

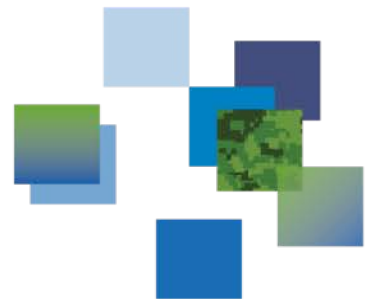


Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

Canada

Defence Research and Development Canada (DRDC) Innovation Call For Proposals (CFP) 2019 W7714-19DRDC



DRDC | RDDC

SCIENCE, TECHNOLOGY AND KNOWLEDGE
FOR CANADA'S DEFENCE AND SECURITY

SCIENCE, TECHNOLOGIE ET SAVOIR
POUR LA DÉFENSE ET LA SÉCURITÉ DU CANADA

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PART 1 – GENERAL INFORMATION

1.1 Summary

Public Works and Government Services Canada (PWGSC) is issuing a Call for Proposals (CFP) on behalf of Defence Research and Development Canada (DRDC). DRDC is an agency of Canada's Department of National Defence (DND) that provides DND, the Canadian Armed Forces (CAF) and other government departments, as well as the broader public safety and security communities, the knowledge and technological advantage needed to defend and protect Canada's interests at home and abroad.

The CFP is an invitation to bidders to submit innovative science and technology (S&T) proposals in support of Canada's defence, security and public safety.

More specifically, this CFP identifies S&T Challenges (see Annex B) for which innovative solutions are sought that relate to the following DRDC programs or client support:

Stream A: Public Safety and Security

DRDC is looking for novel ideas and innovative solutions to resolve public safety and security S&T Challenges under the following 3 themes: Mitigating the Safety and Security Impact of Climate Change, National Security Risks, and Protecting and Connecting Safety and Security Professionals. Stream A is in support of Canada's resilience primarily through the Canadian Safety and Security Program (CSSP) S&T investments. The CSSP mission is to strengthen Canada's ability to anticipate, prevent, mitigate, prepare for, respond to and recover from natural disasters, serious accidents, and crime and terrorism through the convergence of S&T with policy, operations, and intelligence.

Stream B: Support to Canada's Defence Policy "Strong, Secure, Engaged"

One of the initiatives of the "Strong, Secure, Engaged" Canadian Defence Policy, is to acquire space capabilities to improve situational awareness and targeting, including the replacement of the current RADARSAT systems to improve the identification and tracking of threats and improve situational awareness of routine traffic in and through Canadian territory, as well as in other areas of interest around the world.

Assistant Deputy Minister (ADM) S&T in DND has a program focused on conducting cutting-edge research and development (R&D) on space-based earth observation technologies in collaboration with allies, industry, and academia to maintain, enhance, and replace situational awareness capabilities for the CAF. This program provides advice and recommendations to DND stakeholders concerning viable and cost effective solutions that are available, or will be available in the near future, and that could be considered in upcoming options analysis phases of space-based intelligence, surveillance and reconnaissance (ISR) projects.

1.2 Call for Proposals Procurement Approach

This CFP process involves a two-stage procurement process:

Stage 1: Proposal Submission, Evaluation and Selection

Stage 2: Contracting

The information provided in Stage 1 will be used to establish a pool of pre-qualified proposals. Proposals selected for funding from the pool of pre-qualified proposals will be subject to Stage 2.

The establishment of the pool of pre-qualified proposals and the selection of proposals for funding does not constitute a guarantee on the part of Canada that a contract will be awarded.

In addition, no payment will be made for costs incurred in the preparation, submission, and contract negotiation related to a proposal under this CFP. Costs associated with these activities, including the development of any supporting documentation and any bidder costs incurred associated with the submission of the proposal, are the sole responsibility of the bidder.

1.3 Trade Agreements

The Canadian Free Trade Agreement (CFTA) (<https://www.cfta-alec.ca/>), applies to this procurement. The CFP process is organized in a manner consistent with the principles of the CFTA in terms of equal access, fairness and transparency and is open to public and private sector entities.

This procurement is excluded from the North American Free Trade Agreement (NAFTA) as per Annex 1001.1b-2 R&D, all classes, excluded from the application of the World Trade Organization – Agreement on Government Procurement (WTO-AGP) under Appendix 1, Annex 4, as well as excluded from the Canada-European Union Comprehensive Economic and Trade Agreement (CETA).

1.4 Security Requirements

There may be security requirements associated with the resulting contracts. For more information on personnel and organization security screening or security clauses, the bidder should refer to PWGSCs Industrial Security Program (ISP) (<https://www.tpsgc-pwgsc.gc.ca/esc-src/index-eng.html>).

1.5 Canadian Content

This procurement is conditionally limited to Canadian goods and services (see Section 5.1.2.1 Canadian Content Certification).

1.6 Controlled Goods Program (see Part 5 – Certifications and Additional Information).

This procurement is subject to the Controlled Goods Program. The Defence Production Act (DPA) defines Canadian Controlled Goods as certain goods listed in Canada's Export Control List, a regulation made pursuant to the Export and Import Permits Act (EIPA).

1.7 Employment Equity

The Federal Contractors Program (FCP) for Employment Equity may apply to this procurement (see Part 5 – Certifications and Additional Information).

1.8 Conflict of Interest

A successful bidder (the contractor), its subcontractor(s) or any of their agent(s) directly or indirectly involved in the performance of the work and/or in the production of the deliverables under any resulting contract will not be precluded from bidding on any potential future CFP related to the production or exploitation of any concept or prototype developed or delivered.

1.9 Comprehensive Land Claims Agreements

Depending on the proposal received, the region of delivery for the goods and/or services may be in an area subject to Comprehensive Land Claims Agreements (CLCA). If this occurs, the procurement will be subject to the applicable CLCA.

1.10 Terminology

In this document, terms are identified below and their meaning referenced in the 2003 (2017-04-27) Standard Instructions are identified in the below table.

Term (used this document)	Term (used 2003 Standard Instructions)
Call for Proposals	Solicitation/Bid Solicitation
Proposal	Bid

PART 2 – INSTRUCTIONS FOR BIDDERS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in this CFP by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual \(SACC\)](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 PWGSC.

A bidder who submits a proposal agrees to be bound by the instructions, clauses and conditions of this CFP and accepts the clauses and conditions of the resulting contract.

The 2003 (2018-05-22) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of this CFP; some sections have been amended and are listed below.

a. At section 04 – Definition of a Bidder, is amended as follows:

Delete: It does not include the parent, subsidiaries or other affiliates of the bidder, or its subcontractors.

b. At section 05 – Submission of Bids, subsection 4, is amended as follows:

Delete: Proposals will remain open for acceptance for a period of not less than 60 days from the closing date of the proposal solicitation, unless specified otherwise in the bid solicitation.

Insert: Proposals will remain open for acceptance for a period of not less than 365 days from the closing date of the proposal solicitation. The Contracting Authority may modify this period by sending written notice to the bidder following Canada's completion (partial or entire) of Stage 2 and at any other time.

c. At section 14 – Price Justification, is amended as follows:

Delete: In the event that the bidder's proposal is the sole responsive proposal received, the bidder must provide, on Canada's request, one or more of the following price justification:

Insert: For all pre-qualified proposals eligible for contract award, the bidder must provide, on Canada's request, one or more of the following price justification:

2.2 Enquiries about the Call for Proposals

All enquiries must be submitted in writing to the Contracting Authority no later than 10 calendar days before the CFP closing date. Enquiries received after that time may not be answered. The bidder should reference as accurately as possible the numbered item of this CFP to which the enquiry relates. Care should be taken by the bidder 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.

2.3 Contracting Authority

The Contracting Authority for this CFP is:

Joseph Hulse
Public Works and Government Services Canada
Acquisitions Branch
Defence Sciences Division
Telephone: 613-203-1159
E-mail address: joseph.hulse@tpsgc-pwgscc.gc.ca

2.4 Applicable Laws

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

The bidder may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their proposal, 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 bidder.

2.5 Communications Notification

The Government of Canada retains the right to make primary contract announcements. Canada and the contractor shall consult with each other after contract award, about all proposed news releases or public announcements relating to the contract. This is to provide all parties sufficient notice of key project communications and, where appropriate, the time to determine a course of action (including a mutually agreed date and location), coordinate representatives and prepare joint material. Notwithstanding the advance notice requirement, consent shall not be unreasonably withheld by either party if a news release or public announcement must be issued in less than 15 working days as the result of unforeseeable circumstances, including matters of public safety or where an emergency response is required.

2.6 Funding

For this CFP, approximately \$22M* has been allocated for the cumulative value of all resulting contracts. All proposals must be costed in Canadian dollars.

Canada reserves the right to modify project funding via one or more alternate programs or mechanisms.

*These amounts are subject to change.

PART 3 – PROPOSAL PREPARATION INSTRUCTIONS

3.1 Who May Apply

This CFP is open to all public, academic, and private sector entities. The bidder will assume the responsibility of submitting the proposal and serve as the point of contact for the duration of the CFP process.

3.1.1 A proposal submission must be comprised of a team that includes a Canadian Lead Government Department (LGD) (federal, provincial, territorial, municipal) and a public or private sector partner organization that is different than the LGD. Additional Canadian or international partners in the public or private sector are permitted as long as the partnership requirements are satisfied. DRDC can be listed as a partner but can neither be the bidder nor LGD in any proposal for this CFP.

For Stream A S&T Challenges, proposals must meet the requirements as defined below:

3.1.1.1 To qualify as a Canadian LGD, an organization must fit into 1 of the following 3 categories:

1. Be listed under Schedules I through V of the Financial Administration Act;
-OR-
2. Be a government corporation or any other public authority designated by regulation of a Lieutenant Governor in Council;
-OR-
3. Satisfy each of the following criteria:
 - a. the entity was created by legislation;
 - b. the government determines the general policy or program of the entity;
 - c. the government appoints members to the board of directors of the entity;
 - d. direct control of the entity is held by possessing 100 percent of the voting equity;
 - e. the entity's assets revert to the government in the event of liquidation or dissolution;
 - f. the entity's budget is approved by the government;
 - g. the entity submits an annual, audited report to a government; and,
 - h. the entity's financial accounts are subject to examination by an Auditor General.

3.1.1.2 The LGD is prepared to be the project champion and Technical Authority (TA), and at a minimum will:

- a. commit resources to initiate the requisition for the resulting contract;
- b. work with PWGSC to create and issue the resulting contract;
- c. manage the resulting contract (between itself and the bidder);
- d. review and approve deliverables; and,
- e. pay claims/invoices and facilitate project reporting requirements to DRDC.

3.1.1.3 Submission of a complete Partnership Signature Form as set out in Annex G. All entities/organizations identified as partners involved in a proposal must sign, and at a minimum, be at a level:

- a. of Director General (DG) or higher for the federal government; and,
- b. acceptable for a provincial/territorial/municipal government, academic institution or a private industry to authorize the financial and operational commitment of its organization for the proposal.

3.1.2 For Stream B S&T Challenges, there is no partnership requirement. DRDC will be the TA, and the resulting contract will be between DRDC and the Bidder. DRDC can be listed as a partner but can neither be the bidder nor LGD in any proposal for this CFP.

3.2 Electronic Proposal Submission Form

3.2.1 Bidders are requested to complete and submit their proposal using the electronic Proposal Submission Form at the website specified: <https://drdc-rddc-cfp-adp-2019.fluidreview.com>.

3.2.2 In order to complete and submit a proposal, the bidder must first register and obtain a username and password.

3.2.3 When a proposal is successfully submitted, an automated email is sent to the bidder. This email confirms the account was successfully created.

3.2.4 All proposals must be received by the CFP closing date and time specified on the Buy and Sell website. Proposals received after the specified period will not be evaluated.

3.2.5 If a large number of bidders access the web-based system at the same time, the electronic submission of proposals may be delayed. Bidders are solely responsible for ensuring their proposal is submitted properly in its entirety and on time.

3.2.6 Should there be technical difficulties accessing or using the online system, bidders must use the contact information located on the website. Technical assistance is restricted to issues associated with the mechanics of the online system. The personnel providing technical assistance are not associated with the CFP and are not in a position to comment on or provide interpretation on the CFP.

3.2.7 All non-technical assistance for proposal submission is to be directed to the Contracting Authority.

3.3 Classified Proposals

3.3.1 Bidders submitting a classified proposal must contact the Contracting Authority to obtain the Classified Submission Form (Microsoft Word format) and to arrange delivery of the proposal using procedures designed to protect the sensitivity of the content.

3.3.2 Proposals are deemed classified if they contain information related to Canada's national interest that may qualify for an exemption or exclusion under the Access to Information Act or Privacy Act and the compromise of which would reasonably be expected to cause injury to the national interest as defined in the PWGSC Supply Manual Glossary, and in accordance with the Treasury Board's Policy on Government Security. It is expected that the majority of proposals will not qualify for the exemption or exclusion and they will therefore be submitted as unclassified proposals.

3.3.2.1 Classified Information specific to Project Management and Key Team Member expertise: In the event that it is not possible to demonstrate project management expertise commensurate to the proposal's complexity without providing classified information, bidders must use the classified form for this portion of the bid. The bidder will be required to populate a table related to project management experience using the Classified Submission Form and include a reference to the Classified Submission Form in the online form.

3.3.3 Bidders submitting a classified proposal must use and fully populate the Classified Submission Form, identify the proposal using an unclassified title, and adhere to the word limits imposed by different sections (as applicable).

3.3.4 All classified proposals must be received by the specified CFP closing date and time indicated on the Buy and Sell website. Proposals received after the specified closing date and time will not be evaluated.

3.3.5 Due to the nature of this CFP, proposals transmitted by facsimile to PWGSC will not be accepted.

3.3.6 Canada requests that the Bidder provides the proposal in separately bound sections as follows:

Section I: Technical Proposal (4 hard copies)

Section II: Financial Proposal (4 hard copies)

Section III: Certifications (1 hard copy)

Section IV: Additional Information (4 hard copies)

3.4 Technical Proposal

- 3.4.1 The bidder's response to the criteria in Part 4 will form the bidder's Technical Proposal. The bidder must respond to each criterion in a thorough, concise and clear manner within the allotted character count for each criterion. The bidder must provide Technical Proposal content that clearly addresses in sufficient depth the points that are subject to the evaluation criteria against which the proposal will be evaluated.
- 3.4.2 To maintain the integrity of the evaluation, evaluators will consider only information presented in the proposal. No information will be inferred and personal knowledge or beliefs will not be utilized in the evaluation. Bidders should explicitly demonstrate, in sufficient detail, how all criteria are met.

3.5 Financial Proposal

- 3.5.1 The bidder must complete the Detailed Budget Table set out in Annex E which will form the bidder's financial proposal. All financial proposals must be in Canadian dollars. The bidder's financial proposal should be within amounts identified in Table A, within Annex A, Project Types and Parameters. Any dollar value largely exceeding the funding amounts may require additional justification and/or may be considered the bidder's commitment of co-investment funding to a resulting contract.
- 3.5.2 The financial proposal submitted will be negotiated and finalized during Stage 2. These negotiations will be in accordance with the Statement of Work (SOW). The bidder's original proposal must be in accordance with the PWGSC Contract Cost Principles 1031-2 (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/3/1031-2/6>), except for academic institutions for which the costs must be in accordance with article 10.40 (a) to (i) of the PWGSC Supply Manual (<https://buyandsell.gc.ca/policy-and-guidelines/Supply-Manual>).
- 3.5.3 Exchange Rate Fluctuation
Requests for exchange rate fluctuation risk mitigation are not permitted as per C3011T (2013-11-06) Exchange Rate Fluctuation.
- 3.5.4 Eligible Costs
- 3.5.4.1 Goods (A) – When the final ownership of tangible, non-consumable goods, that will have a residual value at the end of the contract, will rest with the bidder/contractor/non-federal LGD (for Memorandum of Agreement (MOA)'s), the following will apply:
- DRDC funds can be used for incremental resourcing costs associated with delivering a project - for example, consumable materiel and supplies, equipment rentals, subcontractors and casual employees (incremental labour costs for indeterminate employees at the federal level of the government in Canada cannot be included). Therefore, DRDC funds can only be used for expenditures that are not amortized. This means that Canada cannot pay for goods and other tangible, non-consumable items that will have a residual value at the end of the contract. If the proposed project requires the purchase of

items that will have a residual value at the end of the contract, the bidder can either purchase the item(s) using their in kind/cash contribution, or charge Canada fair market rental price for the item(s)

3.5.4.2 Goods (B) - When the final ownership of tangible, non-consumable goods, that will have a residual value at the end of the contract, will rest with the federal LGD/TA, the following will apply:

DRDC funds can be used for incremental resourcing costs associated with delivering a project - for example, materiel and supplies, equipment rentals, subcontractors and casual employees (incremental labour costs for indeterminate employees at the federal level of the government in Canada cannot be included). Also, DRDC funds can be used for expenditures that are amortized (tangible, non-consumable items that will have a residual value at the end of the contract).

In the event that materiel ownership will reside with the federal LGD/TA, materiel must accurately be accounted for in the mandatory system of record to ensure sound financial stewardship and achieve full asset visibility. For further information please reference, [Treasury Board Policy on Management of Materiel](http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12062) (<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12062>).

There may be some situations where the federal LGD/TA may not be in a position to accept ownership of the tangible, non-consumable goods that will have a residual value at the end of the contract. If such a situation becomes evident, during the contract negotiation phase(s) Canada will work with the bidder to, revise, reallocate, and/or adjust the bidder's financial proposal accordingly.

3.5.5 Travel expenses using DRDC funding must be compliant with the [National Joint Council Travel Directive](http://www.njc-cnm.gc.ca/directive/d10/en) (<http://www.njc-cnm.gc.ca/directive/d10/en>) and with the other provisions of the directive referring to "travellers", rather than those referring to "employees" and be justified in the work plan (see Annex D).

3.5.6 Salary Wage Envelope Conversion for Federal Government Participants
As per Treasury Board of Canada Secretariat requirements, the Employee Benefit Plan (EBP) amount (20 percent of personnel costs) must be included in costing calculations. The EBP fee is applicable to incremental federal government salaries and does not apply to other orders of government or the private sector.

3.5.7 Ineligible Costs
DRDC funds cannot be used to pay for salaries of indeterminate employees at the federal level of government in Canada; however, indeterminate employee salaries (including the EBP amount) may be included in the proposal as an in kind contribution.

3.5.8 Use of DRDC Resources - *Stream B only*
If any proposals under Stream B include the request to use a DRDC resource, the proposal should articulate the requirements from DRDC for the project to succeed and the mitigation

and impact should DRDC be unable to fulfill those requirements. This should be captured within Annex D (2) - Risks and Mitigation table.

3.6 Certifications

Required certifications and additional information are identified in Part 5.

PART 4 – EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- 4.1.1 Proposals will be assessed in accordance with the entire requirement of this CFP including the technical and financial evaluation criteria.
- 4.1.2 Representatives of Canada will evaluate the proposals. If required, Canada may use external Subject Matter Experts (SMEs) to evaluate any proposal. External SMEs will be required to confirm they are not in a conflict of interest, and sign a non-disclosure agreement.
- 4.1.3 For each S&T Challenge, Canada will determine first if there are two or more bids with a valid Canadian Content certification. In that event, the evaluation process will be limited to the bids with the certification; otherwise, all bids will be evaluated. If some of the bids with a valid certification are declared non-responsive, or are withdrawn, and less than two responsive bids with a valid certification remain, the evaluation will continue among those bids with a valid certification. If all bids with a valid certification are subsequently declared non-responsive, or are withdrawn, then all the other bids received will be evaluated.
- 4.1.4 In conducting its evaluation of the proposals, Canada may, but will have no obligation to, verify any information provided by the bidder through independent research, use of any government resources or by contacting third parties.

4.2 Evaluation Criteria

4.2.1 Mandatory Criteria

Stream A:

Proposals must meet all mandatory criteria (MC) identified in Annex C to be in compliance with the CFP. Proposals that fail to meet all MC will be declared non-responsive.

Stream B:

Proposals must meet MC1, MC2, MC3 and MC4 (not MC5) as identified in Annex C to be in compliance with the CFP. Proposals that fail to meet these MC will be declared non-responsive.

4.2.2 Supporting Information

In the event that the bidder fails to submit supporting information pursuant to the MC, the Contracting Authority may, but is not required to, request it after in writing. It is mandatory that the bidder provide the supporting information within one business day of the written request or within such period as specified or agreed to by the Contracting Authority in the written notice to the bidder. Failure to provide the supporting information in the allotted time will render the proposal non-responsive.

4.2.3 Point-Rated Evaluation Criteria

Each proposal that meets all of the applicable MC will be evaluated and scored in accordance with the point-rated evaluation criteria identified in Annex C. Proposals must obtain a minimum score for the technical merit, as well as a minimum overall pass mark identified in Annex C. Proposals that do not meet both specified minimum pass marks will be deemed non-responsive.

4.2.4 Evaluation of Price

The price of the proposal will be evaluated in Canadian dollars; including travel and living costs and shipping. Custom duties are included and applicable taxes are extra.

For evaluation purposes only, the price of the proposal will be determined as detailed in Annex E - Detailed Budget Table.

4.3 Pool of Pre-Qualified Proposals

Proposals that satisfy all of the applicable MC, achieve the specified minimum pass marks and meet all other requirements of the CFP will be considered responsive and placed in the pool of pre-qualified proposals and submitted to the Proposal Selection Committee (PSC). This is not a guarantee that a responsive proposal will be selected for funding or that a contract will be awarded.

4.4 Proposal Selection

All responsive proposals will be considered for funding in accordance with the selection steps summarized below. Both Stream A and Stream B will follow separately the steps described below.

Proposal Selection Committee (PSC): The PSC is chaired by a DG of DRDC and is composed of representatives from DRDC and as needed, other government department SMEs. The Contracting Authority will also participate in the PSC in an observational capacity. The PSC considers the evaluation results of the proposals and examines the distribution of investment across multiple parameters, such as:

- program priorities;
- number of proposals across priorities and S&T Challenges;
- previous years' investments;
- the strength of individual proposals;
- changes to Government of Canada priorities;
- similar S&T initiatives being funded by DRDC's partners;
- project types;
- level of LGD involvement and support;
- solution readiness levels (SRLs);
- amount of funding requested for travel; and,

- level of co-investment, particularly cash co-investment, as an indicator of shared risk.

This results in the creation of a prioritized pool of pre-qualified proposals that are recommended to receive funding within the budget allocated for the CFP and a list of proposals not recommended for funding. The results are then sent for endorsement to the Steering Committee (SC).

Steering Committee (SC): The SC is chaired by the DND ADM (S&T) and is composed of representatives from DRDC and, as needed, other government department SMEs. The Contracting Authority will also participate in the SC in an observational capacity. The role of the SC is to review and endorse and/or modify the PSC's prioritized pool of pre-qualified proposals recommended and not recommended for funding. The SC will consider the same factors as the PSC. The result is a final prioritized pool of pre-qualified proposals. Canada will communicate the results of this process.

4.5 Debriefing

After the prioritized pool of pre-qualified proposals is finalized, PWGSC will inform all bidders of their individual results via email. Canada may, on request by the bidder, provide unsuccessful bidders with additional clarification. Bidders must make their requests to the Contracting Authority within 15 working days after the receipt of their individual results.

4.6 Contracting Process

Recommendation for award will be determined based on the available budget and the success in completing the following steps:

4.6.1 Financial Capability and Certifications

The Contracting Authority may undertake the following:

- a) obtain financial information to verify the bidder's capacity to undertake the work; and,
- b) request certifications and other information required before Contract Award.

If a bidder fails to demonstrate adequate financial resources to complete the work or fails to provide the certifications and additional information, the proposal will be considered non-responsive and given no further consideration.

4.6.2 Contract Negotiations

Upon completion of the SOW, the Contracting Authority will initiate the negotiations for the following:

- a) contract terms and conditions, as applicable;
- b) pricing and cost breakdown; and,
- c) the provision by the bidder of price support to substantiate the costs to Canada.

Failure to achieve consensus on any aspect of the negotiations will result in the proposal being set aside and not given any further consideration. If an agreement cannot be reached

between Canada and the bidder within a reasonable timeline determined by Canada, Canada reserves the right to stop negotiations with the bidder.

4.6.3 Contract Award

Upon completion of contract negotiations, Canada will recommend contracts to be awarded.

4.6.4 Funding Flow Chart (Stream A only)

The table in Annex J describes the different project structures based on who is the bidder (e.g. government, private sector) and who is the LGD (federal, provincial, territorial, municipal) and what the resulting funding flow and mechanisms will be.

- Note that this is a typical funding flow model for most projects; however, depending on the particular project, it may change.
- LGD is the equivalent of the Government Department for Stream B.

4.7 Intellectual Property

The default position of Canada is to allow contractors to retain the IP rights. In some cases, the IP rights could be negotiated with the bidders. Information on IP is available from the following sources:

General Conditions 2040 30 (2018-06-21) Licenses to [Intellectual Property Rights in Foreground and Background Information](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/3/2040/18), found at: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/3/2040/18>.

Policy on Title to [Intellectual Property Arising under Crown Procurement Contracts](http://www.ic.gc.ca/eic/site/068.nsf/eng/00005.html), found at: <http://www.ic.gc.ca/eic/site/068.nsf/eng/00005.html>.

4.8 Human and Animal Ethics

A proposal that includes human subjects, human tissues, laboratory animals or animal tissues, must not proceed without prior approval of the project team's Human Subjects Research Ethics Committee or the institutional Animal Care Committee and must not be conducted in contravention of the respective committee's conditions of approval.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

The bidder must certify the certifications and additional information to be deemed compliant.

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

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

5.1 Certifications Required with the Proposal

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

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

This declaration is to be sent to the Contracting Authority, as identified in Section 2.3 of the solicitation.

5.1.2 Additional Certifications Required with the Proposal

5.1.2.1 Canadian Content Certification

This procurement is conditionally limited to Canadian goods and services.

Subject to the evaluation procedures contained in the CFP, the bidder acknowledges that only bids with a certification that the goods and services offered are Canadian goods and services, as defined in clause A3050T (SACC) Manual as modified below, may be considered.

Failure to provide this certification completed with the bid will result in the goods and services offered being treated as non-Canadian goods and services.

The bidder certifies that:

() a minimum of 50 percent of the total bid price consists of Canadian goods and services as defined in paragraph 5 of clause A3050T, as amended herein. For more information on how to determine the Canadian content for a mix of goods, a mix of services or a mix of goods and services, consult Annex 3.6.(9), Example 2, of the [Supply Manual \(https://buyandsell.gc.ca/policy-and-guidelines/supply-manual/annex/3/6\)](https://buyandsell.gc.ca/policy-and-guidelines/supply-manual/annex/3/6).

5.1.2.2 SACC Manual clause A3050T (2014-11-27), Canadian Content Definition, is amended as follows:

DELETE: 80 percent

INSERT: 50 percent

5.1.2.3 Canadian Content Percentage Declaration Certification

In addition to the above minimum requirement for 50 percent Canadian content, the bidder is requested to certify the actual Canadian content percentage of the total bid price.

The bidder certifies that:

() percent of the total bid price consists of Canadian goods and services as defined in paragraph 5 of clause A3050T, as amended herein.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the proposal but may be submitted afterwards. If any of these required certifications or additional information are 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 proposal 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 procurement agreement of the Ineligibility and Suspension Policy (<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

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 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 website \(https://www.canada.ca/en/employment-social-development/programs/employment-equity.html\)](https://www.canada.ca/en/employment-social-development/programs/employment-equity.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.

For contracts receiving funds over \$1,000,000.00:

Canada will also have the right to terminate the contract for default if a contractor, or any member if the entity 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 FCP for Employment Equity - Certification (below), before contract award. If the bidder is a joint venture, the bidder must provide the Contracting Authority with a completed FCP for Employment Equity - Certification, for each member of the joint venture.

5.2.3 Federal Contractors Program for Employment Equity – Certification

A bidder's signature constitutes a confirmation to the effect that:

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 FCP for Employment Equity visit: [Employment and Social Development Canada – Labour's website \(https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html\)](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html).

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 (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/regulated-industries.html>) being subject to the [Employment Equity Act \(https://laws-lois.justice.gc.ca/eng/acts/E-5.401/\)](https://laws-lois.justice.gc.ca/eng/acts/E-5.401/).
- 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 \(AIEE\)](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html) (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html>) in place with ESDC-Labour.

-OR-

A5.2. The bidder certifies having submitted the [AIEE](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html) (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html>) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form AIEE (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 FCP for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)

5.2.4 Former Public Servant Certification

Contracts awarded to a former public servant (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, the bidder 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 timeframe 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 FPS may be:

- a) an individual;
- b) an individual who has incorporated;
- c) a partnership made of FPSs; 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.

5.2.5 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 FPS; and,
- b) date of termination of employment or retirement from the Public Service.

By providing this information the bidder agrees that the successful bidder's status, with respect to being a FPS 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..

5.2.6 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 FPS;
- 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; and,

- 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.

5.2.7 Controlled Goods

Will the resulting contract involve controlled goods.

YES () NO ()

For further information on the [Controlled Goods Program](http://ssi-iss.tpsgc-pwgsc.gc.ca/dmc-cgd/index-eng.html), visit the website: <http://ssi-iss.tpsgc-pwgsc.gc.ca/dmc-cgd/index-eng.html>.

5.2.8 Status and Availability of Resources

The bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the bidder is unable to provide the services of an individual named in its bid, the bidder may propose a substitute with similar qualifications and experience. The bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the bidder has proposed any individual who is not an employee of the bidder, the bidder certifies that it has the permission from that individual to propose his/her services in relation to the work to be performed and to submit his/her résumé to Canada. The bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the bidder and of his/her availability. Failure to comply with the request may result in the bid being declared non-responsive.

5.2.9 Procurement Business Number

Bidders are required to have a Procurement Business Number (PBN) prior to contract award in order to receive a PWGSC contract. Bidders may register for a PBN online at [Supplier Registration Information](https://srisupplier.contractsCanada.gc.ca) (<https://srisupplier.contractsCanada.gc.ca>). For non-Internet registration, bidders may contact the Info Line at 1-800-811-1148 to obtain the telephone number of the nearest Supplier Registration Agent.

PBN: _____

5.2.10 Rate or Price Certification

The bidder is requested to provide one (1) of the following certifications, as applicable, in its financial bid:

_____The bidder certifies that the price proposed is based on costs computed in accordance with Contract Cost Principles 1031-2, and includes an estimated amount of profit of _____.

-OR-

_____The bidder certifies that the price proposed:

- a) is not in excess of the lowest price charged anyone else, including the bidder's most favoured customer, for the like quality and quantity of the goods, services or both;
- b) does not include an element of profit on the sale in excess of that normally obtained by the bidder on the sale of goods, services or both of like quality and quantity; and,
- c) does not include any provision for discounts to selling agents.

-OR-

_____The bidder certifies that the price proposed is based on costs computed in accordance with 10.40 (a) to (i) of the Supply Manual, Public Works and Government Services Canada, on the pricing of R&D contracts with universities and colleges.

5.2.11 Education and Experience

The bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the bidder to be true and accurate. Furthermore, the bidder warrants that every individual proposed by the bidder for the requirement is capable of performing the work described in the resulting contract.

5.2.12 Certification Acknowledgement

The bidder certifies that the information submitted herein and the information submitted in its bid, is accurate and complete.

The bidder has read, understands and acknowledges the instructions and the clauses and conditions contained in all parts of the solicitation document.

Solicitation No. - N° de l'invitation
W7714-19DRDC/B
Client Ref. No. - N° de réf. du client
W7714-19DRDC

Amd. No. - N° de la modif.
File No. - N° du dossier
035sv.W7714-19DRDC

Buyer ID - Id de l'acheteur
035sv
CCC No./N° CCC - FMS No./N° VME

By signing below the signatory certifies the above and that he or she is an authorized signing officer of the bidder.

Print Name:	
Signature:	
Position Title:	
Name of Organization:	
Date:	

PART 6 – SECURITY, FINANCIAL AND OTHER REQUIREMENTS

6.1 Security Considerations

Contractors may be required to possess valid security clearances, depending on the nature of the project, in order to have access to information and/or sites necessary for its execution. DRDC will determine the level of security required and will be responsible for establishing a SRCL. The Contracting Authority will communicate such requirements to bidders at Stage 2.

Bidders are reminded to obtain the required security clearance promptly. Any delay in the award of a contract to allow the successful bidder time to obtain the required clearance will be at the discretion of the Contracting Authority.

For additional information on security requirements, Bidders should refer to the [Industrial Security Program](http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html) - visit the website: <http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>.

6.2 Financial Capability

Additional financial information may be required during the evaluation of bids as per the following clause:

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

6.3 Controlled Goods Program - Bid

The following clause may be required if the contract will require the production of or access to controlled goods:

SACC Manual clause A9130T (2014-11-27), Controlled Goods Program

PART 7 – RESULTING CONTRACT/MEMORANDUM OF AGREEMENT CLAUSES

The instructions, clauses and conditions identified below, are provided as an example of the standard terms and conditions that could form part of any resulting contract/MOA and do not represent a complete list. PWGSC may update, add or delete, as applicable, the standard terms and conditions contained herein.

1. Statement of Work

The contractor must perform the work in accordance with the SOW at Annex ____.

1.1 Work Authorization

To Be Determined (TBD) (9) at each individual contract/MOA.

Despite any other condition of the contract, the contractor is only authorized to perform the work required to complete _____ of the contract _____ at a cost not to exceed \$_____. Upon completion of _____, the work will be reviewed before the contractor is authorized to commence any work for _____. Depending on the results of the review and evaluation of the work, Canada will decide at its discretion whether to continue with the work.

If Canada decides to continue with _____, the Contracting Authority will advise the contractor in writing to commence work on _____. The contractor must immediately comply with the notice.

If Canada decides not to proceed with _____, the Contracting Authority will advise the contractor in writing of the decision and the contract will be considered completed at no further costs to Canada. In no event will the contractor be paid for any cost incurred for unauthorized work.

2. Standard Clauses and Conditions

All clauses and conditions identified in the contract by number, date and title are set out in the [SACC 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 PWGSC.

2.1 General Conditions

2040 (2018-06-21), General Conditions - Research & Development, apply to and form part of the contract.

2.2 Supplemental General Conditions

The following supplemental general conditions apply to and form part of the contract TBD for each individual contract/MOA):

4001 (2015-04-01), Hardware Purchase, Lease and Maintenance

4002 (2010-08-16), Software Development or Modification Services

4003 (2010-08-16), Licensed Software

4004 (2013-04-25), Maintenance and Support Services for Licensed Software
4008 (2008-12-12), Personal Information

3. Security Requirement

The following security requirements (SRCL and related clauses) apply to and form part of the contract/MOA.

TBD or no security requirement applies.

4. Term of Contract

The work is to be performed during the period TBD at the time of negotiations.

5. Comprehensive Land Claim Agreements

TBD at each individual contract/MOA, as detailed in Part 1 of the CFP.

6. Authorities

6.1 Contracting Authority

The Contracting Authority for the contract is:

TBD for each individual contract/MOA

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.

6.2 Technical Authority

The TA for the contract is:

TBD for each individual contract/MOA

The TA 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 TA; however, the TA 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.

6.3 Procurement Authority

The Procurement Authority for the contract is:

TBD for each individual contract/MOA

The Procurement Authority is the representative of the department or agency. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the contract. The contractor may discuss administrative matters identified in the contract with the Procurement Authority; however, the Procurement Authority has no authority to authorize changes to the scope of the work. Changes to the scope of work can only be made through a contract amendment issued by the Contracting Authority.

6.4 Contractor's Representative

TBD for each individual contract/MOA

7. Proactive Disclosure of Contracts with Former Public Servants

SACC Manual Clause A3025C (2013-03-21)

8. Payment

8.1 Basis of Payment – Firm Price

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 TBD for a cost of \$ TBD. Customs duties, and excise taxes are included and applicable taxes are extra, if applicable.

Canada will not pay the contractor for any design changes, modifications or interpretations of the work.

-OR-

Basis of Payment – Ceiling Price

The contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the work, as determined in accordance with the Basis of Payment in Annex TBD, to a ceiling price of \$TBD.

Customs duties, and excise taxes are included and applicable taxes are extra, if applicable.

The ceiling price is subject to downward adjustment so as not to exceed the actual costs reasonably incurred in the performance of the work and computed in accordance with the Basis of Payment.

-OR-

Basis of Payment – Limitation of Expenditure

The contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the work, as determined in accordance with the Basis of Payment in Annex TBD, to a limitation of expenditure of \$TBD.

Customs duties, and excise taxes are included and applicable taxes are extra, if applicable.

8.2 Limitation of Price

SACC Manual Clause C6000C (2011-05-16), Limitation of Price

8.3 Method of Payment

Method of Payment – Progress Payments (for Ceiling Price Basis and Limitation of Expenditure Basis of Payments)

1. Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the work up to TBD percent of the amount claimed and approved by Canada 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) (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>), Claim for Progress Payment and any other document required by the contract have been submitted in accordance with the invoicing instructions provided in the contract;
- b) the amount claimed is in accordance with the Basis of Payment;
- c) the total amount for all progress payments paid by Canada does not exceed TBD percent of the total amount to be paid under the contract; and,
- d) all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.

2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all work required under the Contract if the work has been accepted by Canada and a final claim for the payment is submitted.

-OR-

Method of Payment – Milestone Payments (for Firm Price Basis of Payment)

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in Annex TBD 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) (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>), Claim for Progress Payment 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; and,

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

8.4 SACC Manual Clauses

A9117C (2007-11-30), T1204 - Direct Request by Customer Department
C0305C (2014-06-26), Cost Submission – Limitation of Expenditure or Ceiling Price
C4005C (2014-06-26), Travel and Living Expenses – National Joint Council Travel Directive

8.5 Discretionary Audit

SACC Manual Clause C0101C (2010-01-11), Discretionary Audit – Non-commercial Goods and/or Services

-OR-

SACC Manual Clause C0102C (2010-01-11), Discretionary Audit – Canadian Universities and Colleges

-OR-

SACC Manual Clause C0705C (2010-01-11), Discretionary Audit

8.6 Time Verification

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

9. Invoicing Instructions

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

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) a list of all expenses; and,
- d) the description and value of the milestone claimed as detailed in the contract.

Each claim must be supported by (TBD at each individual contract/MOA):

- a) a copy of time sheets to support the time claimed;
- b) a copy of the invoices, receipts, vouchers for all direct expenses, and all travel and living expenses; and,
- c) a copy of the monthly progress report.

2. Applicable taxes must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no applicable taxes payable as it was claimed and payable under the previous claims for progress payments.

3. The contractor must prepare and certify an original claim on Form PWGSC-TPSGC 1111 and forward it to the Contracting Authority for certification in an electronic format to the electronic mail address identified under section entitled "Authorities" of the contract. Portable Document Format (.pdf) format is acceptable. The Contracting Authority will then forward the certified claim, in an electronic format, to the TA for appropriate certification after inspection and acceptance of the work takes place and onward submission to the Payment Office for the remaining certification and payment.

4. The contractor must not submit claims until all work identified in this claim is completed.

10. Certifications

10.1 Compliance

Compliance with the certifications (attestations) and related documentation provided by the contractor in its bid is a condition of the contract and subject to verification by Canada during the entire contract period. If the contractor does not comply with any certification, provide the related documentation or if it is determined that any certification made by the contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the contract, to terminate the contract.

10.2 Federal Contractors Program for Employment Equity – Default by the Contractor

The contractor understands and agrees that, when an AIEE exists between the contractor and 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.

10.3 SACC Manual Clauses

A3060C (2008-05-12), Canadian Content Certification

11. Applicable Laws

The contract must be interpreted and governed and the relations between the parties determined, by the laws in force in (to be inserted at contract/MOA award).

12. 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 supplemental general conditions _____;
- c) the general conditions _____;
- d) Annex __, Statement of Work;
- e) Annex __, Basis of Payment;
- f) Annex __, Security Requirements Check List;
- g) Annex __, Insurance – Specific Requirements; and,
- h) The contractor's proposal dated _____.

13. Foreign Nationals (Canadian Contractor OR Foreign Contractor)

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

-OR-

SACC Manual clause A2001C (2006-06-16) Foreign Nationals (Foreign Contractor)

14. Insurance

SACC Manual clause G1005C (2016-01-28), Insurance – No Specific Requirement

-OR-

Insurance – Specific Requirements

The contractor must comply with the insurance requirements specified in Annex _____. The contractor must maintain the required insurance coverage for the duration of the contract. Compliance with the insurance requirements does not release the contractor from or reduce its liability under the contract.

The contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the contractor's expense and for its own benefit and protection.

The contractor must forward to the Contracting Authority within 10 calendar days after the date of award of the contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. For Canadian-based contractors, coverage must be placed with an Insurer licensed to carry out business in Canada, however, for Foreign-based contractors, coverage must be placed with an Insurer with an A.M. Best Rating no less than "A-". The contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

15. Controlled Goods Program

SACC Manual clause A9131C (2014-11-27), Controlled Goods Program - Contract

-OR-

SACC Manual clause B4060C (2011-05-16), Controlled Goods

16. Government and/or Canadian Forces Site Regulations

SACC Manual clause A9068C (2010-01-11) Government Site Regulations

-OR-

SACC Manual clause A9062C (2011-05-16) Canadian Forces Site Regulations

17. Joint Venture

- a) The contractor confirms that the name of the joint venture is _____ and that it is comprised of the following members: [list all the joint venture members named in the contractor's original bid].
- b) With respect to the relationship among the members of the joint venture contractor, each member agrees, represents and warrants (as applicable) that:
 - i. _____ has been appointed as the "representative member" of the joint venture contractor and has full authority to act as an agent for each member regarding all matters relating to the contract;
 - ii. by giving notice to the representative member, Canada will be considered to have given notice to all the members of the joint venture contractor; and,
 - iii. all payments made by Canada to the representative member will act as a release by all the members.
- c) All the members agree that Canada may terminate the contract in its discretion if there is a dispute among the members that, in Canada's opinion, affects the performance of the work in any way.
- d) All the members are jointly and severally or solitarily liable for the performance of the entire contract.
- e) The contractor acknowledges that any change in the membership of the joint venture (i.e. a change in the number of members or the substitution of another legal entity for an existing member) constitutes an assignment and is subject to the assignment provisions of the General Conditions.
- f) The contractor acknowledges that all security and controlled goods requirements in the contract, if any, apply to each member of the joint venture contractor.

Note to bidders: This Article will be deleted if the bidder awarded the contract/MOA is not a joint venture. If the contractor is a joint venture, this clause will be completed with information provided in its bid.

Annex A – Project Types and Parameters

Project Types:

The types of projects that will be considered for this CFP are:

- Studies;
- Concepts;
- Research and Development;
- Technology Demonstrations; and,
- Technology Pilots.

Each project type covers a SRL range. A SRL is a measure that evaluates the maturity of evolving technology – which includes, for example, devices, materials and software (refer to Annex H).

Studies

Studies are evidence-based examinations or analysis that address known defence, security, or safety issues, define problems or propose options that require investigation. Studies can provide operational research tools and methods, including risk, capability and foresight analysis or road-mapping to define operational needs and/or aid in prioritizing investment decisions. Studies can vary considerably in scale and complexity. Studies analyze key issues with rigour but the scope of the analysis is managed so as to be both feasible and attainable with limited time-frames and resources (including funding). Examples include conducting scoping studies or developing emergency response scenarios that help define needs.

Concepts

Concepts provide a more in-depth analysis of the issues and solution options than studies. Typically, these include an analysis of problems as well as potential solutions taking into account technological, operational, environmental, policy, governance, and regulatory aspects where applicable. Concepts usually include a comprehensive environmental scan that covers the scientific, technological and operational landscapes to ensure the analysis is up-to-date. Often there is broad consultation with a variety of SMEs.

Research and Development

R&D projects involve applied research in scientific or technological fields that may generate new knowledge or awareness while addressing user-defined capability gaps in critical areas. R&D projects include analytical research, laboratory studies and experiments that mature earlier findings. R&D projects can also validate analytical predictions of existing S&T or enable 'proof-of-concept' validation.

Technology Demonstrations

Technology demonstrations are projects that advance the maturity of a technology, application or capability by embedding S&T in an operational context. These projects foster collaboration between operational and S&T communities. They integrate basic technological elements that can be tested in a simulated or realistic environment. Technology demonstrations test the applicability of a SRL solution to address a capability gap. This project type usually does not transition directly into implementation or operationalization as additional development may still be required.

Technology Pilots

Technology pilots, which are sometimes referred to as feasibility studies or experimental trials, are projects that involve the implementation of a known solution on a small-scale to evaluate its full impact, strengths and weaknesses prior to full implementation. This project type allows for the collection of information to adequately learn how the solution might work in practice.

Project Parameters

The table below identifies project parameters for each project type. Proposals should not exceed the parameters identified for funding, and must not exceed the parameters identified for project duration, including for phased projects.

The financial proposal for a Phased Project must not exceed the sum of amounts listed in the project parameters for the selected project types, including applicable taxes. The combined total duration of phased projects must not exceed 36 months, regardless of the project parameters identified for Table A and Table B.

Table A: Project Parameters (Challenges 1 to 14 only)

Project Type	SRL Range	Project Duration (from initiation to close-out)	Funding/Resulting Contract Value (applicable taxes included)
Concept	1-3	≤ 24 months	≤ \$250K
R&D	3-4	≤ 36 months	≤ \$1.0M
Technology Demonstration	5-7	≤ 36 months	≤ \$1.5M
Technology Pilot	7-9	≤ 36 months	≤ \$2.0M
Study	1-9	≤ 12 months	≤ \$125K

Table B: Project Parameters (Challenges 15 and 16 only)

Project Type	SRL Range	Project Duration (from initiation to close-out)	Funding/Resulting Contract Value (applicable taxes included)
Concept	1-3	≤ 24 months	≤ \$200K
R&D	3-4	≤ 36 months	≤ \$400K
Study	1-9	≤ 12 months	≤ \$500K

Phased Projects:

This CFP allows for phased projects. Such projects include two distinct proposals and must demonstrate progression of solution maturity (i.e. SRLs) from one project type (Phase I) to the subsequent project type (Phase II). The bidder must identify the Go/No-Go considerations to transition from Phase I to Phase II of the phased project. Go/No-Go clauses will be included in any resulting contract that spans project types and it will be Canada's decision whether to proceed to the next project. This means that all resulting proposals are dependent on the successful approval/results of the first proposal. If this is not the case, do not submit phased projects.

When submitting a phased project, each proposal must be distinctive. Proposals should be treated as separate work packages and each will be evaluated on its own merits. An evaluator must be able to discern the work described in one proposal from beginning to end, without relying on information from a second proposal submitted as part of the phased project.

The financial proposal for a phased project must not exceed the sum of amounts listed in the project parameters for the selected project types, including applicable taxes. The combined total duration of phased projects must not exceed 36 months, regardless of the project parameters identified for Table A and Table B.

Canada may award one or more or no contracts for each and/or all of the phased projects.

Example:

Bidder ABC submits a proposal and identifies it as a phased project for Stream A or Stream B consisting of the following:

Phase I:

Project Type: Concept

DRDC Funding (maximum): \$250K

Duration (maximum 24 months): X months (TBD by the bidder)

Submits a distinct proposal.

Phase II:

Project Type: R&D

DRDC Funding(maximum): \$1.0M

Duration (maximum 36 months): X months (TBD by the bidder)

Submits a distinct proposal.

Notes:

Total DRDC funding that can be requested: \$1.25M

Total duration not to exceed: 36 months

Both proposals must be in the pool of pre-qualified proposals. Phase II can only proceed if Phase I is selected for funding, contracted, and a go decision to proceed with Phase II is made by the TA at the end of the Phase I contract.

Annex B – Science & Technology Challenges

For this CFP, the following S&T Challenges have been identified:

- a) Stream A: Public Safety and Security: Smart Communities and Systems
- b) Stream B: Support to Canada's Defence Policy "Strong, Secure, Engaged"

Stream A

Public Safety and Security - Smart Communities and Systems

The introduction of smart technologies (artificial intelligence (AI), Internet of Things (IoT), automated learning systems, robotics, data analytics, broadband communications, and connected, driverless vehicles) into public safety and security systems and into urban, rural, or remote, isolated communities can be rapid, complex, non-systematic. The convergence of these technologies coupled with multiple dynamic factors introduced by an ever changing threat, hazard and risk landscape presents significant challenges for public safety and security. Keeping pace with these changes is necessary for society to exploit the benefits of the new technologies while countering the vulnerabilities these same technologies are introducing or exacerbating. The core challenge is to optimize the utility of these inexorable technology advancements in a manner that is coherent, safe, secure, and preserves the privacy of individuals in deployed safety or security systems.

For this CFP, in Stream A, DRDC is looking for novel ideas and innovative solutions to S&T Challenges under the themes of mitigating the impact of climate change, mitigating national security risks and protecting and connecting safety and security professionals.

THEME 1: Mitigating the Safety and Security Impact of Climate Change

The implications of the gradual warming of the planet and changes in hydrological cycles include an increase in the number and severity of extreme weather events and natural disasters, new vectors for diseases, changes in sea ice, and melting permafrost in the Canadian North. In this call, DRDC will seek innovative solutions to identify and mitigate the impact of these changes on the safety and security of Canadians.

1. Community Resilience and Risk Reduction

Problem:

Risk reduction and mitigation is a challenging and complex problem that includes technical, societal and legal aspects with many interdependencies at different levels of government and society. While many Canadian communities have risk assessments for a variety of disasters, methods to mitigate and reduce the risk are needed. Furthermore, emerging innovative technologies and advances in data science, such as real-time data collection, fusion, distribution, analysis and predictive analytics, have created opportunities that have yet to be fully explored.

S&T Challenge:

Develop scalable tools, methodologies, and novel S&T solutions for risk reduction and mitigation at the individual, family, community, regional, and national level, which consider disasters of all types and include geographical, economic, cultural, and social factors, and which aim to inform disaster risk reduction initiatives with considerations of cost-effective mitigation, climate adaptation, and smart recovery or re-building, in alignment with the Sendai Framework for Disaster Risk Reduction (DRR) requirements.

2. Health Consequences of Climate Change

Problem:

A changing climate and environmental-driven disasters can lead to new interactions between different agents, site and atmospheric contamination and long-term human, animal and environmental health. Melting permafrost and species migration can also lead to emerging and re-emerging diseases.

S&T Challenge:

A) Innovative S&T post-disaster health research to help build community resilience that includes the need to understand toxic and/or long term health effect of short-lived chemical or radiological exposures, and data on how chemicals that are released intentionally or during an accident, react with the environment.

B) Innovative S&T solutions that improve situational awareness and anticipation capability for outbreaks of zoonotic diseases, or emerging infectious disease risk resulting from melting permafrost, international travel, trade or migration.

THEME 2: Mitigating National Security Risks

The threat landscape for national security continues to evolve and DRDC will continue to invest in S&T solutions to mitigate threats to the safety and security of Canadians.

3. Securing Soft Targets

Problem:

Recent events around the world demonstrate the vulnerability of public spaces where people congregate to study, shop, dine, conduct business, be entertained, worship, or travel. In general, these spaces are open to facilitate access to the public and thus have little or no security. Soft targets include publically accessible government facilities, schools, hospitals, hotels, restaurants, nightclubs, shopping malls, tourist sites, concert halls, museums, religious facilities, sports stadiums, parks and streets, and public areas around transportation systems; anywhere people assemble. These spaces are exposed to a broad spectrum of tactics that may include firearms, bladed weapons, improvised explosive devices (IEDs), vehicle ramming, and improvised incendiary devices (IIDs), unmanned autonomous systems (air and surface vehicles).

S&T Challenge:

Innovative S&T solutions for protecting soft targets that tailor both visible and non-visible security measures and coordinate a focus on R&D to generate the knowledge, technologies, and behavioural analytics to develop effective security capabilities. All proposed solutions must protect personal information and respect Canadian privacy legislation and expectations. Areas of interest include developing solutions for physical protection of public facilities, new sensors and analytical tools such as video processing and behavioural biometrics, and AI -based techniques that exploit information sources such as social media, and the Internet-of-Things. Note that mitigation of threats to VIPs or critical infrastructure from unmanned autonomous aircraft is not considered in this challenge and should be addressed in the Protection from Drones Challenge below.

4. Detection, Forensics, Attribution and Non-Proliferation for Chemical, Biological, Radiological, and Nuclear

Problem:

Globalization has served to increase the exposure to, access to, and transportation of threat agents. As a result of dissemination of knowledge, both the spectrum of threat agents and event probability have increased significantly. Definitive attribution of Chemical, Biological, Radiological, and Nuclear (CBRN) events remains a challenge, which allows both state and non-state actors plausible deniability. Furthermore, global efforts in nuclear threat-reduction and non-proliferation as well as verification of adherence to nuclear, chemical weapons and biological weapons conventions need to fully exploit new tools and techniques in arms control technology.

S&T Challenge:

A) Innovative S&T solutions to develop the ability of identifying DNA signatures of microorganism that have been cultured and or modified in a laboratory setting prior to the appearance in nature vs naturally occurring strains.

B) Innovative S&T solutions to develop methodologies and solutions to improve the forensic analysis of noble gas emissions and thereby improve and accelerate deductions on nuclear activities.

5. Intelligence for National Security

Problem:

The Government of Canada's first priority is to protect Canadians and Canadian sovereignty. To do so, national security and intelligence agencies are required to identify threat actors, their intent and their capabilities, in order prevent, disrupt or mitigate the threat they pose.

S&T Challenge:

Innovative S&T solutions to enhance the national security and intelligence agencies' capabilities and performance, with a particular emphasis on reliable and validated analytical tools. This includes:

- new tools to counter the threat from disinformation and foreign influence in democratic processes;

- innovative tools that address terrorists use of the Dark Web or block chain technologies as a tool for recruitment, training, propaganda, and financing; and,
- innovative digital forensics and interception techniques to enhance the ability of evidence collection.

6. Understanding the Threat from Disruptive Technology

Problem:

Disruptive technologies bring unknown safety and security risks. They have the capability to significantly change the way we operate on a daily basis and can have dramatic societal impact. As new technologies are introduced into society, safety and security partners need an understanding and assessment of associated risks and mitigations, and the challenges and opportunities their adoption poses with regard to counterterrorism, counter-terrorist financing, and law enforcement efforts.

S&T Challenge:

Innovative S&T solutions or analytical approaches that further our understanding of the risk associated with disruptive technologies such as AI, increased digital connectivity, networked sensors, advanced robotics, and advanced manufacturing.

7. Security, Privacy and Identity Management

Problem:

Governments are required to authenticate and verify the identity of individuals for a multitude of purposes, from establishing the identity of persons entering the country or applying for official documents such as passports and driver's licenses, to conducting criminal and national security-related investigations, among other purposes. However, the increasing digitization of Canadians' personal data has created the potential for adversarial/criminal exploitation of that information. Canadian governments at all levels (federal, provincial, and municipal) are seeking ways to protect Canadians' information, while facilitating the continued modernization of government in the digital era

S&T Challenge:

- A) Innovative S&T solutions to enhance the management of privacy threats and vulnerabilities, with a particular emphasis on developing solutions to support lawful and responsible sharing of Canadians' personal information and data within and between government departments and agencies
- B) Innovative S&T solutions to enhance the government's identity management capabilities, with a particular emphasis on capabilities, including forensic capabilities that support (i) border control/security and immigration, (ii) law enforcement or national security operations, or (iii) access control to government facilities.

8. **Border Security**

Problem:

Canada's vast territory, including its maritime regions, and its remote points of entry, presents daunting border security and domain awareness challenges, including the need to secure the long Canadian land border with the United States, perform surveillance of our maritime and Arctic approaches, and ensure the efficient and secure flow of goods and materials at border Ports of Entry or in transit to the border (i.e. transportation pathways).

S&T Challenge:

Innovative S&T solutions to enhance Canada's ability to protect and secure its land and/or maritime borders, with a particular emphasis on enhancing Canada's border services and search and rescue capabilities in the North/Arctic, combatting organized crime and the trade in firearms and illegal narcotics, addressing irregular migration, and ensuring efficient and effective screening of cargo and travellers.

9. **Protection from Drones**

Problem:

Drones pose a particular threat to VIPs at outdoor events or in a moving vehicle, and may be an effective means of delivering a threat payload, such as explosives, listening device or camera to critical infrastructure. VIP security currently lacks the ability to stop drones in the last 100m even if detected early. The threat to critical infrastructure is not well-understood and response methodologies and procedures are not well-defined. Drone activity around airports is of particular concern. There is currently no truly effective technology to counter the threat to critical infrastructure from drones.

S&T Challenge:

A) Innovative S&T solutions for stopping identified drones within 100m using means that do not require emissions from the drone or ground station, and that are man-portable and easily operated by a single operator with minimal training, ideally lowering the drone safely to the ground.

B) Innovative S&T solutions for novel autonomous hard-kill or soft-kill response technologies along with response tactics techniques and procedures to defend critical infrastructure such as power stations, airports, buildings or other fixed structures.

THEME 3: Protecting and Connecting Safety and Security Professionals

10. **Enabling DND Operations Alongside Safety and Security Partners**

Problem:

Through requests for assistance, the Canadian Armed Forces (CAF) are called upon to provide assistance to local emergency operations across the country. There is an opportunity to exploit new technologies or enhance tactics, techniques or procedures to improve the interconnection between military and non-military responders and systems to improve the overall effectiveness of a combined response.

S&T Challenge:

Innovative S&T solutions that improve the interoperability between military and non-military actors, aid the transition after a request for assistance is made, improve integrated operations, or enhance the preparedness of the CAF for domestic emergency response.

11. Support Tools for Incident Operations

Problem:

The exchange of essential information between front-line operators, their dispatch and/or command personnel and community, currently relies mostly on voice communications and actions, which are subject to technical issues, misunderstanding, and cognitive loading. In addition, IoT sensors are being deployed amongst personnel, in communities, and the general population that have the capability to provide increased situational awareness. Recent advances have opened up the field of AI to a level where it may be effective for use in decision making and support in emergency response situations, thereby improving cognitive/behavioural performance of operators and organizations and their ability to process data.

S&T Challenge:

Innovative S&T solutions that demonstrate seamless communications among multiple disparate wireless technologies including 4G LTE, 5G and Wi-Fi, the ability to enable a secure exchange of information between local end users and IoT sensors, and provide the best available situational awareness.

12. Supporting Next Generation 911

Problem:

The introduction of Next Generation 911 (NG911) in Canada through regulation is a paradigm shift from both a technical and concept-of-operations perspective. There is currently a lack of understanding by operators and responders how it will interoperate with existing systems and operations

S&T Challenge:

Explore approaches, methods and tools for capturing, aggregating, fusing, analyzing, and distributing data that is relayed to Public-Safety Answering Points (PSAPs) through the NG911 system. Develop concepts of operation and best practices for how to deal with the changes brought about by NG911.

Stream B:

Support to Canada's Defence Policy "Strong, Secure, Engaged"

In support of Canada's Defence Policy, "Strong, Secure, Engaged", released in June 2017, the policy states that "Innovative technology, knowledge, and problem solving are critical for Canada and its allies to mitigate new threats, stay ahead of potential adversaries, and meet evolving defence and security needs, while generating economic benefits for Canada."

The Stream B S&T Challenges support portfolios related to joint force development and force employment.

13. The Right to be Cool

(Although this challenge is listed under Stream B, Public Safety and Security will be the TA) Climate change is increasing the frequency and intensity of extreme weather events such as heatwaves, as well as natural disasters such as wildland fires. Vulnerable populations and first responders will likely face increased exposure to extreme heat conditions.

Problem:

With the inevitable threat of climate change and the consequential effects on human health, there has been a need to develop new or adapt existing technologies to protect the health of the particularly vulnerable population such as the elderly, the sick and children exposed to excessive overheating conditions in buildings and as well, first responders working in remote areas under direct conditions of extreme heat. Portable cooling technologies are effective measures to reduce the heat-related risk to the health of people exposed to conditions of extreme heat.

S&T Challenge:

The goal of this research challenge is to develop a portable, self-contained (powered), cost effective, and energy efficient cooling unit that can serve vulnerable people and first responders exposed to extreme heat conditions in indoor spaces or open outdoor environments. The cooling unit should provide cooling effects to individuals or a group of individuals for at least one hour under typical Canadian indoor and outdoor temperature exposures during extreme heat events (temperature range from 30°C to 40°C with dry or humid conditions). The cooling unit can be a wearable garment, or a compact cooling unit or a combination of both, intended to be used for:

1. Building interior spaces to protect the health of vulnerable occupants during heat wave events. In non-air conditioned buildings such as multi-unit residential buildings, the indoor temperature may be higher than outdoor temperature and reach values over 30°C for several hours per day.
2. Outdoor deployable structures (e.g., tents) to provide emergency care for people affected by heat during heat events.
3. First responders (e.g. firefighters, paramedics, rescuers, police) directly exposed to outdoor extreme heat conditions; protective clothing and work level of first responders add additional risk to their heat related health.

This research is limited to new emerging technologies for personal cooling for short periods (several hours) of exposure during heat events. The new technologies should be at SRL of 4 and up, and near or ready for commercialisation.

The expected outcomes of the proposed research are to develop a cooling unit with the following characteristics:

- Portable, compact, and light weight;
- Self-powered and resilient. The unit should use no power (passive), generate its own power, or use low power sources. Energy consumption of the unit should be very low so it does not add on greenhouse gas effect (environmentally friendly);
- Provide effective cooling effects to individuals or a group of individuals for at least one hour under the Canadian typical temperature exposures for indoor and outdoor environments; and,
- Not expensive so that it can be produced in mass for market deployment.

THEME 1: Unmanned Autonomous Systems (air) for Intelligence, Surveillance and Reconnaissance

Intelligence, Surveillance and Reconnaissance (ISR) from the air has been greatly enhanced through the use of Unmanned Autonomous Systems. This is especially important in situations where the ISR task requires constant attention for long periods of time, or requires a platform to be put in harm's way. DND has a strong S&T program in the investigation of the applicability of such systems to operations.

14. High Endurance, Small Footprint ISR UAV

Problem:

One of the main features of UAS for ISR is their high endurance, meaning their ability to stay on mission and on site for at least 10 hours. This is done using fixed-wing UAS. Helicopter-based and multirotor aircraft are also used for short missions that last minutes instead of hours. These are used in urban settings and at close range because of their ease of deployment, their small size, their portability and their maneuverability. What is needed is a UAS that has the endurance of a fixed-wing ISR platform and the portability, maneuverability and small size of multirotor aircraft.

S&T Challenge:

Operators, such as Canadian Special Operations Forces Command, are seeking S&T support to investigate and generate a novel solution to create an ISR UAS that has the following features at a minimum:

1. Vehicle is to be transportable and be capable to be launched by two persons.
2. The vehicle launching system is to be self-contained.
3. Must be able to take off and land in both urban and semi-urban environments (rooftops, parking lots, fields 50x50m).
4. Minimum range of 400 km.
5. Minimum flight endurance 10 hours.
6. Vehicle is to be capable of accepting modular payloads to include but not be limited to cameras, radars and sensors.
7. Payloads must be able to be installed by operators.

Proposals should describe the visual and noise signatures of the proposed solution.

THEME 2: Space-Based Intelligence, Surveillance and Reconnaissance

One of the initiatives of the “Strong, Secure, Engaged” Canadian Defence Policy is to acquire space capabilities to improve situational awareness and targeting, including the replacement of the current RADARSAT system to improve the identification and tracking of threats and improve situational awareness of routine traffic in and through Canadian territory, as well as in other areas of interest around the world.

DND has a program focused on conducting cutting-edge R&D on space-based earth observation technologies in collaboration with allies, industry, and academia to maintain, enhance, and contribute to continuous situational awareness capabilities for the CAF. This program provides advice and recommendations to DND stakeholders concerning viable and cost effective technological solutions that are available, or will be available in the near future, and that could be considered in upcoming options analysis phases of space-based ISR projects.

15. Hyper-Spectral Imaging Satellites

Problem:

DND and CAF require a better understanding of how HSI technology deployed from space could provide novel and significant solutions to ISR problems such as counter IEDs, Search and Rescue, Chemical, Biological, Radiological, Nuclear, High Yield Explosive (CBRNE), Arctic ISR, and Intelligence Preparation of the Operational Environment.

S&T Challenge:

This challenge is seeking proposals that would evolve their current SRL through studies, concepts and/or R&D and be centered on compact imaging spectrometers that can be carried aboard nano-to-medium size satellites. These proposals should identify how existing sensors (commercial of the shelf (COTS) or previously built) can best exploit the visible and near infrared (VNIR), the short-wave infrared (SWIR) or their combined ranges, in order to provide imagery with sufficient quality (signal-to-noise-ratio (SNR), ground sample distance (GSD), etc.) to support various DND/CAF applications. The inclusion of preliminary work phases (components and system concept validation and design, build and/or tests) and of broad cost projections are encouraged.

THEME 3: Space Situational Awareness (SSA)

Recognizing that space capabilities are essential to the current and future operations of the CAF, the “Strong, Secure, Engaged” Canadian Defence Policy directs DND to conduct cutting-edge R&D on new space technologies and to invest and employ a range of space capabilities, including Space Situational Awareness (SSA). Given the essential role of space capabilities in CAF operations, new SSA technologies ensuring timely responsiveness, and enhanced understanding of Earth orbiting space objects is of particular interest.

16. Demonstration of a multi-purpose SSA microsatellite

Problem:

Space assets are playing an increasingly important role for CAF and allied operations. The increasingly complex and dynamic nature of the space environment requires timely and accurate SSA to ensure the safety of space assets – and their associated effects on CAF capabilities – in the face of natural, man-made, and potentially hostile threats.

S&T Challenge:

DRDC is seeking new high-performance capabilities to track space objects under stressing observing conditions, to monitor and assess the state of Canadian space objects on orbit, to maintain awareness of space objects in the orbital proximity around a Canadian satellite, and to task, obtain data from, and monitor telemetry of a Canadian SSA satellite asset in near real-time.

Annex C – Evaluation Criteria

#	Applicable Stream	Evaluation Criteria & Demonstration of Criteria		Evaluation Grid
		Evaluation Criteria	Required information to support the criteria	Assessment
		Mandatory Criteria (MC)	Unless otherwise stated below, the following information must be provided as a minimum to demonstrate the criteria and enable Canada's assessment of each criterion.	Schema (Pass or Fail)
MC-1	A, B	One S&T Challenge of Annex B	Required information to support the criteria	Assessment
		The proposal must identify one primary S&T Challenge of Annex B that the proposal is addressing. If the proposed project addresses more than one S&T Challenge of Annex B, the secondary S&T Challenge can be addressed in other sections, including in MC-4, at the bidder's discretion.	The submission must identify a Primary S&T Challenge.	The proposal identifies one primary S&T Challenge of Annex B.
MC-2	A, B	Project Type Duration	Supporting Information	Assessment
		The proposal must not exceed a combined total project duration period of 36 months.	Show the duration in the work plan.	The proposal meets the criterion.

MC-3	A, B	Financial Support Disclosure	Required information to support the criterion	Assessment
		<p>The proposal must disclose all financial support received (if any) and to be received (if any) from all Canadian federal government organizations and programs (including DRDC) for the proposed project.</p> <p>Bidders are advised that this criterion does not include the financial support requested as program funds from DRDC for this CFP.</p>	<p>The submission must list all financial support and identify the following information for each:</p> <ul style="list-style-type: none"> • name of the Canadian federal government organization and program; • amount; and, • the Fiscal Year of receipt of the funding received or to be received. <p>If financial support is not applicable, indicate "nil".</p>	<p>The proposal discloses all required financial support.</p>
MC-4	A, B	Alignment with Primary S&T Challenge	Required information to support the criterion	Assessment
		<p>The proposal objective(s) must align with the primary S&T Challenge.</p>	<p>In a maximum of 750 words, the submission must identify how the proposal's objective(s) meet the criterion.</p>	<p>The proposal identifies how the objective(s) align with the primary S&T Challenge.</p>

MC-5	A	Partnerships	Required information to support the criteria	Assessment
		<p>The proposal must have a minimum of two partner organizations that include the bidder and a LGD. These partners must meet the requirements as set out in Part 3.1 - Who May Apply.</p>	<p>The submission must include a complete Partnership Signature Form as set out in Annex G for the bidder as well as all entities/organizations identified as partners in the proposal.</p> <p>All signatures, at a minimum, must be at a level:</p> <ul style="list-style-type: none"> • of DG or higher for the federal government; and, • acceptable for a provincial, territorial, municipal government, academic institution or a private industry to authorize the financial and operational commitment of its organization for the proposal. 	<p>The proposal meets the criterion and contains the completed Partnership Signature Form.</p>

Annex C – Evaluation Criteria

	Evaluation Criteria	Required Information to Support the Criteria	Assessment and Proposal Rating
	Point-Rated Criteria (PR) Stream A and B	In a maximum of 500 words for each criterion, the proposal should demonstrate all supporting information with a degree of information sufficient to enable Canada’s assessment of the proposal against the criteria and the Evaluation Schema.	Evaluation Schema and Points PR-1 to PR-12
PR-1	Project Feasibility	Required Information to Support the Criteria	Maximum 15 points
	The bidder’s approach to complete the proposed project (how they intend to carry out and complete the work) is feasible.	The proposal should provide the following details at a minimum: 1. Specific details of the approach; and, 2. Demonstration that the approach is feasible and that the project has a high probability of producing the proposed project objective(s).	0 points The description of the approach has insufficient detail and lacks evidence of the feasibility of the project. 5 points The approach can be understood at a high level, but few details are provided. OR The evidence provided of the feasibility of the approach is weak, not relevant, or not logical. 10 points The approach is described and understandable, with sufficient details provided to allow analysis of its

			<p>feasibility. Minor details may be missing; however, overall the information provided is clear and logical.</p> <p>AND</p> <p>Minor details may be missing; however, the evidence provided is relevant and logical, showing that the project should be feasible.</p> <p>15 points</p> <p>The description of the approach includes substantial details so as to leave the evaluator with no questions as to how the project will be conducted.</p> <p>AND</p> <p>The evidence provided is of sufficient quality and logic that there is no doubt for the evaluator that the project will achieve the proposed objective(s).</p>
PR-2	Project Applicability in Canada	Required Information to Support the Criteria	Maximum 6 points
	<p>The proposed solution applies in Canada and/or can be utilized by a government organization within Canada. (Federal, Provincial/Territorial, Municipal)</p>	<p>The proposal should provide the following details at a minimum:</p> <ol style="list-style-type: none"> 1. The geographical or jurisdictional area(s) of Canada and the level of government to which the proposed solution is applicable; and, 2. Demonstration of why the proposed solution is applicable in Canada and/or how it can 	<p>0 points</p> <p>The areas of Canada and the level of government are not identified, and/or those identified are not applicable.</p> <p>2 points</p> <p>The applicable level of government or geographic area is ambiguous.</p> <p>OR</p> <p>The proposal does not identify how the project can be used by a government organization in Canada.</p>

		be utilized by a Canadian government organization.	<p>4 points The proposal identifies at least one appropriate government organization to which the project applies, and explains the impact on that government organization.</p> <p>AND The proposal shows why the solution is applicable in a Canadian context and the benefits of its use by the identified government organization in Canada.</p> <p>6 points The proposal identifies multiple government organizations in Canada that would use or be impacted by the project, and explains the relationship(s) between the government organizations in the context of the project.</p> <p>AND The proposal demonstrates that the end result/deliverable(s) of the project provides benefit to multiple Canadian governments.</p>
PR-3	Scientific and/or Technical Merit of the Proposal	Required Information to Support the Criteria	Maximum 15 points
	The proposed project is supported by sound and logical, scientific concepts and/or technical evidence.	The proposal should provide the following details at a minimum: 1. The specific scientific concepts and/or technical evidence that support the proposed project; and,	<p>0 points The S&T concepts and/or evidence of the project are not provided.</p> <p>5 points Limited information is provided about the scientific</p>

		<p>2. Demonstrate how the scientific concepts and/or technical evidence support the project to maximize its success.</p>	<p>concepts and/or technical evidence, and/or information provided is unclear and/or not logical.</p> <p>OR</p> <p>The relationship between the scientific concepts and/or technical evidence and the implementation of the project is not clear.</p> <p>10 points</p> <p>Adequate detail and information is provided and supported by valid scientific concepts and/or technical evidence. Minor details may be missing, however, overall the Information provided is clear and logical.</p> <p>AND</p> <p>The relationship between the scientific concepts and/or technical evidence and the implementation of the project is clear. Minor details may be missing, however overall it is clear how the S&T concepts and/or evidence support the project.</p> <p>15 points</p> <p>Great detail and information is provided and supported by valid scientific concepts and/or technical evidence above. All information provided is clear and logical.</p> <p>AND</p> <p>The relationship between scientific concepts and/or technical evidence and the implementation of the project is very clear. It is very clear how the scientific concepts and/or technical evidence support the project and suggests a high probability of success.</p>
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PR-4	Novel and Innovative	Required Information to Support the Criteria	Maximum 12 points
	<p>The implementation of the proposed project exploits novel* and/or innovative** concepts, methodologies, tools, and/or technologies.</p> <p>*Novel: An original idea.</p> <p>**Innovative (examples but not limited to):</p> <ul style="list-style-type: none"> • A new technology or new process that is not currently available in the marketplace. • Advancing knowledge in social science. • Application of existing technologies/processes that are applied in a setting or condition for which current applications are not possible or feasible. • An improvement to an existing technology/process that represents a significant improvement in functionality, cost or performance of goods and services that are considered state-of-the-art or the current industry best practice. 	<p>The proposal should provide the following details at a minimum:</p> <ol style="list-style-type: none"> 1. A description of existing concepts, methodologies, tools, or technologies; and, 2. Demonstration that the proposed concepts, methodologies, tools, or technologies are novel* and innovative** compared to existing solutions described in point 1. above. 	<p>0 points The proposal does not exploit novel and/or innovative concepts, methodologies, tools, and/or technologies in the implementation of the project, or those identified are incorrect/ not logical.</p> <p>4 points The proposal provides some description, however, does not demonstrate a good understanding of existing concepts, methodologies, tools, and/or technologies</p> <p>OR</p> <p>Little evidence is provided about novel and innovative concepts, methodologies, tools, and/or technologies, and the implementation of the novel concepts within the project is not clear.</p> <p>8 points The proposal adequately describes existing concepts, methodologies, tools, or technologies that apply to the implementation of the project. Minor details may be missing, however, overall the information provided is clear and logical.</p> <p>AND</p> <p>It is clear how novel and innovative concepts, methodologies, tools, or technologies will be implemented in the project. Minor details may be missing, however, overall the information provided is clear and logical.</p>

			<p>12 points The proposal fully describes the existing concepts, methodologies, tools, or technologies.</p> <p>AND It is very clear how novel and innovative concepts, methodologies, tools, or technologies exploited can be considered advanced thinking or breakthroughs with little or no previous application, and the proposal details the difference and logic behind their use compared to existing concepts, methodologies, tools, or technologies.</p>
PR-5	New Knowledge/Technology and/or Enhancements	Required Information to Support the Criteria	Maximum 6 points
	<p>The resulting solution of the proposed project will create new knowledge and/or a technology enhancement, over current state-of-the-art and existing solutions, by addressing a gap or critical barrier in the S&T Challenge.</p>	<p>The proposal should provide the following details at a minimum:</p> <ol style="list-style-type: none"> 1. Identify the gap or critical barrier and current state-of-the-art and existing solutions to the S&T Challenge; and, 2. Demonstrate that new knowledge and/or technology enhancement, over the items mentioned in 1. above, will result from the proposed work, and resulting solution. 	<p>0 points The proposal does not identify the gap or critical barrier and does not provide information on new knowledge or technology enhancement over current solutions.</p> <p>2 points The proposal provides some description, but does not clearly identify the gap or critical barrier but demonstrates a good understanding of existing solutions to the S&T Challenge.</p> <p>OR The proposal provides limited evidence to show that it will result in a new knowledge and/or technology, the logic linking the implementation to the solution is not</p>

			<p>clear, or the relationship between the solution and the gap or critical barrier in the S&T Challenge is not logical.</p> <p>4 points The proposal adequately describes and identifies the gap or critical barrier in the S&T Challenge that is being addressed, and describes the existing state-of-the-art solutions. Minor details may be missing, however, overall the information provided is clear and logical.</p> <p>AND It is clear how new knowledge and/or technology enhancements will be created in the project to address a gap or critical barrier in the S&T Challenge. Minor details may be missing, however, overall the information provided is clear and logical.</p> <p>6 points The proposal fully explains why existing solutions are unacceptable, and identifies a gap or critical barrier in the S&T Challenge and any associated operational requirements.</p> <p>AND The new knowledge and/or technology enhancements proposed would be a 'game changer' and the proposal clearly demonstrates how the solution will be achieved in the project.</p>
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PR-6	Project Impact	Required Information to Support the Criteria	Maximum 12 points
	<p>The proposed solution will result in a positive change for the end user* and the bidder has defined in the response who is considered to be the end user.</p> <p>*depending on the type of project and S&T Challenge, the 'end user' may be the user of a capability, the future conductor of S&T activities, recipient of the knowledge or other.</p>	<p>The proposal should provide the following details at a minimum:</p> <ol style="list-style-type: none"> 1. Elements of user requirements that are unaddressed in current environment; and, 2. Demonstrate how the proposed solution will improve the end user capabilities that address these requirements, for example by providing a simpler user interface, producing novel insights by synthesizing a body of knowledge, integrating existing capabilities, employing novel user technologies, or through other means. 	<p>0 points The proposal does not identify the end user, provides no information about improved user experience, or the information is not logical.</p> <p>4 points The proposal does not identify the end user, provides limited information about end user requirements, or demonstrates a lack of understanding about end user concerns.</p> <p>OR</p> <p>The improvements to end user capabilities suggested are self-evident and minor, or not relevant to the S&T Challenge.</p> <p>8 points The proposal clearly identifies the end user, and addresses previously unexplained requirements relative to the S&T Challenge. Minor details may be missing, however, overall the information provided is clear and logical.</p> <p>AND</p> <p>The proposal adequately explains how implementation of the project will improve the end user capabilities. Minor details may be missing, however, overall the information provided is clear and logical.</p>

			<p>12 points The proposal identifies critical deficiencies in the existing end user capabilities.</p> <p>AND The proposed enhancements to end user capabilities would be a true 'game changer', and the proposal clearly demonstrates how that solution will be achieved in the project.</p>
PR-7	Gender-Based Analysis Plus (GBA+) Factors	Required Information to Support the Criteria	Maximum 10 points
	<p>The proposed solution describes how GBA+ factors have been considered in the project and resulting solution.</p> <p>*GBA+ as defined by the Treasury Board Secretariat of Canada: https://www.tbs-sct.gc.ca/hgw-cgf/oversight-surveillance/tbs-pct/gba-oacs-eng.asp. It is encouraged to also refer to the Status of Women Canada website: http://www.swc-cfc.gc.ca/gba-acs/index-en.html.</p>	<p>The proposal should provide the following details at a minimum:</p> <p>Describe how GBA+ factors have been considered for the following project stages:</p> <ol style="list-style-type: none"> a. In the development of the project solution. b. In the implementation of the project solution. <p>When GBA+ factors are not applicable in neither a nor b, explain why.</p>	<p>0 points The proposal provides no information on GBA+ factors, asserts that GBA+ is not relevant without justification, or describes GBA+ issues in the bidder's organization without reference to the project.</p> <p>5 points GBA+ factors are not fully accounted for and described for all project stages.</p> <p>10 points All relevant GBA+ factors are clearly accounted for and described for all project stages.</p>

PR-8	Work Plan Work Plan, Risk and Mitigation Strategy, and Costs.	Required Information to Support the Criteria (maximum of 1000 words per milestone)	Maximum 20 points
	<p>The fields listed below, as set out in Annex D (1), are completed, the tasks and deliverables show measurable progress, and the work plan demonstrates completion of the project.</p> <p>Fields:</p>	<p>The proposal should provide the following details at a minimum:</p>	
	<ul style="list-style-type: none"> • Milestone description 	<p>Provide overall milestone description and what will be accomplished.</p>	<p>0 points Milestones not listed, or are unsuitable.</p> <p>4 points Suitable description of technical and programmatic milestones listed throughout project lifespan.</p>
	<ul style="list-style-type: none"> • Milestone dates: <ul style="list-style-type: none"> ○ Start ○ End 	<p>Show month and year (MM/YY).</p>	<p>0 points Most dates are not provided, or are not logical.</p> <p>2 points Logical dates are provided that match the project schedule.</p>
	<ul style="list-style-type: none"> • Task Description 	<p>Articulate the specific sequential tasks that must be completed in order to accomplish the milestone.</p>	<p>0 points Most task descriptions are not provided.</p> <p>2 points The task(s) to be conducted is not suitably described, or not logical.</p>

		For each task for which travel is proposed, the travel is explained and logical.	4 points The task(s) are explained in detail with logic.
	• Task Lead	Identify who (LGD, partner) is responsible/doing the work for each task.	0 points Leads are not identified, or are not logical for the task to be performed. 2 points Appropriate leads are identified and logical.
	• Deliverables	Identify all resulting deliverables for each milestone.	0 point Deliverables are not described, or do not correspond to the task(s), or are not appropriate for the project. 4 points Deliverables are described appropriately, correspond to the task(s), and are appropriate for the project.
	• Deliverable Due Date	Identify when each deliverable is planned to be completed.	0 points Not all due dates for deliverables are provided and/or appropriate. 2 points Appropriate due dates are provided.
	• Go/No-Go decision points	Articulate the specific reasons why a Go/No-Go decision should or should not be made. Should include triggers and action plans.	0 points Go/No-Go points are not identified, or do not include triggers and action plans. 2 points Suitable Go/No-Go points are identified and include triggers and action plans.

PR-9	Work Plan – Risks and Mitigation	Supporting Information	Maximum 10 points
	<p>The proposal should identify risks* and include a mitigation strategy for each identified risk, as set out in Annex D (2), are completed.</p> <p>*Risks can be identified as items that could delay and/or prevent the completion of the work. Examples of risks include, but are not limited to, unexpected financial overruns, schedule delays, third party approvals, unforeseen scope changes, technical challenges, change or loss of key personnel, weather or seasonal requirements, Intellectual Property issues, results and deliverables delays etc.</p>	<p>The proposal should answer the following questions at a minimum:</p> <ul style="list-style-type: none"> • Explain and articulate the anticipated risks, if any, for the project. Include a logical explanation, appropriately identified probability and impact, realistic and adequately articulated mitigation strategy and correlate with the proposed project. • For each risk identified, show: <ul style="list-style-type: none"> ○ the probability as high, medium or low; ○ the impact as high, medium or low; ○ the Risk Type**; and ○ Provide the mitigation strategy and show the steps to be taken to lessen the impact of the risk. <p>If no risks are identified, an explanation as to why must be entered in Annex D (2) of the Submission Form.</p>	<p>0 points Obvious programmatic or technical risks are not identified, probability and impact are not included, or risk mitigation plans are insufficient and not logical.</p> <p>5 points Some major risks that could derail the project appear to be missing; however, as a whole, the majority of the risks and resulting mitigation plans described are appropriate, include logical explanation(s), appropriately identify probability and impact, are realistic and adequately articulate a mitigation strategy and correlate with the proposed project.</p> <p>10 points All known major technical and programmatic risks are included, risks and resulting mitigation plans are fully and realistically described,</p>

		**Examples of Risk Type include but are not limited to financial, schedule, scope, technical, operational, or resources.	
PR-10	Work Plan – Cost Estimate	Supporting Information	Maximum 8 points
	<p>The proposal should provide a cost estimate that is commensurate and directly reflects the work plan.</p> <p>Information should form part of the Submission Form at Annex D “Milestone(s) cost breakdown”.</p>	<p>The proposal should demonstrate the following at a minimum:</p> <p>a) The cost estimate aligns with, and is relative to the correlating Milestone(s) including:</p> <ul style="list-style-type: none"> • Milestone description(s); • Tasks; and, • Deliverables <p>b) For each task for which travel is proposed, the travel costs are captured and correspond to the descriptions in the Milestone(s).</p> <p>c) The cost estimate includes the Total (project) amount of costs for each of:</p> <ul style="list-style-type: none"> • Canada’s contribution (DRDC Requested Funds); and • Bidder’s LGD’s and Partner’s Co-investments 	<p>0 points A significant amount of information is missing and/or there are many errors in calculation and/or the costs do not appear to relate to and adequately represent the milestone(s).</p> <p>4 points All requested information is provided, with minimal errors or potential flaws in cost allocation. Costs somewhat appear to relate and adequately represent the milestone(s). Some minor items appear to be missing but overall the costing is completed.</p> <p>8 points All requested information is provided, cost estimate is detailed and error-free. Relation to the milestone description is clear.</p>

		contribution(s) (In Kind and Cash)	
PR-11	Project Management (PM) Plan Project Team	Supporting Information (maximum of 2000 words)	Maximum 8 points
	<p>The proposal should provide the combined experience and qualifications of the proposed project team to demonstrate the ability to manage and complete the project.</p> <p>The bidder should complete the information required in Annex F – “Project Manager and Key Project Team Members Experience” of the submission form.</p>	<p>The proposal should answer the following questions at a minimum:</p> <ul style="list-style-type: none"> • The combined experience of the project team* commensurate with both the complexity of the proposed project and the funding amount requested to manage the project; and • The combined experience of the project team* is sufficient to undertake the scientific and/or technical elements required by the proposed project. <p>*Project team = project manager (or Principal Investigator for Studies and Concepts) and all key project team members, including the LGD.</p>	<p>0 points Information on the project team is not provided, or they are clearly as a combined team not suitable for the project.</p> <p>4 points The project team does not include suitable project management experience, in terms of PM training, several projects of similar length, complexity and cost.</p> <p>OR</p> <p>The project team does not include suitably qualified technical team members for each of the technical areas to be addressed in the project and suitable operationally experienced team members concerning the operational requirements of the project.</p> <p>8 points The project team includes project manager(s) with appropriate training and project experience, technical team members with experience in all relevant technical fields and member(s) with appropriate operational experience.</p>

PR-12	Transition/Exploitation Plan	Supporting Information (maximum of 2000 words)	Maximum 16 points
	<p>The proposal includes a plan to transition and/or exploit the knowledge, science or technology that is developed through the proposed project.</p>	<p>The proposal should provide details at a minimum on the following aspects (A, B, C and D):</p> <p>A) Steps that are beyond the scope of the proposal (the transition, exploitation and/or dissemination plan; for example, user validation trials, regulatory approvals, ongoing maintenance and licensing renewal, additional research, technology exploitation and/or commercialization).</p> <p>B) Financing the next steps including how additional research, technology exploitation and/or commercialization are to be financed. This may include the intent to form strategic partnerships or alliances with other stakeholders.</p> <p>In addition, the bidder may provide support letters from stakeholders, who are not named project partners, indicating their interest in the work. Support letters from</p>	<p>0 points No or very little information provided.</p> <p>OR</p> <p>The majority of information provided is heavily flawed and not logical.</p> <p>2 points All of the aspects are described; however, some of the information appears to be lacking minor details, and or has some logic flaws.</p> <p>4 points All aspects are adequately described and are logical.</p> <p>0 points No or very little information provided.</p> <p>OR</p> <p>The majority of information provided is heavily flawed and not logical.</p> <p>2 points All of the aspects are described; however, some of the information appears to be lacking minor details, and or has some logic flaws.</p> <p>4 points All aspects are adequately described and are logical.</p>

		<p>named project partners will not be considered.</p>	
		<p>C) Describe the ultimate project result (desired final outcome), including the product (or knowledge), technology, device, method, process, systems, etc., that are expected to ultimately result from this project.</p>	<p>0 points No or very little information provided.</p> <p>OR</p> <p>The majority of information provided is heavily flawed and not logical.</p> <p>2 points All of the aspects are described; however, some of the information appears to be lacking minor details, and or has some logic flaws.</p> <p>4 points All aspects are adequately described and are logical.</p>
		<p>D) Information on the intellectual property dependencies, as well as the disposition and management on foreground intellectual property.</p>	<p>0 points No or very little information provided.</p> <p>OR</p> <p>The majority of information provided is heavily flawed and not logical.</p> <p>2 points All of the aspects are described; however, some of the information appears to be lacking minor details, and or has some logic flaws.</p> <p>4 points All aspects are adequately described and are logical.</p>

Point-rated Criteria – Scoring Breakdown

Consensus Score			
Technical Criteria	Score	Operational Criteria	Score
PR-1 Scientific Feasibility	/15	PR-8 Work Plan – Risk and Mitigation, Strategy and Costs	/20
PR-2 Applicable in Canada	/6	PR-9 Work Plan – Risks and Mitigation	/10
PR-3 Scientific and/or Technical Merit of the Proposal	/15	PR-10 Work Plan – Cost Estimate	/8
PR-4 Novel and Innovative	/12	PR-11 Project Management Plan	/8
PR-5 New Knowledge	/6	PR-12 Transition/Exploitation Plan	/16
PR-6 Impact	/12		
PR-7 GBA+ Factors	/10		
Subtotal (minimal pass score required for Technical Criteria = 49)	/76	Subtotal (minimal pass score for Operational Criteria = 12)	/62
Total Points (minimal pass score required overall = 88)			/138

To complete Table 1, the Work Plan – Milestone breakdown table (Annex D1) as shown on the following page, bidders should specify the work activities to be performed, being sure to decompose the work activities at a level that exposes all risk factors and that allows accurate estimation of the requirements and the schedule duration for each task activity. The following should be taken into consideration when completing the Milestone(s) tables:

- a. The Milestone Table should directly correlate with the milestone cost breakdown.
- b. Milestone start dates/end dates – these are used to get a sense of the duration of the project and are not firm dates. Timelines will be adjusted (forward or backwards) at time of contract award. If a project is seasonally sensitive, indicate this in the milestone description and it will help with expectations and planning during future contract negotiations. For project planning purposes/bid consistency, assume a project start date of 1st April 2020 for Milestone 1.
- c. Lead – this section provides the evaluation team with an appreciation of who is doing the work and the level of involvement, interest and shared responsibility of the LGD/TA/partners. At time of contract negotiations, this section will be removed and only the tasks, that the contractor and partners (subcontractors) are responsible for, will be included in the final SOW within the resulting contract/MOA. The task/responsibilities of the LGD/TA will be moved to the client support section of the SOW.
- d. Deliverables – deliverables are the tangible project takeaways of the Milestones. Once the deliverables are accepted by the LGD/TA, they become assets of the LGD/TA. Payment is released, per milestone, once all deliverables indicated in the milestone are accepted and approved by the LGD/TA.

Annex D(1) – Work Plan – Milestone breakdown

Input overall milestone description and what will be accomplished.

Milestone Activities

Anticipated Milestone Start Date (mm yyyy)		Milestone End Date (mm yyyy)	
Tasks (Articulate the specific tasks that must be completed in order to accomplish the milestone)	Lead for task (Identify the project participant organization.)	Deliverables (Articulation of the deliverable(s) or product(s) to be provided to the TA for review and approval)	Deliverable Due Date (mm yyyy)
Input Task 1 Description Here	Input lead	Input	Input
Input Task 2 Description Here	Input lead		
Input Task 3 Description Here	Input lead		
Bidder to add/delete rows as required			
Go/No Go point Articulate the specific reasons why a go/no-go decision should or should not be made.			

Annex D(2) – Risks and Mitigation

Risk(s) (Articulate risks that could delay and/or prevent the completion of the work)	Probability* (H/M/L) Strategy (ies)	Impact* (H/M/L)	Risk Type **	Mitigation Strategy (Articulate the appropriate steps to be taken to lessen the impact of the risk.)
Input	Input	Input	Input	Input
Input	Input	Input	Input	Input
Input	Input	Input	Input	Input

* Note 1: (H/M/L) = high, medium or low (probability and Impact)

** Note 2: Examples of “Risk Type” include but are not limited to: financial, schedule, scope, technical, operational, or resources.

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File No. - N° du dossier
035sv.W7714-19DRDC

Buyer ID - Id de l'acheteur
035sv
CCC No./N° CCC - FMS No./N° VME

Annex E – Detailed Budget Table

Attached is the template of the Microsoft Excel document, by fiscal year, which must be completed using the online submission tool or the classified submission form

Proposals submissions for projects longer than 36 months will not be considered. If the proposed project has a duration of less than three years, the column(s) corresponding to the additional year(s) should be left blank. Additional columns (e.g. Year four) cannot be added.

Note: The Federal Government fiscal year is April 1st to March 31st. For planning purposes, it is estimated that contracts will be awarded starting 1st April 2020; however, Canada may require that some contracts be awarded earlier. For planning purposes, it is suggested that the detailed budget start 1st April 2020 if possible.



W7714-19DRDC.xlsx

Annex F – Project Manager and Key Project Team Members’ Experience

(Bidder, LGD (**Stream A only**) and partners)

Project Manager:

For the project manager identified, list three projects that show that the project manager or project management team has project management expertise that is commensurate with both the complexity and funding amount being requested in the proposal and provide details on what activities they will be undertaking/responsible for on this proposed project.

Project Manager Name:	
Organization:	

Project 1:

Project Title:				
Description	Start Date	End Date	Cost	Responsibilities

Project 2:

Project Title:				
Description	Start Date	End Date	Cost	Responsibilities

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035sv
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Project 3:

Project Title:				
Description	Start Date	End Date	Cost	Responsibilities

Describe key responsibilities for this proposed project (400 words maximum).

Key Project Team Members

For each Key Project Team Member identified, list the relevant experience and/or qualifications to undertake the scientific or technical elements required by the proposal. It is expected, at a minimum, that the Key Project Team Members will be made up of representatives from all project partners. Also, provide details on what activities they will be undertaking/responsible for on this proposed project.

Key Project Team Member:	
Organization:	

Experience:

Required scientific or technical contribution (related to task number in work plan)	Past Experience	Start Date	End Date	Achievements

-AND/OR-

Qualifications:



Required scientific or technical element (related to task number in work plan)	Qualification	Year

Describe key responsibilities on this proposed project (400 words maximum):

Annex G – Partnership Signature Form (Stream A only)

This template for the Partnership Signature Form is to be filled out. Signatures must include the bidder’s signature, as well as all partners involved in a proposal and at a minimum, be at a level:

- a) of DG level for the federal government; and,
- b) acceptable for a provincial/territorial/municipal government, academic institution, or a private industry to authorize the financial and operational commitment of its organization for the proposal, as set out in Part 3.1 Who May Apply

Partnership Signature Form						
DRDC Reference ID:						
Proposal Title:						
Signatory Section						
Organization Name (print)	Organization Type (select one)	Full Name (First, Last) (print)	Position Title (print)	Signature	Date (YYYY/MM/DD) (print)	Certification Statement (check box)
	<input type="checkbox"/> Academia <input type="checkbox"/> Federal <input type="checkbox"/> Provincial /Territorial <input type="checkbox"/> Municipal <input type="checkbox"/> Private	Bidder		 Bidder		<input type="checkbox"/> “I have read this Call for Proposals in full and understand my role in this proposed project as per the roles and responsibilities detailed in Annex K.
	<input type="checkbox"/> Federal <input type="checkbox"/> Provincial /Territorial <input type="checkbox"/> Municipal	Lead Government Department		 Lead Government Organization		<input type="checkbox"/> “I have read this Call for Proposals in full and understand my role in this proposed project as per the roles and responsibilities detailed in Annex K.

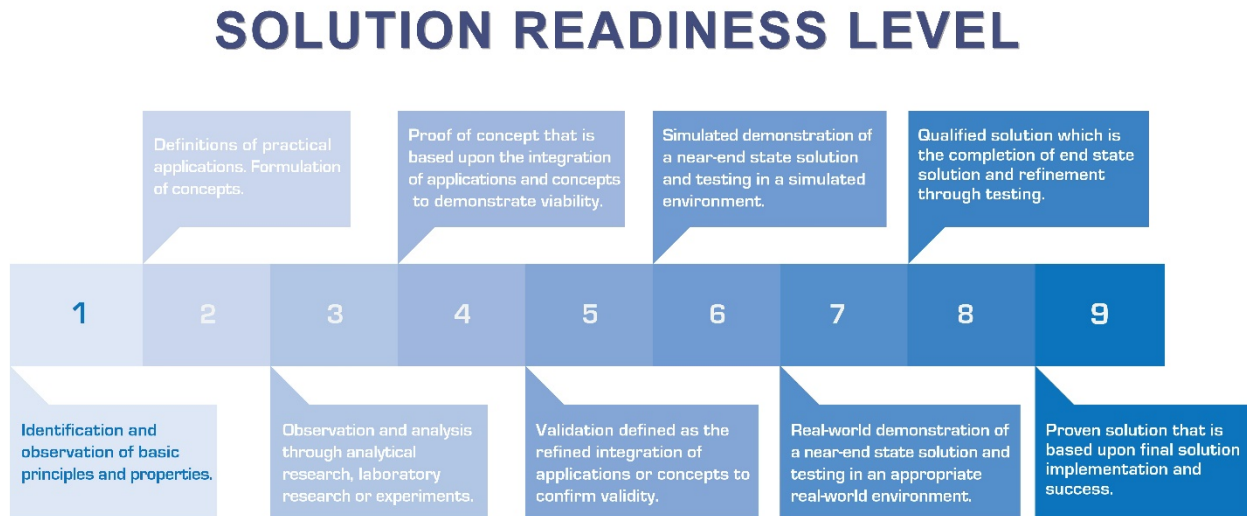
	<input type="checkbox"/> Academia <input type="checkbox"/> Federal <input type="checkbox"/> Provincial /Territorial <input type="checkbox"/> Municipal <input type="checkbox"/> Private	Partner 2		<p style="text-align: center;">X</p> <hr style="width: 80%; margin: auto;"/> Partner 2		<input type="checkbox"/> "I have read this Call for Proposals in full and understand my role in this proposed project as per the roles and responsibilities detailed in Annex K.
	<input type="checkbox"/> Academia <input type="checkbox"/> Federal <input type="checkbox"/> Provincial /Territorial <input type="checkbox"/> Municipal <input type="checkbox"/> Private	Partner 3		<p style="text-align: center;">X</p> <hr style="width: 80%; margin: auto;"/> Partner 3		<input type="checkbox"/> "I have read this Call for Proposals in full and understand my role in this proposed project as per the roles and responsibilities detailed in Annex K.

Bidder to add rows for additional partners, as needed. A signature on this form constitutes an agreement to the certifications set out above. All proposed project partners must be fully aware of their Roles and Responsibilities as listed in Annex K in this solicitation document. The signature of a partner in an acting capacity must be specified.

The sector classification (public, industry, academia, etc.) of an organization is to be identified. Public organizations are to identify which level of government they represent - federal, provincial, territorial or municipal. Other than the signature, all entries should be printed.

Annex H – Solution Readiness Levels

The SRLs are indicated below:



SRLs (<https://www.canada.ca/en/department-national-defence/programs/defence-ideas/solution-readiness-level.html>)

1. Identification and observation of basic principles and properties.
2. Definitions of practical applications. Formulation of concepts.
3. Observation and analysis through analytical research, laboratory research or experiments.
4. Proof of concept that is based upon the integration of applications and concepts to demonstrate viability.
5. Validation defined as the refined integration of applications or concepts to confirm validity.
6. Simulated demonstration of a near-end state solution and testing in a simulated environment.
7. Real-world demonstration of a near-end state solution and testing in an appropriate real-world environment.
8. Qualified solution which is the completion of end state solution and refinement through testing.
9. Proven solution that is based upon final solution implementation and success.

Annex I – Co-Investment Information

There are two types of co-investment contributions, as detailed below.

- 1) **Cash Contributions:** Partners (LGD, bidder and other project stakeholders) are strongly encouraged to demonstrate their direct support for the project (defined in the proposal) with cash contributions. Cash contributions are project expenses paid for directly by a partner organization for goods or services acquired solely for activities related to the project. Two examples include:
 - a) partner organization funds that will be used to purchase new equipment or software that no partner had at the time of project initiation; and,
 - b) services of a resource that will work on the project that were not engaged by a partner prior to the initiation of the project.

Cash contributions are very useful when tangible, non-consumable assets (equipment, instruments, hardware) need to be purchased and the bidder or other project partner intends to maintain ownership of the assets.

- 2) **In kind Contributions:** In kind contributions are direct costs to the project that are considered essential to project execution. They are most often in the form of cash equivalent goods or services that are pre-existing within a partner's inventory at the initiation of the project. For example, the salary of a full time employee, use of equipment, licences and/or laboratory space all qualify as in kind contributions to the project. Contributions will only be taken into consideration if they are from participating partners.

Partners may solicit financial support from other federal programs as a contribution to the project. Such contributions must respect the limitations imposed – if any – by the partner organizations (for example, stacking provisions associated with some federal programs) and must be clearly articulated in the proposal.

If a proposal is selected, co-investment contribution information must be supported by detailed calculations, explaining all proposed inputs and valuations in the project implementation phase.

Table I – 1: In Kind Contributions

In Kind Category	Acceptable	Unacceptable
Access to Databases	- Incremental costs of access	- Cost of developing a database and collecting data
Analytical and Other Services	- Internal rates or incremental cost of providing service	- Commercial rates
Equipment	- Donated (used) - fair-market value - company book value - price for internal transfers - Donated (new) - selling price to most favoured customer (if stock item) - cost of manufacture (if one of a kind) - Loaned - rental equivalent based on depreciation - rental equivalent to highest-volume rate	-List price or discounted list price - Rentals exceeding the acceptable values had the rental equipment been donated or sold - Development costs
Faculty Remuneration	- Payment to the university/college for release time from teaching duties	- Payments as consulting fees or honoraria (additional to normal salary)
Materiels	- Unit cost of production for commercial products - Selling price to most favoured customer - Price for internal transfers - Cost of production of prototypes and samples	- Development costs
Patents and Licences	- Licences acquired from third parties for use by the project	- Fees related to applying for and maintaining patents - Licensing fees
Salaries	- Actual salary cost (including benefits)	- External charge-out or consultant rates - Salary and costs of administrative support staff - Salary and costs of management activities not directly related to scientific and technical contributions to the project
Software	- Cost of training and support for software required - Most-favoured-customer cost for one licence per software package - Cost of equivalent commercial product (where donated software is not commercially available)	- Development costs

Travel	Justified in Work Plan and compliant with the <u>National Joint Council's Travel Directive</u> (https://www.canada.ca/en/treasury-board-secretariat/services/travel-relocation/travel-government-business.html) - Travel costs to meet with project stakeholders	- Conference travel
Use of Facilities	- Internal rates for logistical support, food and lodging for project personnel working on stakeholder premises or on field work - Internal rates for use of specialized equipment by project personnel or use of process or production lines - Internal rates for value of lost production resulting from downtime	- Space for stakeholder activities outside the scope of the specific proposal - Equivalent commercial rates

Annex J – Funding flow chart for resulting Contract(s)/Memorandum of Agreement(s)

Type	Bidder	LGD	1 st a. flow of funding: from DRDC to LGD	1 st b. flow of funding: from DRDC to other federal department partner (if applicable)	2 nd a. flow of funding: from LGD to bidder	3 rd a. flow of funding: from bidder to other project partners (private, P/T/M) (if applicable)	Key takeaways
Private							
1.	Private	Federal	DRDC will send funding to the LGD by an interdepartmental settlement (IS).	The DRDC will send funding to other federal department partner by an IS.	The LGD will send funding to the bidder by a contract. PWGSC will set up the contract on behalf of the LGD.	The bidder will send funding to all other non-federal partners using their own internal processes.	The LGD will need to create a 9200 and send to PWGSC so the contract can be created. The LGD will be the TA on the contract. PWGSC nor DRDC is involved in the 3 rd flow of funding.
2.	Private	Provincial / Territorial / Municipal (P/T/M)	DRDC will send funding to the LGD by a MOA. PWGSC will set up the MOA on behalf of the DRDC.	The DRDC will send funding to other federal department partner by an IS.	The LGD will send funding to the bidder by their own internal process.	None – this will be handled by the LGD	The MOA will use the same terms, conditions and layout, as a contract, in principle, but be non-legally binding. DRDC will be the TA on resulting MOA and have to send PWGSC a 9200 to set up the MOA. PWGSC nor DRDC is involved in the 3 rd flow of funding.

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Federal							
3	Federal	Federal	DRDC will send funding to the LGD by an IS.	The DRDC will send funding to other federal department partner by an IS.	The LGD will send funding to the bidder by an IS.	The bidder will send funding to all other non-federal partners by their own internal processes (if the bidder has the ability) or by contract/MOA that PWGSC will set up on behalf of the LGD.	PWGSC is only involved if there are non-federal government departments/private partners that are requesting funding/doing work on the project and the bidder's (federal) cannot transfer funding directly themselves.
4	Federal	P/T/M	DRDC will send funding to the LGD by a MOA. PWGSC will set up the MOA on behalf of DRDC.	The DRDC will send funding to other federal department partner by an IS.	DRDC will send funding to the bidder by an IS. A transfer from the non-federal LGD to federal is not possible.	The LGD will send funding to all other non-federal partners by their own internal processes.	Funding cannot flow from a non-federal government department to a federal government department. PWGSC nor DRDC is involved on the 3 rd flow of funding.

Provincial/Territorial/Municipal							
5	P/T/M	Federal	DRDC will send funding to the LGD by an IS.	The DRDC will send funding to other federal department partner by an IS.	The LGD will send funding to the bidder by a MOA. PWGSC will set up the MOA on behalf of the LGD.	The bidder will send funding to all other non-federal partners by their own internal processes.	The MOA will use the same terms, conditions and layout, as a contract, in principle, but be non-legally binding. The LGD will be the TA on resulting MOA and have to send PWGSC a 9200 to set up the MOA. PWGSC nor DRDC is involved on the 3 rd flow of funding.
6	P/T/M	P/T/M	DRDC will send funding to the LGD by a MOA.	DRDC will send funding to other federal department partner(s) by an IS.	The LGD will send funding to the bidder by their own internal processes.	The bidder will send funding to all other non-federal partners by their own internal processes.	The MOA will use the same terms, conditions and layout, as a contract, in principle, but be non-legally binding. DRDC will be the TA on resulting MOA and have to send PWGSC a 9200 to set up the MOA. PWGSC nor DRDC is involved on the 3 rd flow of funding.

Annex K – Project Partner’s Roles and Responsibilities

This chart describes the roles and responsibilities for the three key project partners and provides context to what each partner is agreeing to complete in the event that your proposal is selected for funding.

A signature on the Partnership Form in Annex G validates your acceptance of these responsibilities. (Stream A only)

Project Partner Role	Key Responsibilities
Bidder	<p>As the bidder, I have read this Call for Proposals in full and agree to the collaboration of myself and my organization as described in the project description and budget information. This may include the following activities:</p> <ol style="list-style-type: none"> 1. Work in collaboration with the LGD, Stream A only, DRDC, PWGSC, other project partners to create and finalize all required documents (Project Charter Stream A only, SOW, revise Cost Breakdown) in order to begin the contract/MOA negotiation process. 2. Set-up and manage working relationships/contracts with partners and subcontractors.
LGD (Stream A only)	<p>As the LGD, I have read this Call for Proposals in full and agree to the collaboration of myself and my department as described in the project description and budget information. This may include the following activities:</p> <ol style="list-style-type: none"> 1. Assume the role of project champion. 2. Work in collaboration with the bidder, other government department(s), DRDC, PWGSC, other project partners to create and finalize all required documents (project charter, SOW, revise cost breakdown) in order to begin the contract/MOA negotiation process. 3. Commit resources to initiate the requisition for the resulting contract (prepare the 9200) federal LGD only. 4. Work with PWGSC to create and issue the resulting contract to the bidder when the bidder is a private contractor. 5. Manage the resulting contract (between yourself and the bidder when the bidder is a private contractor). 6. Support the contractor/other partners in completing the work outlined in the contract. 7. Review and approve deliverables resulting from the contract. 8. Pay claims/invoices.

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	<ol style="list-style-type: none">9. Facilitate project reporting requirements to DRDC as per the project charter.10. Set-up and manage working relationships/contracts with partners and subcontractors for provincial/municipal LGDs only (MOA's).
Partner	<p>As a project partner, I have read this Call for Proposals in full and agree to the collaboration of myself and my organization as described in the project description and budget information. This may include the following activities:</p> <ol style="list-style-type: none">1. Work in collaboration with the bidder, LGD, DRDC, PWGSC, other project partners to create and finalize all required documents (project charter, SOW, revise cost breakdown) in order to begin the contract/MOA negotiation process.2. Set-up and manage working relationships/contracts with LGD provincial/municipal LGDs only (MOA's) and bidders.

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Annex L – Statement of Work Template

***This document is not required at time of bid submission. Example only.**

Below is the SOW template that all successful bidders will complete, in collaboration with the LGD (Stream A only), DRDC, and other project partners during the contract negotiation stage. It will form part of the resulting contract/MOA and contain milestone breakdowns and other information extracted directly from the proposal.



W7714-19DRDC_Statement of Work Template

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Annex M – Milestone Cost Breakdown Template

***This document is not required at time of bid submission. Example only.**

Below is the Milestone Cost Breakdown template that all successful bidders will complete, in collaboration with the LGD (Stream A only), DRDC, and other project partners during the contract negotiation stage. This is the required level of granularity required for PWGSC to determine that the proposed prices are fair and reasonable (funding being requested from Canada).



EN_Annex M –
Milestone Cost Brea