



**Build in Canada Innovation Program (BCIP)  
Request for Information (RFI)**

**Date:** February 9, 2018

**Solicitation No.:** EN578-DB1708/A

**GETS Reference Number:** PW-18-00815698

**Closing date:** Please refer to the tender notice on [www.BuyandSell.gc.ca](http://www.BuyandSell.gc.ca)

**Industry Engagement Q&A submission details are included in this Request for Information document herein.**

**Issuing Office:**

Public Services and Procurement Canada  
Space, Innovation and Informatics Projects Directorate  
10 rue Wellington  
Gatineau, Québec K1A 0S5  
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## **Request for Information (RFI)**

**Challenge: Micro Unmanned GPS Denied Aircraft System**

**Sponsor: Department of National Defence (DND)**

### **1. Introduction**

Public Services and Procurement Canada (PSPC), Office of Small and Medium Enterprises and Stakeholder Engagement (OSME-SE), under the Build in Canada Innovation Program (BCIP), has a requirement to procure:

- a) Research and Development (R&D) innovative pre-commercialized goods and services (referred to as Innovations) that are in late stage of development; and
- b) Support services such as installation, training and testing support services for the pre-commercial Innovations procured under the BCIP.

The BCIP is a R&D procurement program aimed at procuring, testing and evaluating R&D pre-commercialized goods and services in the late stage development (Technology Readiness Level 7 to 9).

The BCIP has launched a Challenge Call for Proposals (CFP) under the Military component of the BCIP to help testing departments solve challenges in innovative ways. Under the Challenge CFP, sponsor departments partner with the BCIP to create challenges, evaluate proposals, and act as testing departments. Under this CFP, BCIP will publish challenges for the scientific, technical and innovation communities to submit innovative science and technology proposals to respond to, ultimately providing innovators with the opportunity to provide solutions.

### **2. Request for Information (RFI)**

The respondent(s) to the RFI are defined as a company or joint venture with the ability to fulfil the requirements of the Challenge as identified under Annex A – Challenge Details. The information The information provided by Respondent(s) may be used to refine the details of the requirement.

The Respondent(s) are invited to submit a reply to the RFI that addresses each of the topics identified in Annex B – Industry Engagement Questions. To facilitate the review of the responses, Respondent(s) are asked to address and present the requested information in the order in which the topics are presented.

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 provided in writing.

No payment will be made for costs incurred in the preparation and submission of a response to the RFI.

#### **2.1 Recommendations, Suggestions or Comments**

Respondent(s) are invited to provide general feedback and/or any recommendations, inputs or comments (including technical and/or costing information) that could assist Canada in the refinement of any of the documents included in the RFI. However, Canada will have the right to accept or reject any or all recommendations.

### **3. Additional Content to the RFI**

The following documents form part of the RFI document:

**BCIP Challenge Call for Proposals** which is currently active on [BuyandSell.gc.ca](http://BuyandSell.gc.ca)

- [BCIP Challenge Call for Proposals Solicitation](#)
  - o [Attachment 1 – Evaluation Grid](#)
  - o [Attachment 2 – Draft Resulting Contract Clauses](#)
  - o [Attachment 3 – Certifications and Additional Information](#)

## **Annex A – Challenge Details**

### **Annex B – Industry Engagement Questions**

This document includes Questions that PSPC would like the Industry to respond in order to improve the Challenge.

#### **4. Requested Information**

PSPC is seeking engagement with Industry to assess the technical feasibility of its proposed requirement and the procurement strategy for the Challenge. PSPC is seeking advice from Industry on the proposed requirement and specific questions identified under Annex B – Industry Engagement Questions.

Respondent(s) are invited to consult Annex B – Industry Engagement Questions, in order to provide their response(s) to the requested information. Respondent(s) are requested to provide a maximum of 400 words per answer in their responses.

#### **5. No Obligation**

The RFI is not a bid solicitation and does not constitute a commitment, implied or otherwise, that the Government of Canada will take procurement action in this matter. The issuance of the RFI does not create an obligation for Canada to issue a subsequent Challenge, and does not bind Canada legally or otherwise, to enter into any agreement or to accept any suggestions from Respondent(s). Canada reserves the right to accept or reject any or all comments received.

Further, the Government of Canada will not be responsible for any cost incurred by Respondent(s) in furnishing responses.

A review team composed of representatives of PSPC and the Challenge Sponsor Department will review the responses on behalf of Canada. Not all members of the review team will necessarily review all responses.

There will be no short listing of firms for purposes of undertaking any future work, as a result of this RFI. Similarly, participation in the RFI is not a condition or prerequisite for participation in any Challenges.

#### **6. Confidentiality**

Respondent(s) are advised that any information submitted to Canada in response to this RFI may be used by Canada in the finalization of a competitive Challenge. However, the Government is not bound to accept any Expression of Interest or to consider it further in any associated documents such as a Challenge.

All industry consultations will be documented and this information is subject to the Access to Information Act. Respondent(s) should identify any submitted information that is to be considered as either company confidential or proprietary. Canada will not reveal any designated confidential or proprietary information to public and/or third parties.

### **7. Delivery Address and Response Format**

Responses to this RFI must be sent via email to [SSGP.SCPD@tpsgc-pwgsc.gc.ca](mailto:SSGP.SCPD@tpsgc-pwgsc.gc.ca)

The electronic file formats of the response must be in either the Adobe Portable Document Format (PDF) TM or in a file format that is readable by the 2013 Microsoft Office Suite.

Provision of an electronic copy is required in order to facilitate the distribution of the RFI responses to PSPC.

### **8. Closing Date**

Responses to this RFI should be submitted, on or before the date and time specified on the tender notice.

### **9. Response Review**

Following receipt of responses to this RFI, PSPC and the Challenge Sponsor Department will review responses received for purposes of refining its way forward on this requirement.

Canada reserves the right to 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 Respondent.

### **10. Enquiries**

All enquiries and other communications related to this RFI must be directed exclusively to the PSPC Contracting Authority identified in Section 12, below. Respondent(s) that intend on responding to this RFI are asked to advise the Contracting Authority of their intention to respond, in order that they may be notified of any changes to the notice on Buy and Sell website, which may occur during the posting period.

### **11. Language**

Responses are to be provided in one of the two Official Languages of Canada (English or French).

### **12. Contracting Authority**

All enquiries and other communications related to this RFI must be directed to the Contracting Authority as follows:

**Huda Dahir**  
Supply Team Leader  
Public Services and Procurement Canada  
Email: [SSGP.SCPD@tpsgc-pwgsc.gc.ca](mailto:SSGP.SCPD@tpsgc-pwgsc.gc.ca)

#### **List of Annexes:**

Annex A – Challenge Details

Annex B – Industry Engagement Questions

## ANNEX A – CHALLENGE DETAILS

### **Challenge: Micro Unmanned GPS Denied Aircraft System** **Challenge Sponsor: Department of National Defence (DND)**

#### **Background/Summary:**

The Royal Canadian Navy (RCN) is investigating the use of a NATO class 1 mini/micro unmanned aircraft system that is hand launched and capable of operating in a GPS-denied environment (such as inside a ship). The system would be able to enter a room, perform a scan of the room, including identification of personnel or obstacles in the room, and transmit that imagery back to a hand held control station that is located outside of the room; all without the requirement for a GPS signal.

Most UAS systems rely on a GPS signal to situate and orient themselves when operating. The problem that we face inside a ship is that this GPS signal is unavailable due to the superstructure of the ship, therefore these systems would not be suitable for employment in this environment.

The goal of the challenge is to enhance the ability of Naval Boarding Parties to identify potential threats while performing boardings of vessels. The ability to deploy a hand launched UAS capable of performing reconnaissance ahead of the boarding party would provide invaluable situational awareness and decrease the risk to personnel.

**Challenge Details:** The aim of this challenge is to test the performance of the Innovation.

**Note:** The following elements of the challenge will be assessed in accordance with the Proposal Submission Form and the Evaluation Grid.

The Innovation should possess as many of the following characteristics as possible:

- The control station should be application based to allow for the use of COTS USB devices running commercial operating systems as displays;
- The control station should be able to receive secure video and data from any similar device and platform anywhere within the datalink network; and
- The control station should be operated by only one person and either wrist worn or vest mounted;
- The control station should be able to record and playback data/imagery;
- Compliance with applicable STANAGs;
- Ability to operate remain airborne for longer than 30 minutes without changing batteries; and
- Interoperability with other CAF ground control stations;

The Innovation must possess all of the following characteristics:

- The UA must operate without a GPS signal, in confined areas, such as the interior of a ship or building;
- The UA must remain airborne for a minimum of 30 minutes;
- The UA must be able to stream near real-time mapping data/imagery to the control station;
- The UAS must be compact and lightweight, so as to integrate all components into a member's tactical rigging;
- The UA must be able to sustain minor impacts to unseen obstacles and remain airborne; and
- The UAS must be waterproof.
- The operator must be able to rapidly switch power sources on the UA without the use of complex tools or procedures;

**Test Site: All testing will be done in Canada, exact details to be confirmed, however possible options include Halifax, NS. Ottawa, On, and Alma, QC.**

**ANNEX B – INDUSTRY ENGAGEMENT QUESTIONS**

Respondents are requested to provide the following information:

Company name	
Representative	
Telephone	
Email	

Please respond to the following:

**Question 1:**

Are there any commercially available solutions, Canadian or otherwise, that can currently meet the mandatory characteristics (i.e. those listed under “must”) of this Challenge?

**Response 1:**

**Question 2:**

Are there any pre-commercial innovations at Technology Readiness Level<sup>1</sup> (TRL) 7 to 9 that can meet the mandatory characteristics of this Challenge?

**Response 2:**

**Question 3:**

Do you currently have an innovation at TRL 7 to 9 that can meet at minimum the mandatory characteristics of this Challenge?

**Response 3:**

**Question 4:**

Please provide a list of the non-mandatory characteristics (i.e. those listed under “should”) of this Challenge that you are able to meet.

**Response 4:**

**Question 5:**

Are there any characteristics listed in this Challenge that you feel the industry will not be able to meet?

**Response 5:**

<sup>1</sup> <http://www.tpsgc-pwgsc.gc.ca/app-acq/picc-bcip/technologique-technology-eng.html>

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**Question 6:**

Are there any additional features or benefits that can be described as advancements on the state of the art<sup>2</sup> which should be considered as additions to this Challenge?

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**Response 6:**

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**Question 7:**

Are there any other solutions for the problem this Challenge is attempting to solve?

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**Response 7:**

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**Question 8:**

Please refer to article 3 of this RFI document and provide any comments on the BCIP Challenge Call for Proposals or its attachments such as the Evaluation Grid or any other parts of this process.

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**Response 8:**

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<sup>2</sup> Advance on state of the art: A technology that is an advance on the highest level of development for current commercially available products or services. For the purposes of the BCIP, state of the art must meet the program's definition of innovation and is a key component against which innovations are evaluated to determine the level of advancement offered.

The BCIP evaluates innovations against what is commercially available, and not against other proposals or other related pre-commercial innovations which may be a similar advance on the state of the art.