REQUEST FOR INFORMATION (RFI)
GEOSPATIAL DATA
COMMUNICATION RESEARCH CENTRE (CRC)
DEPARTMENT OF INNOVATION, SCIENCE AND ECONOMIC DEVELOPMENT CANADA

PART 1 – PURPOSE AND NATURE OF THE REQUEST FOR INFORMATION (RFI)

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ANNEX A – STATEMENT OF WORK (DRAFT)

PART 1 – PURPOSE AND NATURE OF THE REQUEST FOR INFORMATION (RFI)

1.1 Introduction

The Communications Research Centre Canada (CRC) is seeking feedback from industry related to the availability of high resolution (1m) geospatial data across Canada.

1.2 Purpose

To support the Communications Research Centre (CRC) Canada's role as the research organization within the Spectrum and Telecommunications Sector (STS), the CRC has a requirement to conduct simulations at millimetre-wave (mmWave) frequencies. The purpose of this RFI is to assess industry availability of geospatial data in a variety of landscapes and scenarios. To this end, knowledgeable industry suppliers/vendors are invited to submit responses to the questions contained in this document using the information in the draft Statement of Work (SOW) contained in the attachment (Annex). In addition, Canada invites vendors to supply any additional information and observations that they believe would inform this procurement process.

1.3 Background

Geospatial data for a diverse range of scenarios, frequency bands, and landscapes throughout the country is of interest to the CRC Canada. Such geospatial data is relevant to simulation or modelling work that requires 3D models of terrain, buildings, and foliage models. Example applications include the evaluation of potential interference caused by new spectrum licence applications and the assessment of deployments in mmWave bands frequency bands.

1.4 Objectives

The objectives of this RFI process are as follows:

A. To seek feedback from industry on the proposed technical requirements. This includes the desire for a better understanding of
    - industry capabilities and constraints;
    - time and cost estimates of the technical components of the proposed capability (e.g., hardware, software, software development);
    - time estimates of the acquisition component of the proposed capability;
    - time and cost estimates of the support component of the proposed capability; and
    - required adjustments/changes to the technical requirements, if any, that are required to ensure that a viable dataset or datasets can be delivered at an acceptable cost.

B. To confirm potential bidder compliance with the technical requirements in the draft SOW.

PART 2 – INSTRUCTIONS TO RESPONDENTS

2.1 Format of Responses

Respondents are requested to provide their comments, concerns, and, where applicable, alternative recommendations regarding how the requirements or objectives described in this RFI could be satisfied. Respondents should explain any assumptions they make in their responses.

Notes to Interested Suppliers

- This RFI for the supply of geospatial data is not a bid solicitation and does not constitute a commitment, implied or otherwise, that the Government of Canada will take procurement action in this matter. The issuance of this RFI is not to be considered in any way a commitment by the Government of Canada, nor as authority to potential respondents to undertake any work that could be charged to Canada. The issuance of the RFI does not create an obligation for Canada to issue a subsequent RFP, and does not bind Canada legally or otherwise, to enter into any agreement or to accept any suggestions from suppliers. Canada reserves the right to accept or reject any or all comments received.

- The Government of Canada will not be responsible for any cost incurred by suppliers in furnishing responses to the RFI process.

- A review team composed of representatives of ISED will review the responses on behalf of Canada.

- There will be no short listing of suppliers for purposes of undertaking any future work, as a result of the RFI. Also, participation in the RFI is not a condition or prerequisite for participation in a future RFP.

- Confidentiality:

    - Suppliers are advised that any information submitted to Canada in response to this RFI may be used by Canada in the finalization of a competitive solicitation.

    - All industry consultations will be documented and this information is subject to the Access to Information Act. Suppliers should identify any submitted information that is to be considered as either company confidential or proprietary. Canada will not reveal any designated confidential or proprietary information to the public and/or third parties.

2.2 Submission of Responses

Responses are not considered bids but, for expediency purposes, electronic submissions may be sent by email to following email address by November 26, 2021:

crcbidreceiving-receptiondesoffrescrc@ised-isde.gc.ca

The Respondent's name, return address, the RFI number and closing date should be clearly visible on the response. Responses to this RFI will not be returned.

2.3 RFI Authority

The Corporate Management Sector (CMS) RFI Authority is responsible for the management of the procurement and RFI process.

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2.4 Enquiries

CRC will not necessarily respond to enquiries in writing or by circulating answers to all potential suppliers as this is not a bid solicitation process. However, respondents with questions regarding this RFI may direct their enquiries to the RFI Authority named above.

2.5 Official Languages

Responses may be in English or French, at the preference of the Respondent.

2.6 Response Confidentiality

Respondents are requested to clearly identify those portions of their response that are proprietary. The confidentiality of each Respondent's response will be maintained. Items that are identified as proprietary will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that the respondent do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all interested parties.

2.7 Methods of Communication

Communication between CRC and respondents as part of this RFI process will consist of written exchanges via email.

Written responses to the RFI questions must be submitted by email by November 19, 2021. Potential respondents may pose clarifying questions in writing via email; all such questions will be published as part of the RFI record.

PART 3 – QUESTIONS AND COMMENTS ON THE DRAFT STATEMENT OF WORK

In the following, references to 'requirements' refer to the contents of the attached draft SOW.

3.1 Questions for Industry

Technical

Question 1:
Is geospatial data available (i.e., already generated) within the specifications and geographical regions listed in Annex A? If not, which regions are unavailable and why (i.e., need to be generated or cannot be obtained)? How long would it take to generate the data for these regions?

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Question 2:
For those geographical regions where data has already been generated, in which year and month were the most recent datasets created?

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Question 3:
What data formats are available for each data "layer" (i.e., terrain, buildings, and foliage) that are compatible with the following propagation simulation toolsets: Wireless Insite from Remcom; Atoll from Forsk; Planet from Infovista, and MapInfo from precisely? Please list all available data formats for each layer and each toolset.

Question 4:
Regarding surface material data for the building data layer:

a) Is building surface material data (ex. Concrete, glass, brick, etc.) available for each of the regions listed in Annex A?
b) If geospatial datasets are purchased initially without building surface material data, can the initial dataset be augmented with building surface material data in the future?

Question 5:
What after-sales support is available for purchased geospatial datasets (e.g., technical support for data formatting issues, consultation on data format conversions)?

Question 6:
What is the estimated cost for datasets in regions for which data is already available (not a formal quotation)?

Question 7
What is the estimated cost for datasets in regions for which data needs to be generated (if any)?

3.2 Comments

In this section of the RFI, CRC invites Respondents to provide their general comments on the draft SOW or to propose ideas not envisioned by the draft SOW. Please note, the draft SOW is subject to change at CMS's discretion.

ANNEX A

STATEMENT OF WORK (DRAFT)

Geospatial data

1.0 Requirement

Technical Specification	Requirement
Resolution	< 2m
Relative Planimetric Accuracy (x,y)	< 3m (RMSE)
Relative Altimetric Accuracy (z)	< 3m (RMSE)
Data Layers	Building Polygons, Vegetation Polygons, DTM, Clutter, Clutter Heights (DHM), Linear Vectors, Ortho-Imagery
Minimum Mapping Unit	5m x 5m

Data Layers	Specifications
Digital Terrain Model (DTM)	1m
Building Polygons	Above-ground and sea level elevation measurements of buildings and building part structures
Vegetation Polygons	Above-ground and sea level elevation measurements of tree canopy vegetation. Relative Planimetric Accuracy (x,y): < 3m Relative Altimetric Accuracy (z): < 5m
Clutter	1m
Clutter examples	Inland Water, Low Vegetation, Forest, Village, Dense Residential, Urban, Building Blocks, Commercial/Industrial, Airport
Linear Vector examples	Coastline, Double River, Inland Water, Highways, Main Roads, Secondary Roads, Railways, Streets
Orthoimage	1m

2.0 Availability

The Communications Research Centre Canada (CRC) has a requirement for geospatial data across a range of region types and scenarios.

Urban Region	***Scenario Type***	Data layers available, meeting specifications (yes/no)	If data layers are unavailable, please list	Year (date)	Comments
Halifax	Downtown / harbour				
Québec	Downtown				
Montréal	Downtown / Hill				
	Downtown / Urban Residential				
	Industrial				
Ottawa – Gatineau	Downtown / River				
	Suburban / Industrial				
	Business Park				
Toronto	Downtown				
	Airport				
	Industrial / Residential				
Windsor – Detroit	Border crossing				
Calgary	Downtown / Urban Residential				
	Suburban				
	Industrial				
Vancouver	Downtown				
	University campus / residential / wooded area				
	Airport				
	Residential / Hill				