

Advance Contract Award Notice (ACAN)

Solicitation No.: 23-224572
Estimated value: CAN\$250,000 plus applicable taxes
Closing date: Closing Date 2022-08-26 -2:00 PM Eastern Daylight Time

1. Advance Contract Award Notice (ACAN)

An ACAN is a public notice indicating to the supplier community that a department or agency intends to award a contract for goods, services or construction to a pre-identified supplier, thereby allowing other suppliers to signal their interest in bidding, by submitting a statement of capabilities. If no supplier submits a statement of capabilities that meets the requirements set out in this ACAN, on or before the closing date stated in this ACAN, the contracting officer may then proceed with the award to the pre-identified supplier.

2. Definition of the Requirement

The Department of Foreign Affairs, Trade and Development (DFATD) has a requirement for the provision of an in-depth analysis of Canada's alignment with the Ceres2030 interventions in order to understand and demonstrate increased programming in 10 high-impact interventions (hereafter "Interventions") over time. GAC would like to know what portion of Canada's development programming in agriculture and food aligns with these Interventions and better understand what project features are associated with alignment and project success. An analysis is needed at the activity and output level, which is not captured in departmental reporting or the Organisation for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC) codes. Subject to the call for proposals entitled "Portfolio Synthesis, Intervention Profiles and Decision Support: Analyzing Global Affairs Canada's Agriculture and Food Systems Portfolio Alignment with Ceres2030 High-Impact Interventions."

2.1 Background:

The [Ceres2030: Sustainable Solutions to End Hunger](#), is a three-year and multi-institutional initiative that brings together [evidence and cost-models](#) to support coordinated G7 donor decision making as they explore their role in the international effort to end hunger (Sustainable Development Goal 2 [SDG2]). The project is designed to support global development donors to increase the amount and improve the efficacy of public fund investments to improve food security and sustainability outcomes. Three partner organizations - Cornell University, the International Food Policy Research Institute (IFPRI) and the International Institute for Sustainable Development (IISD) – have come together to form the Ceres2030 partnership.

GAC's Minister of International Development confirmed Canada's commitment to the Zero Hunger Coalition as a part of the UN Food Systems Summit in 2021. A core objective for donors joining this Coalition is to align development programming with the interventions to achieve Sustainable Development Goal 2 and ultimately meet "zero hunger".

Currently, Canada does not know what portion of development programming in agriculture and food aligns with these areas, as the analysis is needed at the activity and output level, which is not captured in departmental reporting or DAC Codes.

Understanding Canada's alignment with the Interventions will be important to demonstrate increased programming in these areas over time. In addition to coding to the Interventions, it would be important to capture outcomes and other project features like beneficiary types, region, policy makers (e.g., gender, climate) to have better sense of our portfolio in these areas. This will be even more important as Canada is expected to increase programming in the agriculture and food systems sector given the current food crisis that has been exacerbated by the invasion of Ukraine.

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2.2 Scope of Services

The aim of this work is to use machine learning to extract certain project characteristics, features and details at the output and activity level to enhance the details currently found in existing departmental reporting and DAC code databases. This will help to elaborate causal relationships of outputs and activities that are buried within project documents and project outcomes presented in Management Summary Reports (MSR). Project budgets would also be considered to allow economic analysis of the effectiveness of specific activities on project outcomes. This process will lead to building a platform for portfolio analysis and future predictive analysis. Presenting this information as a series of analytics can then be used to create a step-wise evaluation approach. This approach will inform the extent to which interventions and approaches, either individually and jointly, are in alignment with the Ceres2030 Interventions and meeting strategic, programmatic and policy needs of GAC and beyond.

We have connected multiple times with the organisations that led the Ceres2030 initiative to discuss our needs and understand their capacity to apply their machine learning model to address our business challenge.

3. Criteria for Assessment

Any interested supplier must demonstrate by way of a statement of capabilities that its service meets the following requirements:

- Proven track record of creating machine learning models with high accuracy and prediction in the agriculture and food development to assess program impacts;
- Leverage robust and automated data pipeline and data engineering techniques to ingest large volumes of open and internal data (e.g., academic research, published papers, research studies, grey literature) in agriculture and food development programming;
- Extensive experience providing evidence-based policy design, management, monitoring and evaluation support;
- Experience working within complex partnership models involving governmental and non-governmental collaborators.

4. Applicability of the trade agreement(s) to the procurement

This procurement is subject to the following trade agreements:

- Canadian Free Trade Agreement (CFTA)
- Canada-Chile Free Trade Agreement (CCFTA)
- Canada-Colombia Free Trade Agreement (CCoIFTA)
- Canada-Honduras Free Trade Agreement (CHonFTA)
- Canada-Korea Free Trade Agreement (CKFTA)
- Canada-Panama Free Trade Agreement (CPanFTA)
- Canada-Peru Free Trade Agreement (CPFTA)
- Canada-Ukraine Free Trade Agreement (CUFTA)
- Canada-United Kingdom Trade Continuity Agreement (CUKTCA)
- Canada-European Union Comprehensive Economic and Trade Agreement (CETA)
- Comprehensive and progressive Agreement for Trans-Pacific Partnership (CPTPP)
- World Trade Organization-Agreement on Government Procurement (WTO-GPA)

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5. Justification for the Pre-Identified Supplier

The Ceres2030 partnership along with the University of Notre Dame (UND) have led several workshops and engagements with the G7 donors to discuss and demonstrate the machine learning models developed to support this initiative and are well-versed in this digital agriculture landscape, having the subject matter expertise and depth of experience with the machine learning tool to respond to the stated requirements outlined in the aforementioned sections.

What makes the UND unique are the following points:

- **Specialized Machine Learning (ML) Model.** Over the last five years, UND has developed, trained and refined a customizable machine-learning pipeline, comprised of state-of-the-art natural language processing (NLP) methods and transformer-based machine-learning models, to perform data analysis, standardization, summarization, and information extraction.
- **Specialized Training Set and Data:** The ML model It has been trained using more than two million scientific articles, development papers, and metadata focused on for food security, agriculture, and development goals, and its primary purposes is to identify the elements supporting causal pathways to determine links between specific targets (e.g., interventions) and their broader outcomes or programmatic aims.
- **Model Flexibility:** Other data points and contextual data, such as beneficiaries and geographies, can also be included in the model's data pipeline and linked to interventions and their outcomes.
- **International Recognition.** The models have been validated and vetted with food systems donors and multilateral organisations such as the United States Agency for International Development (USAID), International Fund for Agricultural Development (IFAD) and the UN's Food and Agriculture Organization (FAO).
- **Decision Support, Predictive Models and Reporting.** The decision-support framework will show how interventions and outcomes interact across various contexts to predict likelihood to exhibit more impact, given a specific policy benchmark or intervention. This will be expressed with a user interface and dashboards by showing where interventions have been most successful, and under what type of use facilitators (and barriers) have contributed to their success.
- **Knowledge Sharing.** In order to develop and augment data science internal knowledge in the international development domain, UND shall work closely with the GAC data science team to provide access to the models and outputs, and coaching sessions on a regular basis with the intent to support the development of better data science and decision-making for public sector purpose.

6. Government Contracts Regulations Exception(s)

The following exception(s) to the *Government Contracts Regulations* is (are) invoked for this procurement under subsection 6(d) - "only one person is capable of performing the work."

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7. Limited Tendering Reasons

Only a particular supplier can supply the services and no reasonable alternative or substitute services exist for any of the following reasons (CAP Code 71 Exclusive Rights): the protection of patents, copyrights or other exclusive rights.

8. Ownership of Intellectual property

UND will undertake open access sharing of the intellectual property in good faith to support the development of better data science and decision-making for public sector purpose. The GAC data science team will provide open access to the underlying code in its enterprise environment, documentation and notebooks for other teams across the federal department to benefit from this process.

9. Period of the proposed contract or delivery date

The proposed contract is for a period of seven months from the date of contract award.

10. Cost estimate of the proposed contract

The estimated value of the contract, including option(s), is \$ 250,000.00, plus applicable taxes.

11. Name and address of the pre-identified supplier

Legal Name: Notre Dame University
Office Address: Lucy Data Institute for Family & Society,
Nieuwland Science Hall, 384E, Notre Dame, IN 46556, United States
Mailing Address: 384E Nieuwland Science Hall, Notre Dame, IN 46556 USA

12. Suppliers' right to submit a statement of capabilities

Suppliers who consider themselves fully qualified and available to provide the goods, services or construction services described in the ACAN may submit a statement of capabilities in writing to the contact person identified in this notice on or before the closing date of this notice. The statement of capabilities must clearly demonstrate how the supplier meets the advertised requirements.

13. Closing date for a submission of a statement of capabilities

The closing date and time for accepting statements of capabilities is August 26, 2022 at 2pm EST.

14. Inquiries and submission of statements of capabilities

Inquiries and statements of capabilities are to be directed to:

Grant Bott

Procurement Officer, Development Contracting and Management Services
E-mail: URP-BRU@international.gc.ca