

TERMS OF REFERENCE

CONSULTANCY SERVICES FOR THE TRAINING, ADVICE AND IMPLEMENTATION OF A BIM PILOT IN THE PUBLIC TRANSPORT SECTOR IN LATIN AMERICAN AND CARIBBEAN COUNTRIES

Regional

RG-T4814

Building Information Modeling (BIM) Strategy Implementation in Costa Rica, Panamá, Perú and Colombia.

<https://www.iadb.org/en/project/RG-T4814>

1. Background and Justification

1.1. This Technical Cooperation (TC) has the objective of supporting the implementation of Building Information Modeling (BIM) in Latin America and the Caribbean (LAC). BIM is a set of methodologies, technologies, processes, and strategies that enable the various actors to collaboratively plan, design, build, operate, and maintain a project (building or infrastructure) in a virtual space. Construction, a traditional sector in Latin America and the Caribbean, has lagged in innovation and the use of technologies, limiting its growth and optimization. The present Terms of Reference are part of this TC and intend to contribute to the achievement its objectives.

2. Objectives

2.1. The objective of this consultancy is to provide training, advisory services, and technical support for the definition, planning, and implementation of a pilot project using Building Information Modeling (BIM) in the public transport sector across countries in Latin America and the Caribbean.

3. Scope of Services

3.1. The consultancy will include the design and implementation of a training process to strengthen the executing agencies' capacity for implementing the BIM pilot in a selected public transport project. It will also include diagnostic assessments, monitoring and evaluation, and the delivery of recommendations for scaling up BIM adoption at national and regional levels.

4. Key Activities

4.1. Definition and planning for the development of the BIM project. This will include a work plan and detailed schedule for the development of the consultancy.

4.2. Diagnosis of the executing agencies to identify gaps and key stakeholders and define up to four

transport infrastructure projects where the pilot will be implemented.

- 4.3. Preparation of the documents to be included in the procurement processes of the selected projects, so that BIM methodologies can be implemented in the projects' lifecycle.
- 4.4. Support the projects' executing agencies in the implementation of the BIM pilot through all the defined stages of the projects' lifecycle. This includes the provision of software licenses in the executing agencies, training and adequate functioning of the software during the development of the pilot project.
- 4.5. Monitor and evaluate results, document lessons learned and propose a plan for national and regional scale-up.

5. Expected Outcome and Deliverables

- 5.1. Product #1: Work plan for the development of the consultancy.
- 5.2. Product #2: Diagnosis and definition of infrastructure projects for the implementation of the pilot plan.
- 5.3. Product #3: Intermediate report on the implementation of the pilot plan.
- 5.4. Product #4: Final report on implementation of pilot plan.
- 5.5. Product #5: Report on lessons learned and plan for national and regional scaling up.

6. Project Schedule and Milestones

- 6.1. Product #1: 15 days from the beginning of the consultancy.
- 6.2. Product #2: 30 days from the beginning of the consultancy.
- 6.3. Product #3: 270 days from the beginning of the consultancy.
- 6.4. Product #4: 510 days from the beginning of the consultancy.
- 6.5. Product #5: 530 days from the beginning of the consultancy.

7. Reporting Requirements

- 7.1. All products must be delivered in editable format. The consultancy will also deliver the BIM documents developed during the pilot projects.

8. Acceptance Criteria

- 8.1. All products must be approved by the consultancy's supervisor, Mauricio Bayona (mauricioba@iadb.org).

9. Supervision and Reporting

- 9.1. Supervisor: Mauricio Bayona INE/TSP (mauricioba@iadb.org).

10. Schedule of Payments

- 10.1. 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.
- 10.2. The IDB Official Exchange Rate indicated in the RFP will be applied for necessary conversions of local currency payments.

Payment Schedule	
<i>Deliverable</i>	%
1. Product #1: Work plan for the development of the consultancy.	10%
2. Product #2: Diagnosis and definition of infrastructure projects for the implementation of the pilot plan.	20%
3. Product #3: Intermediate report on the implementation of the pilot plan.	40%
4. Product #4: Final report on implementation of pilot plan.	20%
5. Product #5: Report on lessons learned and plan for national and regional scaling up.	10%
TOTAL	100%

TERMS OF REFERENCE

CONSULTANCY SERVICES TO ORGANIZE AND EXECUTE A KNOWLEDGE TRANSFER PROGRAM ON THE IMPLEMENTATION OF THE BIM METHODOLOGY, BASED ON EXPERIENCES IN KOREA AND OTHER PARTS OF THE WORLD, AIMED AT OFFICIALS OF PUBLIC ENTITIES IN THE TRANSPORT SECTOR IN LATIN AMERICA AND THE CARIBBEAN

Regional

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2. Objectives

2.1. The objective of this consultancy is to organize and implement a comprehensive knowledge transfer program on the use of Building Information Modeling (BIM) in the public transport sector of Latin America and the Caribbean.

3. Scope of Services

3.1. The consultancy will design and implement a knowledge transfer program on Building Information Modeling (BIM) tailored to public transport agencies in Latin America and the Caribbean, drawing on international best practices such as those from Korea. It will deliver training activities including workshops, seminars, and courses—both in-person and virtual—supported by practical exercises, case studies, and reference materials to ensure long-term capacity building and replicability.

4. Key Activities

4.1. Diagnosis of training needs and mapping of current capacities in public entities of the transportation sector in the region.

- 4.2. Design of the transfer program incorporating relevant international experiences (mainly based in Korea), adapted to the LAC context.
- 4.3. Execution of workshops, seminars and on-site and virtual courses for employees, with practical sessions and case studies.
- 4.4. Development of reference materials (manuals, guides, digital repositories) to consolidate learning and ensure replicability.
- 4.5. Evaluation and systematization of results, including a final report with recommendations for scaling up BIM adoption in public transportation institutions.

5. Expected Outcome and Deliverables

- 5.1. Product #1: Work plan for the development of the consultancy.
- 5.2. Product #2: Intermediate report on the implementation of the training plan.
- 5.3. Product #3: Final report on implementation of training plan.

6. Project Schedule and Milestones

- 6.1. Product #1: 15 days from the beginning of the consultancy.
- 6.2. Product #2: 60 days from the beginning of the consultancy.
- 6.3. Product #3: 170 days from the beginning of the consultancy.

7. Reporting Requirements

- 7.1. All products must be delivered in editable format.

8. Acceptance Criteria

- 8.1. All products must be approved by the consultancy's supervisor, Mauricio Bayona (mauricioba@iadb.org).

9. Supervision and Reporting

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Payment Schedule	
<i>Deliverable</i>	%
1. Product #1: Work plan for the development of the consultancy.	10%
2. Product #2: Intermediate report on the implementation of the training plan.	20%
3. Product #3: Final report on implementation of training plan.	70%
TOTAL	100%

TERMS OF REFERENCE

CONSULTING SERVICE FOR THE DEVELOPMENT OF MANUALS AND PROCEDURES (TECHNICAL, ORGANIZATIONAL, AND OPERATIONAL) FOR THE USE OF BIM METHODOLOGY IN COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN

Regional

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2. Objectives

2.1. The objective of this consultancy is to develop technical, organizational, and operational manuals and procedures to guide the effective adoption and use of Building Information Modeling (BIM) in transport infrastructure projects across Latin America and the Caribbean. The consultancy will provide public institutions with standardized tools and reference frameworks to strengthen governance, improve efficiency, and promote regional harmonization in the application of BIM.

3. Scope of Services

3.1. The consultancy will include the design, drafting, and validation of BIM procedures and manuals tailored to the specific needs and institutional contexts of the beneficiary countries. It will also provide technical assistance and guidance to ensure the manuals are practical, implementable, and aligned with the best international practices while being adapted to regional conditions. The services will culminate in the delivery of a comprehensive BIM Procedures Manual as its primary output.

4. Key Activities

- 4.1. Assess current practices, institutional capacities, and regulatory frameworks related to BIM implementation in beneficiary countries.
- 4.2. Review and adapt relevant international experiences and standards to the context of Latin America and the Caribbean.
- 4.3. Develop draft manuals and procedures covering technical, organizational, and operational aspects of BIM adoption.
- 4.4. Gather information from consultations and workshops developed by this TC with key stakeholders from public institutions to refine and validate the drafts.
- 4.5. Develop a BIM Procedures Manual, incorporating feedback and recommendations for practical application at national and regional levels.

5. Expected Outcome and Deliverables

- 5.1. Product #1: Work plan for the development of the consultancy.
- 5.2. Product #2: Draft of BIM Procedures Manual.
- 5.3. Product #3: Final version of BIM Procedures Manual.

6. Project Schedule and Milestones

- 6.1. Product #1: 15 days from the beginning of the consultancy.
- 6.2. Product #2: 90 days from the beginning of the consultancy.
- 6.3. Product #3: 170 days from the beginning of the consultancy.

7. Reporting Requirements

- 7.1. All products must be delivered in editable format.

8. Acceptance Criteria

- 8.1. All products must be approved by the consultancy's supervisor, Mauricio Bayona (mauricioba@iadb.org).

9. Supervision and Reporting

- 9.1. Type of contract: Product External Consultants (PEC). Lump sum.
- 9.2. Supervisor: Mauricio Bayona INE/TSP (mauricioba@iadb.org).

10. Schedule of Payments

- 10.1. 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.

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

Payment Schedule	
<i>Deliverable</i>	%
1. Product #1: Work plan for the development of the consultancy.	20%
2. Product #2: Draft of BIM Procedures Manual.	40%
3. Product #3: Final version of BIM Procedures Manual.	40%
TOTAL	100%

TERMS OF REFERENCE

CONSULTING SERVICE FOR THE PREPARATION OF A DOCUMENT ON LESSONS LEARNED IN THE DEVELOPMENT OF PILOT PROJECTS FOR THE IMPLEMENTATION OF BIM METHODOLOGY IN LATIN AMERICAN COUNTRIES

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2. Objectives

2.1. The consultancy aims to compile, analyze, and synthesize the lessons learned from the pilot implementation of the BIM methodology in countries of Latin America and the Caribbean, producing a document that can inform future projects and support knowledge sharing across Latin America.

3. Scope of Services

3.1. The consultancy will cover the collection of experiences and insights from the pilot projects developed by the TC, evaluation of successes and challenges, identification of best practices, and preparation of a structured, publishable lessons-learned document. The service includes coordination with local stakeholders, data gathering, analysis, validation, and final documentation ready for dissemination.

4. Key Activities

4.1. Data Collection: Gather information from interviews, surveys, and workshops developed by the pilot projects of TC. If needed, gather additional information through the project teams and

stakeholders.

- 4.2. Analysis and Synthesis: Review collected information to identify patterns, successes, challenges, and best practices in BIM implementation.
- 4.3. Drafting Lessons Learned Document: Prepare an initial version of the lessons-learned report, including structured insights and recommendations.
- 4.4. Validation and Feedback: Share the draft with relevant stakeholders for review, ensuring accuracy and completeness of the content.
- 4.5. Finalization and Publication: Produce the final document suitable for public dissemination, highlighting actionable insights and key recommendations for future BIM projects.

5. Expected Outcome and Deliverables

- 5.1. Product #1: Work plan for the development of the consultancy.
- 5.2. Product #2: Draft of Lessons-learned Document.
- 5.3. Product #3: Final version of Lessons-learned Document.

6. Project Schedule and Milestones

- 6.1. Product #1: 15 days from the beginning of the consultancy.
- 6.2. Product #2: 90 days from the beginning of the consultancy.
- 6.3. Product #3: 170 days from the beginning of the consultancy.

7. Reporting Requirements

- 7.1. All products must be delivered in editable format.

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1. Product #1: Work plan for the development of the consultancy.	20%
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3. Product #3: Final version of Lessons-learned Document.	40%
TOTAL	100%