RETURN BIDS TO:
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Réception des soumissions - TPSGC / Bid Receiving - PWGSC
1550, Avenue d'Estimauville
1550, D'Estimauville Avenue
Québec
Québec
G1J 0C7

LETTER OF INTEREST
LETTRE D'INTÉRÊT

Title - Sujet Lettre intérêt C4ISR	

Solicitation No. - N° de l'invitation W7701-176500/A	**Date** 2017-03-08
Client Reference No. - N° de référence du client W7701-176500	**GETS Ref. No. - N° de réf. de SEAG** PW-$QCL-028-17068
File No. - N° de dossier QCL-6-39387 (028)	**CCC No./N° CCC - FMS No./N° VME**

Solicitation Closes - L'invitation prend fin at - à **02:00 PM** on - le **2017-06-30**	**Time Zone** **Fuseau horaire** Heure Avancée de l'Est HAE

F.O.B. - F.A.B.

Plant-Usine: ☐ **Destination:** ☐ **Other-Autre:** ☐

Address Enquiries to: - Adresser toutes questions à: Roy, Josée	**Buyer Id - Id de l'acheteur** qcl028
Telephone No. - N° de téléphone (418) 649-2932 ( )	**FAX No. - N° de FAX** (418) 648-2209

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:

RDDC-R et D Défense Canada-Valcartier
DCDR-Defence R&D Canada-Valcartier
2459 ROUTE DE LA BRAVOURE
BATISSE 53
QUEBEC
Québec
G3J1X5
Canada

Comments - Commentaires

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Delivery Required - Livraison exigée Voir doc	**Delivery Offered - Livraison proposée**
Vendor/Firm Name and Address **Raison sociale et adresse du fournisseur/de l'entrepreneur**	

Telephone No. - N°de téléphone
Facsimile No. - N° de télécopieur

Issuing Office - Bureau de distribution
TPSGC/PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

Name and title of person authorized to sign on behalf of Vendor/Firm (type or print)
Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)

Signature   **Date**

Canada

Letter of interest / Request for information for R&D work in C4ISR

Public Works and Government Services Canada (PWGSC), on behalf of Defence Research and Development Canada (DRDC) – Valcartier Research Center, is issuing this letter of interest to inform industry members that a strategy is being developed to potentially address future needs in the area of command, control, communications, computing, intelligence, surveillance, and reconnaissance (more commonly known as C4ISR). Security requirements will be associated with these needs.

The main intent of this letter of interest is therefore to encourage potential suppliers to be proactive when they approach the Canadian Industrial Security Directorate (CISD) by completing the organization and personnel forms prior to the issuance of any invitation to tender.

The requirement is expected to require security clearance in order to access classified information, assets and workplaces. **The security requirements will be up to the Top Secret level.**

Sponsorship

As it takes a relatively long time for firms to obtain security clearance, we invite suppliers to apply for organization and security screening, as described on the CISD website.

You can now email Maude.Roy-Lippe@tpsgc-pwgsc.gc.ca with the subject "Application for sponsorship of organizations and eligibility for safety investigation – C4ISR Project" and provide the required information, according to the CISD website.

More information about obtaining security clearance for your organization and applying for a security investigation for your staff is available at:

https://www.tpsgc-pwgsc.gc.ca/esc-src/enquete-screening-eng.html

Context and description of C4ISR

Needs in science and technology (S&T)

DRDC has unique expertise in certain areas of science, such as combat systems, optronic systems, information systems, information fusion, and decision supports. Research and development (R&D) in support of science programs are guided by DRDC's strategic objectives and the Defence and Security S&T Strategy. Our mission is to:

- Maintain strategic knowledge of technological issues;
- Use this knowledge in support of domestic defense and security operations and missions abroad;
- Provide advice on S&T developments, costs and evolving conditions to meet operational requirements;
- Generate knowledge and technology for a robust, connected and multi-jurisdictional security/intelligence and command and control environment;

- Through the diversity of collaborations, create an environment that leverages the expertise, knowledge and resources of other organizations.

C4ISR is a concept that integrates command, communication and intelligence activities to improve decision-making. This definition supports the "built C4ISR" at the higher level, as identified in the C4ISR Capability Development Strategy. It encompasses concepts, people, connectivity, information systems, sensors and tools to support and achieve effective C2 and situational awareness across the spectrum of operations of the Canadian Armed Forces (CAF), through the timely procurement, production and dissemination of reliable and relevant information.[1]

The S&T requirements for the C4ISR domain intersect with the work of several projects involving a number of DRDC scientific sections in Canada. For the Valcartier Research Center, these sections include Spectral and Geospatial Exploitation (SGE), Electro-Optical Warfare (EOW), Tactical Surveillance and Reconnaissance (TSR), Command, Control and Intelligence (C2I) and Defence experimentation Valcartier (DeV).

DRDC's C2I Section will work on projects that act as an integrating S&T cluster to study systems and technologies for command, control and intelligence for all military environments. These systems and technologies will require the integration of different systems operating on different platforms. Systems integration can also be achieved through automation, algorithm development and technical solutions to facilitate the exchange and exploitation of tactical data from various information systems and sensors. The C2I Section is used for capacity development projects to improve the integration and compilation of information. Research is also continuing in the areas of information and knowledge management and geo-spatial-temporal representations of information that facilitate analysis and decision-making.

Work in C4ISR S&T

The development of new concepts in support of R&D programs requires expertise at the cutting edge of S&T advances, which need to be achieved by industry. Requirements are grouped into six R&D areas to be handled by industry for S&T coverage, in accordance with CAF requirements.

The six areas are:

1 - Command and Control (C2)

The field of command and control (C2) deals with how commanders and decision-makers discover and use operational information to make decisions and give directives that generate the desired operational effects consistent with the commander's intent.

R&D in this area is intended to enable commanders and other decision-makers of the CAF to exploit operational information in order to make decisions and provide guidance, thereby generating the desired operational effects in line with command intent. There is a need to support the continued

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[1] Canadian Forces, "C4ISR Capability Development Plan", distributed under 1180-1 (D Mil CM), 31 August 2009.

development of innovative collaborative tools and information processes to directly support the enhanced C2 effects of command, including interoperability with allies, the CAF and others.

2 - Communications, computers and information systems (C2IS)

The field of communications, computers and information systems addresses how information technology can be used to support the sharing and exploitation of operational information in a way that supports commanders and operators.

The ability to extend the rapid information lifecycle (and its communication means) to all CAF personnel is essential to the activities of deployed forces and support activities. The CAF uses a myriad of internal and external networks to support information processes. These networks and their specialized components (including traditional information technologies in support of data processing and storage, tactical communication equipment and satellite equipment) pose ongoing challenges in terms of supporting of the increasingly important and demanding information processes of the CAF. DRDC must support optimization and innovation activities in support of the command's ability to achieve superior information.

3 - Information and Intelligence (I2)

The Information and Intelligence area deals with how operational information is created and managed so that it can be used to support the actions of commanders and operators.

Intelligence information processes are required to support all activities related to the production, exploitation and dissemination of intelligence through the chain of command, in the most efficient manner possible. Intelligence processes and capabilities require development and optimization in all areas of data management, data security, storage and retrieval, as well as information integration and exploitation from all sources of intelligence. This includes the combination of quantitative and qualitative factors in a single analysis and visualization process. The analytical tools sought are intended to provide intelligence and support for evidence-based decision-making.

4 - Information and Knowledge Management (IKM)

Information and Knowledge Management (IKM) processes support all CAF activities within the CAF Integrated Information Enterprise. They seek to do so in a manner that meets the CAF's information management and data security policies in the most efficient and effective manner. The CAF IKM information processes require development and optimization in the areas of data management, data security, and storage and retrieval activities in support of information.

The research focuses on the development of innovative solutions related to the management and exploitation of information through the development and integration of methodologies, tools and technologies, so as to carry out quantitative and qualitative analyses on massive heterogeneous data sets, data storage, retrieval and processing for efficient decision-making, while reducing the cognitive load.

5 - Surveillance, Recognition and Targeting (SRT)

The area of Surveillance, Recognition and Targeting (SRT) addresses how operational information is gathered from the environment in order to be used to support the actions of commanders and operators.

The CAF must have a suite of battlefield information sensors to handle critical information requests and ensure that decision-makers have full situational awareness to support accurate commitments by the operational units. Whether it is land, sea or air sensors platforms, DRDC must help the CAF in the SRT field by working on the feasibility, integration and application of sensors across multiple platforms, with constant technological advancement. In addition, DRDC must strive to integrate workstations in a variety of platforms by focusing on common human-machine interfaces and common electronic, mechanical and data interfaces, enabling operators to use and to exploit any existing or future sensor via a common workstation.

6 - Integration of C4ISR

As part of its Defence and Security Strategy S&T mandate, DRDC must have access to science and technology to develop and implement solutions to maximize the savings and reliability of systems acquired by the Department of National Defence (DND) and the CAF.

This area integrates R&D results from previous C4ISR research areas. The role and expertise of industry resources in this area range from the development of new concepts to the evaluation and demonstration of enabling technologies for advanced C4ISR information systems through experimentation of potential solutions within the DND and CAF. Information technology is evolving rapidly, and the range of expertise sought is vast. The industry must be able to carry out R&D related to the development of advanced prototypes. External resources are also required in terms of technological support for S&T computing environments, support for testing and experimentation, and technology watch of future system-of-systems architectures.