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Travaux publics et Services gouvernementaux
Canada
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NA
Québec
NA

REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Travaux publics et Services gouvernementaux Canada
Place Bonaventure, portail Sud-Oue
800, rue de La Gauchetière Ouest
7e étage, suite 7300
Montréal
Québec
H5A 1L6

Title - Sujet smartWhales	
Solicitation No. - N° de l'invitation 9F040-190633/A	Date 2020-06-23
Client Reference No. - N° de référence du client 9F040-190633	
GETS Reference No. - N° de référence de SEAG PW-\$MTB-450-15781	
File No. - N° de dossier MTB-0-43010 (450)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2020-09-15	Time Zone Fuseau horaire Heure Avancée de l'Est HAE
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Paradis, Mary	Buyer Id - Id de l'acheteur mtb309
Telephone No. - N° de téléphone (514) 702-8173 ()	FAX No. - N° de FAX (514) 496-3822
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: AGENCE SPATIALE CANADIENNE 6767 ROUTE DE L'AEROPORT 9F040-Utilisaion de l'espace ST HUBERT Québec J3Y8Y9 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée Voir doc.	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

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9F040-19633/A
Client Ref. No. - N° de réf. du client
9F040-19633

Amd. No. - N° de la modif.
File No. - N° du dossier
MTB-0-43010

Buyer ID - Id de l'acheteur
MTB450
CCC No./N° CCC - FMS No./N° VME

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PART 1 - GENERAL INFORMATION

1.1 Introduction

The bid solicitation is divided into seven parts plus attachments and annexes, as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;
- Part 3 Bid Preparation Instructions: provides Bidders with instructions on how to prepare their bid;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;
- Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided;
- Part 6 Security, Financial and Other Requirements: includes specific requirements that must be addressed by Bidders; and
- Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes and Attachments include:

- Annex A - The Statement of Work
- Annex B - The Basis of Payment
- Attachment 1 to Part 3 - The proposal preparation instructions
- Attachment 1 to Part 4 - Mandatory technical criteria and Benchmark statements
- Attachment 2 to Part 3 - Electronic payment instruments
- Annex F to Part 5 - The Federal Contractors Program for Employment Equity – Certification

1.2 Summary

TITLE: smartWhales - Development of Space-Based Solutions for the Monitoring and Protection of the North Atlantic Right Whale (NARW).

- 1.2.1 Under the Integrator track of the Canadian Space Agency (CSA) smartEarth initiative, in line with several key priorities of the Government of Canada (GoC), services of suppliers are being sought for the development of Space-Based Solutions for the Monitoring and Protection of the North Atlantic Right Whale (NARW). On behalf of CSA and in collaboration with Fisheries and Oceans Canada (DFO) and Transport Canada (TC), Public Services and Procurement Canada (PSPC) will be awarding several contracts under two streams.

- Stream 1: To improve the accuracy of detection and monitoring of NARW.
- Stream 2: To increase the effectiveness of prediction and modelling methods.

Bidders can submit a proposal for each Stream.

In the event they wish to submit bids for both Streams 1 and 2, bidders must provide **separate** bids, and clearly identify on each bid (1 or 2) for which Stream they are proposing their services.

Actual Available Budget

Stream 1:

The maximum funding available for each contract resulting from the bid solicitation for this stream is **\$1.2M per contract** (Applicable Taxes extra, as appropriate). Annex A (Statement of Work) includes a description of the work required. Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available. A maximum of 3 contracts are expected to be awarded within Stream 1.

Stream 2:

The maximum funding available for each contract resulting from the bid solicitation for this stream is **\$0.9M** per contract (Applicable Taxes extra, as appropriate). Annex A (Statement of Work) includes a description of the work required. Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available. A maximum of 2 contracts are expected to be awarded within Stream 2.

In this RFP, up to 5 (five) contracts are expected to be awarded. For additional information, please refer to Part 2, section 2.7 – Maximum Funding, of the bid solicitation.

- 1.2.2 The proposed period of the contracts will be from the date of the award up to 36 months.
- 1.2.3 There are no security requirements associated with this requirement.
- 1.2.4 This requirement is not subject to the trade agreements.
- 1.2.5 The requirement is subject to a preference for Canadian services.
- 1.2.6 The Federal Contractors Program (FCP) for employment equity applies to this procurement; refer to Part 5 – Certifications and Additional Information, Part 7 - Resulting Contract Clauses and the annex titled Federal Contractors Program for Employment Equity - Certification.

1.2.7 IMPORTANT NOTICE TO SUPPLIERS RE. BID SUBMISSION REQUIREMENTS

Due to the impacts from the COVID-19 pandemic, temporary measures are being taken on-site at the Québec Region Bid Receiving Unit to encourage social distancing. The health and safety of staff and suppliers remains our top priority.

Suppliers are required to submit bids electronically using the Canada Post epost Connect application for the subject bid solicitation. This service allows suppliers to submit bids, offers and arrangements electronically to PWGSC Bid Receiving Units. This online service enables the electronic transfer of large files up to Protected B level.

Faxed, emailed and hard copy (submitted in person or via mail/courier) bids will not be accepted for the subject bid solicitation.

Given current circumstances and network limitations, some active procurements may be delayed. To stay up to date on the status of specific procurements, please consult Buysandsell.gc.ca.

This bid solicitation allows bidders to use the epost Connect service provided by Canada Post Corporation to transmit their bid electronically. Bidders must refer to Part 2 entitled Bidder

Instructions, and Part 3 entitled Bid Preparation Instructions, of the bid solicitation, for further information.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The [2003](#) (2019-03-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days
Insert: 240 days

2.2 Submission of Bids

Bids must be submitted only to the Public Works and Government Services Canada (PWGSC) Bid Receiving Unit specified below by the date and time indicated on page 1 of the bid solicitation:

- a) Only bids submitted using epost Connect service will be accepted. The Bidder must send an email requesting to open an epost Connect conversation to the following address: TPSGC.RQReceptionSoumissions-QRSupplyTendersReception.PWGSC@tpsgc-pwgsc.gc.ca

Note: **Bids will not be accepted if emailed directly to this email address.** This email address is to be used to open an epost Connect conversation, as detailed in Standard Instructions [2003](#), or to send bids through an epost Connect message if the bidder is using its own licensing agreement for epost Connect.

It is the Bidder's responsibility to ensure the request for opening an epost Connect conversation is sent to the email address above at least six days before the solicitation closing date.

- b) Dud to the nature of this solicitation, bids transmitted by facsimile, email or hardcopy to PWGSC will not be accepted.

2.3 Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

Definitions

For the purposes of this clause, "former public servant" is any former member of a department as defined in the [Financial Administration Act](#), R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants, or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the [Public Service Superannuation Act](#) (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the [Supplementary Retirement Benefits Act](#), R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the [Canadian Forces Superannuation Act](#), R.S., 1985, c. C-17, the [Defence Services Pension Continuation Act](#), 1970, c. D-3, the [Royal Canadian Mounted Police Pension Continuation Act](#), 1970, c. R-10, and the [Royal Canadian Mounted Police Superannuation Act](#), R.S., 1985, c. R-11, the [Members of Parliament Retiring Allowances Act](#), R.S. 1985, c. M-5, and that portion of pension payable to the [Canada Pension Plan Act](#), R.S., 1985, c. C-8.

Former Public Servant in Receipt of a Pension

As per the above definitions, is the Bidder a FPS in receipt of a pension? **Yes** () **No** ()

If so, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:

- a. name of former public servant;
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with [Contracting Policy Notice: 2012-2](#) and the [Guidelines on the Proactive Disclosure of Contracts](#).

Work Force Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes** () **No** ()

If so, the Bidder must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

2.4 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than **15 (fifteen) calendar days** before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.5 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

2.6 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the

Contracting Authority at least **15 (fifteen) days** before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

2.7 Maximum funding

The total maximum funding available for the contracts resulting from the bid solicitation will be **\$5,400,000.00 million dollars (applicable taxes extra) to be distributed within the two Streams as described below***. This disclosure does not commit Canada to pay the maximum funding available.

Stream 1:

The maximum funding available for each contract resulting from the bid solicitation, for this stream, is **\$1.2M** (Applicable Taxes extra, as appropriate), for the work described in Annex A SOW Section A.6. Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available. A maximum of 3 contracts are expected to be awarded within Stream 1.

Stream 2:

The maximum funding available for each contract resulting from the bid solicitation, for this stream, is **\$0.9M** (Applicable Taxes extra, as appropriate), for the work described in Annex A SOW Section A.6. Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available. A maximum of 2 contracts are expected to be awarded within Stream 2.

*Note: A maximum of 5 contracts are expected to be awarded under this RFP (Stream 1 and 2 together). For additional information, please refer to Part 4 - Evaluation Procedures and Basis of Selection.

2.8 Intellectual Property

The CSA generally favours intellectual property ownership by the industry whenever industry creates intellectual property under Crown procurement issued in relation to the project. However, when intellectual property is to be owned by industry, as a result of such intellectual property being created under Crown procurement, the Crown is to be granted unrestricted rights to such intellectual property for government purposes.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid preparations instructions

The Bidder must submit its bid electronically in accordance with section 08 of the 2003 standard instructions. The epost Connect system has a limit of 1GB per single message posted and a limit of 20GB per conversation.

The bid must be gathered per section and separated as follows:

Section I: Technical and Managerial Bid
Section II: Financial Bid
Section III: Certifications

Bids transmitted by facsimile, email or hardcopy will not be accepted.

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Section I: Technical and Managerial Bid

In the technical and managerial bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

The technical and managerial bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

To maintain the integrity of the evaluation, evaluators will consider only information presented in the bid. No information will be inferred and personal knowledge or beliefs will not be utilized in the assessment.

Please note: Website references, technical papers, product samples, videotapes, slides, or other ancillary items will not be considered during the evaluation process.

The Part 4: *Evaluation Procedures and Basis of Selection*, contains additional instructions that Bidders should consider when preparing their technical and managerial bid.

Attachment 1 to Part 3: The proposal preparation instructions contain additional instructions that Bidders have to follow while preparing their technical and managerial bid.

The Technical and Management bid should not exceed fifty (50) pages (12pt font), excluding the title page, table of contents and Annexes.

Section II: Financial Bid

3.1.1 Bidders must submit their financial bid in accordance with the following:

Basis of Payment in Annex "B". Firm prices for the work, **not exceeding the maximum funding available for the contract** resulting from the bid solicitation, as specified at Part 2, section 2.7 Maximum funding. The total amount of applicable taxes should be shown separately, if applicable.

3.1.2 Electronic Payment of Invoices – Bid

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Attachment 2 to Part 3 Electronic Payment Instruments, to identify which ones are accepted.

If Attachment 2 to Part 3 Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

3.1.3 Exchange Rate Fluctuation

C3011T (2013-11-06) , Exchange Rate Fluctuation

3.1.4 Price breakdown

Bidders are requested to detail the following elements for expenses in the performance of each task, milestone or phase of the Work, as applicable:

- a) Labour: For each individual and (or) labour category to be assigned to the Work, indicate: i) the hourly rate and ii) the estimated number of hours.
- b) Subcontracts: Identify any proposed subcontractor and provide for each one the same price breakdown information as contained in this article.
- c) Travel and Living Expenses: Indicate the number of trips and the number of days for each trip, the cost, destination and purpose of each journey, together with the basis of these costs which must not exceed the limits of the National Joint Council (NJC). With respect to the NJC's Directive, only the meal, private vehicle allowances specified in Appendices B, C and D of the Directive <http://www.njc-cnm.gc.ca/directive/travelvoyage/index-eng.php>, and the other provisions of the Directive referring to "travellers", rather than those referring to "employees", are applicable. The Treasury Board Secretariat's Special Travel Authorities, <https://www.canada.ca/en/treasuryboardsecretariat/services/travel-relocation/special-travel-authorities.html>, also apply.
- d) Other Direct Charges: Identify any other direct charges anticipated, such as long distance communications and rentals, and provide the pricing basis.
- e) Applicable Taxes: Identify any Applicable Taxes separately.

Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical, management and financial evaluation criteria.
- (b) An evaluation team composed of qualified professionals will evaluate the bids.

4.1.1 Technical and Management Evaluation

Mandatory and point rated technical evaluation criteria are included in Attachment 1 to Part 4.

4.1.2 Financial Evaluation

4.1.2.1 Mandatory Financial Criteria

Stream 1:

The Bidder must submit for Stream 1 a Firm-Fixed Price of **\$1.2M** for the work described in Annex A SOW section A.6, (Applicable Taxes extra, as appropriate), which must not exceed the maximum funding available for each contract resulting from the bid solicitation as indicated in Part 2, Section 2.7 *Maximum Funding*, (Applicable Taxes extra, as appropriate).

Stream 2:

The Bidder must submit for Stream 2 a Firm-Fixed Price of **\$0.9M** for the work described in Annex A SOW section A.6, (Applicable Taxes extra, as appropriate) which must not exceed the maximum funding available for each contract resulting from the bid solicitation as indicated in Part 2, Section 2.7 *Maximum Funding*, (Applicable Taxes extra, as appropriate).

Bids which fail to meet the mandatory financial criteria will be declared non-responsive.

Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available.

4.2 Basis of Selection (for Stream 1 and Steam 2)

4.2.1 Basis of Selection – Highest Rated Within Budget

1. To be declared responsive, each bid must:
 - a) meet all mandatory evaluation criteria; and
 - b) obtain the required minimum of 60 points, on a scale of 100 points, for the overall Evaluation of the bid.
2. Bids not meeting (a) or (b) will be declared non-responsive.
3. Responsive Bids will be ranked according to their overall score. Bids will be ranked starting from the Bid with the highest score down to the lowest score resulting in a Responsive Bid List. A responsive bid list will be established for each of the two streams present in this RFP;
4. In the event that more than one responsive bid have the same score, these responsive bids will be further ranked based on the highest score of the “Added Value of the Proposed Solution”, Criterion 2;
5. Up to 3 contracts will be awarded by ranking order of the Stream #1 Responsive Bid List.
6. Up to 2 contracts will then be awarded by ranking order of the Stream #2 Responsive Bid List.
7. A maximum of 5 contracts are expected to be awarded under this RFP (Stream 1 and 2 together).

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue, whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the Integrity declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame specified will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real property agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid list at the time of contract award.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the ["FCP Limited Eligibility to Bid"](#) list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex titled Federal Contractors Program for Employment Equity - Certification, before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

5.2.3 Additional Certifications Precedent to Contract Award

5.2.3.1 Canadian Content Certification

This procurement is limited to Canadian services.

The Bidder certifies that:

() the service offered is a Canadian service as defined in paragraph 2 of clause A3050T.

5.2.3.1.1 SACC Manual clause A3050T (2018-12-06) Canadian Content Definition

5.2.3.2 Status and Availability of Resources

SACC Manual clause A3005T (2010-08-16) Status and Availability of Resources

5.2.3.3 Education and Experience

SACC Manual clause A3010T (2010-08-16) Education and Experience

5.2.3.4 Language Capability

The Bidder certifies that:

() All proposed consultants must be able to communicate (spoken and written) in English

PART 6 - FINANCIAL REQUIREMENTS

6.1 Financial Capability

SACC Manual clause A9033T (2012-07-16) Financial Capability

PART 7 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

7.1 Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex "A" and the technical and management portions of the Contractor's bid entitled _____, dated _____. (*Will be inserted at the Contract award*)

7.2 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

7.2.1 General Conditions

2040 (2020-05-28), General Conditions - Research & Development, apply to and form part of the Contract.

7.3 Security Requirements

7.3.1 There is no security requirement applicable to the Contract.

7.4 Term of Contract

7.4.1 Period of the Contract

The period of the Contract is from date of Contract to 36 months inclusive.

7.5 Authorities

7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Naoual Guerinik
Title: Team Leader in Procurement
Organization: Public Works and Government Services Canada
Acquisitions Branch
Directorate: Space Programs Directorate
Telephone: 514-607-2651
E-mail address: naoual.guerinik@pwgsc-tpsgc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

7.5.2 Project Authority

The Project Authority for the Contract is: *(Will be inserted at the contract award)*

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: ____-____-_____
E-mail address: _____

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority; however, the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

7.5.3 Technical Authority

The Technical Authority for the Contract is: *(Will be inserted at the contract award.)*

Name: _____
Title: _____
Organization: _____
Address: _____

Solicitation No. - N° de l'invitation
9F040-19633/A
Client Ref. No. - N° de réf. du client
9F040-19633

Amd. No. - N° de la modif.
File No. - N° du dossier
MTB-0-43010

Buyer ID - Id de l'acheteur
MTB450
CCC No./N° CCC - FMS No./N° VME

Telephone: ____ - ____ - ____
E-mail: _____.

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all recommendations to the Project Authority concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no capacity to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

7.5.4 Contractor's Representative

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: ____ - ____ - ____
E-mail address: _____

7.6 Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

7.7 Payment

7.7.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price, as specified in Annex B – Basis of Payment (A) for a cost of \$ _____ **(insert the amount at contract award)**. Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

7.7.2 Method of Payment

7.7.2.1 Milestone Payments - Firm Price

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in Annex B - Basis of Payment and the payment provisions of the Contract if:

(a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111 (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>) and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;

(b) all the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives;

(c) all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.

7.7.2.2 Schedule of Milestones

The schedule of milestones for which payments will be made in accordance with the Contract is detailed in Annex B.

7.7.3 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI);
- e. Wire Transfer (International Only);

7.7.4 Discretionary Audit

SACC Manual clause **C0101C** (2010-01-11) Discretionary Audit - Non-commercial Goods and/or Service

7.7.5 Time Verification

SACC Manual clause **C0711C** (2008-05-12), Time Verification

7.8 Invoicing Instructions - Progress Claim - Firm Price

1. The Contractor must submit a claim for progress payment using form PWGSC-TPSGC 1111 Claim for Progress Payment (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>).

Each claim must show:

- a) all information required on form PWGSC-TPSGC 1111;
 - b) all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;
 - c) the description and value of the milestone claimed as detailed in the Contract.
2. The Contractor must prepare and certify **one PDF copy** of the claim on form [PWGSC-TPSGC 1111](#), and send **it by e-mail** to the Contracting Authority and Project Authority identified under the section entitled "Authorities" of the Contract, with copy to the following:
 - a) CSA e-mail address: asc.facturation-invoicing.csa@canada.ca
 - b) PWGSC e-mail address: QueReclamationsMontreal/QueMontrealClaims@tpsgc-pwgsc.gc.ca

3. The CSA's Financial Services Section will then forward the original and one (1) copy of the claim to the Contracting Authority for certification and onward submission to the Payment Office for the remaining certification and payment action.
4. The Contractor must not submit claims until all work identified in the claim is completed.

7.9 Certifications and Additional Information

7.9.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

7.9.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "[FCP Limited Eligibility to Bid](#)" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

7.9.3 SACC Manual Clauses

SACC Manual clause [A3060C](#) (2008-05-12), Canadian Content Certification

7.10 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____ (*The name of the province or territory as specified by the Bidder in its bid, will be inserted at contract award*).

7.11 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- a) the Articles of Agreement;
- b) the general conditions [2040](#) (2020-05-28) General Conditions – Research & Development, apply to and form part of the Contract;
- c) Annex A, Statement of Work;
- d) Annex B, Basis of Payment;
- e) Attachment 2 to Part 3, Electronic payment instruments;
- f) Annex F to part 5, The Federal Contractors Program for Employment Equity – Certification;
- g) the Contractor's bid dated _____, as clarified on _____ **or** as amended on _____.

7.12 Foreign Nationals (Canadian Contractor)

SACC Manual clause [A2000C](#) 2006-06-16 Foreign Nationals (Canadian Contractor)

7.13 Insurance

SACC Manual clause [G1005C](#) (2016-01-28) Insurance - No Specific Requirement

7.14 Directive on Communications with the Media

1. Definitions

"Communication Activity(ies)" includes: public information and recognition, the planning, development, production and delivery or publication, and any other type or form of dissemination of marketing, promotional or information activities, initiatives, reports, summaries or other products or materials, whether in print or electronic format that pertain to the present agreement, all communications, public relations events, press releases, social media releases, or any other communication directed to the general public in whatever form or media it may be in, including but without limiting the generality of the preceding done through any company web site. This excludes scientific publications, scientific presentations and scientific demonstrations of the results derived from this project.

2. Communication Activities Format

The Contractor must coordinate early on with the Canadian Space Agency (CSA) all Communication Activities that pertain to the present contract.

Subject to review and approval by the CSA, the Contractor may mention and/or indicate visually, without any additional costs to the CSA, the CSA's participation in the contract through at least one of the following methods at the complete discretion of the CSA:

- a) By clearly and prominently labelling publications, advertising and promotional products and any form of material and products sponsored or funded by the CSA, as follows, in the appropriate official language:

"This program/project/activity is undertaken with the financial support of the Canadian Space Agency."

- b) By affixing CSA's corporate logo on print or electronic publications, advertising and promotional products and on any other form of material, products or displays sponsored or funded by the Canadian Space Agency.

Any and all mention or reference to the Canadian Space Agency in addition to those specified above in (a) and (b) must be specifically accepted by the CSA prior to publication.

The Contractor must obtain and use a high resolution printed or electronic copy of the CSA's corporate identity logo and seek advice on its application, by contacting the project authority as mentioned in Paragraph [7.5.2](#) of this contract.

3. Communication Activity Coordination Process

The contractor must coordinate with the CSA's Directorate of Communications and Public Affairs all Communication Activities pertaining to the present contract. To this end, the contractor must:

- a. As soon as the Contractor intends to organize a Communication Activity, send a Notice to the CSA's Directorate of Communications and Public Affairs. The Communications Notice must include a complete description of the proposed Communication Activity. The Notice must be in writing in accordance with the clause Notice included in the general conditions applicable to the contract. The Communications Notice must include a copy or example of the proposed Communication Activity.
- b. The contractor must provide to the CSA any and all additional document in any appropriate format, example or information that the CSA deems necessary, at its entire discretion to correctly and efficiently coordinate the proposed Communication Activity. The Contractor agrees to only proceed with the proposed Communication Activity after receiving a written confirmation of coordination of the Communication Activity from the CSA's Directorate of Communications and Public Affairs.
- c) The Contractor must receive beforehand the authorization, approval and written confirmation from the CSA's Directorate of Communications and Public Affairs before organizing, proceeding or hosting a communication activity

ANNEX A

STATEMENT OF WORK (SOW)

A.1 INTRODUCTION

A number of the world's whale populations are in crisis and in need of protection if they are to survive. Canada has taken significant steps to improve the circumstances in which whales in our coastal areas can safely coexist with human activity. However, more has to be done to protect certain endangered whale species so that they may recover their populations to healthier levels while allowing human activity to continue in shared environments. Circumstances are particularly critical for the North Atlantic Right Whales (NARW) that inhabits Canada's East Coast waters.

The primary purpose of this Request for Proposal (RFP) is to explore and develop ways in which space-based solutions can be used in conjunction with other information sources to contribute to the protection and environmental management of NARW in Canadian waters. In this Statement of Work (SOW), the term 'whale(s)' will be used to denote NARW, and only NARW, unless other megafauna are specified.

The Earth Observation Applications and Utilization (EOAU) section of the Canadian Space Agency (CSA), through its smartEarth program within the Integrator Track, intends to award contracts to successful bidders to conduct activities that address one or more of the challenges that have been identified in this SOW. This initiative is being supported in partnership between the CSA, the Department of Fisheries and Oceans (DFO) and Transport Canada (TC).

This initiative aligns very well with several key priorities of the Government of Canada, including marine conservation, climate change adaptation and mitigation, as well as fostering innovation and partnerships. It also represents an important step in the implementation of the Oceans Protection Plan (OPP) for the implementation of the Species at Risk Act (SARA), along with the proposed 2020 *Action Plan for the North Atlantic Right Whale (Eubalaena glacialis) in Canada*, while incorporating the principles of the Canada's New Space Strategy.

This SOW includes additional background information, project objectives, the scope of work, along with a summary of the deliverables and meetings.

A.2 BACKGROUND

The following information is intended to provide background regarding the overall context in which NARWs live in Canadian waters, along with a brief discussion of the measures that Canada is taking to protect and manage this endangered whale population. This overview is not exhaustive and the bidders are urged to independently research the subject matter to become familiar with other relevant background information. It is essential for the successful fulfilment of the requirements for this work that the bidders have an in-depth understanding of nature of the NARW environment, including their favoured habitats, their seasonal migration cycles, as well as their feeding, breeding, calving and socializing patterns. A partial list of helpful links has been listed below.

- <https://species-registry.canada.ca/index-en.html#/documents/2973>
- <http://www.dfo-mpo.gc.ca/species-especes/profiles-profils/rightwhaleNA-baleinenoireAN-eng.html>
- <http://www.dfo-mpo.gc.ca/species-especes/whalereview-revuebaleine/index-eng.html#background>
- <https://www.canada.ca/en/fisheries-oceans/news/2019/02/backgrounder-protecting-north-atlantic-right-whales.html>
- <https://whalemap.ocean.dal.ca/WhaleMap>
- <https://www.tc.gc.ca/en/services/marine/navigation-marine-conditions/protecting-north-atlantic-right-whales-collisions-ships-gulf-st-lawrence.html>
- http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2019/2019_028-eng.pdf
- <https://www.canadianwhaleinstitute.ca>

- <https://www.cioos.ca>
- <https://coinatlantic.ca>
- <https://oceanfrontierinstitute.com>
- <https://www.oceannetworks.ca>
- <https://www.mi.mun.ca>
- <https://ogsl.ca>
- <https://www.narwc.org/narwc-databases.html>
- <https://www.whoj.edu/know-your-ocean/ocean-topics/ocean-life/marine-mammals>

A.2.1 North Atlantic Right Whales (NARW) in the Canadian Context

It is estimated that there are only approximately 400 individual NARWs in existence today that at one time prior to commercial whaling had numbered in the thousands. They range from Florida to Iceland and Norway, but there is no single area within their range where all NARWs are present at the same time. In general NARW use the more southerly areas for calving during the winter, and move to northerly areas during the summer for feeding and socializing, crossing many of the East Coast's busy shipping lanes and fishing zones. It is for this reason that both DFO and TC share a challenge in detecting NARW and implementing management strategies in and around human activities.

The primary driver for the presence of NARW appears to be the density and availability of its main prey, copepod *Calanus* spp. There have been significant changes in the abundance of *Calanus* in eastern Canadian waters since 2010. While there is interannual variability, biomass of *Calanus* in most areas has declined, with the greatest declines observed in the Gulf of Maine and on the Scotian Shelf. These changes have affected the migration channels and feeding zones that the whales inhabit.

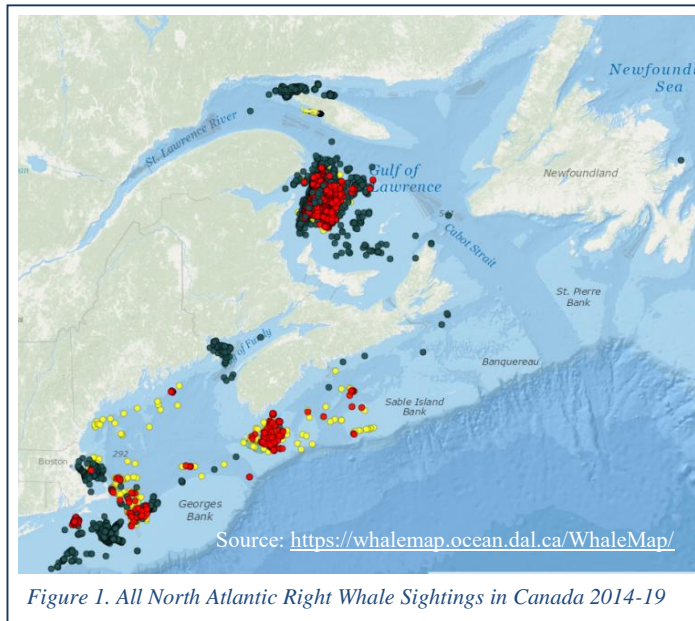


Figure 1. All North Atlantic Right Whale Sightings in Canada 2014-19

Prior to 2010, in Canadian waters, the NARW was consistently found in the Bay of Fundy and the Scotian Shelf. The presence of NARW in the Gulf of St. Lawrence (GSL) was considered "occasional". However, since 2017 almost half of the population now migrate to the GSL between May to September. Some individuals may remain in northern areas year-round.

A.2.2 Environmental Resource Management

There is a wide range of human activities that can adversely affect marine mammals and other aquatic species, including fishing operations, marine traffic, noise, coastal development, offshore drilling, and pollution. In the past few years there have been substantial mortality of the NARW in Canadian waters. It has been observed that 87% of these whales show scars of having been entangled in fishing gear such as nets and ground lines. In 2017 there were twelve NARW deaths and another nine in 2019, all in the GSL. Necropsies conducted on seven of the 2017 carcasses concluded that four animals died from blunt trauma consistent with vessel strikes, two from entanglement in fishing gear, and in one case the cause of death was inconclusive. There is tremendous effort by DFO and TC to detect, model and anticipate the NARW movements.

In response to the vessel strike mortalities, the Government of Canada (GoC) implemented a combination of areas with static and dynamic speed restriction zones of 10 knots for vessels 20 metres or longer, in the GSL. Approximately 4,812 vessel transits occurred through the speed restricted zone in the GSL between April 28 and October 25, 2019, with 465 of those vessels recording speeds above 10 knots. In an effort to reduce the risk of entanglements of NARW in fishing gear, DFO implemented static and dynamic fisheries management zones (i.e., fishery closures) related to the snow crab and lobster fisheries and all other non-tended fixed-gear fishing. These measures are intended to minimize the risk of harmful encounters for NARW in Canadian waters, but only form part of the solution.

Current management measures aimed to protect NARWs are spatially based and dependent on visual whale sightings as a trigger for pre-planned protective responses. Near real-time NARW detections are currently conducted using a variety of methods that include aerial surveillance (aircraft and drones), vessel-based sightings, and acoustic detection. Other indirect methods using satellite tagging and habitat suitability models are being researched as a means to delimit areas of possible higher risk of impact. Since the whales are able to travel up to 60 km per day, there are challenges in tracking and monitoring them. The oceanic study area is vast so aerial surveillance coverage is costly, limited spatially, and not as effective as desired; other detection and monitoring approaches are needed to supplement the current data sources.

Although the GSL is the region where the most mortalities of the NARW have occurred in recent years, the Area of Interest (AOI) for this RFP includes the GSL, as well as the Bay of Fundy, the Roseway Basin, the Scotian Shelf, and Newfoundland (particularly Placentia Bay). Offshore waters beyond the shelf break in eastern Canadian waters are also of interest since more than half of the NARW population are not sighted each year, and they are thought to travel far offshore. In addition, since the whales migrate to warmer waters during the winter periods to the south eastern shores of the U.S. for calving purposes, there may be interest and a need to consider including data from U.S. sources in these regions, particularly for prediction and modelling purposes.

A.3 GAPS AND CHALLENGES

Although important advances have been made in the monitoring of the NARW population and multiple measures have been taken to reduce the risk of harm to the whales, there still exist areas where there are gaps and challenges related to the scope and effectiveness in the detection, monitoring, and prediction of NARW distribution, as well as the feeding, breeding and calving behaviour, and responses to human activities. The following discussion summarizes the main gaps and challenges that this RFP is intended to address. It should be noted that the projects to be supported under this RFP will directly address these gaps and challenges using space solutions in conjunction with other sources of information.

A.3.1 Detection and Monitoring

The primary means to locate NARW relies on visual methods (sightings or imagery from aircraft, ships, or drones). This approach has limitations when having to cover vast areas of ocean often under challenging weather conditions, since the search is for individual or small groups of NARW that barely break the surface and are near the colour of the background ocean. Current surveillance activities work on the basis of 10 arc minute grids over limited areas on a per mission deployment. Wider area surveillance on a regional basis could significantly improve the efficiencies of the process. The detection of the NARW is the most challenging aspect for their conservation and protection. It is also the most important item for this RFP.

Once the NARW have been detected, it is often equally challenging to continue to monitor them with the existing approaches since they dive to forage and can move steadily over long distances. There is a need for near continuous detection as part of the monitoring process.

Often secondary indicators are helpful in identifying areas where the NARW may be present. In particular, knowing where there are large masses of *Calanus* would be very useful in predicting where the NARW

are likely to gather. Also, acoustic sensing provides an indication of the presence of the NARW, which could be further verified by surface sensing methods.

False detections of other marine megafauna, such as fin and minke whales, can result in unnecessary regulatory responses (e.g., speed reductions) and is therefore another problem that better detection methodologies can address.

In addition, the monitoring of human activity (fishing, marine traffic, pollution, offshore drilling) in the vicinity of the NARW will provide an indication of the levels of risk that they face when in shared activity environments. However, assessments of these risks are not the primary purpose of this RFP.

A.3.2 Prediction and Modelling

Predicting where the whales are and where they will be in the near future (days to 1 week) involves a complex mix of understanding and modelling of several important environmental variables on a seasonal basis that influence and affect the behaviour and migration patterns of the NARW. Various models exist that address specific aspects of the dynamic NARW environment, but few exist that attempt to incorporate a full range of behaviours, activities and environmental variables (static and non-static). The recent redistribution of the NARW into the GSL highlights the evolving ocean environment and likely implicates a change in food availability and distribution.

A.4 OBJECTIVES

As the above information has demonstrated, new and innovative approaches are needed to enhance the Government of Canada's ability to detect and monitor the presence of NARW, predict their movements and areas of aggregation, as well as to develop new tools for the timely analysis and dissemination of relevant information to mariners and the public. This information is critical to the effective and timely protection of the NARW in Canadian waters.

There is an opportunity for Canadian leadership in the field of space-based approaches that leverage technologic development to improve marine management activities. Space-based solutions with far-reaching environmental implications and socio/economic benefits for Canadians and for the protection of irreplaceable marine species like NARW are needed. Through this opportunity new partnerships will be formed involving Canadian organizations led by industry, in conjunction with academia and government, with the purpose of stimulating the uptake of space capabilities to address an urgent national priority for the Government of Canada.

The CSA, through this RFP, seeks proposals for research and development projects using space-based solutions that address the following objectives:

- a) To forge multi-sector partnerships in the form of project consortiums for the integration of space-based solutions for the conservation and protection of NARW;
- b) To improve the accuracy of detection and monitoring as well as real-time or near real-time dissemination of NARW sightings over wider areas of Canada's East Coast ocean regions using space-based solutions and advanced analysis methods;
- c) To increase the effectiveness of prediction and modelling for locating and tracking the movement and activities of the NARW.

A.5 SCOPE

As previously discussed, new and innovative approaches are needed to enhance the Government of Canada's ability to detect and monitor the presence of NARW, predict their movements or areas of aggregation and monitor their habitats, as well as to develop new tools for the timely analysis and dissemination of relevant information to mariners and the public. This information is critical to the effective and timely protection of NARW in Canadian waters and requires the creation and use of advanced technology solutions.

It is important at this point to highlight an overarching topic that is the basis of this RFP, which is the importance of incorporating innovative space-based, technology solutions to the current means that are in use today. As part of addressing the NARW applications and the use of space-based solutions, there are many parallel developments in complementary technologies to consider with regard to big data analytics, cloud computing, AI, telecommunications, data cubes, block chain linkages, data portals and other technologies that may offer useful potential in contributing to the creation of innovative solutions to the gaps and challenges that the NARW application faces. Adapting these technologies to the NARW application with the use of increased space-based solutions presents both a growing challenge and an opportunity for the future protection of the NARW species. With this RFP it is expected that the proposed concepts will advance the use of space-based solutions in a manner that significantly contributes to the way in which NARW are monitored and regulatory responses are managed.

The Scope of the proposed concept is to design and develop innovative advanced technology solutions using space-based data to credibly address one or more of the challenges identified above in Section A.3.

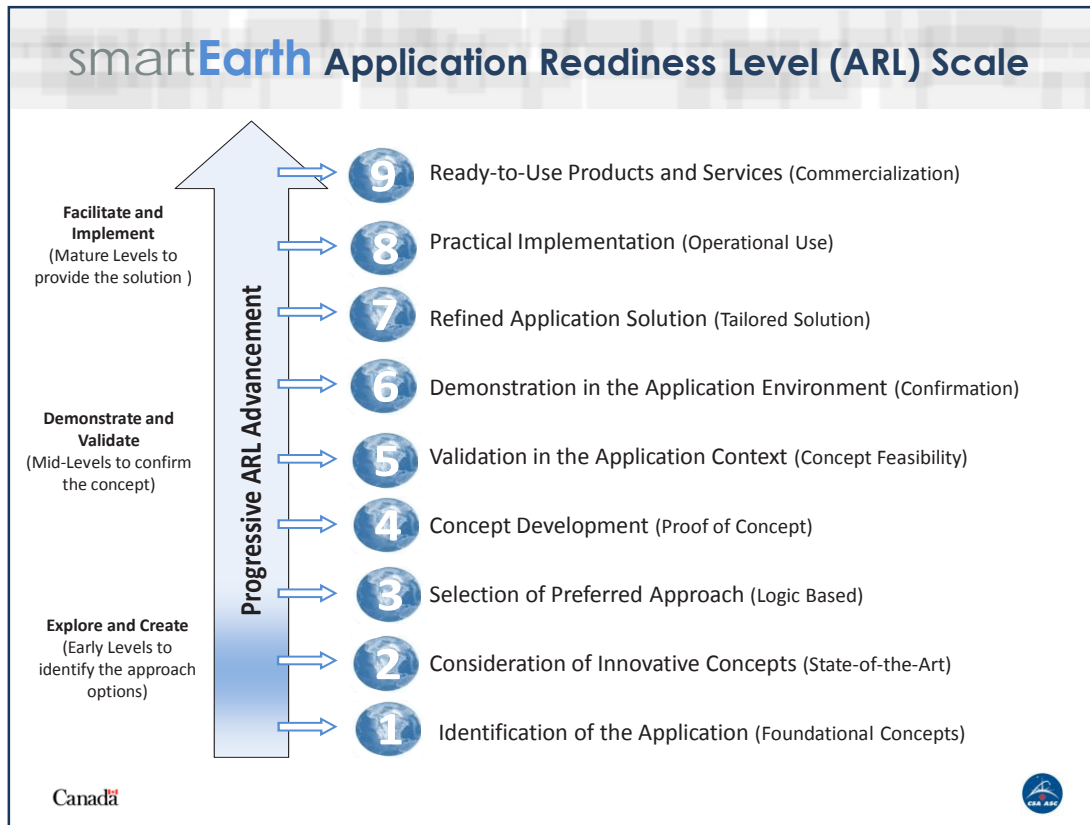
A.5.1 Technologies and Services

The Bidders should be mindful of the following considerations related to the proposed technologies and services:

- The concept for the proposed solution may be related to a method, system, model, product, and/or service that incorporate the use of space-based solutions for one or more of the challenges facing the NARW application. The proposed solution must incorporate space-based data in an appropriate role and introduce new advanced approaches that are now emerging in the marketplace as listed in the introductory paragraphs to the Scope section;
- The concept for the proposed solution may be either: a) a major improvement to an existing method, system, product, model and/or service, or: b) it could be an entirely new method, system, model, product and/or service;
- Two important aspects of the proposed concept need to be considered and incorporated: 1) the final output products should aim to be provided in near real-time; 2) the method for the quick dissemination of the products to the appropriate users needs to be described. At the same time, all output products must be preserved for archival purposes in order to build an ongoing knowledge base;
- For this solicitation, the bids are intended to focus on a proposed solution that will require a description of how the concept will arrive at the solution for the related challenge. For the proposed concept, the work will involve the actual development of the final method, system, product, model and/or service. To further demonstrate the utility of the proposed solution, the bidder will propose to include a sample demonstration of the expected outcome or product.
- It is important to note that any concept that is approved for support under this RFP will need to include sufficient details on **how** the solution would be accomplished, including a statement on the feasibility of the proposed solution for future implementation into an operational environment.

A.5.2 Application Readiness Levels (ARLs)

Since much work and development has been created over the years related to the NARW applications, the proposed concepts should show noticeable advancement in the technology solutions and applications over current practices. For guideline purposes, the following Application Readiness Levels (ARLs) are provided. The bidder should indicate the current ARL for the application and then to which level the proposed concept intends to advance to.



A.5.3 Data Access

Fortunately there are many sources of data that encompass all or most of the AOI by the participating organizations. Much of it is in the form of historical files, while new data are being collected in the AOI on a regular basis and there are ongoing plans for new data to be collected in the future. However, the NARW data are from a disparate group of sensors and observations that include: whale maps and charts; ship, airborne, and drone data; acoustic data and model outputs. A wide variety of publicly available physical data is also available, including satellite imagery. It will be up to the bidders to decide what data will be required to meet the technical objectives of their proposed concept. In the meantime, the following sections describe the data types that will be available from the participating partners.

A.5.3.1 Space-Based Solutions

Space-based solutions involve a full range of space data and technology. For the NARW application, Earth Observation imagery holds further utility potential when used in conjunction with other forms of information. There are numerous sources of EO data in the open marketplace, including a variety of optical and synthetic aperture radar (SAR) imagery, as well as non-image data such as S-AIS and other

relayed data. It will be the responsibility of the bidders to locate these sources based on the objectives of their proposed activities. RADARSAT data from the processed archives will be available through the EODMS portal (https://www.eodms-sgdot.nrcan-rncan.gc.ca/index_en.jsp). If costs are to be incurred in acquiring new EO imagery, the bidder should include these costs in their financial bids to be commensurate with project value.

A.5.3.2 DFO Data

The DFO has acquired a wide range of field observations, whale maps and charts, as well as habitat and model outputs. This data and other sources will be made available on a best efforts basis for the purposes of supporting the development activities of the successful bidders. The following examples describe the types of datasets that may be made available:

- Whales sighting database;
- Geolocated datasets related to North Atlantic Right Whales, fishing gears, boats, etc. (historical and recent);
- CHS: Bathymetry and coastal maps available, Various (aerial/satellite (optical, radar, derived thematic)/drone) archived datasets;
- BIO: Data to be made available in the context Departmental Policy of allocated usage.

The specific data for each of the above categories will have to be determined on a case by case basis depending on the research objectives and the acquisition activities conducted during each monitoring season.

Current open access data can be searched through this portal:

<https://open.canada.ca/en/open-data>.

A.5.3.3 TC Data

TC has also acquired large volumes of whale observation data in recent years from ships, aircraft, and drones. Historical files will be available as well as access to new acquisitions over the period of the project lifecycle on a best efforts basis. The following examples describe the types of datasets that may be made available:

- Relevant RPAS (drone) data;
- Relevant data from NASP (airborne) NARW whale surveillance missions;
- Geo-located datasets related to vessels and marine activities (historical and recent);
- Drone and aerial datasets available related to whales, and marine transportation (historical and recent);
- Shipborne observation data where available.

The specific data for each of the above categories will have to be determined on a case by case basis depending on the research objectives and the acquisition activities conducted during each monitoring season.

A.5.3.4 Other Data Sources

There is a variety of other data sources that may have important implications for the proposed project work. Much of this type of data may come from public sources such as meteorological and oceanographic data (e.g., <https://earthengine.google.com/>), as well as bathymetry, etc. Additional information may come from private sources and observations from fisheries and tourist activities or from the records of indigenous peoples in the areas of interest. Basically, there are no limitations on the available data sources that the bidders may consider, provided that it is accessible for use. It will be up to the bidders to determine their data requirements and to conduct the searches for the full complement of data to meet those needs, including from foreign sources.

Since the NARW migrate from their winter habitat in southern U.S. waters, a number of U.S. organizations (e.g. NOAA) collect and model NARW information that would also be available for use in these projects.

Any other data types that the bidder would like to consider, but that are outside of the offerings by the CSA, DFO and TC, would have to be arranged by the bidder and identified as an item in the financial bid if costs are involved.

A.6 STREAM SUMMARIES and DELIVERABLES

In order to address the gaps and challenges that have been described in Section A.3 above, there will be two (2) separate Streams supported within this RFP for a total of five (5) individual contracts. The bidders are requested to consider submitting a proposal for one of the contracts in either of the Stream categories. Bidders may consider submitting separate proposals for more than one of the Streams so long as they are in different Streams, and provided that the concepts are unique and separate, as well as subject to a suitable allocation of the consortium's resources. All proposals must incorporate space-based solutions in some capacity within the context of the proposed solution.

For planning purposes, the distribution of the resources to support the research for each Stream is summarized in the following table.

smartWhales STREAM RESOURCE ALLOCATIONS			
Stream	Total \$ Allocation	# of Contracts	\$ Allocation/Contract
Stream 1: Detection and Monitoring	\$3.6M	3	\$1.2M
Stream 2: Prediction and Modelling	\$1.8M	2	\$0.9M
Totals	\$5.4M	5	

The two Streams are complementary to one another and may eventually lead to the development of an applications platform at a later date under other opportunities. The two Streams for consideration are described below.

A.6.1 Detection and Monitoring Stream

Three (3) separate contracts will be awarded under this Stream. This Stream should address the challenge of detecting the whales in their natural habitats and monitoring them as they move from place to place within Canada's East Coast regions. A variety of complementary data sources may be used for this purpose, as well as any analytical methods. The key objective is to locate the whales and to follow them as best as possible incorporating space-based solutions and other appropriate data in the process, either as a complementary source for detection and monitoring or as a secondary source for initial coverage or verification purposes.

Due to the large area that NARW inhabit during the summer season, a central aspect of this Stream category is to obtain and use wide area coverage that can then be used to narrow down to a more local area based on the possible detection of the NARW using space-based solutions. In this way, it may be possible to use the space-based data to locate specific areas of interest for a more effective deployment of other resources for closer inspection and validation purposes.

Various aspects of whale behaviour can become quite important in determining the success of the detection and monitoring of the whales. For example, they tend to be in groups early in the day and again towards the end of the day, while they make dispersed, solitary journeys throughout the day in search of food. Also, water temperature and bathymetry affect the locations of their primary food source, *Calanus*, which is the major reason they congregate in Canadian coastal waters in the summer season. Groups of whales involving 2 to 40 animals often socialize in what are known as Surface Active Groups (SAG) that may be quite visible since the activity occurs on the water surface. These and other important

aspects of their behaviour help to determine their locations, which the bidders should become familiar with.

From a detection and monitoring perspective, there are also secondary features that are worthy of consideration as part of this project. These features of interest include the location of the whale's primary food sources and other habitat determinants, as well as areas of human activity.

Primary Deliverables for this Stream

Based on the technical objectives of the proposed work, one or more of the following items should comprise the primary deliverables for this Stream:

- New methods and analysis approaches in the use of space-based data for the detection and monitoring of NARW;
- New products and services for the detection of the NARW and the monitoring of their movements;
- Integrated products and services that incorporate various data sources and information related to the presence of whale food sources and risks to whale habitats;
- Methods for the production of near real time output products and their quick dissemination to the user community;
- Integration of the methods or output products to an historical archive.

A.6.2 Prediction and Modelling Stream

Two (2) separate contracts will be awarded under this Stream. This Stream should address methods and means for the prediction and modelling of the whales' locations in Canadian coastal regions. This challenge will involve consideration of the following dynamics:

- The prediction of their movements, areas of aggregation and distribution, and behaviour (feeding and SAG);
- The environmental conditions (meteorology and oceanography variables related to wind, wave, weather, ice, ocean currents, sea surface temperature and ocean colour, marine drift and dispersion forecasts) in the area of interest that affect both the detectability of the NARW and the likelihood that they will be there;
- Habitat suitability that involves the location of the whales' primary food source (*Calanus* spp.) and its abundance, as well as the presence of zooplankton biomass;
- The dynamics and characteristics of the various coastal areas (tides, topography, bathymetry, navigation hazards).

Since all of these variables interact with one another and affect the behaviour patterns of the NARW, integrating different sources and aspects of this information is central to implementing predictive methods for the seasonal location of the NARW. Addressing this challenge may require database cross referencing and validation with other sources of data. The full integration of the disparate databases within various modelling scenarios presents a major processing and dissemination challenge.

Since the NARW populations have a wide range of movement between their breeding, calving and feeding zones, it would be advantageous to be able to incorporate information regarding their arrival and departure dates on a seasonal basis for prediction and modelling purposes. This may necessitate the need to include data outside of the primary area of interest in Canadian coastal waters and to include data from U.S. coastal regions. However, from a prediction and modelling perspective, the most important aspect of their movements for modelling purposes is within a finer scale for shorter periods of 1 to 2 weeks duration when the whales are moving in their main activity areas for the season.

Primary Deliverables for this Stream

Based on the technical objectives of the proposed work, one or more of the following items should comprise the primary deliverables for this Stream incorporating the use of space data:

- New prediction and modelling methods that forecast the movements and presence of NARW;
- New prediction and models that identify the presence and location of the NARW primary food source, *Calanus*;
- Improved presence and spatial/temporal patterns in the distribution of NARW movement models that are scalable in terms of area coverage;
- Improved habitat models that incorporate sea surface temperature, bathymetry, wind and other spatial variables;
- Establishment of a Spatial Decision Support System (SDSS) for NARW information management purposes that incorporates prediction and modelling concepts and related data;
- Methods for the production of near real-time output products and their quick dissemination to the user community;
- Integration of the methods or output products to an historical archive.

A.6.3 Standard Deliverables

The standard deliverables that will be common for all contracts will include the following items:

1) Regular Deliverables:

- Brief (1 or 2 page) monthly reports summarizing the highlights, challenges, and progress for the previous month, including the cumulative level of effort summaries;
- Workshop and teleconference summaries that include the discussion of activities, challenges, and action items as required.

2) Milestone Reports:

- Provide a summary of recent activities, accomplishments and challenges since the previous report;
- Summarize the plans and activities, as well as the expected challenges for the upcoming period;
- Demonstrate or describe any developed output products or interim functionality.

3) Final Report

The final report should include details related to the following topics:

- A full description of the solution concept for the chosen challenge, including a justification of the concept as supported by appropriate literature references and a summary as to how the solution advances the technology or its use, referring to the ARL scale;
- A flowchart of the solution concept that includes the major steps and technologies involved in the concept;
- Detailed summaries for each of the steps in the solution concept and any relevant documentation;
- An analysis and assessment of the solution's feasibility and its potential effectiveness in addressing the chosen challenge. This should include a summary of the pros and cons of the approach with recommendations on the next steps for future development purposes; and
- A summary of how any developed intellectual property will be managed for the benefit of the Crown and integrated into existing DFO and TC workflows.

A.7 WORKSHOPS AND MILESTONES

The main Stream workshops and milestones are described below.

smartWhales STREAM WORKSHOPS AND MILESTONES												
Workshops and Milestones	Year 1 ^(a)				Year 2				Year 3			
	Stream Year Quarters											
	1	2	3	4	1	2	3	4	1	2	3	4
Face to Face Workshops ^(b)	Combined Kickoff and 1 st Workshop				Mid-Term Workshop				Final Workshop			
Major Milestone Items ^(c)	Milestone Reports				Milestone Reports				Final Report			

Notes:

- (a) The assumption is that the contract activities within each of the two (2) Streams would begin within the 2020/2021 government fiscal year and proceed over a maximum of 36 months. The commencement date will be based on various timing and planning factors.
- (b) A number of face to face meetings are foreseen for all participants in each of the approved contracts within the two (2) Streams. The exact timing and nature of the meetings will be determined based on the proposals and the bidders' study plans. It is envisioned that over the course of the Stream lifecycles there will be three workshops: one at the beginning for coordination purposes, one at the mid-term point for progress purposes and a final workshop to present the results. The nature and timing of these workshops may be affected by the status of the COVID-19 situation.
- (c) The major milestones for each of the contracts within the two (2) Streams will include: the initial workshop, mid-term workshop progress summaries, and the final workshop with final reports, as well as any other appropriate milestones to be determined at the time of contract signing.

GLOSSARY AND ACRONYMS

AOI	Area of Interest
BIO	Bedford Institute of Oceanography
CHS	Canadian Hydrographic Service
CSA	Canadian Space Agency
DFO	Department of Fisheries and Oceans
EOAU	Earth Observation Applications and Utilization (CSA)
EO	Earth Observation: wherever EO appears, assume Earth Observation from space
GSL	Gulf of St. Lawrence
ICT	Information and Communication Technology
NARW	North Atlantic Right Whales
NASP	National Aerial Surveillance Program
NOAA	National Oceanic and Atmospheric Administration
Payload	Any instrument/sensor mounted on a space-based platform, such as optical sensors, digital cameras, spectrometer/radiometer, SAR, LIDAR, communication receiver/transmitter, onboard recorder, thermal instruments, GPS receiver, SAIS, etc.
RFP	Request for Proposal
RPAS	Remotely Piloted Aircraft System (drone)
SAG	Surface Active Group
SARA	Species at Risk Act
SOW	Statement of Work
Space-Based Solutions	Data or imagery collected or relayed from a Payload mounted on a space-based Platform
Space-Based Platform	Spacecraft (Satellites, International Space Station, etc.) orbiting the Earth or in geostationary mode outside of the lower atmosphere usually at an altitude of 100 km (62 mi) or more above sea level.
TC	Transport Canada

ANNEX "B"

BASIS OF PAYMENT

In consideration of the Contractor satisfactorily completing all of its obligations under the terms of the Contract, the Contractor will be paid a firm price, on a milestone basis, as specified in the Contract.

1. Bidders must provide a firm price for the overall project:

Total Firm Price CAN \$:

(Taxes extra, if applicable) \$ _____

2. Milestones: The schedule of milestones for which payments will be made in accordance with the Contract is as follows:

No.	Milestone Descriptions	Deliverable Descriptions	Milestone Payments	Dates
1				
2				
3				
4				
5				
Etc.				
Total Firm Price				

ATTACHMENT 1 TO PART 3 TECHNICAL AND MANAGERIAL BID PREPARATION INSTRUCTIONS

PROPOSAL PREPARATION INSTRUCTIONS

I INTRODUCTION

The proposal should be clear and concise with sufficient detail to address each of the required evaluation criteria. This annex describes the specific instructions for preparation of the Technical and Management proposal.

II ELIGIBLE PROJECTS

This RFP seeks proposals from consortium for research and development (R&D) projects using space-based solutions for the conservation and protection of North Atlantic Right Whales (NARW) under two Streams: 1) Detection and Monitoring; 2) Prediction and Modelling. Through this opportunity consortium teams will be formed involving Canadian organizations led by industry, in conjunction with academia and and/or non-government organizations. The proposed research will involve innovative concepts that could incorporate methods, systems, models, products, and/or services related to the application.

III PARTNERS

This RFP is being offered through the Integrator Track of the CSA's smartEarth initiative in conjunction with the Department of Fisheries and Oceans (DFO) and Transport Canada (TC). Since the application involves many sectors of society and requires many varied elements of expertise, the Bidders will be multisector consortia led by industry with **mandatory** participation of academic institutions and/or non-government organizations, keeping in mind the importance that Canada places on building a skilled and diverse workforce that reflects Canada's values through the promotion of employment equity, particularly in the STEM fields. However, government organizations may participate as partners in the project, but no portion of the funds, provided under this RFP, will be expended on government organizations. Government participation will be to evaluate and ensure product or service utility for the particular application, or to give access to other complementary data, as well as to provide additional information and recommendations related to the application.

IV TECHNICAL AND MANAGEMENT PROPOSAL

The proposal must address **only one Stream** and all relevant material should be contained within a **single document/file**. The information should be organized in the following order:

1. Title/Project Identification Page (Appendix C-1);
2. Executive Summary;
3. Table of Contents;
4. Technical and Management Sections; and
5. Appendices.

The entire Technical and Management proposal (1-5) should not exceed fifty (50) pages in length, exclusive of appendices.

Body text should be in 12 point font, exclusive of figures and tables, which may be in any appropriate size.

1. Title/Project Identification Page

This page should clearly state:

- a) The Bidder's name and address;
- b) Contact Person (with communication coordinates);
- c) The title of the Bidder's proposal. (The use of acronyms in the title, unless they are described.);
- d) The RFP Title: **smartWhales: Innovative, Space-Based Solutions for the Protection of the North Atlantic Right Whale (NARW)**;
- e) The Streams: 1) Detection and Monitoring or 2) Prediction and Modelling, for which the proposal is to be considered;
- f) A short abstract from the Executive Summary (not to exceed seven lines).

2. Executive Summary

The Executive Summary should be suitable for public dissemination and ready for posting on the CSA website when the successful bids are announced. It should not exceed two (2) pages in length (8.5" x 11") and should highlight the following elements:

- a) Project objectives addressed in the proposal;
- b) Project partners and any user organizations that will be involved;
- c) A brief description of the application concept;
- d) The expected results.

3. Table of Contents

The table of contents should be formatted such that its headings are hyperlinked in the electronic version to their respective location within the bid for ease of reference. It is recommended that the Table of Contents and related text follow the sequence of the evaluation criteria.

4. Technical and Management Sections

The technical section describes the details required for the proposal material in relation to each of the evaluation criteria. In addition to carefully following the instructions in this section, the Bidders should also be familiar with the evaluation descriptions and benchmark definitions in Attachment 1 to Part 4 of this RFP since they form the basis for the proposal evaluations. Please ensure that these criteria are fully addressed in detail in the Technical and Management proposal.

4.1 Understanding the Integration of the Space-Based Solutions with Other Data Sources for the Proposed Application (Evaluation Criterion 1)

This criterion assesses the degree to which the proposal demonstrates a thorough understanding of the fundamental concepts for the use space-based solutions (data and technology) and other sources of information in relation to the application. It should include a comprehensive overview of the current state-of-the-art for the use of space-based data and technology with other sources of information for the application as described in the literature and reports.

4.2 Added Value of the Proposed Solution (Evaluation Criterion 2)

This criterion assesses how well and to what extent the proposed solution will improve the quality of information available to decision makers when compared to current practices. The proposal should include a clear description of the proposed solution with specific technical objectives, representing an

innovation which may be either: a) a major improvement to an existing method, system, product, model and/or service, or b) an entirely new method, system, model, product and/or service.

Highlighting the current research endeavours that may overlap or complement this proposal will be key to ensuring that the government is allocating funding effectively and efficiently to NARW protection measures. This proposal aims to advance the governments capabilities to protect NARW and optimize the economic activities at sea. The proposed concept should represent a progression to the next level in the Application Readiness Level (ARL) scale as summarized in the SOW, which should be described and explained. The expected results and the overall technical advantages and benefits of the proposed solution in terms of superior performance and quality should be described.

4.3 Methodology (Evaluation Criterion 3)

The methodology should describe the work that will be performed and how the work will achieve the technical objectives for the proposed research. The methodology should be composed of a Work Breakdown Structure (WBS), data plan and technical risk analysis with detailed Work Package descriptions and a flow chart of the overall project elements. The methodology should include descriptions of the analytical tools, techniques and procedures using best practice and industry standards that will be employed in conducting the research.

The Bidder should also provide a data plan for any data that may be required for the application development.

A technical risk analysis with mitigation strategies must be included.

The methodology section should demonstrate that the overall work plan is clearly substantiated, coherent and feasible.

Work Breakdown Structure (WBS)

The Work Breakdown Structure, with the associated Work Packages (WP), should be defined in sufficient depth to clearly demonstrate the work that will be conducted and the process that will be followed to complete the project. Each WP should focus on specific activities for the project, and as a minimum, should define and describe the specific tasks to be carried out and should indicate the lead person responsible for the WP, as well as the associated overall level-of-effort for the WP along with the required resources, the schedule (start and finish dates for the WP), and the associated deliverable(s) or output(s).

Data Plan

The data plan may include a variety of data types and sources based on the application and the technical objectives of the proposed concept, both from historical and new sources. The data may include a mix of space data from a variety of missions combined with data acquired by shipborne, airborne and drone platform; physical and in situ data (geographic, oceanographic, meteorological, bathymetric data); observational records, whale tags, acoustic data and model outputs. A key component of the proposed research has to include some element of space data. The data plan should explain why these data are needed. The data request must be commensurate with the RFP scope.

It is the responsibility of the Bidder to identify its data needs and to locate the appropriate data sources. Any data that is not available free of charge will have to be costed as part of the financial proposal and be commensurate to the total value as defined in this RFP.

Technical Risk Analysis

An assessment of the technical risks involved in the proposed research should be provided in the proposal. This should include an assessment of the potential likelihood of the risk occurrence and the level of the impact on the work. The risk analysis should also include a mitigation strategy for each risk item, particularly when the item identified could jeopardize the successful completion of the project.

4.4 Management Plan (Evaluation Criterion 4)

The Management Plan should provide a summary of all of the project elements that involve participation and oversight of the proposed work. It should include details related to the following topics:

Project Organizational Chart

The project organizational chart should illustrate the structure of the proposed project team, including the consortium partners, subcontractors, back-up personnel and any other participants.

Roles and Responsibilities

The roles and responsibilities for each of the proposed team members should be described. This must include all partners and subcontractors that will be involved in the study, along with the identification of backup personnel. Care should be taken to specifically identify the proposed project manager and the backup project manager, along with an explanation of how they will manage and coordinate the activities and work of the consortium.

Responsibility Assignment Matrix (RAM)

A responsibility assignment matrix (RAM) should be provided (Table 1) that shows the level of effort for each individual team member that has been allocated to each WP, including all subcontractors. The matrix should identify each individual by name, and provide the estimated time (number of days) required to complete each task. The RAM should also identify the role of the individual as either being the person accountable (A) for the WP or being a participant (P) in the WP. The following hypothetical example shows the make-up of the RAM that should be provided.

TABLE 1 RESPONSIBILITY ASSIGNMENT MATRIX								
WBS Number	Work Packages (WP) Task Title	Resource A		Resource B		Resource C		Total Days
1	WP1.1 - Title	A	200	P	25	P	25	250
	WP1.2 - Title	A	25	P	100	-	0	125
2	WP2 - Title	P	50	A	100	P	100	250
3	WP3 - Title	P	100	A	100	P	150	350
4	WP4 - Title	-	0	P	200	A	150	350
5	WP5 - Title	A	100	P	200	P	200	500
etc.								
Total Days:			475		725		625	1 825

Where: A = *Accountable Role*, and P = *Participant Role*.

Summary of the Milestones and Deliverables

This Management Plan should contain a summary of the major milestones and all expected deliverables. The milestones and deliverables should relate to the corresponding WP definition in a manner that enables clear monitoring of progress. Deliverables may be in the form of reporting, documentation, data, presentations, software, applications, upgrades or other building blocks of the project. Milestones are the

stages at which substantial advancement of the proposal is completed and is linked to the payment scheduled found in Annex B: Basis of Payment.

Schedule

This Management Plan should summarize tasks, milestones and deliverables to a project timetable in the form of a Gantt or PERT chart to illustrate the schedule in relation to the Work Packages.

Managerial Risk Analysis

An assessment of the managerial risks involved in the proposed work should be provided with mitigation strategies for each risk element, along with its potential likelihood of occurrence and level of impact on the work.

Description of Intellectual Property

This subsection should identify and describe all Background Intellectual Property (BIP) that is required to conduct and/or support the project and all Foreground Intellectual Property (FIP) expected to arise from the proposed work.

4.5 Team's Technical and Management Experience (Evaluation Criterion 5)

This section must include the following technical and management experience summaries:

- Identification of the technical team members with a brief summary of their individual capabilities and experience, emphasizing activities related to the proposed project. This must be supported by their resumes in an appendix.
- Identification of the management team members with a brief description of their individual capabilities and experience in managing studies of a similar nature. This must be supported by their resumes in an appendix.
- An overview of the company, including subcontractors, consortium partners and other participants, with its capabilities, products and services, including the following elements:
 - The nature and structure of the Bidder's organization;
 - The location, size and general description of the facility;
 - The number and composition of staff;
 - The principal product or services and field of endeavour;
 - The annual business volume and general nature of the Bidder's client base;
 - The location(s) where the work for the proposed project will be performed.
- A summary of experience in conducting and managing studies of a related nature. A maximum of three (3) relevant project summaries may be presented. The Bidder is asked to use a Previous Project Summary Form as shown in Table 2 to provide basic information for each of the relevant projects.

TABLE 2 PREVIOUS PROJECT SUMMARY FORM		
Project Title:		
Client Organization:	Point of Contact (POC):	POC Phone Number:
Contract Value:	Start Date:	End Date:
Project Personnel and Roles:		
Project Description (including relevance to this RFP):		

4.6 Multi-Disciplinary Collaborative Research (Evaluation Criterion 6)

The proposal should address the potential benefits and importance of the collaboration between project partners and participants in relation to the application. Since the Integrator Track aims to use space-based solutions to foster collaborations between the various sectors of society to make innovative advances in research and development, the proposal should include a summary of how the expected results and the proposed solution may be used by the project participants in the future to their mutual benefit. The proposal should state how this collaboration brings to the table a diversity of opinions and ideas that could continue to foster innovation. It should also include recommendations for further research and improvements that could be made in the future to further increase the potential utility of the proposed solution.

5 Appendices

The following items should be addressed in individual appendices as part of Section I of the proposal:

- List of Acronyms: All the acronyms used in the proposal should be explained;
- Resumes: The proposal should include resumes of all the team members, including partners and subcontractors;
- List of Contacts: The list of contacts shall be in a format suitable for distribution and shall include all of the Bidder's points-of-contact involved in the proposal development and/or during the contract, including the details as identified below in Table 3:

TABLE 3 LIST OF CONTACTS				
Role	Name	Telephone	Email	Fax
Project Manager				
Contract Authority				
Claims Officer				

- Any other appendix deemed appropriate by the Bidder.

ATTACHMENT 1 TO PART 4 - POINT RATED EVALUATION CRITERIA

MANDATORY EVALUATION CRITERIA AND BENCHMARK STATEMENTS

I INTRODUCTION

The following section of the RFP describes the technical and managerial evaluation criteria, along with the corresponding benchmark statements, that will be used in the assessments of the proposals.

It is essential that the elements contained in the proposals be stated in a clear and concise manner. Providing complete information for each criterion will be to the Bidder's advantage. The CSA, in conjunction with DFO and TC, will select proposals as determined by the selection criteria contained in this solicitation document.

II POINT RATED EVALUATION CRITERIA

The Technical and Management proposal will be evaluated and scored in accordance with Table 4 below: Evaluation Criteria and Associated Ratings.

TABLE 4 EVALUATION CRITERIA AND ASSOCIATED RATINGS							
Criteria	Maximum benchmark points for evaluation	Weighting factors	Overall maximum points for corresponding criterion (a*b)	Benchmark definition corresponding to point rating (1 to 8 points)			
	(a)	(b)		Level A	Level B	Level C	Level D
1. Understanding the integration of space-based solutions with other data for the proposed application	8	1.875	15	8 or 7	6 or 5	4 or 3	2 or 1
2. Added value of the proposed solution	8	3.125	25	8 or 7	6 or 5	4 or 3	2 or 1
3. Methodology	8	1.875	15	8 or 7	6 or 5	4 or 3	2 or 1
4. Management Plan	8	1.25	10	8 or 7	6 or 5	4 or 3	2 or 1
5. Team Technical and Management Experience	8	2.5	20	8 or 7	6 or 5	4 or 3	2 or 1
6. Multi-disciplinary Collaborative Research	8	1.875	15	8 or 7	6 or 5	4 or 3	2 or 1
Total Points			100				
Minimum Pass Score			60				

To be responsive, the Bidder must at least achieve the total combined minimum pass score requirement for the Criteria (60/100) as indicated in Table 4.

The proposal information for the six (6) Criteria will be evaluated using the following scoring method. The proposal scoring for each evaluation criterion, as listed in Table 4 above, will be determined using a range of scoring (from 1 to 8 points, 8 being the highest rating):

- 8 or 7 points (Level A)
- 6 or 5 points (Level B)
- 4 or 3 points (Level C)
- 2 or 1 points (Level D)

As an example, the maximum point rating, including the weighting factor, for the "Methodology" criterion is $8 \times 1.875 = 15$ points. If a proposal receives "6" for this criterion in the evaluation process, the final score attributed to the criterion will be:

$$6 \times 1.875 \text{ (weighting factor)} = \underline{11.25 \text{ points (score)}}$$

Evaluation criteria that are not addressed in the proposal will be given a score of zero (0).

III TECHNICAL CRITERIA AND BENCHMARK STATEMENTS

As guidelines, a series of four (4) evaluation benchmark definitions (A, B, C or D) will be used by the Evaluation Committee for each of the criterion. Table 4 above shows the points available for each benchmark definition.

CRITERIA AND BENCHMARK STATEMENTS:

Criterion 1. Understanding the integration of space-based solutions with other data sources for the proposed application.

This criterion assesses the degree to which the proposal demonstrates a thorough understanding of the fundamental concepts for the use of space-based solutions and other sources of information in relation to the application. It should include a comprehensive overview of the current state-of-the-art for the use of space-based data and technology with other sources of information related to the application as described in the literature.

The proposal:

- A) Demonstrates a detailed understanding of the fundamental concepts and the "state-of-the-art" for the use of space-based solutions and other sources of information in relation to the application.
- B) Demonstrates a good understanding of the fundamental concepts and the "state-of-the-art" for the use of space-based solutions and other sources of information in relation to the application.
- C) Demonstrates a general understanding of the fundamental concepts and the "state-of-the-art" for the use of space-based solutions and other sources of information in relation to the application.
- D) Demonstrates only a limited understanding of the fundamental concepts and the "state-of-the-art" for the use of space-based solutions and other sources of information in relation to the application.

Criterion 2. Added Value of the Proposed Solution

This criterion assesses how well and to what extent the proposed solution will improve the quality of information available to decision makers when compared to current practices. The proposal should include a clear description of the proposed solution with the technical objectives, representing an innovation which may be either: a) a major improvement to an existing method, system, product, model and/or service, or: b) it could be an entirely new method, system, model, product and/or service. The proposed concept should represent a progression to the next level in the Application Readiness Level (ARL) scale. The expected results and the overall advantages and benefits of the proposed solution in terms of superior performance and quality will be assessed.

The proposal:

- A) Provides a complete and detailed description of the proposed solution and technical objectives, and a complete summary of how the proposed solution will significantly advance the performance and quality of the available information. Benefits over existing practices are well described and are significant with clear progression in the ARL scale.
- B) Provides a good description of the proposed solution and technical objectives, and a good summary of how the proposed solution will advance the performance and quality of the available information. Benefits over existing practices are presented and are considerable with noticeable progression in the ARL scale.
- C) Provides a short description of the proposed solution and technical objectives, and a brief summary of how the proposed solution will advance the performance and quality of the available information. Benefits over existing practices are indicated, but are minor with minimal effect on the progression in the ARL scale.
- D) Provides a poor description of the proposed solution and technical objectives with an indication of how the proposed solution will advance the performance and quality of the available information. Benefits over existing practices are not addressed or are insignificant with no progression in the ARL scale.

Criterion 3. Methodology

This criterion assesses the effectiveness of the proposed methodology in attaining the stated objectives of the work in the context of the application. The methodology demonstrates that the overall work plan with work packages, their sequence and the data plan are clearly substantiated, coherent and feasible. A technical risk analysis with mitigation strategies must be included.

The proposal:

- A) The methodology shows a sound and methodical approach for conducting the work and achieving the objectives with the proposed solution for the application. A complete and realistic data plan is included along with an appropriate technical risk analysis and suitable mitigation strategies.
- B) The methodology shows a good approach to conducting the proposed work. Its effectiveness in achieving the objectives and the proposed solution for the application are feasible. A good data plan is included along with an appropriate technical risk analysis.
- C) The methodology shows an adequate approach to conducting the proposed work. However, there are gaps in the methodology that will affect its effectiveness in achieving the objectives. A data plan is included with few technical risks and mitigation strategies.
- D) Is not clear how the technical objectives of the proposed research will be achieved with the proposed methodology. The methodology is not complete in certain aspects of the proposed work or is not adequately described. The data plan lacks detail. The technical risk analysis is missing or is inappropriate.

Criterion 4. Management Plan

This criterion evaluates the Management Plan for its completeness and also assesses its effectiveness in directing the project to a successful completion. The following items should be covered: project organizational chart, responsibility assignment matrix (RAM), including levels of effort, milestones and deliverables, schedule, managerial risk analysis, and description of intellectual property.

The proposal:

- A) Provides a coherent and comprehensive Management Plan, allocates tasks to responsible parties and provides effective timelines linked to milestones/deliverables. The work plan flexibility accounts for potential mitigation strategies and demonstrates its effectiveness in delivering a successful project, including means to address risk and problems.

- B) Provides a good Management Plan covering all of the essential topics, but demonstration of its ability to completely deliver on the project has some limitations.
- C) Provides a marginal Management Plan with some explanations and insufficient details to assess whether the project will come to a successful completion.
- D) Does not provide an adequate Management Plan and contains minimal explanations and few details.

Criterion 5. Team Technical and Management Experience

This criterion assesses the combined technical and management experience, as well as the capabilities of the proposed team members, including back-up personnel and subcontractors.

The team:

- A) Has extensive experience in conducting and managing projects directly related to the technologies and applications proposed under this RFP. The proposal includes relevant project descriptions and related material.
- B) Has high levels of experience in conducting and managing projects of a similar nature. The proposal includes appropriate project descriptions.
- C) Has some experience in conducting and managing projects of this nature. The proposal includes brief descriptions of some related projects, although the overall experience is limited.
- D) Has little or no experience in conducting and managing projects of this nature. Few if any relevant project descriptions have been included in the proposal. The background material, such as resumes, is incomplete or missing.

Criterion 6. Multi-Disciplinary Collaborative Research

This criterion will assess the consortium composition and the potential benefits and importance of the collaboration between project partners and participants, as well as with the research community at large. The proposal should include a summary of the expected results and how the proposed solution may be used by the project participants in the future to their benefit.

The proposal:

- A) Provides a complete and coherent summary of the potential benefits and importance of the multi-disciplinary collaboration, with an excellent summary of the expected results of the collaboration and how the proposed solution may be used by the collaborators and the general marine community in the future.
- B) Provides a good summary of the potential benefits and importance of the multi-disciplinary collaboration, with a good summary of the expected results of the collaboration and how the proposed solution may be used by the collaborators and the marine community in the future.
- C) Provides a brief summary of the potential benefits and importance of the multi-disciplinary collaboration, with a brief or incomplete summary of the expected results of the collaboration and how the proposed solution may be used by the collaborators and the marine community in the future.
- D) Does not provide a summary of the potential benefits and importance of the multi-disciplinary collaboration, nor does it include a summary of the expected results of the collaboration and how the proposed solution may be used by the collaborators and the marine community in the future.

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File No. - N° du dossier
MTB-0-43010

Buyer ID - Id de l'acheteur
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CCC No./N° CCC - FMS No./N° VME

IV EVALUATION PROCESS

Only proposals that meet the mandatory requirements listed previously will be given further consideration for evaluation.

Once the mandatory requirements are confirmed, an individual evaluation of the screened proposals will be performed according to the evaluation criteria listed above in Section III. The CSA, in conjunction with DFO and TC, will appoint an Evaluation Committee of qualified experts to evaluate the proposals received in response to this RFP. Evaluators shall be experts in the field relevant to the applications and may include representatives of other Canadian government departments as well as external consultants.

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ATTACHMENT 2 TO PART 3

ELECTRONIC PAYMENT INSTRUMENTS

The Bidder accepts to be paid by any of the following Electronic Payment Instrument(s):

- ☐ () VISA Acquisition Card;
- ☐ () MasterCard Acquisition Card;
- ☐ () Direct Deposit (Domestic and International);
- ☐ () Electronic Data Interchange (EDI);
- ☐ () Wire Transfer (International Only);

ANNEX "F" to PART 5

FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY – CERTIFICATION

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid non-responsive or constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit [Employment and Social Development Canada \(ESDC\) – Labour's](#) website.

Date: _____ (YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

- ☐ A1. The Bidder certifies having no work force in Canada.
- ☐ A2. The Bidder certifies being a public sector employer.
- ☐ A3. The Bidder certifies being a [federally regulated employer](#) being subject to the [Employment Equity Act](#).
- ☐ A4. The Bidder certifies having a combined work force in Canada of less than 100 permanent full-time and/or permanent part-time employees.

A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

- ☐ A5.1. The Bidder certifies already having a valid and current [Agreement to Implement Employment Equity](#) (AIEE) in place with ESDC-Labour.

OR

- ☐ A5.2. The Bidder certifies having submitted the [Agreement to Implement Employment Equity \(LAB1168\)](#) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- ☐ B1. The Bidder is not a Joint Venture.

OR

- ☐ B2. The Bidder is a Joint venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)