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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

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Title - Sujet RFI for RCN ISTAR UAS project	
Solicitation No. - N° de l'invitation W8472-175664/A	Amendment No. - N° modif. 003
Client Reference No. - N° de référence du client W8472-175664	Date 2017-04-11
GETS Reference No. - N° de référence de SEAG PW-\$\$QD-037-26189	
File No. - N° de dossier 037qd.W8472-175664	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2017-05-18	
Time Zone Fuseau horaire Mountain Daylight Saving Time MDT	
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Lee, Inwon	Buyer Id - Id de l'acheteur 037qd
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Signature	Date

This Amendment No. 3 to RFI No. W8472-175664 is raised to effect the following changes and to answer questions.

I. Amendment to RFI

1. Closing Date: At Cover page of the RFI, under “Solicitation Closes”

Delete: 2017-04-18;

Insert: 2017-05-18.

2. Update Annex A

Delete “Annex A: in its entirety;

Insert “Annex A” attached hereto.

3. At Appendix 1 to Annex C, under “Contract Services”:

Delete “9.c.iv ITB Management” without replacement.

II. Questions and Answers

No.	Questions	Answer
1	RFI proposal submission deadline: Leonardo kindly requests an extension of at least 1 month, preferably 45 days, to the current deadline.	See Amendment to RFI above regarding Closing Date Extension.
2	What interoperability standards are used to share data with other ships, DND and other Government Departments?	DND is still in the process of collating UAS and ISTAR related interoperability standards. In order for us to better understand our requirements, we request industry to inform us of their current compliancy with existing standards and where they are focussing their future developments in this field.
3	For the aim of data dissemination, could satellite data communication from ground station to the vessel be considered?	The RCN has a requirement to transfer multi-stream near real-time sensor data from the Unmanned Air Vehicle back to the ship utilising a BVLOS communications link. The RCN will then use onboard systems for the Processing, Exploitation and Dissemination (PED) of that sensor data.
4	Is heavy fuel engine a mandatory requirement?	At this early stage in the project approval process, we have not yet determined this requirement. Our initial investigations indicate that due to fuel storage limitations onboard the ship, an engine that utilises fuel already available onboard the <i>Halifax</i> -class ship would

		be extremely beneficial.
5	Are the Halifax frigates provided with deck landing grid?	No the Halifax-class ship is not fitted with a helicopter landing grid.
6	To extend endurance/payload capability, could two air vehicles (in formation flight) be considered?	We are interested in learning how your UAS, if capable, conducts simultaneous air vehicle operations
7	<p>RFI Reference, Annex A ITB and Value proposition</p> <p><i>Point 1. To what extent would economic opportunities be affected (negatively or positively) should the Government consider bundling some of its requirements? Which requirements would you recommend be bundled or unbundled to obtain maximum economic benefits?</i></p> <p><i>Question:</i> Please clarify what is meant by bundling or unbundling requirements. Could you please provide examples?</p> <p>RFI Reference, Appendix 1 to Annex C, Cost Table Amplification</p> <p><i>c. Contract Services</i></p> <p><i>iv. Industrial and Technological Benefits (ITB) Management, which includes all related costs to establish, manage and sustain the Industrial and Technological Benefits policy to Canada.</i></p> <p><i>Question:</i> please clarify which costs are meant for the establishment, management and sustaining with reference to the ITB Management.</p> <p>RFI Reference, Annex A ITB and Value proposition</p> <p><i>Question:</i> please provide the ITB and Value proposition time frame to be taken into consideration (commence and end)</p>	See Amendment to RFI above regarding Annex A

8	<p>Manning: What are the restrictions, if any, on manning onboard; is the UAS Det responsible for deck manning during flying operations? If so, are there any requirements to keep the deck manned during extended UAS operations? Will extended operations be conducted under a two or three watch system?</p>	<p>The project has yet to determine the manning requirements for RCN ISTAR UAS and the operational tempo will determine the deck cycle. Recommendations from industry on how many personnel they believe would be required to both operate and maintain their system, following the baseline metrics provided in the RFI, will be used in future training needs analysis.</p>
9	<p>GCS: is the GCS to be located in the hanger area or will another space be allocated? What will be the requirements for passing the sensor data/feeds to the Halifax Class Operations Room/Bridge, and What provision is to be made for tactical direction of the UAS operators by the ships</p>	<p>The final location for the GCS has yet to be determined. Lessons learned from previous operations lead toward the Operations Room as the ideal location.</p>
10	<p>Ship Integration: what mast space will be available and allocated for the directional narrow band data-link? and Given those prescriptions, what is the expectation from the ship/mast design of the number of aerials that would be needed to give uninterrupted 360deg coverage? Will the flight deck allow for fitment of autoland system antenna (type to be determined)</p>	<p>The project team acknowledges that real-estate on the upper deck is limited and it is envisaged that RCN ISTAR UAS will require 360 degree coverage in order to operate effectively. A study on antenna placements, including those required for an auto-land capability, will be conducted in the near future and will rely on industries detailed response to this RFI.</p>
11	<p>Deck Operations: what are the access arrangements and limitations for the movement of the UAS from its hanger space to the flight deck when the Maritime Helicopter is secured in the hanger (the diagram could indicate that the access is restricted due to the folded tail of the helo).</p>	<p>As with space availability on the upper deck for any antennae locations, space between decks is also very limited. Please refer to the diagrams provided in both the RFI and the industry day presentation, which highlight a possible solution for storage and maintenance areas. More detail may be made available later in the project process.</p>
12	<p>Op areas: please provide definition of ‘theatre of operations’ with reference to the UAS area of operation</p>	<p>The RCN ISTAR UAS needs to be able to operate by day/night, in challenging weather conditions anywhere in the world globally. A theatre of operations would generally be an operational area defined by the geographic combatant commander for the conduct or</p>

		support of specific military operations.
13	Targeting: for targeting operations will the system be required to provide laser designation of the target (para 3)	Initial indications suggest that there may be a requirement for a combination of a laser marker, indicator and/or designator.
14	Sensors: can the RCN give any indication of what additional sensors they would like to be able to deploy on the UAS (para 6,d)	Please refer to the industry day brief for any additional mission specific payloads. The project team is very interested in what payloads your company currently have and what you are working on for the future.
15	Third Party Integration: can the RCN give any indication of what ground terminals are they likely to want to stream data to i.e. Rover Terminals (para 6,f)	This has yet to be determined and is intrinsically linked with our need to understand your compliance with interoperability standards. We aim to be interoperable within DND, with other government departments and agencies, and our allies.
16	RFI reference requirement: <i>UAS utilization, 1000FH/6Months embarked:</i> <i>Question:</i> Shall this be interpreted as a standard utilization time, a maximum utilization or a nice to have? How long is an UAV expected to remain embarked (operational) over a one year period?	The utilization rate of one thousand hours per six month deployment was deliberately chosen to test our initial draft requirements against industries current and future capabilities and to be a baseline for industries response to the RFI, especially the costing portion.
17	Please confirm required form of proposals delivery: electronic copies through email, electronic copies on memory device (CD or memory stick), hard copies or any mix of the above.	Any form would be acceptable: electronic copies through email, electronic copies on memory device (CD or USB stick), hard copies or any mix of the above. You may send the above directly to Contracting Authority, Inwon Lee, by email (preferred) or to PWGSC Bid Receiving Unit specified on the cover page of the RFI.
18	In response to a couple of questions raised during the Industry Day/One-to-One session, the project team indicated that they intend to elaborate on certain elements in due course. Do you expect to release additional information before the RFI responses are due on April 18? We particularly interested in	Each nation has their own interpretation of the following: Access to high seas airspace cannot be denied. However, the conduct of the flight will have to conform, to the maximum extent practicable, to the standards and recommended practices issued by ICAO, as indicated in ICAO Circular 330/AN189.

	<p>additional information regarding the ICAO “Due Regard” procedures mentioned in Section 3. C.</p> <p>Please let me know if we should anticipate receiving additional information prior to April 18.</p>	<p>Without prejudice to Articles 3a and 3d of the Chicago Convention, there may be exceptional circumstances when only the notification of the flight would be possible. However, in case of imperative operational necessities which might preclude this notification, the safety of air navigation shall always be paramount in the conduct of the flight.</p> <p>In case of absence or suspension of the competent ATS Authority, within the area of operation:</p> <ul style="list-style-type: none"> • Be operated within radar surveillance and under positive control of a surface or airborne radar facility, or • Be equipped with airborne radar that is sufficient to provide separation between themselves, aircraft they may be controlling and other aircraft, or • Be operated in visual meteorological conditions (VMC). <p>The RCN continues to work with the RCAF in order to understand how we will operate the UAS in uncontrolled/international airspace under Due Regard. Essentially, flight under the Due Regard option obligates the host warship to be their own Air Traffic Control agency and to separate their aircraft from all other air traffic, therefore providing for a level of safety equivalent to that normally given by Air Traffic Control agencies.</p>
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All other terms and conditions remain unchanged

ANNEX A

INDUSTRIAL AND TECHNOLOGICAL BENEFITS AND VALUE PROPOSITION

Canada is requesting that industry provide information regarding Canadian capabilities in the unmanned aerial systems market, export potential, R&D investments and supplier development opportunities to help Canada develop leveraging approaches for procurements that may occur as a result of this RFI.

Please provide responses to the following questions:

1. Where do you see economic opportunities for your company to undertake work directly in Canada related to the requirement?
2. Where do you see economic opportunities for your company to undertake work in the unmanned aerial systems market in Canada?
3. Where do you see economic opportunities for your company in undertaking work with Canadian companies:
 - a. Directly related to the requirement (please list)
 - b. Within the unmanned aerial systems market (please elaborate)
 - c. Other
4. Are these opportunities already established in Canada or do these areas require investment?
5. What R&D investments related to the requirement and/or within the unmanned aerial systems market do you anticipate undertaking?
6. What are the export opportunities that you see could be leveraged?
 - a. Directly related to the requirement?
 - b. in other areas?
7. Recognizing Canada's growing interest and involvement in the small UAV market, would placing points specifically for activities involving growing and developing this capability motivate you to place work/investments into this area?