI can request additional information and/or clarifications regarding the submitted offers.**

2.6 Compliance Documentation

2.6.1. The compliance documents to be sent in this section shall include the following information:

- a. Copy of the company's deed, articles of incorporation or constitutive act, duly registered in the Commercial Registry or its equivalent, in which the stakeholder composition of the company can be found.
 - b. Power of Attorney or Certification Copy issued by the Secretary of the Council in which the appointment of the legal representative of the company can be found.
 - c. TAX ID Copy (RUC, RTN, NIT or its equivalent in the country of origin).
 - d. At least one original bank reference, no older than 30 days after it has been issued.
 - e. Affidavit for the Prevention of Money Laundering and Financing of Terrorism, (Annex 3) completed and signed by the legal representative.
 - f. Copy of Legal Representative's passport or identification document.
- 2.6.2. The Bank reserves the right to request additional information or updated documents as it deems appropriate.

2.7 Economic Bid Contents

2.7.1. The financial bid shall contain the following documents placed in the following order:

- a. Properly stamped and signed economic bid template (Annex 4).
- b. Detailed document of the stamped and signed economic bid, in which the detail of fees and related expenses required to provide the services must be included.

2.7.2. The economic bid shall be subject to the following guidelines:

- a. The economic bid must include the direct and indirect costs related to the quoted service and clearly indicate the currency in which it is expressed.
- b. If the payment is made in United States dollars, the official exchange rate in effect at the date of the transaction will be used.

2.7.3. The economic bid must be submitted tax-free. CABEI will provide the taxes waiver document to the awarded bidder.

2.8 Bid Language

All documentation required to participate in this tender shall be submitted in English.

2.9 Bid Submission Procedure

Bids must be uploaded electronically in CABEI's Institutional Procurement Portal, which is available at <https://proveedoreserp.bcie.org/inicio> and all documentation shall be upload in the Public Tender **No. 007/2023 "Intelligent Traffic Systems in Santo Domingo and the National Highways of the Dominican Republic"** following the instructions below:

- a. Proposals must be uploaded separately, as indicated in the "Create Response" tab under section 1 (Oferta Técnica) and section 2 (Oferta Económica).
- b. In the "Create Response" area, the available "Lines" section must be completed".
- c. Once the documents have been uploaded to the Portal in full, click the "Submit" button.
- d. The offers must only be submitted through CABEI's Vendor Portal, **do not send a copy to an email address.**

2.10 Deadline for Submission of Bids

- 2.10.1. The deadline for receiving bids is **March 14th, 2023.**
- 2.10.2. The bids submitted after this date shall be deemed extemporaneous and will not be taken into consideration.
- 2.10.3. Once the bid has been submitted, it cannot be withdrawn, replaced nor modified.
- 2.10.4. If necessary, requests to extend the deadline for submitting the bid must be submitted no later than **March 7th, 2023.**, through the CABEI Institutional Procurement Portal or by sending the request to the address adqinstitucionales@bcie.org CABEI shall submit the period extension request for authorization.

2.11 Inquiries, Deadlines and Coordination

- 2.11.1. If there are doubts or questions regarding the Terms of Reference or the bidding process, they shall be addressed through CABEI's Institutional Procurement Portal "Public Tender **No. 007/2023 "Intelligent Traffic Systems in Santo Domingo and the National Highways of the Dominican Republic"** in the "Gestionar Preguntas del Negocio" tab.
- 2.11.2. Questions submitted regarding the Terms of Reference will be accepted no later than **March 7th, 2023.**
- 2.11.3. All questions will be answered to all Bidders in order to maintain equality in the information provided, these will be uploaded to CABEI's Institutional Procurement Portal.

2.12 Expression of Interest

Bidders who wish to participate in the Tender have to send an email to adqinstitucionales@bcie.org Expressing their interest in order to be granted access to the tender's documents.

2.13 Validity of bids

The bids must have a validity period of at least ninety (90) calendar days, starting on their presentation deadline.

3. GENERAL NORMS

3.1 Performance Standards

- 3.1.1. The Contractor is committed to providing its professional services and execute the tasks indicated in the Contractual Documents, certifying that it meets the highest standards of integrity and professional competence, taking into consideration the nature and purpose of the Bank as an international organization of public law and guaranteeing that it will carry out the services indicated in the Contract to be signed in a manner consistent with the aforementioned.
- 3.1.2. The Bank at all times has the right to verify the quality of the work carried out by the Contractor and to request the modifications and revisions that it deems pertinent within the approach contained in these Terms of Reference.

3.2 Bank Rights

- 3.2.1. If none of the proposals received is considered to fully satisfy the requirements included in these Terms of Reference, CABEI reserves the right to declare the process void. Likewise, CABEI reserves the right to reject any proposal, annul or declare the process failed, decide to extend it, cancel it or partially or totally postpone it, decide to grant it totally or partially to one or more suppliers, as well as determine whether it is convenient to its Corporate interests, without incurring in any liability to the Contractor.
- 3.2.2. CABEI will publish the winning bid for the process of the consultancy on its website, as well as the amount and date of the award in accordance with the provisions of the current Information Security Policy.
- 3.2.3. CABEI reserves the right to supervise the activities carried out by the Contractor and determine whether said activities contravene the provisions related to information security; the Bank may take the actions it deems necessary to safeguard its information, reputation and image.

3.3 Reasons for Disqualification of Bids

- 3.3.1 Lack of a presentation letter signed by the legal representative of the company in the format provided by CABEI (Annex 1).
- 3.3.2 The bids may be disqualified at any time during the process if a breach of the terms of reference occurs or is verified regarding the veracity of the information provided or the adulteration or falsification of the documentation presented.
- 3.3.3 If the bids are incomplete or any of the requirements established in the terms of reference are omitted or not complied with, that are classified by the Bank as not rectifiable.
- 3.3.4 If the proposals are submitted somewhere different than established in the terms of reference and after the established date and time.
- 3.3.5 If the documentation is presented with erasures or unjustified amendments.
- 3.3.6 It will be disqualified if the Economic offer is attached in the same file or is included any economic information in the Technical offer.
- 3.3.7 Send a copy of the proposal to any of CABEI's email addresses.
- 3.3.8 If the technical offer, once evaluated by CABEI, does not meet the minimum score established.

3.4 Prohibitions

To guarantee transparency in its procurement processes, the following persons may not participate, directly or indirectly, in the supply of goods, services and consultancies for CABEI.

- 3.4.1 Active officials or employees, ex-officials or ex-employees and retirees of CABEI for a period of two (2) years from their separation, in addition to spouses or housemates, nor relatives by blood or affinity up to the second degree, inclusive, of officials or active CABEI employees.
- 3.4.2 Juridical persons involving anyone indicated in the previous paragraph, considered individually or jointly, be holders of more than twenty-five percent (25%) of the share capital or hold a position of management or representation, for major purchases amounting ten thousand dollars (US\$10,000), currency of the United States of America, or its equivalent in any other currency.

3.5 Protests or Appeals in the Bidding Process

Any bidder who has participated in this tender and has a complaint regarding its outcome can access the Reporting Channel available on the CABEI's website to issue such complaint. www.bcie.org

3.6 Confidentiality Clause

- 3.6.1 The Contractor and, where appropriate, the personnel in charge of offering the services described in this document, must exercise the greatest secrecy and confidentiality in relation to conversations, data, documents and general information of the Bank that by any means comes to be of their knowledge, and in general, of any prior event or element, whether material or conceptual.
- 3.6.2 Any serious breach of the foregoing, defined as serious and which negatively affects the Bank's official relations with national authorities at any level, or which results in public or commercial dissemination that in any way damages the confidentiality of the Bank's information, may give rise to terminate the contract; the latter will be done by written communication to the Contractor denouncing such events.

3.7 Acceptance of the Code of Ethics

The bidder declares, that it knows the principles, norms and institutional and individual ethical values that prevail at CABEI within the framework of the Code of Ethics, which is attached to these Terms of Reference, and that in case of being selected, it must follow observance and compliance without any restrictions; any breach of said norm will give the Bank the right to terminate the procurement and/or contracting in advance without any responsibility on its part and without prejudice to the pertinent criminal and civil actions.

3.8 Annexes

- a. Annex 1 - Presentation letter.
 - b. Annex 2 - Payment Instructions Template.
 - c. Annex 3 - ML-TF Affidavit Form.
 - d. Annex 4 - Economic offer Template
 - e. Annex 5 - CABEI Policies (Code of Ethics, Integrity Provisions, CABEI Information Security Policy, Money Laundering Prevention Policy).
 - f. Annex 6 - CABEI Contract Template.
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