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Bid Receiving - PWGSC / Réception des
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11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
Core 0A1 / Noyau 0A1
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

LETTER OF INTEREST
LETTRE D'INTÉRÊT

Comments - Commentaires

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

Issuing Office - Bureau de distribution
Science Procurement Directorate/Direction de l'acquisition
de travaux scientifiques
11C1, Phase III
Place du Portage
11 Laurier St. / 11, rue Laurier
Gatineau, Québec K1A 0S5

Title - Sujet RFI FOR MASAS X	
Solicitation No. - N° de l'invitation W7714-145919/A	Date 2014-02-25
Client Reference No. - N° de référence du client W7714-145919	GETS Ref. No. - N° de réf. de SEAG PW-\$\$\$V-055-27213
File No. - N° de dossier 055sv.W7714-145919	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-03-27	
Time Zone Fuseau horaire Eastern Daylight Saving Time EDT	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Bellefeuille, Bruno P.	Buyer Id - Id de l'acheteur 055sv
Telephone No. - N° de téléphone (819) 956-1688 ()	FAX No. - N° de FAX (819) 997-2229
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE DEFENCE RESEARCH & DEVELOPMENT CDA 222 NEPEAN ST, 11TH FLOOR OTTAWA Ontario K2P 0B8 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée See Herein	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	
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

Solicitation No. - N° de l'invitation

W7714-145919/A

Amd. No. - N° de la modif.

File No. - N° du dossier

055svW7714-145919

Buyer ID - Id de l'acheteur

055sv

CCC No./N° CCC - FMS No/ N° VME

W7714-145919

The Multi-Agency Situational Awareness System (MASAS) - Request For Information is attached.

Revisions to the first page of this document are to clarify that this is not a solicitation for bids.

ON THE FIRST PAGE, PLEASE:

REPLACE "LETTER OF INTEREST" WITH "REQUEST FOR INFORMATION.

NOTE:

**TITLE: Multi-Agency Situational Awareness System
(MASAS)**

**Please be advised that the attached document is a
Request for Information**

This Request for Information (RFI) seeks to determine interest in and approaches for operating the Multi-Agency Situational Awareness System (MASAS) from organizations who could operate the national situational awareness information exchanges, related products and services, and support the management of the national emergency messaging specifications required by them.

REQUEST FOR INFORMATION (RFI)

FOR

Multi-Agency Situational Awareness System (MASAS)

1.0 PURPOSE

This Request for Information (RFI) seeks to determine interest in and approaches for operating the Multi-Agency Situational Awareness System (MASAS) from organizations who could operate the national situational awareness information exchanges, related products and services, and support the management of the national emergency messaging specifications required by them.

2.0 Applicable Documents

Business Model and Governance Structure Options Analysis for the Multi-Agency Situational Awareness System.

Multi-Agency Situational Awareness System Community Survey 2013

Multi-Agency Situational Awareness System Technical Architecture

Communications Interoperability Strategy and Action Plan for Canada

All documents available upon request.

3.0 Background

MASAS has been identified as a national situational awareness platform in the *Action Plan of the Communications Interoperability Strategy for Canada*, and the Canada –

United States Action Plan *Beyond the Border – A Shared Vision for Perimeter Security and Economic Competitiveness*.

The *Communications Interoperability Strategy for Canada* (CISC) is a strategic document that sets goals and identifies key national priorities to enhance governance, planning, technology, training and exercises to promote interoperable voice and data communications. The CISC, through its Action Plan, provides a series of action items, including milestones, to help emergency responders and relevant government officials make measurable improvements in day-to-day operations, as well as emergency communications, on an annual basis.

Situational awareness (SA) is essential to the planning and execution of emergency response efforts. Those working in critical environments, like first responders, incident commanders, or emergency managers, are highly dependent on SA information to make decisions and perform their duties. Several different SA tools are used across Canada, and the ability to connect these different tools for shared SA is a critical capability that is needed in order to improve interoperability and ensure a more efficient and effective response. MASAS enables pan-Canadian and Canada/United States interoperability, and is recognized as a leading pilot project that enables communications interoperability among Canada’s public safety community.



Figure 1 Vision of MASAS to enable interoperability

MASAS is realized through a software system, which facilitates the sharing of authoritative location-based information, in near real-time, among Canada’s emergency management community. MASAS is designed to allow multiple agencies to log into the

system and access real-time information from the system, as well as provide information into the system.

MASAS acts as an information broker, enforcing a common standard for defining how data is to be structured and packaged, to ensure interoperability between agencies. The MASAS architecture is based on national geospatial and public safety standards. It also acts as information filter, enforcing access rights and levels of information, to ensure that confidentiality and possible security restrictions are met.

MASAS consists of the core software, and a set of interfaces and software development tools which can be used by public agencies to build interfaces and stand-alone software systems which connect to MASAS.

3.1 Options Analysis Study

In 2012, Public Safety Canada commissioned a Business Model and Governance Structure Options Analysis report from KPMG for the Multi-Situational Awareness System (referenced in section 2 above) that provided options for a business model and governance structure for MASAS. The report focused on six case studies of existing or proposed organizations selected by Public Safety Canada, and analysis of four generic business models as they would be applied to MASAS:

- Government-Funded Model (Federal Agency)
- Government-Funded Model (Crown Corporation)
- Non-Profit/Non-Government Organization
- Public-Private Partnership

The analysis was carried out with the base assumption that a governance model could be established independently of the form of the MASAS business organization. A key observation was that a governance model which placed more emphasis on user community representation, rather than corporate monitoring, was likely more applicable to the MASAS business case. The results of a KPMG detailed survey sent to public safety organizations and agencies resulted in detailed responses from four organizations. A summary of these responses is below:

Topics	General Conclusion
Appropriate Business Model	Public-based, non-profit organization is preferred, with no respondent preferring a private arrangement.
Appropriate Cost-Recovery mechanism	Membership fees are acceptable, but the fee amounts and levels need to take into account the upfront investment organizations need to undertake to integrate the system

	including reengineering of business processes. In addition, there is some concern, likely related to budgeting processes, to show that one region is not cross-subsidizing another.
Potential services to be included with MASAS rollout	Technical training and education ranked high in importance in many responses.
Governance and Oversight Models	Board of Directors to include representatives from all constituents. Some disagreement as to whether to allow private vendors to be a part of the governance structure.
Implication of Legal and Liability Issues	All responses emphasized importance of legal and liability issues but without specific details.

A more recent survey in June 2013 asked stakeholders and registered users if a Not-For-Profit (NFP) organization could effectively manage MASAS. The results indicated that 77% of respondents agreed that the MASAS service could be managed effectively by a NFP organization.

4.0 Scope

The scope of the RFI is focused on parties that are interested in operating the MASAS, as described in section 4.1, and managing applicable Canadian Emergency Management Communications Specifications described in section 4.2 and meeting the anticipated quality of service in section 4.3.

4.1 Operating MASAS

In 2011, the Defence R&D Canada – Centre for Security Science (DRDC/CSS) launched the MASAS-X Pilot Project. As of August 2013, the MASAS-X pilot had 621 user accounts associated with 463 operating units. Operating units represent organizations, divisions, departments, etc. that have submitted applications for access to the system, and manage their own user account(s).

For the operating entity, DRDC CSS will provide a production released version of the MASAS software. The software will be licensed to the operating entity for 3 years which is the anticipated transition duration of the MASAS to the operating entity. MASAS is based on open development concepts and is based on an open architecture. For year 1, maintenance of the MASAS will be supported by DRDC/CSS. However, for year 2 and 3 maintenance and future enhancements will be the responsibility of the operating entity. In addition, the operating entity would be responsible for hosting and configuring the MASAS for years 2 and 3 in a 24/7 high resiliency operating environment within a

Government of Canada certified data centre. Migration of MASAS to some external data center is potentially viable and may be explored as part of the transition plan to be proposed by interested parties. Sensitivity by some MASAS stakeholders to having their data shared through a commercial or non-Canadian data center would warrant consideration if this is of interest.

MASAS provides a web-based information sharing platform that has the following technical components:

National Information Exchanges enable the sharing of information between the different participating agencies. The MASAS pilot supports four purpose-specific information exchanges:

1. Operations: For factual information.
2. Exercise: For use in exercises.
3. Training: For learning, user experimenting, etc.
4. Development: For technical development.

Participant Portal is a web-based portal accessed by a username/password offering a location where users can access the common MASAS applications and other resources. Account management can also be administrated here.

Access Management provides reporting tools that allow emergency management agencies to identify account holders in their governments and the provinces and territories. Members will have the opportunity to add, remove, configure and update their account information, such as issuing read-only access to the operations exchange, read/write to the exercise and training exchange.

Common Tools are tools that are used by the community for the viewing and posting of information to the information exchanges. There are two common tools, a JavaScript version and an ESRI Flex Viewer with a map-based based display that enables the viewing of information from the national information exchanges and the posting of information to the exchanges.

Application Program Interface (API) – the key services of MASAS are exposed as an API that has been used by various vendors and system developers to integrate MASAS in their systems.

MASAS Content – The MASAS National Information Exchanges contain Entries which have situational awareness information about an incident, a piece of infrastructure or an emergency management operation. Entries can be displayed on a map as a point, line or area feature. They have the following required information elements: Title, Description, Categories and Expiry and the following optional information elements: Severity, Status

and Related Link. An Entry can stand alone or it can include additional content items such as an Alert and/or file attachments. An Alert is a call to attention, or call to take action. File attachments can be pictures and situation reports.

At this time, the Common MASAS National Information Exchange provides an aggregation of content from over 20 sources. As an example, Earthquakes Canada, which is a service of Natural Resources Canada's Canadian Hazards Information Service, provides real-time notifications of automatic detections of earthquakes. Earthquakes Canada automatically posts an Entry containing an Alert to MASAS for earthquakes with a magnitude of 3.0 or greater.

Content in the MASAS National Information Exchange is viewable through freely available MASAS common tools and from participant's internal tools that have been integrated with MASAS.

Web site provides background information on the project, information for developers and educational material for the community.

Any interested parties can attend monthly MASAS web sessions which provide an introduction to the MASAS components described above. The after mentioned components have been operational for the past 2 years and are used on a daily basis by the emergency management community.

4.2 Managing Canadian Emergency Management Communications Specifications

The operating entity, with governance aligned with the F/P/T Senior Officials Responsible for Emergency Management (SOREM), and serving the entire community through the *Communications Interoperability Strategy for Canada (CISC)*, would support the management of emergency communications specifications. It should be highlighted that MASAS is based on open interoperability standards and specifications.

Currently, the Change Management Process (CMP) for Canadian Emergency Management Communications Specifications (CEMCS) is being used for the first time to develop the 1.0 version of the Common Alerting Protocol - Canadian Profile (CAP-CP). The CMP for CEMCS was developed mindful that it may be used for a variety of emergency communications specifications, such as the MASAS application programming interface, emergency management taxonomy and symbols, and other such specifications adopted in the future. As the F/P/T Interoperability Working Group establishes specification committees, and the terms of references for the management of a specification, the new entity is expected to play a secretarial role, providing a web presence for the specification, and support document management.

4.3 Service Listing

The following is a listing of the anticipated quality of service required for the operation of MASAS:

4.3.1 Website

A web site will be administered and maintained to share MASAS-related information. This website will conform to Government of Canada (GOC) guidelines, including being available in English/French. The web site will have the following areas:

General Information

A public facing section of the web site will be administered and maintained. The purpose of this section of the web site is to inform prospective participants and a more general public audience of what MASAS is and how to register for a user account. It will have a newsfeed that will provide updates of key advancements and happenings. The amount and type of information and functionality will be equal to or greater than that on the existing MASAS website (*www.masas-x.ca*).

Participant-Only Information

A section of the web site accessible only to MASAS participants will be administered and maintained. The purpose of this section is to share MASAS-related education and training resources, information on best practices and standard operating procedures with respect to the adoption and use of MASAS by participant organizations and a calendar of relevant events. A community discussion forum will be included.

Technical Information

A technical information and development support section of the web site will be maintained to share key MASAS software and components and provide a means for bugs to be reported and enhancements to be changes to be requested and suggested. The amount and type of information and functionality will be equal to or greater than that on the existing MASAS development website (*www.masas.ca*).

4.3.2 Newsletters

An email newsletter of approximately 4 pages in length will be sent bi-monthly to all MASAS participants describing key MASAS advancements and other relevant happenings.

4.3.3 Conferences

Promotion of MASAS at 8 key emergency management conferences per year. Promotion will include making conference presentations and having a booth presence.

4.3.4 Training and Education

Instructor-led MASAS information and training webinars will be hosted monthly. The sessions will be 1.5 hours in length comprised of the main session followed by a 20 minute Q&A. The following information and training webinars will be hosted:

MASAS 101

Recurring monthly webinar session to share information on MASAS and related developments. Content will continually be maintained to remain current.

Common Tools Webinars

Recurring monthly training webinar session to provide training on how to use the Common MASAS tool(s).

Exercising with MASAS Webinars

Recurring monthly training webinar session to information on using MASAS Common Tools for exercises.

4.3.5 Account Registration

New or existing participants will be able to register for new accounts through the MASAS access control portion of the MASAS portal. Participant registrations will be manually processed to ensure user access policy is enforced prior to approval subsequent generation of accounts.

4.3.6 Support

User and technical support will available 24/7 to MASAS participants and it will be provided in both English and French. Support will be accessible by telephone, MASAS web site or by email. The first line of support will be automated systems but support from a person will be available for resolution is issues. There may be times such as prior to a major exercise or around an emergency where there is an increase in demand for support.

The following types of support will be available:

Account Management

Support for resolution of account creation and access related issues.

Common Tools

Support for the use of the Common MASAS tools.

Business Process Integration

Support to organizations adopting the use of MASAS into their workflows and standard operating procedures.

Technical Integration

Support to organizations that are integrating MASAS with their tools.

4.3.7 System Development

Systems engineering, operations & support, and maintenance of the MASAS infrastructure consisting of the National Information Exchanges , participant portal, access control, common tools and web site.

4.3.7.1 System Engineering

Enhancements to existing MASAS components or the creation of new software components

Requirements Analysis

Analysis of user needs and the development of user requirements. User requirements captured as detailed functional requirements documents.

Design

Transformation of detailed functional requirements into a detailed systems design document.

Development

Programming to convert detailed systems design.

Integration and Test

Demonstration that system developed meets requirements specified in functional requirements document.

Implementation

Incorporation of enhancements or new functionality into the production system.

4.3.7.2 Data Source Integration

Maintenance of existing links to MASAS data sources, addition of new connections to data sources and the provision of technical support for organizations integrating data sources.

- Maintenance of the links of MASAS content from over 20 sources will be regularly tested to ensure that are in operation.
- Addition of new links to MASAS content.
- Support to participant organizations to directly push content to hubs.

4.2.7.3 Operations and Support

Operations and support functions include:

- System monitoring, verifying the integrity and availability of all hardware, server resources, systems and key processes, reviewing system and application logs, and verifying completion of scheduled jobs such as backups.
- Security monitoring to identify any possible intrusions.
- Perform regular backup operations, ensuring all required file systems and system data are successfully backed up.
- Perform regular information archival and purge as necessary.
- Repair and recover from hardware or software failures. Coordinate and communicate with impacted constituencies.

4.2.7.4 Maintenance

Maintenance functions include:

- Application of operating systems patches and upgrades on a regular basis
- Upgrade administrative tools and utilities

- Configure / add new services as necessary
- Upgrade and configure system as per project operational needs.
- Maintain operational, configuration, or other procedures.
- Regular performance reporting to support capacity planning.
- Perform ongoing performance tuning, hardware upgrades, and resource optimization as required.
- Optimization of hardware and software performance

5.0 Requested Information

It is requested that the responder provide and/or report on the following areas in order to assist the Government of Canada with assessing operating approaches for MASAS. A suggested schema for the response is provided below:

1. Governance and Oversight
 - a. Provide information on the proposed organizational governance model and how it is aligned with the SOREM governance structure outlined in the Communications Interoperability Strategy for Canada.
 - b. Provide information on key parties and their roles. For example, membership types, board of directors and committees.
 - c. Provide information on the key organizational positions that would operate MASAS (Section 4.1) and manage the Canadian Emergency Management Communications Specifications (Section 4.2).
2. Business Model
 - a. Provide information on which type of business model is being proposed. Government-Funded Model (Federal Agency), Government-Funded Model (Crown Corporation), Non-Profit/Non-Government Organization, Public-Private Partnership – or combinations of the above (e.g. Government owned system and data center with an Entity-Operator where Entity may be a Not for Profit or a private sector partner).
 - b. Provide information on the lead organization and its interface with the governance and oversight body.
 - c. Provide information on engagement approaches within the emergency management community.
 - d. Provide information on the revenue sources to support MASAS operation.
 - e. Provide a 3-year revenue forecast and the anticipated level of government support that may be required by year.
3. Costing
 - a. Provide information on starting costs to install and operate the MASAS components (Section 4.1). The operating entity will be provided with a production released version of MASAS.

- d. Provide information on costs to support the management of the Canadian Emergency Management Communications Specifications (Section 4.2).
 - e. Provide information on costs to support the Service levels (Section 4.3)
 - f. Provide a costing of key personnel required to operate MASAS (Section 4.1) and manage the Canadian Emergency Management Communications Specifications (Section 4.2).
4. Technical
- a. Provide information on approaches for hosting the MASAS components outlined in section 4.1.
 - b. Provide information on methodologies to develop future business and technical requirements for MASAS.
 - c. Provide information on technical services approaches for the MASAS user community. (Section 4.3)
 - d. Provide information on approaches to work with the community to evolve emergency communications specifications related to situational awareness. For example the Common Alerting Protocol – Canadian Profile, Emergency Management Symbology/Taxonomy.
5. Marketability
- a. Provide information on how you would market MASAS within the Canadian national emergency management community.
 - b. Provide a preliminary assessment on market demand for MASAS in accordance with its current functionality. Do opportunities exist for further development of MASAS that may enable the responder to broaden their business opportunities, both within Canada and abroad?

It is recognized that the information requested under this RFI is comprehensive and it is requested that respondents provide as much information as possible. The Government of Canada seeks information to inform the transition of MASAS to a self-sustainable operating entity.

5.1 Presentation of Response

In addition to a written response to the RFI, DRDC/CSS will also request a presentation from proponents on their approach. These presentations can be in-person or remote using web-based technologies. It is envisioned that these session will be approximately three hours in duration. This will be an opportunity for interested parties to ask questions on MASAS and its transition, and for DRDC/CSS to seek any clarifications needed following the written response.

6.0 NO OBLIGATION

The issuance of this RFI does not create an obligation for Canada to issue a subsequent bid solicitation and does not bind Canada legally or otherwise, to enter into any agreement or to accept any suggestions from industry. A contract will not result from this RFI. There will be no short listing of Companies for purposes of undertaking any

future work as a result of this RFI. Similarly, participation in this RFI is not a condition or prerequisite for participation in any potential resultant bid solicitation.

7.0 ENQUIRIES

All enquiries must be submitted in writing to the Contracting Authority no later than five (5) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items 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 Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

7.1 INDUSTRY CONSULTATION MEETINGS

The MASAS Project Team welcomes the opportunity to hold one-on-one meetings, either in person or by teleconference, with interested vendors at their request. In person meetings will occur at government facilities within the National Capital Region. Meetings will be held at a date and time agreeable to both the MASAS Project team and the vendor. Meetings may be held at the vendor's facilities at the sole discretion of the MASAS Project team. In addition, the project team is prepared to conduct such meetings beyond the closing date identified in this Notice and throughout the pre-RFP phase or until further notice. To arrange a meeting, please contact the Contracting Authority listed below.

All substantive and non-proprietary questions and answers discussed during these meetings will be noted and made available to all vendors participating in the Industry Consultation Process. Questions may be edited so that the proprietary nature of questions is eliminated.

Participation in one-on-one meetings is not required in order to submit a response to any follow-on RFP.

8.0 CLOSING DATE

Written responses to this RFI must be submitted directly to the Contracting Authority on or before the closing date specified on page 1 of this Request for Information (RFI).

9.0 REVIEW OF RFI

Canada reserves the right to:

- Amend, Delete or Add, in whole or in part, any terms or provisions of this RFI document. Any revision will be forwarded in writing, to any part that requests the RFI;
- Request additional information for clarification during the review of the responses to this RFI, and/or to consider a subsequent modification of the response put forward by a company.

No payment will be made for costs incurred in the preparation and submission of a response to the RFI. Costs associated with preparing and submitting a responses, as well as any costs incurred by the Respondent associated with the evaluation of the RFI, are the sole responsibility of the Respondent.

10.0

CONTRACTING AUTHORITY

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Defence Sciences Division (SV)
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