



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

CF18 Life Extension/Prolongation de vie CF18
455 Boulevard de la Carrière-8NB44
Gatineau
Québec
K1A0S5

**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

CF18 Life Extension/Prolongation de vie CF18
455 Boulevard de la Carrière-8NB44
Gatineau
Québec
K1A0S5

Title - Sujet CF18 Hornet Advanced Helmet System	
Solicitation No. - N° de l'invitation W8475-20HE18/B	Date 2020-12-04
Client Reference No. - N° de référence du client W8475-20HE18	GETS Ref. No. - N° de réf. de SEAG PW-\$\$BG-004-28004
File No. - N° de dossier 004bg.W8475-20HE18	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM Eastern Standard Time EST on - le 2020-12-18 Heure Normale du l'Est HNE	
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: Thivierge, Valérie	Buyer Id - Id de l'acheteur 004bg
Telephone No. - N° de téléphone () - ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Specified Herein Précisé dans les présentes	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée See Herein – Voir ci-inclus	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	



IMPORTANT NOTE

Subsequent to the information and feedback received from Industry as part of the Request for Information (RFI) W8475-20HE18/A posted on 6 August 2020, additional information is being requested herein, more specifically in the following sections:

- Annex A, section 2; and
- Annex B, sections 1 and 2.

Respondents who previously responded to the first RFI may respond uniquely to the additional information requested as per the above.

First time respondents to this RFI are encouraged to submit a response that includes all requested information at Annex B.



REQUEST FOR INFORMATION

Title: CF-18 Hornet Advanced Helmet System

1. Purpose and Nature of the Request for Information (RFI)

Public Works and Government Services Canada (PWGSC) is requesting Industry feedback regarding the requirement for a CF-18 Hornet advanced helmet system for the Government of Canada Department of National Defence.

The objectives of this RFI are to:

- a. Provide industry with information about the CF-18 Hornet advanced helmet system requirement;
- b. Provide industry with the opportunity to present their capabilities and considerations regarding the Royal Canadian Air Force (RCAF) requirements and objectives for the CF-18 Hornet advanced helmet system requirement; and
- c. Solicit feedback from industry on this planned procurement and related costing.

This RFI is neither a call for tender nor a Request for Proposal (RFP). No agreement or contract will be entered into based on this RFI. The issuance of this RFI is not to be considered in any way a commitment by the Government of Canada, nor as authority to potential respondents to undertake any work that could be charged to Canada. This RFI is not to be considered as a commitment to issue a subsequent solicitation or award contract(s) for the work described herein.

Although the information collected may be provided as commercial-in-confidence (and, if identified as such, will be treated accordingly by Canada), Canada may use the information to assist in drafting performance specifications (which are subject to change) and for budgetary purposes.

Respondents are encouraged to identify, in the information they share with Canada, any information that they feel is proprietary, third party or personal information. Please note that Canada may be obligated by law (e.g. in response to a request under the Access of Information and Privacy Act) to disclose proprietary or commercially-sensitive information concerning a respondent (for more information: <http://laws-lois.justice.gc.ca/eng/acts/a-1/>).

Respondents are asked to identify if their response, or any part of their response, is subject to the Controlled Goods Regulations.



Participation in this RFI is encouraged, but is not mandatory. There will be no short-listing of potential suppliers for the purposes of undertaking any future work as a result of this RFI. Similarly, participation in this RFI is not a condition or prerequisite for the participation in any potential subsequent solicitation.

Respondents will not be reimbursed for any cost incurred by participating in this RFI.

Canada will review all responses to this RFI received by the RFI closing date published herein, and may, at its discretion, review responses received after the RFI closing date. Comments and input will be accepted any time up to the time when/if a follow-on solicitation is published

2. Background Information:

Air Force pilots around the world are known to be highly susceptible to neck and back injuries. Experts attribute these injuries to many factors but the most prevalent is the head-borne equipment (i.e, helmet system (shell with night-vision goggles and/or helmet-mounted display)) that they wear. To mitigate the risk of neck and back injuries among the CF-18 pilot community, the Royal Canadian Air Force (RCAF) has a requirement to acquire a new helmet system which is lighter (mass), lower profile (inertia), and more balanced (Centre of mass (CoM)) than the current in-service helmets.

High-level Requirements have been developed and can be found in Annex A of this RFI.

3. Potential Work Scope and Constraints:

A contract for the provision of up to 165 CF-18 Hornet advanced helmet system with associated integration work such as engineering and integrated logistic support activities (training, publications, simulator update) may be entered into with a single organization as a result of a potential future solicitation.

All systems are to be delivered by June 2025.

4. Economic Benefits

Canada may seek to leverage this procurement through the application of the Industrial and Technological Benefits (ITB) Policy, including Value Proposition (VP).

The Industrial and Technological Benefits Policy has five (5) main objectives:

- Support the long-term sustainability and growth of Canada's defence sector;
- Support the growth of prime contractors and suppliers in Canada, including small and medium-sized enterprises in all regions of the country;
- Enhance innovation through Research and Development (R&D) in Canada;
- Increase the export potential of Canadian-based firms; and

- Identify opportunities for skills development and training in Canada.

Under the ITB Policy, companies awarded defence procurement contracts are required to undertake business activities in Canada, equal to the value of the contract. The ITB/ VP may apply to the acquisition and sustainment and will look to maximize Canadian industrial participation and leverage Key Industrial Capabilities (KICs). The potential to leverage economic benefits will be a consideration in determining the final procurement strategy.

The ITB Policy is administered by Innovation, Science and Economic Development Canada, with assistance from the Regional Development Agencies. Further information regarding the ITB Policy can be found at www.canada.gc.ca/itb.

5. Legislation, Trade Agreements, and Government Policies:

The following is indicative of some of the legislation, trade agreements and government policies that could impact any follow-on solicitation(s):

- a) Canadian Free Trade Agreement (CFTA); does not apply
- b) North American Free Trade Agreement (NAFTA); does not apply
- c) World Trade Organization – Agreements on Government Procurement (WTO-AGP); does not apply
- d) Defence Production Act; does apply
- e) Industrial and Technological Benefits (ITB) Policy; may apply
- f) Defence Procurement Strategy (DPS); does apply
- g) Controlled Goods Program (CGP); may apply
- h) Federal Contractors Program for Employment Equity (FCP-EE); may apply
- i) Comprehensive Land Claim Agreements (CLCAs); does not apply

6. Schedule:

In providing responses, the following schedule should be utilized as a baseline:

- RFI Issue: August 2020
- RFI Re-Issue: December 2020
- Possible RFP Issue: August 2021
- Potential Contract Award: December 2021

7. Important Notes to Respondents:

Interested Respondents may submit their responses to the PSPC Contracting Authority, identified below, via email:



Name: Valérie Thivierge
Title: Senior Contracts Officer
CF18 Life Extension Division
Aerospace Equipment Program Directorate
Acquisitions Branch
Public Works and Government Services Canada

E-mail: valerie.thivierge2@tpsgc-pwgsc.gc.ca

Responses should be provided electronically in MS Word or PDF format and should include:

- a. a cover page with the full legal name of the Respondent and address, the RFI Solicitation number, the date, and a point of contact for the Respondent (name, address, telephone number and email); and
- b. responses to questions proposed by Canada at Annex B of this RFI.

Changes to this RFI may occur and will be advertised on the Government Electronic Tendering System. Canada asks Respondents to visit Buyandsell.gc.ca regularly to check for changes, if any.

8. Closing date for the RFI:

Responses to this RFI are to be submitted to the PSPC Contracting Authority identified above, on or before 18 December 2020.

9. Attachments

Annex A – High-level Requirements

Annex B – Requested Information



ANNEX A – HIGH-LEVEL REQUIREMENTS

1. The CF-18 advanced Helmet and Helmet Mounted Display (HMD) system is required to:
 - a. Provide a helmet that must offer a crash and blunt protection that meets or exceeds MIL-DLT-87174A;
 - b. Be currently or imminently certified for F/A-18 with minimum level of integration effort (form-fit-enhanced function, which implies no hardware change is required to the aircraft);
 - c. Provide a helmet system that must meet the Mandatory Mass Property Requirements in Table 1 below to improve current muscular-skeletal medical factors;
 - d. Provide a helmet that must be fully integrable with CF-18 aircraft and all crew systems/body borne equipment (e.g. oxygen mask, communications, Life Preserver Survival Vest (LPSV)). Specifications of these systems/equipment can be provided to respondent upon request;
 - e. Provide operators with a single-helmet cueing solution for both day and night operations;
 - f. Be capable of providing an effective night vision symbology that meets or exceeds MIL-STD-1472G;
 - g. Be compatible with Night Vision Imaging Systems (NVIS) cockpit lighting standards that meets or exceeds MIL-STD-3009;
 - h. Be suitable to support CF-18 Cybersecurity for Cyber Airworthiness certification standards (CYBERSAFE) by providing:
 - i. an application whitelisting plan describing how the weapon system will prevent malicious software and unapproved programs from running;
 - ii. a description of the patch management process to ensure weapon system software applications and operating systems remain free of known vulnerabilities; and
 - iii. an operating system lifecycle management plan describing how the operating systems will:
 - i) remain OEM-supported for security patches at all times during the weapon system lifecycle; and
 - ii) remain upgradeable as modern operating system security technology progresses; and
 - iii) a plan to restrict administrative privileges within weapon system software applications and operating systems based on user duties.



- i. Enable future software growth to display sensor video on Helmet Mounted Display sub-system. For instance, capable of being upgraded to visor projected video and symbology.
2. The Mandatory Mass Property Requirements (maximum mass, Centre of Mass (CoM), and Moment of Inertia (Mol)) for the advanced helmet system in Table 1 are based on a point of origin.
- a. The procedure to establish the point of origin representing the geometric centre on every advanced helmet system is as follow:
 - The helmet system mass scalar must be measured on a scale.
 - Axes directions:
 - X-axis must be defined as positive out the right ear
 - Y-axis must be defined as positive out the nose
 - Z-axis must be defined as positive upwards
 - (0,0,0) must be defined as the geometric centre of the object
 - The CoM point (x, y, z) must be calculated from the helmet shell's geometric centre. The CoM value in Table 1 is the distance between (0,0,0) and (x, y, z) or $\sqrt{x^2 + y^2 + z^2}$
 - The Mol tensor must be calculated at the CoM and then transformed into a Principle Component Matrix with (Px, Py, and Pz) along the diagonal. The Mol value indicated in Table 1 is represented as a "distance" or $\sqrt{Px^2 + Py^2 + Pz^2}$
 - b. The mass, CoM and Mol must be calculated with a helmet shell and a HMD.*

Table 1. Helmet and HMD System Mass Property Requirements

	mass (kg)	CoM (cm)	Mol (kg cm ²)
Medium	1.65	4.5	125
Large	1.70	5.0	140
Extra Large	1.80	4.0	165

**Note: Suppliers who has on offer only a helmet shell or Helmet Mounted Display must calculate the helmet system mass properties using any other helmet shell or Helmet Mounted Display on the market, to allow for adequate comparison of values.*



ANNEX B – REQUESTED INFORMATION

Requirement

1. Do you sell a commercial-off-the-self (COTS) Helmet that meets all requirement listed in Annex A?
 - a. If so, please provide the Helmet system mass properties **based on a point of origin, calculated as per the procedure at section 2 of Annex A**, supporting data, and the standards used to support any certifications and requirements.
 - b. Please provide the rough-order-of-magnitude (ROM) cost per unit.
2. Do you sell a COTS product that does not meet one or more of the requirements listed in Annex A, but can be modified to meet the requirements?
 - a. If so, please list the requirements that cannot be met and provide details on the modification(s) that would be required.
 - b. Please provide the Helmet system mass properties **based on a point of origin, calculated as per the procedure at section 2 of Annex A**, supporting data, and the standards used to support any certifications and requirements.
 - c. Please provide the rough-order-of-magnitude (ROM) cost per unit.
3. Please provide any further information you believe Canada should consider in its plans for a potential follow-on solicitation for a CF-18 Hornet advanced helmet system.

Industrial and Technological Benefits (ITBs) and Value Proposition (VP)

4. This procurement may be used to leverage KICs. Please identify KIC areas, including areas in emerging technologies, that your company could see leveraging as a result of this procurement.
5. Please identify existing Canadian content of your current solution, and what opportunities exist to add further Canadian content to your solution?
6. In terms of indirect activity that could be leveraged through this procurement, please describe possible opportunities for each category listed below. Also, prioritize the areas based on the value added your company is able to bring to Canada and why:
 - a. Export opportunities for Canadian suppliers;



Public Services and
Procurement Canada

Services publics et
Approvisionnement Canada

Canada



Serving
GOVERNMENT,
serving
CANADIANS.

- b. Research and development opportunities in Canada;
- c. Supplier development of Canadian companies, including any current initiatives your company has to integrate small and medium sized businesses into your global supply chain; and
- d. Skills development and training opportunities in Canada.