

Travaux publics et Services gouvernementaux Canada

REQUEST FOR INFORMATION FOR

Area Detection and Identification System (ADIS) Project Department of National Defence (DND)

THIS DOCUMENT IS *NOT* A REQUEST FOR PROPOSAL, REQUEST FOR QUOTATION OR CALL FOR TENDER. NOTICE



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1. INTRODUCTION

This Request for information (RFI) seeks information from industry on its interest and capability to meet the requirements of the Chemical Agent Sensors (CAS) project to procure 32 transportable optical-based standoff chemical sensor, called the Area Detection and Identification System (ADIS).

2. BACKGROUND

ADIS will provide chemical detection and identification as a remote stand-alone sensor, or as part of a suite of up to 6 sensors monitored. It may be controlled by the Sensor Integration and Decision Support (SI&DS) command and control system (see note on page 12). The minimum standoff detection distance will be 3 km, with a preferred distance of 5 km. ADIS will be capable of detecting both Chemical Warfare Agents (CWA) and Toxic Industrial Chemicals (TICs) and provide warning to Canadian Armed Forces (CAF) personnel in a timely manner. The responses provided by industry will be considered in finalizing the Request for Proposal (RFP) documentation, in order to enable the maximum participation in the solicitation process.

3. RFI ADDITIONAL CONTENT

The following annexes are an integral part of this RFI:

Annex A—Participation Form

Annex B-Questions to Industry

Annex C—Industrial and Technological Benefits Questions

4. REQUEST FOR INFORMATION

"Respondents" refer to businesses, business consortiums, legally incorporated persons and/or academic organizations with the capacity to meet the requirements specified in this document.

Canada may use the information provided by respondents to improve the current requirement, the procurement strategy or the budget allocation for the project. Canada may also use information collected in the engagement process to improve all subsequent requests for competitive proposals.

In order to optimize the results of this RFI, respondents are encouraged to respond to each of the subjects listed in Annex B—Questions to Industry and Annex C – Industrial and Technological Benefits Questions.

4.1. Recommendations, suggestions and comments

Respondents are invited to comment or to make recommendations and/or present data (including technical data and/or financial data) that could help Canada improve the procurement strategy.

4.2. Contractual information and the procurement process

If Canada decides to proceed with the bidding process, following the closing of this current engagement process, requests for proposals for a standing offer and/or supply arrangement and/or contract or a combination of these will include all details and necessary documents. Any request for proposals will be posted on the Buyandsell.gc.ca website. Further details on the procurement strategy are identified in section 6, below.

4.3. Security requirements

The security requirements associated with ADIS projects have not been determined. It is expected that security clearance up to SECRET will be required for facilities and/or the contractor's employees. To meet



these requirements, respondents are asked to provide details of their abilities and their current and future facilities. Respondents are encouraged to be aware of any security provisions. More information on this can be found at the following address: <u>http://www.tpsgc-pwgsc.gc.ca/services/secinfo-eng.html</u>.

5. DESCRIPTION OF REQUIREMENTS

The Department of National Defence (DND) has a requirement for the supply of a chemical Area Detection and Identification System (ADIS). The ADIS will provide an early warning so that Canadian Armed Forces (CAF) can survive and operate under the chemical, biological, radiological or nuclear (CBRN) threat by adopting protective measures.

6. PROPOSED PROCUREMENT STRATEGY

Respondents are asked to refer to Annex B—Questions to Industry and Annex C – Industrial and Technological Benefits Questions., to present their responses to information requested.

To facilitate the review of responses, respondents are asked to provide the information requested in the order presented.

7. NOTES FOR INTERESTED RESPONDENTS

The RFI is not a Request for Proposal nor does not constitute a commitment, implied or otherwise, based on which the Government of Canada would launch a procurement process. The publication of this RFI does not commit Canada to publish one or more resulting Request for proposals and does not carry any legal or other obligations in Canada to enter into an agreement or accept suggestions from respondents. Canada reserves the right to accept or reject, in whole or in part, any comments received.

In addition, the Government of Canada will not reimburse the costs incurred by respondents to participate in this consultation process, nor to present their responses.

A review team composed of representatives of Canada will be responsible for assessing responses on behalf of the Government of Canada. Canada can also call upon an external consultant or any other government resources deemed necessary to evaluate responses. Each response will not necessarily be assessed by all members of the review team. If necessary, the external consultant(s) will sign a non-disclosure agreement prior to the assessment of responses. Canada will provide information through an intermediary for any amendment to this RFI or by sending an email to the electronic mailing list.

A shortlist of businesses for the delivery of future work following this current RFI will not be drawn up. Similarly, participation in this RFI is neither a condition nor a prerequisite to respond to any future Request for Proposal.

7.1. Confidentiality

Respondents should be aware that Canada can use any information transmitted to it in preparing a competitive request for proposal. However, the government is obliged neither to accede to any statement of interest nor to take it into account in any related document.

All consultations with industry members will be documented. The information collected is governed by the *Access to Information Act*. If necessary, respondents are asked if the information they provided should be treated as confidential or proprietary. Canada will not disclose any information designated as confidential or proprietary to the public or to third parties, except for external consultants who could be called in to assess responses to the RFI.



8. MAILING ADDRESS AND RESPONSE FORMAT

Responses to questions regarding this RFI are to be sent by email to the Contracting Authority identified in section 12. Respondents are responsible for ensuring that their responses to the RFI have been received by Canada.

The electronic file containing the responses must be submitted in portable document format $(PDF)^{TM}$ or in a readable format using Microsoft Office 2003^{TM} or a more recent version. The email capacity for sending and receiving is unfortunately limited to a maximum of five (5) Mb.

The submission of an electronic copy will facilitate the distribution of responses to the members of the project team at DRDC and complies with the *Policy on Green Procurement* of the Government of Canada.

9. ASSESSMENT OF RESPONSES AND INDUSTRY FOLLOW-UP

Once responses to this RFI are received, an evaluation will be made to determine whether improvements can be made to the procurement strategy. In order to keep respondents apprised of this requirement, PWGSC will issue a document containing the results of this RFI.

This document could include, without being limited to, the following:

- the number of contractors that participated in the process;
- the names of contractors that submitted responses;
- a collective assessment of the responses received, including anticipated changes, if any. <u>Proprietary information shall not be disclosed;</u>
- the final procurement strategy;
- > an approximate timetable for the resulting procurement process, if applicable; and
- next steps.

The document containing the results of the RFI will be sent to respondents that submitted a response to this RFI and will be published on the Buyandsell.gc.ca website.

10. INQUIRIES

Inquiries and other communications regarding this RFI are to be sent exclusively to the Contracting Authority indicated in section 12. We request that respondents that anticipate responding to this RFI inform the Contracting Authority. This way, they can be informed of any changes to the notice published on the Buyandsell.gc.ca website.

11. LANGUAGE

Communication and/or responses can be made in one of the two official languages of Canada (English or French).

12. CONTRACTING AUTHORITY

All inquiries and other communications related to this RFI are to be directed to the Contracting Authority at the following address:

Marco Pelchat

Acquisitions Branch Public Services and Procurement Canada Les Terrasses de la Chaudière 10, Wellington St., 4th Floor, Gatineau (Québec) K1A 0S5, Canada



Telephone: 819-665-7128 Email: <u>marco.pelchat@tpsgc-pwgsc.gc.ca</u>

ANNEX A—PARTICIPATION FORM

To participate in this Engagement process, respondents must complete and sign the Participation Form, including its appendices, and return them to the Contracting Authority identified in section 12, above.

Name of Main Participant	Name of Business
Title of Main Participant	Business Address
Preferred Language of Communication	
English French	

By signing this document, the participant declares to have full binding authority for the above-mentioned business and agrees on the business's behalf to be bound by the terms and conditions set out in Annex A—Participation Form, including its appendices.

Signature		
(I have the authority	to bind the company)	

Date

Name (Block Letters)

Title or Position (Block Letters)ANNEX B—

QUESTIONS TO INDUSTRY

In order to better respond to industry concerns, adhere to best practices and develop a procurement strategy that is better aligned to the requirements, we ask respondents to respond to the questions below.

In addition, respondents are asked to inform the Contracting Authority of any additional topic that in their opinion should have been considered in developing the procurement strategy and/or tender documents.

For any negative responses, we invite respondents to provide suggestions for improvements and/or constructive feedback so that Canada can take the necessary measures to amend the negative item(s) identified, where appropriate.

Questions			
1.0	System Detect and Identification (D&I) of CWA and TICS		
а	What is the spectral range of the sensor?		
b	What is the overall system probability of detection and identification and its confidence level?		
с	What is the temperature contrast between the cloud and background for the above probability?		
d	How long does it take to complete a 360 degree scan while in detection/identification mode?		



е	What is the maximum slew rate of the sensor when not detecting?						
f	At which elevations range can the system scan?						
2.0	Capacity of Simultaneous Detection and Identification						
а	Can your system search for, as well as detect and identify any substance that is in the library simultaneously and without any restriction? If not, please see b-d:						
b	How many C	WAs and TIC	s can be det	ected and ic	lentified sim	nultaneously?	
с	What is the reason for this limitation? (i.e. Computer processing related? Detection technology related? Other?)						
d	Can this limit	ation be red	uced or mit	igated?			
3.0	Agent Detection	I					
		n and 5km, g	iven a thern			.C, HD, a G agent f data not availal	
		3 km		51	ĸm	Justification	
а	Agent	Column Density (mg/m ²)	Cloud size (m)	Column Density (mg/m ²)	Cloud size (m)	(analysis, test, etc)	
	AC						
	HD						
	G						
	V						
4.0	Electromagnetic interference (EMI) / electromagnetic compatibility (EMC)						
а	List all of the EMI/EMC conditions to which your system has been tested/certified.						
b	Which standards and test methods were used?						
с	Are you in a position to provide the test reports / certification for each test? If not, why?						
5.0	Environmental conditions						
а	List all of the environmental conditions to which your system has been tested/certified:						
b	Which standards and test methods were used						
с	Are you in a p	position to p	rovide the t	est reports /	certificatio	n for each test? I	f not, why?
6.0	System cost and content						
а	What is the Rough Order of Magnitude cost of a single bilingual English/French system based on a lot of 32?						
b	List all system contents/components that are included at this cost.						

7.0	Decontamination			
a	How is your system decontaminated?			
ŭ				
b	Can you deliver the system with Chemical Agent Resistant Coating painting according to MIL-DTL-53072?			
с	Are there components that cannot be decontaminated?			
8.0	Manuals and training			
а	Are your manuals and training available in both English and French?			
9.0	Operator manual			
а	Please provide an English copy of your operator manual with your reply to this RFI.			
10.0	Mean time between failure (MTBF)			
а	What is the system mean time between failure (MTBF)?			
11.0	Self-test and calibration			
а	Does the system have self-test and calibration capability?			
12.0	Graphic User Interface (GUI)			
а	Is the GUI available in both English and French?			
b	What information is displayed?			
с	What kind of alarms are provided?			
d	How is the system controlled through the GUI (keyboard, mouse, touchscreen, MIL-STD- 1472 compliant)?			
е	Does system software allow for different user profiles (i.e. Admin, Operator, Maintenance, etc.)?			
13.0	System Library			
а	What CWAs are in your system's library?			
b	How many TICs and interferants are in your library?			
с	Are you in a position to provide the test reports for each signature? If not, why not?			
d	Is there a limit to the size of the library (i.e. memory capacity? algorithm processing? system response time?)			
14.0	System library update			
а	Who can add new chemical signatures (user, manufacturer, etc)?			
b	Is the signature development completed in house or through a third party?			
с	What is a typical timeline from request to delivery of a new chemical signature?			
d	Can classified chemical signatures be added?			
е	Can library be tailored for specific missions?			
f	Are special software or tools required by the user to create and update library items?			

15.0	Warning Messages			
a	Can your system generate CBRN 4 messages per ATP-45?			
b	Is it automatically transmitted?			
С	Can users view and edit?			
16.0	Connectivity			
а	Does your sensor unit provide Ethernet and video ports?			
b	How many Ethernet and video ports?			
С	Is your system compatible with self-routing Ethernet radios?			
17.0	Control			
а	Can your system be networked and remote controlled?			
b	How many sensors can be controlled using single console?			
с	Is a router provided / needed?			
18.0	Sensor Integration (See Note *)			
а	Does your system have a Vehicle Specific Module (VSM) software component that is compliant with STANAG 4586 Edition 4, specifically AEP-84.1 Edition A, Version 1 to level of interoperability 3?			
b	If no VSM has been implemented, can your system architecture and resources support the implementation of the above VSM?			
с	Would your company be willing to work with DND to implement the VSM?			
19.0	Operating configuration for an autonomous, 96 hour mission			
а	What components are required?			
b	What is the weight of each component?			
с	What are the dimensions of each component?			
20.0	Transit configuration for an autonomous, 96 hour mission			
а	How many cases total?			
b	What is the weight of each loaded case?			
с	What are the dimensions of each loaded case?			
d	Are the transit cases stackable?			
21.0	Global Positioning System(GPS) and compass			
а	How does your system accept GPS and compass information?			
22.0	Power Requirements			
а	List the different power sources the system can accept (eg, vehicle, shore, grid)			
b	How long can a system operate on a single battery charge?			

С	Is the battery rechargeable?
d	How long does it take to fully recharge a battery?
е	Can the battery be hot-swapped?
23.0	System Information Security
а	Where does the chemical library and processor reside within your system?
b	Does the library reside on removable storage medium?
с	What information is exchanged between the sensor and control components?
d	Where does the signal processing occur?
е	What kind of encryption does your system use?
24.0	International Traffic in Arms Regulations (ITAR)
а	Is your equipment subject to ITAR restriction?
25.0	TEMPEST TM
а	Is your system certified to TEMPEST [™] Level 1 or 2? If so, which one?
b	If your system is not TEMPEST [™] approved, can your system become certified as TEMPEST [™] Level 1 or 2 by just incorporating a console that is certified to TEMPEST [™] Level 1 or 2?
26.0	Delivery
а	If your company were to receive an order for 32 bilingual English/French systems in 2018, what would be your delivery schedule (first and last delivery)?

* Note on System Integration (SI&DS).

DND integrates different types of CBRN sensors into a higher level command and control network. The Common Sensor Controller (CSC) is a computer device belonging to the command and control network that receives event reports and exercises individual control on chemical and other types of CBRN sensors. The CSC is part of the Sensor Integration and Decision Support (SI&DS) project, and is not part of this chemical sensor project itself.

Therefore, the chemical sensor project must incorporate a software that is capable of interfacing the individual chemical sensors with the CSC. In STANAG 4586 vocabulary, this interface is called the Vehicle Specific Module (VSM). The VSM is a vendor specific software residing in the chemical sensor network. The hardware where the STANAG 4586 VSM resides must provide an RJ45 Ethernet port to reach the CSC(s).

Please note that in STANAG 4586: Level of Interoperability 3 means: control of the sensor(s); Level of Interoperability 2 means: monitoring of the sensor(s); and STANAG 4586 refers to sensors as "payloads."



ANNEX C— INDUSTRIAL AND TECHNOLOGICAL BENEFITS

1.0 Introduction

The Industrial and Technological Benefits (ITB) Policy, including Value Proposition, may apply to the Area Detection and Identification System (ADIS) project. Engagement through the Request for Information (RFI) will help determine the ITB Policy's application and how Canada could leverage this procurement for economic benefit.

1.1 The ITB Policy including Value Proposition

The ITB Policy is a powerful investment attraction tool and companies awarded defence procurement contracts are required to undertake business activities in Canada equal to the value of the contract. The ITB Policy encourages companies to establish or grow their presence in Canada, strengthen Canada's supply chains, and develop Canadian industrial capabilities.

The goal of the ITB Policy is to support the long-term sustainability and growth of Canada's defence sector, including small and medium-sized enterprises in all regions of the country, to enhance innovation through R&D in Canada, to support skills development and training, and to increase the export potential of Canadian-based firms. The ITB Policy includes the Value Proposition (VP), which requires bidders to compete on the basis of the economic benefits to Canada associated with its bid. Winning bidders are selected on the basis of price, technical merit and their VP. VP commitments made by the winning bidder become contractual obligations in the ensuing contract.

For more information about the ITB Policy, please visit <u>www.canada.ca/itb</u>.

Key Industrial Capabilities:

To maximize the economic impact that can be leveraged through the VP, Canada will look to use the ITB Policy to motivate defence contractors to invest in <u>Key Industrial Capabilities</u> (KICs). KICs align with Canada's defence policy, <u>Strong, Secure, Engaged</u>, and the <u>Innovation and Skills Plan</u> by supporting the development of skills and fostering innovation in Canada's defence sector. The KICs represent areas of emerging technology with the potential for rapid growth and significant opportunities, established capabilities where Canada is globally competitive, and areas where domestic capacity is essential to national security.

The Government has identified this procurement as requiring capability in the area of the *Electro-Optical / Infrared (EO/IR) Systems*. As leading Canadian competencies and critical industrial services, this KIC represent an area where Canada is globally competitive. As a result, Canada expects to motivate defence work in this area, including enhanced supply chain participation and opportunities for exports.



The definition for the relevant KIC for this project is:

Electro-Optical / Infrared (EO/IR) Systems: Design, manufacture and integration of electro-optical and infrared systems for surveillance, reconnaissance, night vision, and targeting. This category also includes components and assemblies that significantly drive system capability, as well as software that enhances system performance or contributes to superior exploitation of collected sensor information. Applications for these systems are either military or civil, and feature in multiple media, including airborne platforms, satellites, ground vehicles, ships and submarines, or in fixed infrastructure.

2.0 ITB/VP INDUSTRY ENGAGEMENT QUESTIONS

2.1 Defence Sector:

The ITB Policy seeks to promote economic development and long-term sustainment of Canadian businesses engaged in the manufacturing and delivery of products and services used in government defence and security applications.

- Based on the high level mandatory requirements proposed by the Department of National Defence, describe what Direct Work activities your company would foresee undertaking in Canada for the production and the maintenance of the ADIS system?
 - a. What percentage of the Direct Work could be completed in Canada in EO/IR Systems?

2.2 Supplier Development:

The ITB Policy seeks to improve the competitiveness of Canadian industry by encouraging Canadian industrial participation and the scaling up of Canadian companies, including small and medium-sized businesses (SMB), in the supply chains of bidders and tier-one suppliers for the ADIS project.

- ii. As a result of the ADIS project, please indicate what new supply chain opportunities could be made available to Canadian suppliers and what opportunities you foresee that could be specifically targeted at Canadian SMBs? Please include in your response information on:
 - a. Which activities should be perceived as providing the highest value to Canada and why; and
 - b. Supplier development opportunities that could be performed in the area of EO/IR Systems. For the EO/IR Systems supplier development opportunities identified, please specify the Direct and Indirect activities that could be performed with SMBs?
- iii. The ITB Policy requires at least 15 percent of the value of the contract to be work with Canadian SMBs. Please describe the challenges and opportunities that you foresee if Canada motivates higher levels of SMB participation through a rated requirement?

2.3 Exports:

The ITB Policy seeks to increase the opportunities for Canadian industry to successfully access export markets.



iv. Please detail the potential export opportunities your company foresees undertaking from Canada as a result of the ADIS project?

a. Please identify to what extent export opportunities could be performed in EO/IR Systems?

- v. Please provide your views on the feasibility of providing an exclusive global product mandate to your Canadian partners or Canadian-based operations, including subsidiaries, and supply chain partners for direct work, global value chain (exports on the system) and indirect opportunities?
- vi. To what extent are you able to support the licencing or transfer of Intellectual Property (IP) related to your solution to your Canadian partners or Canadian-based operations, including subsidiaries, and supply chain partners so that these organizations have access to the necessary IP to undertake work in Canada?

2.4 Skills Development and Training:

The ITB Policy fosters the development and sustainment of a diverse, talented, and innovative Canadian workforce through access to training, education, opportunities and programs.

- vii. Please detail the potential opportunities related to skills development and training that could be incentivized for investment through the Value Proposition?
 - a. Include in your response which activities should be perceived as providing the highest value to Canada and why?
 - b. Please identify to what extent skills development and training investments could be performed in EO/IR Systems?

2.5 Research and Development:

The ITB Policy encourages innovation and technological advancement through research and development (R&D) investments.

- viii. Through the Value Proposition, in what high-value R&D areas should Canada motivate investment?
 - a. Please identify to what extent R&D investments could be performed in EO/IR Systems?
- ix. Recognizing the role that post-secondary institutions and public research institutes play in fostering innovation in Canada, please describe what potential direct or indirect opportunities your company foresees undertaking in Canada with these organizations and what specific research areas you would pursue?

2.6 Other Questions:

x. Are there other relevant KICs which align with the work to be conducted for the ADIS project? If yes, please indicate which KICs should be considered and why. As part of your response, please describe how the proposed KICs would enhance the opportunities that could be leveraged through the Value Proposition for Canadian industry.



- xi. With consideration to technical merit and price, the Value Proposition typically has a weight of no less than 10 percent of the overall bid evaluation. Please provide yours views on the weighting of the Value Proposition for the ADIS project?
 - a. In your response, please include feedback on proposed weightings for each Value Proposition pillar (i.e. Defence Sector, Supplier Development, Exports, Skills Development and Training, and Research and Development)?
- xii. Based on the high level mandatory requirements, do you foresee any challenges if the ITB Policy, including Value Proposition, is applied to this procurement?
 - a. Please explain these potential challenges and propose mitigation strategies that could support development of the defence sector in Canada for the acquisition and maintenance of the ADIS system?