Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:

Bid Receiving - PWGSC / Réception des soumissions – TPSGC
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Quebec
K1A 0S5
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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

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

Issuing Office - Bureau de distribution
Victoria Class Modernization (VCM) / Modernisation de la classe Victoria
Louis St-Laurent Building (2)
2nd Floor - SC19
455 De la Carrière Blvd
Gatineau
Quebec
K1A 0S5

Title - Sujet RFI • VCM Torpedo Countermeasure RFI - Victoria-class Modernization Torpedo Countermeasure Launcher	
Solicitation No. - N° de l'invitation W8472-195758/A	**Amendment No. - N° modif.** 001
Client Reference No. - N° de référence du client W8472-195758	**Date** 2022-08-11
GETS Reference No. - N° de référence de SEAG PW-$VCM-004-28746	
File No. - N° de dossier 004vcm.W8472-195758	**CCC No./N° CCC - FMS No./N° VME**

Solicitation Closes - L'invitation prend fin
at - à 02:00 PM Eastern Daylight Saving Time EDT
on - le 2022-08-26 Heure Avancée de l'Est HAE

F.O.B. - F.A.B.
Plant-Usine: ☐ **Destination:** ☐ **Other-Autre:** ☐

Address Enquiries to: - Adresser toutes questions à: Dawson, Kirby	**Buyer Id - Id de l'acheteur** 004vcm
Telephone No. - N° de téléphone (000) 000-0000 ( )	**FAX No. - N° de FAX** ( ) -

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	**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**

Canada

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ABBREVIATIONS AND DEFINITIONS

ADC: Acoustic Device Countermeasure

CAF: Canadian Armed Forces.

CM: Countermeasure

Component: The third level of decomposition, below that of system and sub-system, of physical installations to which ship-level capabilities are allocated. Components are typically wholly contained functions within a sub-system.

Dgr.C.: Measure of degrees Celsius.

DND: Department of National Defence.

Maintenance Levels: maintenance levels are used to identify the level of complexity and difficulty of the activities required to perform that maintenance. They are determined by the depth of maintenance required and by the associated skill sets, special tools, facilities, etc. necessary to accomplish the maintenance. The following are guidelines in attributing maintenance levels:

> **Level One Maintenance**: maintenance that can normally be performed by shipboard naval technicians with only shipboard tools, equipment and facilities.
>
> **Level Two Maintenance:** maintenance that can normally only be performed by a qualified Fleet Maintenance Facility, industry, or naval technician with tools and equipment only available at Formation (not shipboard) facilities.
>
> **Level Three Maintenance:** maintenance that can be performed by industry or a qualified Fleet Maintenance Facility with specialized tools, skill sets, equipment, and facilities normally available only in industry.

NAE: Naval Acoustic Electromechanical

NSE: National Security Exception.

PDF: Portable Document Format.

PSPC: Public Services and Procurement Canada.

RCN: Royal Canadian Navy.

RFI: Request for Information.

RFP: Request for Proposal.

SOR: Statement of Operational Requirements.

STTE: Specialized Tools or Test Equipment

TCML: Torpedo Countermeasure Launcher

TRA: Technical Readiness Assessment

TRL: Technical Readiness Level

VCS: VICTORIA class Submarines.

VCM: *Victoria*-class Modernization.

Videoconferencing applications: a set of tools designed for personal and corporate collaboration. Videoconferencing applications are used to connect to others, typically through the internet, and they allow you to communicate through audio, video, text, file sharing, whiteboard, and other features. Commonly used applications include Microsoft Teams and Cisco WebEx.

REQUEST FOR INFORMATION (RFI)

FOR THE VICTORIA CLASS MODERNIZATION TORPEDO COUNTERMEASURE LAUNCHER PROJECT

1. Purpose of the Request for Information

Public Services and Procurement Canada (PSPC) is releasing a Request for Information (RFI) on behalf of the Department of National Defence (DND) in order to gather information for a potential future procurement opportunity related to the *Victoria*-class Modernization (VCM) Torpedo Countermeasure Launcher (TCML) Project. The responses provided will contribute to the further definition of the Statement of Operational Requirements (SOR).

The purpose of this RFI is to:

- To gain an understanding of available Torpedo Countermeasure Launchers; and
- To receive feedback from industry on the Torpedo Countermeasure Launcher questions contained at Annex A.

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.

2. Background Information

VCM will provide modernized and increased capability to maintain the VICTORIA class Submarines' (VCS') operational relevance through the mid-2030s. VCM will be a collection of discrete projects that will be managed both individually and within a larger VCM portfolio to generate the necessary capability for Canada's submarines as detailed in *Strong, Secure, Engaged* - Canada's Defence Policy. Overall, the modernization outcomes will make Canada and its allies stronger and safer by:

a. improving the habitability and deployment conditions onboard the VCS in support of Royal Canadian Navy (RCN) submariners;
b. positioning the VCS to contribute meaningfully to Canadian Armed Forces (CAF) Joint Operations ashore; and
c. ensuring the survivability of the VCS against an evolving threat in an increasingly complex and changing battlespace.

This RFI relates to the VCM TCML Project.

Advances in technology such as powerful sonars and processing, propulsion and guidance have made modern anti-submarine torpedoes more effective than ever. The most significant developments are those that enable torpedoes to recognize and overcome decoys. The objective of the VCM - TCML Project is to provide the VCS with a submarine torpedo countermeasure (CM) launching system fitted external to the pressure hull that can rapidly and remotely deploy countermeasures to defeat current and evolving threat anti-submarine torpedoes. The system should be fully integrated for remote activation and provide command decision tools in support of the RCN's domestic and international operations.

Currently, the VCS employs the Naval Acoustic Electromechanical (NAE) Beacon Mk 3, and the Acoustic Device Countermeasure (ADC) MK2 Mod 3. While the simplest of torpedo countermeasures, the NAE Beacon is a three-inch (76.2mm) in diameter device that generates broadband noise to interfere with a torpedo sonar's ability to differentiate a contact from background noise. Conversely, the ADC is a more sophisticated, three-inch (76.2mm) in diameter, device that produces a range of tones designed to confuse a torpedo detection logic by creating false targets in an attempt to exhaust the torpedo. Eventually the torpedo will run out of fuel or battery power trying to find the real target submarine amongst the false contacts.

Presently, both the NAE Beacon and the ADC are individually and manually loaded and launched from one of the two Submerged Signal Ejectors, located in either the Weapon Storage Compartment or Motor Room. The order to do so is passed verbally from the Control Room to the watch keeper who operates the Submerged Signal Ejectors. The lack of integration or remote-control functionality greatly reduces already limited reaction time decreasing the prospect of surviving a torpedo attack. Even if the CM is deployed in time, the use of a Submerged Signal Ejector limits the number of CMs that can be launched and does not sufficiently displace the CM off the submarine's track consequently allowing the torpedo to continue towards the submarine without being drawn away. Modern countermeasure launchers can be programmed to launch multiple CMs in patterns to defeat torpedoes.

The VICTORIA Class consists of four diesel electric submarines which operate year round throughout the globe, from arctic to tropical conditions and diving depths of up to 200m. Typical deployments for the Victoria Class are up to two months in duration. These vessels are therefore subjected to a broad spectrum of atmospheric and oceanographic conditions that evolve dynamically. Table 1 lists the conditions under which a TCML will need to operate.

Table 1: Operating Conditions

Parameter	Range	Unit
Sea Water Temperatures	-2 to 36	dgr.C.
Depths	15 to 200	m
Static List	15	dgr.
Static Pitch	35	dgr.
Dynamic List	45	dgr.
Dynamic Pitch	10	dgr.

3. Directions to Respondents

3.1 Nature of the RFI

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 as 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.

Procurement of the goods or services described in this RFI will not necessarily follow this request. Any procurements of this system / equipment / services will be in accordance with standard government procurement policies.

Respondents and potential suppliers of any goods or services described in this RFI should not earmark stock or facilities, nor allocate resources, as a result of any information contained in this RFI.

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.

3.2 Nature and Format of the Requested Responses

Respondents are asked to format their responses in MS Word, Excel, or a PDF document with a suggested limit of 6 megabytes per response.

Respondents must identify if their response, or any part of their response, is subject to the Controlled Goods Regulations and/or any export controls.

If respondents wish to provide multiple submissions or volumes/versions in response to this RFI, respondents are requested to indicate on the front cover page of the title of the response, the Buy and Sell identification number, the volume/version number, full legal name of the respondent and a point of contact of the respondent including name, telephone number and email address.

Respondents should list and explain any assumptions / constraints that they make in their responses.

3.3 Response Costs

Canada will not reimburse any respondent for expenses incurred in responding to this RFI.

3.4 Treatment of Responses

3.4.1 Use of Responses

Responses will not be formally evaluated. However, the responses received may be used by Canada to develop or modify procurement strategies and to draft performance specifications or requirements.

3.4.2 Review Team

A review team composed of representatives from Canada will review the responses, yet they will not be formally evaluated. Canada reserves the right to hire any independent consultant, or use any Government resources or contractors that it considers necessary to review any response. Any consultants or contractors utilized will be subject to a Non-Disclosure Agreement. Not all members of the review team will necessarily review all responses.

Canada will review all responses received by the RFI closing date. Canada may, in its discretion, review responses received after the RFI closing date.

3.4.3 Confidentiality

Respondents should clearly identify any information they provide Canada that they feel is proprietary, commercial-in-confidence, third party, or personal information. Please note that Canada may be obligated by law (e.g., in response to a request under the Access to Information and Privacy Acts) to disclose proprietary or commercially-sensitive information concerning a respondent (for more information: https://laws.lois-justice.gc.ca/eng/acts/a-1).

3.4.4 Post-Submission Review Meetings

Canada at their discretion may request individual Post-Submission Review Meetings with respondents to obtain clarity on information provided. This may take place in the form of follow on meetings via videoconferencing applications.

Respondents will not be reimbursed for any cost incurred in participating in Post Submission Review Meetings if Canada requests this meeting to take place.

3.5 Format of Responses

The respondents must identify all response data with the following information:

a. name and address of the respondent;
b. name, address, telephone number, and email address of the respondent's contact;
c. submission date;
d. RFI number; and
e. version number of the submission.

3.5.1 Numbering System

Each section has its own unique section number. Respondents are requested to prepare their response using the system that corresponds to the one in this RFI. Descriptive material, technical manuals and brochures included as part of the response should be referenced accordingly.

3.5.2 Submission

Respondents shall send their responses directly to the PSPC Contracting Authority, identified in section 3.7, by 1400 EST, August 26th, 2022. The PSPC Contracting Authority will provide positive confirmation of receipt.

Responses to this RFI will not be returned.

3.6 Enquiries

Because this is not a bid solicitation, Canada will not necessarily respond to enquiries in writing or by circulating answers to all potential suppliers. However, respondents with questions regarding this RFI may direct their enquiries to the PSPC Contracting Authority. The use of email to communicate is required .

Canada may, in its discretion, contact any respondent for clarification on any aspect of the respondent's submission.

All enquiries must be submitted to the PSPC Contracting Authority no later than seven (7) calendar days before the RFI closing date. Enquiries received after that time may not be answered.

Documents may be submitted in either official language of Canada.

3.7 Contracting Authority

The PSPC Contracting Authority for the Contract is:

Name:	Kirby Dawson
Title:	Supply Team Leader Public Works and Government Services Canada
Directorate:	Marine Sustainment Directorate
Address:	455 Boulevard de la Carrière, Gatineau, QC, J8Y 6V7
E-mail address:	Kirby.Dawson@tpsgc-pwgsc.gc.ca

3.8 Security Requirements

There is no security requirement associated with this RFI.

On future procurement phases relating to the VCM Torpedo Countermeasure Launcher, Canada reserves the right to apply the National Security Exception (NSE).

4.0 Industrial and Technological Benefits (ITB) Policy:

Canada is consulting with industry as part of the development of an economic leveraging approach for the TCML Project within the VCM. The Policy Framework for the ITB Policy, including Value Proposition, may be applied.

The ITB Policy, including the Value Proposition, applies to all eligible defence procurements over $100 million and for which the National Security Exception applies. Additionally, procurements valued between $20-100 million are reviewed for the possible application of the Policy.

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 Policy includes the Value Proposition (VP), which requires bidders to compete on the basis of the economic benefits to Canada associated with its bid. Winning bidders are selected on the basis of price, technical merit and their VP. VP commitments made by the winning bidder become contractual obligations in the ensuing contract.

The objectives of the ITB Policy are to: support the long-term sustainability and growth of Canada's defence sector; support the growth of prime contractors as well as suppliers in Canada, including small and medium-sized enterprises in all regions of the country; enhance innovation through research and technological development in Canada; and increase the export potential of Canadian-based firms.

For more information regarding the ITB Policy, please visit:
http://www.ic.gc.ca/eic/site/086.nsf/eng/home

ANNEX A – Torpedo Countermeasure Launcher Questions

1. Acquisition Costs

1.1 What is the acquisition cost breakdown of the system based on the following configurations:

a. economic order quantities and the associated prices,
b. cost of one boat set,
c. cost of four boat sets,
d. cost of five boat sets; and
e. average annual maintenance costs (in-service support)?

2. Spares

2.1 What is the anticipated cost for 2 years' worth of spares (initial provisioning) to support the purchase of four boats systems and a training system set?

3. Delivery Lead Time

3.1 What is the production lead time for the system?

4. Installation Effort

4.1 What was the level of effort required for previous installations of the system (in hours)?

5. Current Production

5.1 Is the system currently in production?

6. Current Customer Base

6.1 What customers have installed the system?

7. Description of System

7.1 Respondents are requested to provide a description of the proposed TCML including:

a. performance specifications;
b. sub-systems and components;
c. interface requirements;
d. maintenance requirements; and
e. Integrated Logistic Support.

7.2 Respondents are requested to identify requirements that may:

a. require significant non-recurring engineering;
b. create a significant integration cost and risk;
c. be significant cost-drivers; or
d. be unachievable.

For these identified requirements, respondents are requested to provide feedback, suggestions for improvement or alternative requirements.

8. Functional Characteristics

8.1 Is your system capable of launching each of the CMs listed in table 2

Table 2: Countermeasure Characteristics			
CM	**Diameter**	**Length**	**Weight**
Naval Acoustic Electromechanical (NAE) Beacon Mk 3	3 in		
Acoustic Device Countermeasure (ADC) MK2 Mod 3	3 in		
Next Generation CMs	3 in		

8.2 How many CM can be stored in the system while underway?

8.3 How many CM can be launched at a time?

8.4 Is the system capable of remote operation from inside the control room by a single operator?

8.5 Can the system launch CMs in customizable patterns? Provide details.

8.6 Can the system provide command recommendations for optimizing the CM and launcher settings along with determining the best time of launch?

8.7 Is your system capable of operating at various humidity, temperature and pressure levels? Provide details.

8.8 Can it operate under all conditions as described in table 1?

8.9 Can the system record data for further analysis and data sharing?

8.10 Is your system centralized or distributed?

8.11 Will the system be accessible for first-line maintenance while on operations?

8.12 What first line maintenance is required on the system while deployed?

8.13 What are the dimensions of your system? List major components.

9. Analysis

9.1 What analysis tools and functionality does your system provide?

10. Control and Operation

10.1 Does the system require a separate, dedicated operator console?

10.2 Does the system support multiple display options?

10.3 Describe user interface options.

11. Training

11.1 Respondents are requested to provide information on training for equipment operators to include:

a. where the training can be conducted (RCN establishment, respondent facility, other commercial facility),
b. if the training already exists,
c. facilities recommended for training (classroom, simulator, emulator, suitably-equipped submarine),
d. cost for provision of initial cadre training (per student or per course),
e. cost for provision of periodic training courses (per student or per course), and
f. cost basis for provision of Training Material to the RCN.

11.2 Respondents are requested to provide information on training for equipment maintainers to include:

a. where the training can be conducted (RCN establishment, respondent facility, other commercial facility),
b. if the training already exists,
c. facilities recommended for training (classroom, simulator, emulator, suitably-equipped submarine),
d. cost for provision of initial cadre training (per student or per course),
e. cost for provision of periodic training courses (per student or per course), and
f. cost basis for provision of Training Material to the RCN.

11.3 Respondents are requested to provide details and cost of any recommended variant of the proposed equipment for use solely as a training system.

12. Certification

12.1 What requirements qualification testing (e.g., Shock, Noise and Vibration, EMC/EMI, Environmental, etc.) has your system been subjected to and to what standard?

12.2 Does the system require calibration/inspection? What is the frequency? Can calibration be done by Ship's staff? Are there special tools required for calibration?

13. Legacy Systems

13.1 How could the system be interfaced with other on-board control systems? Would the vendor be willing to provide Interface Control Drawing to integrate with on board systems?

13.2 Which onboard systems does the system rely on? (i.e. power, low pressure air etc,)

14. Auxiliary Systems

14.1 What are the system's cooling requirements?

14.2 How much heat does the system generate inside the pressure hull in metric?

14.3 How much noise does the system generate?

15. Dimensions

15.1 What are the dimensions of each of the system's major Components in metric?

16. Weight

16.1 What is the weight of each of the system's major Components in metric?

17. Electrical

17.1 What are the system electric power requirements?

18. Sustainability

18.1 What is the intended service life of the system?

18.2 What are the planned system upgrades, when are the upgrades planned and what is the intended schedule?

19. Availability

19.1 What is the operational availability described as a percentage, over a Patrol Cycle and what is the confidence level in that number?

19.2 What was the methodology for determining the operational availability?

20. Maintainability

20.1 What is the recommended preventive maintenance profile of the system?

21. Technical Readiness Level

21.1 What is the Technological Readiness Level (TRL) of the system in accordance with Technology Readiness Assessment (TRA) Guidance?

22. Trade Controls

22.1 If the system is subject to export trade controls, what are they?
Trade controls include but are not limited to, Controlled Goods, International Traffic in Arms Regulations and Export Administration Regulations.

23. Other Information

23.1 Is there any other important information the respondent feels will be of use to Canada?

24. Availability of components

24.1 For your solution(s), are there any limiting factors related to availability of components or customization that would impact supportability over a 10 year period? (i.e. component end of life or “one off” components).

25. Repair of components

25.1 Which components in your proposed solution require the most repairs or replacements and when do these repairs or replacements historically take place?

26. Maintenance

26.1 What is the maintenance regime proposed for your recommended solution(s) for the VCS? Can your solution(s) be maintained without removal from the submarine, or does it require periodic complete removal and transport to an overhaul facility? Please describe your approach.

26.2 Could you describe how any of the current customers of this solution are performing maintenance and how Canada might be able to perform similar maintenance on the proposed solution(s)?

27. OEM

27.1 What are the major OEMs in the manufacturing, integration, and delivery of the proposed solution(s)? Is reach-back required in order to maintain or repair the proposed solution?

28. Technology Insertion

28.1 What are the parameters for providing Technology Insertion for your solution(s) that must be incorporated into DND’s end state sustainment solution?

29 Incompatibility issues

29.1 Are there any material, signal or services incompatibility issues that would need to be addressed between the submarine and your solution(s)?

30 Power Back-up

30.1 If primary power is lost, what capability does your solution(s) provide and for how long?

31. Test Equipment

31.1 Are there any specialized tools or test equipment (STTE) required for your solution's equipment to perform maintenance, calibration, removal, installation or transportation?

32. Intellectual Property

32.1 Will you grant Canada a licence to use and to have use of foreground and selected background information or intellectual property in order to perform regular maintenance, conduct repairs or to manufacture parts?

32.2 Will you grant a 3rd party agent licence to use and to have use of foreground and selected background information or intellectual property in order to perform regular maintenance, conduct repairs or to manufacture parts ?

33. Related Publications

33.1 Are there any related published materials associated with the proposed solution, including Operating Manuals, Maintenance Manuals, Parts Catalogues, or Technical Data Packages)?

33.2 Will you grant Canada use of these publications?

33.3 Will you allow Canada to have the right to transfer any related publications to a 3rd Party so that Canada has the ability to source maintenance and supply chain separately?

34. Canadian Content

34.1 Please highlight any opportunities or work that could be foreseen performed in Canada or by Canadian industry, as a part of your proposed solution.