



**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**
Bid Receiving - PWGSC / Réception des
soumissions - TPSGC
11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
Core 0B2 / Noyau 0B2
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised;
unless otherwise indicated, all other terms and
conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf
indication contraire, les modalités de l'invitation
demeurent les mêmes.

Comments - Commentaires

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

Issuing Office - Bureau de distribution
Innovation Procurement Directorate/Direction
des achats innovateurs
Terrasses de la Chaudière 4th floor / Terrasses
de la Chaudière 4e étage
10 Wellington Street / 10, rue Wellington
Gatineau, Québec K1A 0S5

Title-Sujet Enhanced Maritime Situational Awareness / Système de connaissance améliorée de la situation maritime	
Solicitation No. - N° de l'invitation T8840-180119/A	Amendment No. - N° modif. 006
Client Reference No. - N° de référence du client T8840-18-0119	Date 27 September / septembre 2018
GETS Reference No. - N° de référence de SEAG PW-18-00841043	
File No. - N° de dossier 075ss. T8840-180119	CCC No./N° CC - FMS NO. / N° VME
Solicitation Closes - L'invitation prend fin at - à 2:00 PM on - le 15 Octobre / October 2018	Time Zone Fuseau horaire Eastern Daylight Time EDT
F.O.B. - F.A.B Plant-Usine : <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: April Campbell	Buyer Id - Id de l'acheteur 075ss
Telephone No. - N° de téléphone 613-858-9485	FAX No. - N° de FAX
Destination of Goods, Services and Construction: Destinations des biens, services et construction : Specified Herein Précisé dans les présentes	

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 telephone 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



THIS SOLICITATION AMENDMENT IS RAISED TO RESPOND TO QUESTIONS AND REVISE THE RFP.

- Q42 Can Transport Canada describe the AIS feed in more technical detail (example: json, xml, or other format) with the message components?
- A42 AIS messages need to be decoded, from information provided in the section of the message called the “data payload”, according to specified rules from the AIS protocol.

File formats: JavaScript Object Notation, or JSON, is often used in web processes to contain databased information, and a geographic version of JSON (GeoJSON) would be convenient for containing the AIS data.

Example AIS message:

s:MAEROSPACE-S,q:u,c:1535374804*4E\!AIVDM,1,1,,B,177Md500j3lioRCQp8H3IjI60?vo,0*7D

There are 27 different AIS message types, as identified by one of the variables decoded from the data payload, each describing particular aspects of AIS vessels. Typically, situational awareness tools extract and display messages 1, 2, 3, 5, 18 and 24.

- Q43 An estimate of the number of ships to be tracked at any point in time.
- A43 An estimate of 10,000 tracks at a given time is consistent with what our experimentation with the data feed shows. This number is expected to increase over time as more vessels adopt position reporting mechanisms.
- Q44 An estimate on the maximum number of active geofences at any point in time
- A44 Strictly as an estimate, upwards of 100 geofences may be active at any time.
- Q45 The tracking rate on the ships. Example = every second, every minute, every hour
- A45 The standard broadcast rates vary for different types of AIS messages. Locational messages arrive every 2-10 seconds per ship (e.g. messages 1-3, 18-19) while the ship is at sea. Locational messages while a ship is at rest are sent every 6 minutes. Static information messages arrive every 6 minutes (e.g. AIS messages 5, 24).

In a scenario where 10,000 vessels are in the Canadian area of interest and each ship is reporting every 30 seconds, a conservative estimate may be approximately 333 locational messages sent each second. However, it's possible that the estimate may be much higher – in the 2-10 seconds per ship range – for each locational message, meaning possibly 1,000 to 5,000 locational messages arriving per second. Static information messages come in more slowly, with the 6 minute assumption yielding an estimate of 28 static messages per second. A more



conservative estimate for static information messages being sent every 10 minutes would yield an estimate of 17 static messages per second.

- Q46 We will use commercially reasonable efforts to make the Covered Services available with a Quarterly Uptime Percentage of ninety-nine point nine percent (99.9%) ("Service Commitment"). Please confirm whether this service availability is acceptable for EMSA.
- A46 Section 6.10 of the RFP indicates the service standards required. 99.9% is acceptable.
- Q47 Due to timing in relation to a long weekend, we respectfully request an extension to the proposal submission deadline by one week to October 16. Please advise.
- A47 Canada will extend the timeline by 6 days, to Monday, October 15, 2018.
- Q48 It has already been determined that the October 9 call for tenders covers Phase 1 only. Does the attached financial bid only cover the work of Part 1 with a maximum amount of \$100,000?
- A48 The Financial Proposal must address all option periods as detailed in the Financial Bid Presentation Sheet.
- Q49 RTC 1 (RFP pg. 16); can you please clarify the scoring formula; for example, please confirm that the points at the bottom are added in addition to those gained from the a), b) and c) points?
- A49 The total available points for RTC-1 is 18 and includes those items in the bottom of the table cell.
- Q50 RTC 1 (RFP pg. 16); please clarify meaning of "in addition to the projects submitted in MTC-1". Does this mean you cannot use the same projects as used in MTC-1?
- A50 Correct.
- Q51 P.18 TS-5 "The solution must allow the user to, at the click of a button or keystroke or mouse scroll, zoom in/out, pan, **zoom to previous extent**, zoom to full extent, and zoom to selected feature(s)." Considering that most map based environments support the use of the scroll wheel on the mouse to quickly zoom in and out can you explain via an example use case what is to be understood by zooming to the previous extent?
- A51 This button is frequently found on the interface of GIS applications. An example of this feature is that a user may wish to flip back and forth between how something looks from the view of the whole province/territory and how something looks from the view of a municipality/settled area. A "zoom to previous extent" feature would enable the user to scroll to the provincial / territorial height, then scroll to the municipality / settled area height, and thereafter the user



could click on the “zoom to previous extent” button to automatically go back to the provincial/territorial view, without requiring repeated use of the “zoom in/out” feature.

Q52 P.19 TS-13 "The solution must allow users to configure: fonts, labels, symbolizers (e.g. vessels), visibility and location of specific panels, sub-panels and functionality". Concerning the entity "users": do you mean the end user or would it be acceptable if a system administrator or developer could configure/customize these?

A52 This criteria is referring to the end-user.

Q53 P.19 TS-20 "The solution must allow the user to download selected information onto their device and provide a synchronization capability for when they reconnect to the solution". Concerning the entity "device": what are the devices onto which a user must be able to download information to? Does this include laptops as well as mobile devices (Smart phones and tablets)? Finally, can you provide us with some use case examples for this requirements?

A53 Device is referencing a computing device (such as a conventional desktop computer, a pad computer or a smartphone). In terms of use-case examples, please see the definitions of “dock” and “undock” on page 14.

Dock: Connect a computing device (such as a conventional desktop computer, a pad computer or a smartphone) to a network or cloud server, for the purpose of uploading local data the computing device has been storing to the network server, or for the purpose of updating the local computing device with network information from the server.

Undock: Disconnect a computing device (such as a conventional desktop computer, a pad computer or a smartphone) from a network or cloud server, for the purpose of storing local data on a computing device without needing to maintain a network connection in an area underserved by the internet, or for the purpose of bringing information obtained from earlier internet connection sessions into an area underserved by the internet.

Q54 P.19 TS-23 "The solution must allow for the capability to specify delimited geographical areas that trigger notifications when a vessel enters them, and when a vessel exits them and when a specified vessel related rule is activated (e.g. vessel is anchored, vessel speed is too high)." Concerning the concept "notification": our understanding of a notification is that the alert appears within the application itself. Is this correct? Please clarify if and what other kinds of notifications are required.

A54 The notification could be sent by the system to the user by e-mail or SMS. The notification would be in response to a setting established by the user, such as a geofenced area set to send notifications in the event a certain type of vessel enters the geofenced area. Notifications within the application may be a feature requested by the user as an additional function at a later date.

Please also see related criteria TS-24 – “The geofencing notifications must electronically be sent to the appropriate users (e.g. by e-mail or SMS).



Q55 P.20 TS-30 "The solution should provide the user with the ability to export static geographical map views in PDF format". Concerning the concept "PDF": Does it concern the generation of a custom made printer friendly version or will the standard browser supported "Save as PDF" capability be sufficient?

A55 Custom-made printer-friendly exports may be more effective than browsers, as browsers may not necessarily be consistently effective with cartography elements. However, if a browser were to be relied upon, it is incumbent on the bidder to ensure compatibility across numerous platforms. PDF format is the most common printer-friendly version and is compatible with most computing devices.

A use-case example of an interactive geographical view that a user could export is any map view displaying layers of data as selected by the user. For example, the user could create a map view that displays ice data, walrus "haulout" locations and vessel locations. The user may then wish to print the map view displaying those three layers of data together.

Q56 P.20 TS-34 "The solution should provide the user the capacity to perform multi-overlay analysis on the geographical map view". Can you please clarify the requirement via a Use Case Example?

A56 An example of this requirement is an area with three layers being used in conjunction with the others: (1) a geographic layer showing walrus "haulout" locations; (2) a geographic layer showing where ice is present in the Arctic; and, (3) a live AIS ship traffic layer. A user would be able to "turn on" all three of these layers to make them active in the map view at the same time. The user could then use this data to better understand the "haulout" locations in relation to both ice and vessel presence in the Arctic.

Q57 P.21 TS-40 "The solution should allow the capability to calculate statistics on maritime traffic for certain areas and display reports". Concerning "Statistics": Could you give us an overview of which kind of statistics must be calculated?

Concerning "Reports": Could you give us an overview of which reports must be generated and which information must be displayed?

A57 For example, the software should enable the user to generate reports related to "geofencing" to measure whether ships cross into defined locations and how often they do this. Users will be able to identify a zone on the map base and could then generate statistics on how many ships crossed into that zone in a particular period of time, what class of ships they were, whether a ship with the same MMSI or IMO code transited the area several times, and so forth.

Q58 P.21 TS-43 "The solution should have the capability to summarize information with the use of tables and graphics". Concerning "Summarize": Could you give us an overview of the information to show in the summary?



Concerning "Graphics": Could you give us an overview of the graphics that must be displayed within the application?

A58 GIS applications frequently have a function that allows summarisation of any variable contained in the attribute table for a geographic layer and the automatic generation of tables or graphs from that data.

GIS applications often produce charts/graphs or tables. Tables present data with row and column labels as well as information about how values are generated (are these counts, sums, averages, ratios, results of equations, etc.). Summary tables should contain similar information for a GIS project. Additional values represented may be geographic coordinates, distances, areas, perimeters, and so on. The 'chart' function requires the specification of variables to chart (called "data ranges") and these ranges can be shown in various formats (line graphs, bar graphs, pie charts, scatterplots, etc.) as well as across various axes (X-axis, Y-axis, Z-axis) and sometimes simultaneously according to differing ranges (for example, a line graph can have two X-axes, primary and secondary, to permit the simultaneous comparison of different variables).

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At Front Page, **Solicitation Closes,**

DELETE : 9 October 2018

INSERT : 15 October 2018

At Part 4, Article **4.2.2, Phase 2: Technical Solution Evaluation,**

DELETE: Bids will be assessed by Canada against the criteria detailed at 4.4.1. Bids must meet the mandatory technical solution requirements to be considered further. Bidders who have achieved a minimum score of 129.5 on a scale of 185 for the technical solution point rated criteria to be invited to proceed to Phase 3.

INSERT: Bids will be assessed by Canada against the criteria detailed at 4.4.1. Bids must meet the mandatory technical solution requirements to be considered further. Bidders who have achieved a minimum score of 129.5 on a scale of 185 for the technical solution point rated criteria described at 4.4.2 will be invited to participate in a webex evaluation of their proposed solution. The webex will be recorded for evaluation purposes.

The webex evaluation will be to verify that the elements identified at 4.4.1 are met and to witness the score achieved for 4.4.2. This will also allow the bidder to provide guidance, if necessary, to use the solution. Bidders will not inform the score. Canada's decision is final. Bidders' who achieve the minimum required score will be invited to proceed to Phase 3.