

SHARED SERVICES CANADA

Challenge-Based Solicitation (CBS)

For Application Performance Management (APM)

Solicitation No.	R000067885	Date	July 15, 2020
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Closing Date and Time Pre-Qualification Bid Closing	August 4, 2020 at 15:00 EDT August 27, 2020 at 15:00 EDT		
Time Zone	EDT		
Destination of Goods/Services	Ottawa, Canada		

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This procurement process is comprised of two components: a Pre-Qualification followed by a Challenge Based Solicitation.

To the difference of a traditional procurement, the requirement is not fully defined at the stage of the posting on Buy and Sell. Under this solicitation, SSC is engaging private sector to complete the requirement definition. The Bidders will provide information at predefined stages during the procurement process.

The list of annexes and attachments associated with each of the two components is provided below.

Applicable to Pre-Qualification Process:

Annex A- Problem Statement, Challenges, Minimal Requirements, and Personas

Form to be used by Bidders:

ATTACHMENT 1 – Bidder Qualification Form (PROVIDED AS A DISTINCT DOCUMENT)

Applicable to Challenge Based Solicitation: (to be added later in the process)

APPENDIX 1 – BID SUBMISSION FORM CBS

APPENDIX 2 - FINANCIAL BID FORM

APPENDIX 3 - SOFTWARE PUBLISHER Certification/ Authorization Form

APPENDIX 4 – EVALUATION GRID

ANNEX A - STATEMENT OF CHALLENGE (SOC)

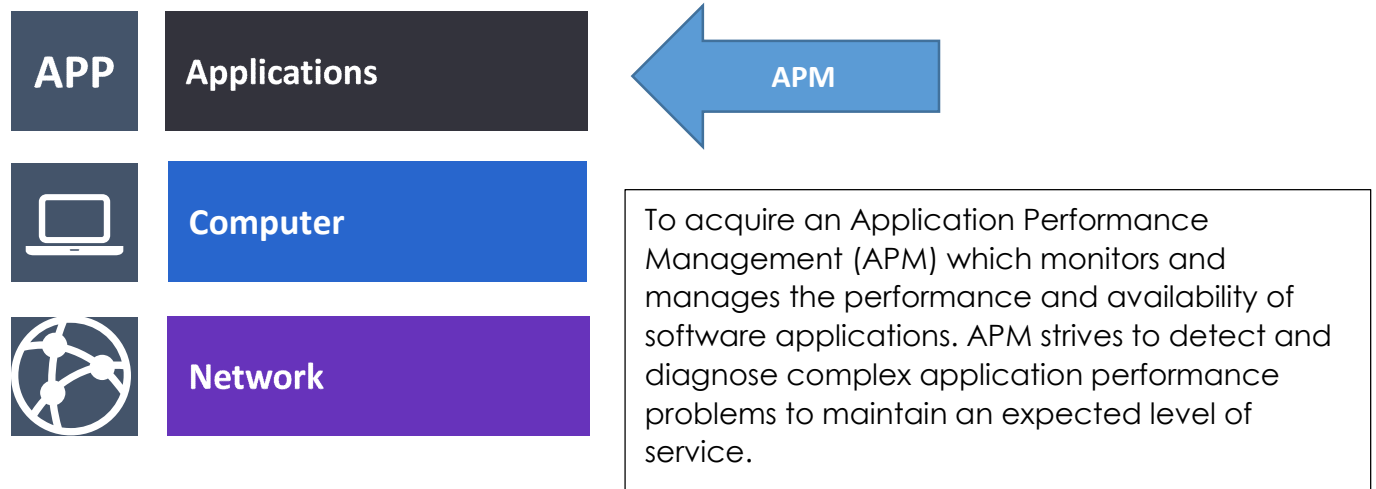
ANNEX B – BASIS OF PAYMENT

ANNEX C - SECURITY REQUIREMENTS CHECKLIST (SRCL)

PART 1 - GENERAL INFORMATION

The Center of Expertise in Agile and Innovative Procurement (CoEAIP) is currently piloting a renewed contracting framework: Procurement Process 3.0 (PP3.0). The PP3.0 proposes tools and flexible contracting mechanisms to improve the ability of Canada to move quicker and produce better results leveraging the procurement function. This challenge-based solicitation is one of CoEAIP pilots.

1.1 Requirements



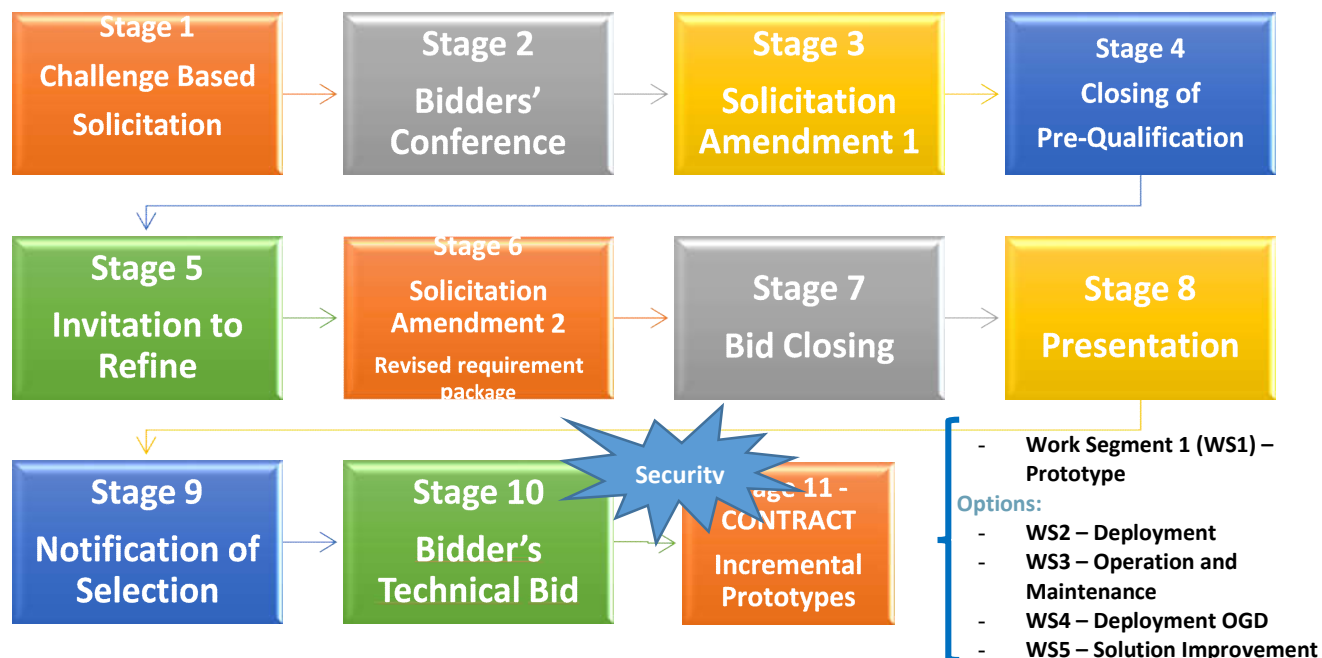
Specifically, a solution that will:

- monitor the availability and performance of selected applications proactively;
- improve mean time to detect and repair application;
- measure the users experience of those applications; and
- provide a real time dashboard of key performance indicators for critical business applications.

It is estimated that the solution will be deployed to up to 600 different CBAS applications over 4 years.

1.2 Procurement Process

The following are the key Stages of the procurement process. Details will be found in upcoming sections.



Stage 1 – Challenge Based Solicitation: In comparison to a traditional procurement, where the requirement is fully defined, this solicitation discloses the requirement as problem statement, challenges, and minimal requirements, and invites Bidders to propose Solution(s) to resolve them. In this posted Statement of Challenges (SOC), Bidders will find details about those elements.

Stage 2 – Bidders' Conference: During the Bidders' Conference Canada will provide an overview of the approach, and collect feedback from the private sector on the proposed procurement process.

Stage 3 – Solicitation Amendment 1: Canada may amend the CBS as a result of the consultation during the Bidders' Conference.

Stage 4 – Pre-Qualification: In order to proceed to the next stage of the procurement process, the Bidders must submit the Attachment 1 - Bidder Qualification Form. The received submissions will be evaluated using the Qualification Grid included in the Attachment 1. Not more than ten (10) Bidders could be qualified.

Stage 5 – Invitation to Refine (IIR): The Bidders that qualify under Stage 4 will be invited to participate in the Invitation to Refine, which will not be scored. The objectives of the IIR are to:

1. Refine the definition of needs by interacting with Bidders regarding the performance requirements of the solution(s).
2. Allow the Bidders to influence the design of the solution by presenting solutions that have the potential to solve the problem identified by Canada.

Stage 6 – Solicitation Amendment 2: Based on the feedback received, and if required, Canada may issue an amendment to the solicitation. This will be the final requirement.

Stage 7 – Bid Closing: Only Bidders that are qualified as a result of Stage 4 will be eligible to submit their bids using the Bid Submission Form CBC (Appendix 1) and APPENDIX 2 - Financial Bid Form. Unlike in a traditional solicitation, the Bidders are not required to provide a comprehensive written technical bid at Stage 7. Refer to Instruction to Bidders, Part 2 and 3.

Stage 8 – Presentation: The Bidders that comply with the mandatory procedural requirements will be invited to make a presentation, which will be scored for purposes of selection.

Stage 9 – Notification of Selection: Based on the results of the selection process (further defined in sections 3 and 4), the highest ranked Bidders will be invited to sign prototype contract(s) with Canada. Up to four (4) prototype contracts will be entered into. Canada reserves the right to enter into less than four (4) prototype contracts.

Stage 10 – Technical Bid: The Bidders notified in Stage 9 will be invited to submit their Technical Bids, describing in writing the elements demonstrated in Stage 8, the additional requirements identified by the Bidder to meet outcomes and to resolve the problem(s), as well as any additional requirements that the Bidder feels are needed in order to resolve the problem(s). The Technical Bid(s) become part of the resulting contract(s).

Stage 11 – Contract – Incremental Prototypes: Canada expects to award up to four (4) multiple option-based contracts to prototype the selected solutions in parallel. The duration of the prototype stage is 3 months. The maximum value of each prototype contract for Stage 11 is CAD \$25,000.

1.3 Assessment of Corporate Capability

During Stage 11, Canada may request information to verify a Bidder's fiduciary capacity to deploy its solution in full on the Canada environment and possibly on other government department systems.

1.4 Choice of the solution to be deployed

Based on the results of the solutions prototyped by the selected Bidders, Canada will make the choice of the solution(s) to be deployed in full on Canada systems. The parameters that will be considered by Canada to choose the solution(s) to be deployed are defined in the SOC.

1.5 Options available under the resulting contract

Option 1 - Deployment on Canada environment

If the results of the prototypes are conclusive, Canada may exercise option 1 to deploy the solution(s) on the SSC's environment.

Option 2 - Operation and Maintenance

Canada may exercise option 2 to request operation and maintenance services.

Option 3 - Deployment on Other Departments

Canada may exercise option 3 to deploy the solution(s) on other Government of Canada departments' environments (other than SSC).

Option 4 – Solution Improvements

Canada may exercise option 4 to request improvements to the deployed solution(s).

PART 2 - BIDDERS' INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

- a) All instructions, clauses and conditions identified in the CBS by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services.
- b) The Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the CBS and accept the clauses and conditions of the resulting contract.
- c) The 2003 (2019-03-04) Standard Instructions - Goods or Services - Competitive Requirements are incorporated by reference into and form part of this solicitation, but are amended as follows.

Section 03, Standard instructions, clauses and conditions:

Delete: "Pursuant to the *Department of Public Works and Government Services Act, S.C. 1996, c.16.*"

Section 09, Customs clearance: deleted in its entirety.

Section 13, Communications – solicitation period

Delete: To ensure the integrity of the competitive bid process, enquiries and other communications regarding the bid solicitation must be directed only to the Contracting Authority identified in the bid solicitation. Failure to comply with this requirement may result in the bid being declared non-responsive.

Insert: Single Point of Contact: To ensure the integrity of the competitive procurement process, all formal questions and other communications regarding the solicitation must be directed only to the Contracting Authority identified in the solicitation. While public servants (who may or may not be involved in this procurement) may engage in exchanges in other fora, such as social media, official information that is binding on Canada will only be made available by the Contracting Authority and Bidders relying on information found do so at their own risk.

Section 14, Price justification:

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

Insert: On Canada's request, the Bidder must provide one or more (as requested) of the following forms of price justification:

If there is a conflict between the provisions of Standard Instructions 2003 and this document, this document prevails. All references to PWGSC contained within the Standard Instructions will be interpreted as a reference to Canada.

2.2 Enquiries – Solicitation

Questions and comments regarding this solicitation may be submitted in accordance with Section 13 of 2003, Standard Instructions entitled "Communication". However, instead of the deadline indicated in standard instructions, there will be 2 question periods, as follows:

- a) **Question Period 1:** All inquiries are to be submitted in writing to the Contracting Authority no later than three (3) calendar days before the Bidders' Conference date. Inquiries received that do not meet this condition may not be answered during the Bidders' Conference.
- b) **Question Period 2:** All inquiries are to be submitted in writing to the Contracting Authority no later than five (5) calendar days before the CBS closing date (Stage 7 – Bid Closing). The inquiries received after that time may not be answered.

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

Department: Shared Services Canada

Address: 427 Laurier Ave. W, 3rd floor

Phone number: 343-551-9034

Email: agnes.kowalska2@canada.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 the Province of Ontario, Canada.

The Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by inserting the name of the Canadian province or territory of their choice in the Bid Submission Form CBC (Appendix 1). If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

2.5 Bidders' Conferences

The Bidders' Conferences will be held on *July 21, 2020* as follows:

Webinar Language	Date	Time	Link to Join
<i>English</i>	2020-07-21	14h00 EDT	<u>Join Microsoft Teams Meeting</u>
<i>French</i>	2020-07-21	15h00 EDT	<u>Join Microsoft Teams Meeting</u>

The scope of the requirement outlined in this CBS solicitation as well as related questions will be reviewed during the Bidders' Conference. It is recommended that Bidders who intend to submit a bid participate. The Bidders who do not attend will not be precluded from submitting a bid at Stage 4.

2.6 Pre-Qualification

Bidders must submit the Bidder Qualification Form (Attachment 1) by the date indicated on page 1. Received submissions will be evaluated using the Qualification criteria included in the Attachment 1.

Ten (10) highest ranked Bidders that achieved 60% pass mark will be invited to the Invitation to Refine (Stage 5) and allowed to bid.

2.7 Invitation to Refine (ItoR) – Stage 5

The qualified Bidders will be invited to participate in the ItoR sessions during the week of August 10th.

In summary, a Bidder that participates in the ItoR sessions consents to the following:

- Respond to the questionnaire to provide feedback on the problem statements and minimal requirements, and to answer other questions. (individual session)
- Participate in an interactive discussion based on the results of the questionnaire (all Bidders)
- Present its solution and explain how this solution could solve the problem and challenges identified by Canada. (one-on-one session).
- Provide feedback about its participation after the procurement process. (one-on-one session)

Stage 5 will help Canada to finalize the solicitation. Therefore, the interactions and presentations will not be scored and will not be considered in the evaluation and selection process.

All questions, answers and changes made to the CBS as a result of the ItoR will be published as an amendment to the CBS. All questions and answers will be documented and will form part of the CBS (Stage 6).

At the discretion of Canada, other event may be organized for the same purposes as those described above. In this case, the logistical details will be published through an Amendment to the CBS.

PART 3 - BID PREPARATION INSTRUCTIONS

This procurement process is comprised of two components: a Pre-Qualification followed by a Challenge Based Solicitation.

3.1 Submission of Written Documents by Bidders

Bidders may be required to submit written documents at 3 different stages:

Pre-Qualification

- Stage 4 – Closing of Pre-Qualification;

Challenge Based Solicitation

- Stage 7 – Bid Closing; and
- Stage 10 –Technical Bid.

A- Pre-Qualification Instructions

Bidders are invited to demonstrate their qualifications using the Bidder Qualification Form (Attachment 1). The form must be received no later than the Pre-Qualification closing date and time specified on page 1 of the SPD.

B- Instructions for Challenge Based Solicitation (CBS)

The instructions provided for the CBS are in draft form at this point. They will be discussed in Stage 5, Invitation to Refine, and formalized in Stage 6.

3.2 Bid Closing (Stage 7)

At bid closing, the qualified Bidders must submit the Bid Submission Form (Appendix 1). All bids must be received by the bid closing date and time specified on Page 1 of the CBS. The Bidder's Technical Bid is not required at bid closing (see below).

3.3 Bidder's Technical Bid (Stage 10)

The Bidders receiving a Notification of Selection (Stage 9) will submit their Technical Bids in accordance with the instructions and before the date indicated in the Notification of Selection. The Technical Bids will reflect in writing the elements demonstrated in Stage 8, the additional requirements identified by the Bidder to meet outcomes and to resolve the problem(s), as well as any additional requirements that the Bidder feels are needed in order to resolve the problem(s). The Technical Bid(s) become part of the resulting contract(s).

3.4 Electronic Submission of Bids by P2P

- a) **Submission through P2P Mandatory:** All Bidders must submit their bids (at all applicable stages) through the P2P portal unless they are unable to do so for reasons outside of their control (P2P availability or Contracting Authority availability).
- b) **Submissions not permitted after Solicitation Closing:** After solicitation closing, the P2P system will not permit a Bidder to submit a bid.

- c) Format of Bid Documents: Bidders may submit bid documents in any of the following approved formats:
 - i) PDF attachments; and/or
 - ii) documents that can be opened with either Microsoft Word or Microsoft Excel.Bidders that submit bid documents in other formats do so at their own risk, as Canada may be unable to read them.
- d) File Size: P2P accommodates individual documents of up to 30MB each. Bidders should ensure that they submit their bid in multiple clearly identified documents, each of which does not exceed 30MB. Bidders may submit as many documents as necessary.
- e) P2P Availability: If the P2P portal is unavailable for any reason during any part of the 4 hours immediately before Solicitation Closing, Bidders are requested to contact the Contracting Authority immediately, both by email and by telephone. If the Contracting Authority confirms that the P2P portal is unavailable for any reason during any part of the 4 hours immediately before Solicitation Closing, the Contracting Authority will extend Solicitation Closing by 24 hours. The Contracting Authority will send notice of any such extension only to those Bidders who have sent an email notification to the Contracting Authority indicating their intention to submit a bid. The Contracting Authority will also issue an amendment in P2P. The Contracting Authority is not required to extend Solicitation Closing if the reason a Bidder is unable to access the P2P portal is related to that Bidder or its systems, rather than a Canada system problem.
- f) Availability of Contracting Authority: During the 4 hours leading up to Solicitation Closing, a Canada representative will monitor the Email Address for Bid Submission and will be available by telephone at the Contracting Authority's telephone number shown on the cover page of this document (although the Canada representative may not be the Contracting Authority). If the Bidder is experiencing difficulties transmitting the email to the Email Address for Bid Submission, the Bidder should contact Canada immediately at the Contracting Authority's coordinates provided on the cover page of this document.
- g) Responsibility for Technical Problems: By submitting a bid, the Bidder is confirming it agrees that Canada is not responsible for:
 - i) any technical problems experienced by the Bidder in submitting its bid, including attachments rejected or quarantined because they contain malware or other code that is screened out by Canada for security reasons; and
 - ii) any technical problems that prevent Canada from opening the attachments. For example, if an attachment is corrupted or otherwise cannot be opened or cannot be read, it will be evaluated without that portion of the bid. Bidders will not be permitted to submit substitute attachments to replace any that are corrupt or empty or submitted in an unapproved format.

3.5 Certifications

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

3.6 Supply Chain Security Information (SCSI) Submission

At Stage 10, all Bidders invited to submit their Technical Bid will be requested to provide the following:

Ownership

- 1) The company and legal names of all Joint Ventures, partners, directors and owners;
- 2) The company and legal names of all shareholders;
- 3) The company and legal names of all the OEMs they will be working with;
- 4) The company and legal names of all the software publishers they will be working with; and
- 5) The company and legal names of all the subcontractors they know ahead of time that they intend to work with.

Product Information

- 1) The names and common identifying number (e.g. SKU) of the products being offered:
 - a. All corresponding Common Vulnerabilities and Exposures (CVE); and
- 2) A high-level network diagram of the product and how it will interact with the current infrastructure (i.e. who does it talk to/with).

PART 4 – EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

Bids will be assessed in accordance with the entire requirement of the CBS.

There are several steps in the evaluation process, which are described below. Even though the evaluation and selection will be conducted in steps, the fact that Canada has proceeded to a later step does not mean that Canada has conclusively determined that the Bidder has successfully passed all the previous steps. Canada may conduct steps of the evaluation in parallel.

An evaluation team composed of representatives of Canada will evaluate the bids. Not all members of the evaluation team will necessarily participate in all aspects of the evaluation.

The evaluation criteria are described in Appendix 4. During the presentation, Bidders are requested to demonstrate the merits of their Services in response to each criterion thoroughly, concisely and clearly. Simply repeating statements contained in the CBS is not sufficient.

4.2 Evaluation Process for Pre-Qualification

The information submitted in the Attachment 1, Bidder Qualification Form, will be evaluated using criteria provided in that form.

Basis of selection Prequalification: To be declared responsive, a bid must:

- a. comply with all the requirements of the bid solicitation; and
- b. obtain the required minimum of 60 percent of the points for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of 60 points.

Bids not meeting (a) or (b) will be declared non-responsive. Ten (10) highest ranked responsive Bidders will be invited to the Invitation to Refine (Stage 5) and will be allowed to bid on the subsequent Challenge Based Solicitation.

4.3 Evaluation Process for Challenge Based Solicitation

The proposed evaluation may be revised as result of the consultation under the Invitation to Refine.

4.3.1 Financial Evaluation

The Financial Bids will be assessed to determine compliance with the maximum funding mandatory criterion which is the maximum funding amounts available for Work Segment 1, i.e. **CAD 25,000.00** (Applicable Taxes are extra) for the Challenge Based Solicitation as described in Annex A.

Financial bids valued in excess of a) will be considered non-responsive.

The disclosure of the maximum funding amounts does not commit Canada to spend the maximum funding available.

The bid price will be evaluated in Canadian Dollars, excluding Applicable Taxes, but including shipping, travel and living expenses, Canadian customs duties and excise taxes.

4.3.2 Stage 8: Presentation

Canada is looking for solutions to problems identified in the SOC.

4.3.2.1 Evaluation Process for Presentation

Bidders that comply with the mandatory procedural requirements and the Mandatory Financial Evaluation Criterion will be invited to make a presentation consisting of two parts as follows:

Part A – Presentation on Capacity of the proposed solution to meet the minimal Functional and Non-Functional requirements; and

Part B – Presentation on Capacity of the proposed solution to satisfy the end-users expectations.

Each Part will consist of the following:

Part A – Presentation on Capacity of the proposed solution to meet the Minimal Functional and Non-Functional requirements

Bidders will be invited to make a presentation to demonstrate how the solution meets the evaluation criteria that will reflect the Functional and Non-Functional Requirements. The Requirements will be defined at Stage 6 – Solicitation Amendment 2.

4.3.2.2 The key steps for the presentation are the following:

1. Bidder makes its presentation in front of the evaluation team members (maximum 20 minutes);
2. **Evaluation team withdraw:** The evaluation team withdraws to determine what questions to be posed to the Bidder. During that time, the panel members will identify the areas of interest requiring additional details and/or how the presentation could be improved (estimated 20 minutes); and
3. **Q&A:** Question and answer period (maximum 20 minutes).

The Bidder's presentation together with the answers to the questions posed by the evaluation team will be scored using the presentation evaluation criteria identified in Appendix 4.

Part B – Presentation on Capacity of the Proposed solution to satisfy the end-users expectations

The key steps for this part of the presentation are the following:

1. Bidder makes its presentation in front of the evaluation team members to demonstrate how the interface of the solution is user-centric (maximum 20 minutes);
2. **Evaluation team withdraw:** The evaluation team will withdraw to determine what questions to be posed to the Bidder. During that time, the panel members will identify the areas of interest requiring additional details and/or how the presentation could be improved (estimated 20 minutes); and
3. **Q&A:** Question and answer period (maximum 20 minutes).

The Bidder's presentation together with the answers to the questions posed by the evaluation team will be scored using the presentation evaluation criteria based on end-users expectations of the Solution(s) identified in Appendix 4.

The Bidders will then be ranked based on the Basis of Selection described below.

4.3.2.3 Presentation Logistics

The presentation may be made via teleconference or videoconference at the Bidder's choice.

The Travel and Living expenses related to making the presentation, if any, will not be reimbursed and are at the cost of the Bidder.

4.4 Financial Evaluation

To carry out the financial evaluation, the total price of the bid will be calculated using the Financial Bid Form (Appendix 2);

4.5 Basis of Selection

4.5.1 SCI Assessment Process

Canada will assess the Supply Chain Security Information (SCSI) submitted by the Bidders in accordance with paragraph 3.6. The SCSI must be approved by Canada in order for a bid to remain responsive. If any bid is declared non-responsive at this stage, Canada will consider the SCSI submission of the next-ranked Bidder. The remaining components of the SCSI will be assessed during the contract.

4.5.2 Evaluation of Certifications and Additional Information

Canada will review all submitted certifications and additional information and determine whether any additional information is required, in accordance with Part 5.

4.5.3 Basis of Selection - Highest Combined Rating of Technical Merit (70%) and Price (30%)

The selection will be based on the following:

1. To be declared responsive, a bid must comply with all the requirements of the bid solicitation;

2. The Basis of Selection is based on the highest responsive combined rating of technical merit and price per solution;
 3. The ratio will be 70% for the technical merit and 30% for the price:
 - a) The technical merit score for each responsive bid will be determined as follows: total number of points obtained for the Point-Rated Technical Evaluation Criteria at Stage 7 adjusted to yield a score out of 70;
 - b) To establish the pricing score, the Total Financial Bid will be prorated against the lowest evaluated price to yield a score out of 30; and
 - c) For each responsive bid, the technical merit score (maximum 70) and the pricing score (maximum of 30) will be added together to determine the total score out of 100;
 4. In the event that two or more responsive bids have the same highest total score, these bids will be ranked in descending order using:
 - a) The proposed total cost for Option 1 - Deployment will be used to rank the tied bids from the lowest cost to the highest cost; and
6. Up to 4 responsive bids will be recommended for contract award.

Table 1 below provides an example where three bids are responsive and the selection of the Bidder to be recommended for award is determined by a 70/30 ratio of the technical merit and price, respectively.

Table 1: Sample Basis of Selection - Highest Combined Rating Technical Merit (70%) and Price (30%)

EXAMPLE		Bidder 1	Bidder 2	Bidder 3
Technical Evaluation Score	Total Score Max points (100)	90	75	85
Technical Score (70%)		$90/100 \times 70 =$ 63.00	$75/100 \times 70 =$ 52.50	$85/100 \times 70 =$ 59.50
Bid Evaluation Price		\$3,100	\$2,600	\$3,450
Pricing Score (30%)		$2,600/3,100 \times 30 =$ 25.161	$2,600/2,600 \times 30 =$ 30.000	$2,600/3,450 \times 30 =$ 22.609
Combined Rating		88.16	82.50	82.11
Overall rating		1st	2nd	3rd
Bidders 1 would be recommended for contract award				

4.6 Notification of Selection (Stage 9)

Canada expects to issue multiple contracts for the prototype phase. Up to 4 responsive bids will be recommended for contract award. Canada will notify the highest ranked Bidders of its intention to enter into an option-based contract with them.

4.7 Bidder's Technical Bid (Stage 10)

Bidders notified in Stage 9 will be invited to submit their Technical Bid describing in writing the elements demonstrated in Stage 8 as well as any additional requirements the Bidders consider necessary in order to resolve the problem(s) described in Annex A. If, in the opinion of the Contracting Authority, Bidder's technical bid does not mirror the elements demonstrated in Stage 8, the Bidder must have to correct it. Only technical bid that mirror Bidder's presentation will be considered for contract award.

4.8 Recommendation for Contract Award

All contract awards are subject to Canada's internal approvals process, which includes the requirement to approve funding in the amount of any proposed contract. Despite the fact that the Bidder may have been recommended for contract award, a contract will only be awarded if internal approval is granted according to Canada's internal policies. If approval is not granted, no contract will be awarded.

The Bidder agrees not to make any media announcement(s) about the award of a contract without seeking approval from the Contracting Authority.

PART 5 - CERTIFICATIONS AND ADDITIONAL INFORMATION

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

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

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

5.1 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information should be submitted using Attachment 2 – Bid Submission Form. If any of these required certifications or additional information are not completed and submitted as requested, the Contracting Authority will inform the Bidder(s) of a time frame within which to provide the information. Failure to provide the certifications and/or the additional information listed below within the time frame specified will render the bid non-responsive or constitute a default under the Contract.

PART 6 - RESULTING CONTRACT CLAUSES

Note to Bidders: These Resulting Contract Clauses are intended to form the basis of any contract(s) resulting from this bid solicitation. Except where specifically set out in these Resulting Contract Clauses, acceptance by Bidders of all the clauses is a mandatory requirement of this bid solicitation.

No modification or other terms and conditions included in the bid will apply to the resulting contract, despite the fact that the bid will become part of the resulting contract.

Any Bidder submitting a bid containing statements implying that the bid is conditional on modification of these Resulting Contract Clauses (including all documents incorporated by reference) or containing terms and conditions that purport to supersede these Resulting Contract Clauses will be considered non-responsive. As a result, Bidders with concerns regarding the provisions of these Resulting Contract Clauses should raise those concerns in accordance with the Enquiries provision of the bid solicitation.

If additional legal issues are raised by a bid, Canada reserves the right to address those issues in any contract awarded as a result of this bid solicitation. If the additional provisions are unacceptable to the Bidder, the Bidder may withdraw its bid.

Articles of Agreement

6.1 APM Series of Contracts

The Contractor acknowledges that this Contract is one of a series of 4 [*Note to Bidders: this number may be adjusted downward if necessary at the time of award*] contracts awarded as a result of the Challenge-Based Solicitation issued by Shared Services Canada on [insert date] under No. [insert number].

The award of this Contract begins at Stage 11 of the overall Application Performance Management (APM) initiative described in the Solicitation.

Under this Contract, providing support for the Solution does not include additional features or functionalities after the Solution has received the Authority to Operate.

6.1.1 Delivery and Testing the Solution(s) Prototype

The Contractor must deliver the prototypes and perform all the Work in accordance with the terms and conditions of this Contract, including the Statement of Challenges at Annex A, and the Contractor's technical bid entitled _____, dated _____.

The following options may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment. The Contracting Authority may exercise the option by sending a written notice to the Contractor at any time.

If an option is exercised more than 24 months after contract award and at the request of the Contractor, the prices for Option 1 to 4 will be adjusted in accordance with the Price Adjustment Mechanism (paragraph 6.1.7).

The prototype duration is estimated at 3 months.

6.1.2 Option 1: Deployment of the Application Performance Management (APM)

[Note to Bidders: This section will be customized prior contract award]

The Contractor grants to Canada the irrevocable option to require the Contractor to deploy the Solution in accordance with the terms and conditions of this Contract and the section entitled Deployment in the Statement of Challenge.

Option Duration: The duration of Option 1 is 12 months.

Option validity period: This option expires 24 months after the contract is issued, unless the Parties agree to extend this period and document their agreement in a Contract Amendment.

While the decision to exercise Option 1 is entirely within Canada's discretion, if Canada chooses to exercise Option 1, it will do so in accordance with the Article of Annex A entitled "Decision-Making Framework for Choosing Solution to be Deployed".

Canada anticipates selecting one or two Contractors to proceed with the deployment. However, Canada may, in its discretion, exercise Option 1 with more Contractors and at any time prior to the option expiring.

At the end of the prototype, all Contractors will be informed of whether Canada is exercising Option 1.

6.1.3 Option 2: Operational Support and Maintenance Services

The Contractor grants to Canada the irrevocable option to require the Contractor to provide additional years of Operational support as described in Annex A: Statement of Challenge under the section Option 2, at the prices and rates set out in Annex B: Basis of Payment.

If Canada exercises Option 3 - Deployment on Other Departments, Canada may exercise any of Options 2 for all those Clients identified by Canada. Canada may choose to exercise the option for one, some or all of the Clients at the prices set out in Annex B: Basis of Payment.

6.1.4 Option 3: Deployment of the Solution for other Departments (Clients)

The Contractor grants to Canada the sole and irrevocable option, at any time after Option 1 has been exercised, to require the Contractor to deploy the Solution for another Client at the prices set out in Annex B: Basis of Payment. In this Contract, Canada's "**Clients**" include Canada itself, those government institutions for whom Canada's services are mandatory at any point during the life of any resulting instrument(s), and those other organizations for whom Canada's services are optional at any point during

the life of any resulting contract and that choose to use those services from time to time. In addition to the Government of Canada, Canada may also serve a government of a province or municipality in Canada, a Canadian aid agency, a public health organization, an intergovernmental organization or a foreign government.

6.1.5 Option 4 - Solution(s) Improvements

During the course of the contract, in cases where the technological context will render available innovative features that could help Canada to better resolve the problem identified in the SOC, Section 3, the Contractor grants to Canada the sole and irrevocable option to require the Contractor to provide the additional features or to improve the solution.

In cases of an improvement provided by the Contractor itself, the price will be negotiated and will not exceed the demonstrated market prices. The Contractor will be responsible for demonstrating the value for money to Canada. Applicable principles for price justification could be found in Standard instructions section 14 Price justification.

In cases where the improvement would be provided by a third part (other than the Contractor), the improvement will be reimbursed at cost plus 5% mark-up.

6.1.6 Price Adjustment Mechanism

Upon Contractor's request, for work under the Contract performed after the 24 month period from contract award, the Price Adjustment Mechanism will apply.

The prices will be adjusted to account for inflation according to [Table 18-10-0004-01 Consumer Price Index, monthly, not seasonally adjusted, All-items, Canada](#)

$$\text{New Price} = \text{Initial Price} * \left\{ \left(1 + \frac{\text{CPI exercise date of the Option} - \text{CPI at the contract award}}{\text{CPI contract award}} \right) \right\}$$

For example:

The initial price for the Milestone X is \$ 1000.

Contract award March 31, 2019.

Option 3 for an additional deployment of the solution is exercised on June 2, 2021.

CPI for March 2019 = 134 (hypothetical value)

CPI for May 2021 = 136

The new price = 1000 * (1 + (136-134) / 134) = \$ 1,014.93

6.2 Standard Clauses and Conditions

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

6.2.1 General Conditions

2030 (2018-06-21), General Conditions - Higher Complexity - Goods apply to and form part of the Contract.

6.2.2 Supplemental General Conditions

The following supplemental general conditions apply to and form part of the Contract:

4003 (2010-08-16), Licensed Software;

4004 (2013-04-25), Maintenance and Support Services for Licensed Software; and

4006 (2010-08-16), Contractor to Own Intellectual Property Rights in Foreground Information, if applicable.

6.2.3 Licensed Software <adjust as required>

Note to Bidders: This section will be adjusted after the invitation to refine.

(a) With respect to the provisions of Supplemental General Conditions 4003:

Licensed Software	The Licensed Software, which is defined in 4003, includes all the products offered by the Contractor in its bid, and any other software required for those products to function in accordance with the Software Documentation and the Specifications, including without limitation all of the following products: <i>(this information will be completed at contract award using information in the Contractor's bid)</i>
Type of License being Granted	Entity License, as described in Section 06.
Language of Licensed Software	The Licensed Software must be delivered in English.
Delivery Location	As specified in Annex A
Media on which Licensed Software must be Delivered	DVD, USB, or Internet link for download
Source Code Escrow Required	No

6.2.4 Licensed Software Maintenance and Support <adjust as required>

(a) The provisions of Supplemental General Conditions 4004 are modified, as applicable, in accordance with the following:

Option to Extend Software Maintenance and Support Period	As per Article 6.1 of the Contract.
Hours for Providing Hot Line Support Services	As described in Annex A.

Contractor must keep track of software releases for the purpose of configuration control	Yes, as described in Annex A.
Contact Information for Accessing the Contractor's Support Services	In accordance with Section 5 of 4004, the Contractor will make its Support Services available through the following: Toll-free Telephone Access: Toll-free Fax Access: Email Access: <i>[Note to Bidders: This information will be completed at the time of exercise of Option 1 with information supplied by the Contractor.]</i>
Website	In accordance with Section 5 of 4004, the Contractor must make Support Services available over the Internet. To do so, the Contractor must include, as a minimum, frequently asked questions and on-line software diagnostic routines and support tools. Despite the Hours for Providing Support Services, the Contractor's website must be available to Canada's users 24 hours a day, 365 days a year, and must be available 99% of the time. The Contractor's website address for web support is <i>[Note to Bidders: The website address will be completed at the time of exercise of Option 1 with information supplied by the Contractor.]</i>
Language of Support Services	The Support Services must be provided in both French and English, based on the choice of the User requesting support.
Article 07 – Canada's Responsibilities' – Para 1	Canada will not maintain, for the software Support Period, a telephone line and Internet access for use in connection with the software support services.

6.3 Security Requirement

Security Requirements for the Contract

1. The Contractor/Bidder must, at all times during the performance of the Contract/Standing Offer/Supply Arrangement, hold a valid Designated Organization Screening (DOS), issued by the Canadian Industrial Security Directorate (CISD), Public Services and Procurement Canada (PSPC).

2. The Contractor/Bidder personnel requiring access to protected information, assets or sensitive work site(s) must EACH hold a valid **<reliability status>**, granted or approved by CISD/PSPC.
3. The Contractor/Bidder must not remove any protected information or assets from the identified work site(s), and the Contractor/Bidder must ensure that its personnel are made aware of and comply with this restriction.
4. Subcontracts which contain security requirements are not to be awarded without the prior written permission of CISD/PSPC.
5. The Contractor/Bidder must comply with the provisions of the:
 - (a) Security Requirements Check List and security guide, attached at Annex C; and
 - (b) Industrial Security Manual (Latest Edition).

6.4 Data Ownership and Sovereignty

The Parties agree that neither the operation of the Solution nor the provision of maintenance or support relating to the Solution requires the Contractor at any time to access the content transmitted by Canada using the Solution. The Contractor acknowledges that:

- (a) it, its employees, representatives and agents are prohibited from accessing the content transmitted by the Solution at any time without the written consent of the Contracting Authority; and
- (b) it is prohibited from permitting any third party to access the content transmitted by the Solution at any time without the written consent of the Contracting Authority.

The Contractor agrees that, although it may access the Solution remotely, it must do so only from locations within Canada and the Contractor agrees to segregate its network or access to its network in all ways required in order to ensure that no person outside the geographic boundaries of Canada is capable of accessing the Solution remotely using the Contractor's infrastructure. The Contractor acknowledges that Canada may audit compliance with this Article and agrees to provide access to its premises and systems during normal business hours in order to allow Canada or its representatives to conduct any such audit.

6.5 Contract Period

Contract Period: The "**Contract Period**" is the entire period of time during which the Contractor is obliged to perform the Work, which includes:

- a) the "**Initial Contract Period**", which begins on the day this Contract is awarded and ends 24 months later and

b) the period during which the Contract is extended, if Canada chooses to exercise any options described above.

6.6 Authorities

6.6.1 Contracting Authority

The Contracting Authority for the Contract is:

TBD at contract award.

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.

6.6.2 Technical Authority

The Technical Authority for the Contract is:

TBD at contract award.

The Technical Authority is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority; however, the Technical Authority has no 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.

6.6.3 Contractor's Representative

TBD at contract award

6.7 Payment

Note to Bidders: This section will be adjusted after the invitation to refine.

6.7.1 Basis of Payment Prototype – 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 B for a cost of \$ 25,000 .Customs duties are included and Applicable Taxes are extra.

6.7.2 Basis of Payment Option 1 to 3 Ceiling Prices

If Canada exercises options 1, 2, or 3 and in consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid in accordance with the Basis of Payment in Annex B up to the ceiling prices set out there. Customs duties are included and Applicable Taxes are extra.

The Contractor must complete all the Work associated with options 1 to 3 for no more than the ceiling price for each option period indicated in Annex B. That is, once the

ceiling price has been paid, the Contractor must continue performing the Work, but no further payments will be made.

6.7.3 Basis of Payment Option 4 - Solution Improvement

The pricing basis of the option will be negotiated as per the 6.1.6 prior Option 4 issuance and the basis could be modified to reflect the negotiated pricing basis.

6.7.4 Method of Payment

Canada will pay the Contractor milestone firm all-inclusive prices, as applicable, in accordance with the Annex B Basis of Payment.

6.7.5 SACC Manual Clauses

A9117C (2007-11-30), T1204 - Direct Request by Customer Department

C2000C (2007-11-30), Taxes - Foreign-based Contractor

6.8 Invoicing Instructions

- (a) The Contractor can submit invoices electronically through the SSC P2P portal in accordance with the section entitled "Invoice Submission" of the General Conditions. Invoices cannot be submitted until all work identified in the invoice is completed. In the alternative, the Contractor may seek the consent of the Contracting Authority to submit invoices using an alternative method. The Contractor's invoice must include a separate line item for each subparagraph in the Basis of Payment provision.
- (b) By submitting invoices (other than for any items subject to an advance payment), the Contractor is certifying that the goods and services have been delivered and that all charges are in accordance with the Basis of Payment provision of the Contract, including any charges for work performed by subcontractors.
- (c) For Purchase Orders, the Contractor's invoice must indicate which line item(s) and the quantity for which it is invoicing.
- (d) The Contractor must provide the original of each invoice to the Technical Authority. On request, the Contractor must provide a copy of any invoices requested by the Contracting Authority.
- (e) If Canada disputes an invoice for any reason, Canada agrees to pay the Contractor the portion of the invoice that is not disputed provided that items not in dispute form separate line items of the invoice and are otherwise due and payable under the Contract. Notwithstanding the foregoing, the provisions of "Interest on Overdue Accounts", Section 17 of 2030 – General Conditions will not apply to any such invoices until such time that the dispute is resolved at which time the invoice will be deemed as "received" for the purpose of the "Method of Payment" clause of the Contract.

6.9 Certifications

6.9.1 Compliance

Compliance with the certifications 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 for default.

6.10 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in the Province of Ontario.

6.11 Priority of Documents

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

- a) the Articles of Agreement;
- b) 4003 (2010-08-16), *Licensed Software*;
- c) 4004 (2013-04-25), *Maintenance and Support Services for Licensed Software*;
- d) 4006 (2010-08-16), *Contractor to Own Intellectual Property Rights in Foreground Information, if applicable*;
- e) *the general conditions 2030 (xxxxx)*;
- f) Annex A, Statement of Challenge;
- g) Annex B, Basis of Payment;
- h) the Contractor's bid dated _____ not including any software publisher license terms and conditions that may be included in the bid, not including any provisions in the bid with respect to limitations on liability, and not including any terms and conditions incorporated by reference (including by way of a web link) in the bid; and
- i) SRCL.

6.12 Foreign Nationals

SACC Manual clause A2000C (2006-06-16) Foreign Nationals (Canadian Contractor); or
SACC Manual clause A2001C (2006-06-16) Foreign Nationals (Foreign Contractor).

6.13 Insurance – No Specific Requirement

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

6.14 Limitation of Liability - Information Management/Information Technology

- (a) This section applies despite any other provision of the Contract and replaces the section of the general conditions entitled "Liability". Any reference in this section to damages caused by the Contractor also includes damages caused by its employees, as well as its subcontractors, agents, and representatives, and any of their employees. This section applies regardless of whether the claim is based in contract, tort, or another cause of action. The Contractor is not liable to Canada with respect to the performance of or failure to perform the Contract, except as described in this section and in any section of the Contract pre-establishing any liquidated damages. The Contractor is only liable for indirect, special or consequential damages to the extent described in this Article, even if it has been made aware of the potential for those damages.
- (b) **First Party Liability:**
- (i) The Contractor is fully liable for all damages to Canada, including indirect, special or consequential damages, caused by the Contractor's performance or failure to perform the Contract that relate to:
 - (A) any infringement of intellectual property rights to the extent the Contractor breaches the section of the General Conditions entitled "Intellectual Property Infringement and Royalties"; and
 - (B) physical injury, including death.
 - (ii) The Contractor is liable for all direct damages caused by the Contractor's performance or failure to perform the Contract affecting real or tangible personal property owned, possessed, or occupied by Canada.
 - (iii) Each of the Parties is liable for all direct damages resulting from any breach of confidentiality under the Contract. Each of the Parties is also liable for all indirect, special or consequential damages in respect of any unauthorized disclosure of the other Party's trade secrets (or trade secrets of a third party provided by one Party to another under the Contract) relating to information technology.
 - (iv) The Contractor is liable for all direct damages relating to any encumbrance or claim relating to any portion of the Work for which Canada has made any payment. This does not apply to encumbrances or claims relating to intellectual property rights, which are addressed under (i)(A) above.
 - (v) The Contractor is also liable for any other direct damages to Canada caused by the Contractor's performance or failure to perform the Contract that relate to:
 - (A) any breach of the warranty obligations under the Contract, up to the total amount paid by Canada (including any applicable taxes) for the goods and services affected by the breach of warranty; and

- (B) Any other direct damages, including all identifiable direct costs to Canada associated with re-procuring the Work from another party if the Contract is terminated either in whole or in part for default, up to an aggregate maximum for this subparagraph (B) of the greater of .25 times the total estimated cost (meaning the dollar amount shown on the first page of the Contract in the cell titled "Total Estimated Cost" or shown on each call-up, purchase order or other document used to order goods or services under this instrument), or \$1,000,000.00.

In any case, the total liability of the Contractor under subparagraph (v) will not exceed the total estimated cost (as defined above) for the Contract or \$1,000,000.00, whichever is more.

- (vi) If Canada's records or data are harmed as a result of the Contractor's negligence or willful act, the Contractor's only liability is, at the Contractor's own expense, to restore Canada's records and data using the most recent back-up kept by Canada. Canada is responsible for maintaining an adequate back-up of its records and data.

(c) **Third Party Claims:**

- (i) Regardless of whether a third party makes its claim against Canada or the Contractor, each Party agrees that it is liable for any damages that it causes to any third party in connection with the Contract as set out in a settlement agreement or as finally determined by a court of competent jurisdiction, where the court determines that the Parties are jointly and severally liable or that one Party is solely and directly liable to the third party. The amount of the liability will be the amount set out in the settlement agreement or determined by the court to have been the Party's portion of the damages to the third party. No settlement agreement is binding on a Party unless its authorized representative has approved the agreement in writing.
- (ii) If Canada is required, as a result of joint and several liability or joint and solidarily liable, to pay a third party in respect of damages caused by the Contractor, the Contractor must reimburse Canada by the amount finally determined by a court of competent jurisdiction to be the Contractor's portion of the damages to the third party. However, despite Sub-article (i), with respect to special, indirect, and consequential damages of third parties covered by this Section, the Contractor is only liable for reimbursing Canada for the Contractor's portion of those damages that Canada is required by a court to pay to a third party as a result of joint and several liability that relate to the infringement of a third party's intellectual property rights; physical injury of a third party, including death; damages affecting a third party's real or tangible personal property; liens or encumbrances on any portion of the Work; or breach of confidentiality.

- (iii) The Parties are only liable to one another for damages to third parties to the extent described in this Sub-article (c).

6.15 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 fully authority to act as 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 solidarily 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 is not a joint venture. If the Contractor is a joint venture, this clause will be completed with information provided in its bid.

6.16 Safeguarding Electronic Media

- a. Before using them on Canada's equipment or sending them to Canada, the Contractor must use a regularly updated product to scan electronically all electronic media used to perform the Work for computer viruses and other coding intended to cause malfunctions. The Contractor must notify Canada if any electronic media used for the Work are found to contain computer viruses or other coding intended to cause malfunctions.
- b. If magnetically recorded information or documentation is damaged or lost while in the Contractor's care or at any time before it is delivered to Canada in accordance with the Contract, including accidental erasure, the Contractor must immediately replace it at its own expense.

Annex A

Problem Statement, Challenges, Minimal Requirements, and Personas

APM PROBLEM STATEMENT

SSC wishes to improve their visibility into the availability and performance of the application services currently delivered by SSC, partners and third parties. SSC wants to detect application issues, measure performance, and determine root cause of failures (performance issues/outages/failures) in a consolidated manner.

CHALLENGES:

1. **Inconsistent Monitoring:** Applications are being monitored in different ways, in different places, or sometimes not at all. There are gaps in coverage: isolated pockets, no common standards, and challenges with application availability. There is no reporting available on an enterprise level without robust capabilities for rolling up data from multiple sources or real-time reporting.
2. **Insufficient Monitoring:** SSC Partners and service lines are experiencing difficulty in acquiring a solution that can support application availability management, real user experience monitoring, application troubleshooting, and root cause analysis (full-service delivery stack).
3. **Baselining:** SSC has difficulty determining the baseline behaviour of applications in order to determine deviations from normal to provide reporting and analysis.
4. **Proactive Challenges (Short term Impacts):** Most IT failures impacting end-users are only discovered and reported by end-users. Traditional monitoring tools either do not detect issues that impact the application or do not convey the impact on the application.
5. **Long term Impacts:** Application performance (i.e. response time), user experience, and user behaviour is often difficult to discern. Lacking this information, it is challenging to make informed decisions based on empirical data for the future of the application.

APM MINIMUM VIABLE REQUIREMENTS

DEFINITIONS

Application Components - application code, middleware, and databases, containers, operating systems, servers (virtual and physical), and storage which are required by the application. Application components may be located on-premises or in cloud deployments.

Datacentre components - operating systems, servers (virtual and physical), storage, and networking which are required by the application. Datacentre components may be located on-premises or in cloud deployments.

Trace - a record of a single request to the application as it moves end-to-end through the application components.

Transaction - a well-defined interaction with the application that uses specific application functionality.

Session - data about how the application appeared to the user and how the user interacted with the application over a period of time, such as from logging in until logging out.

Metric – a value, time stamp, and associated metadata. In most cases, a metric is captured at regular intervals.

Log – data in unstructured text format that is created at irregular intervals. Multiple logs may exist for each application and datacentre component.

Event – an asynchronous and time specific structured datum that indicates that something has occurred.

Able to – expression that refers to a functionality or a component of the solution that must be available to be actioned by users.

REQUIREMENTS

The sections below describe the expected minimal performance of the Solution. It describes what the solution must be able to do (functional requirements), how the solution must interact with environment and other devices, (non-functional requirements).

1. The solution must include Application Discovery Tracing and Diagnoses (ADTD):
ADTD1: ADTD must be able to discover application components and their relationships.
ADTD2: ADTD must be able to capture traces. A trace must enable deep inspection of the application code and interactions with other application components.
2. The solution must include Synthetic Transaction Monitoring (STM):

STM1: STM must be able to simulate user transactions with the application, including multistep transactions, and capture the result.

STM2: STM must simulate the user device, including execution of an application's web browser based JavaScript code.

STM3: STM must be performed from multiple locations in the network including from within the government of Canada datacentres, internal WAN location, and public WAN (internet) locations. Locations must include on-premises, private cloud, and public cloud.

STM4: STM must be able to simulate transactions against an application's API.

3. The solution must include Real User Monitoring (RUM):

RUM1: RUM must be able to capture sessions as real users interact with the application.

RUM2: RUM sessions must capture details of how the application is running in the user's web browser and the web browser's interactions with the datacentre for example: request response times and page render times.

RUM3: RUM must include session playback, the ability to replay each user action (e.g. click or scroll) as if watching the user's screen.

RUM4: RUM must NOT require anything on the user's device beyond a JavaScript enabled web browser.

RUM5: RUM must be compatible with multiple web browsers, minimally Chrome and Safari, multiple user device types, minimally devices running IOS, Android, Windows, Mac, and Linux.

RUM6: It must be able to select only a subset of sessions to be captured with RUM.

RUM7: It must be possible to select a subset of RUM sessions to be included in session playback.

4. The solution must include IT Infrastructure Monitoring (ITIM):

ITIM1: ITIM must be able to discover datacentre components and their relationships.

ITIM2: ITIM must be able to detect and capture events from datacentre components. For example, service failures, failure of ICMP response, etc.

ITIM3: ITIM must be able to capture metrics from the datacentre components. For example, CPU load, storage IO rate, etc.

ITIM4: ITIM must be able to create events when metrics fall outside established thresholds and based on patterns found in logs.

5. The solution must operate with a variety of environments while being easy to deploy, configure, and maintain.

ENV1: The solution must operate with applications:

- deployed in Government of Canada datacentres, private cloud, and public cloud;
- developed by the Government of Canada (including 3rd-parties), Commercial off the shelf (COTS) products, and Software as a Service (SaaS);
- created with various languages, including Java, C, Python, PHP, MS .Net;
- using various containers, middleware, and databases, at a minimum Docker, Kubernetes, Apache, WebLogic, and Oracle, MS SQL Server.

ENV2: The solution must provide integration with monitoring APIs for Software as a Service (SaaS) based solutions, at a minimum Microsoft Office 365, and cloud vendor monitoring APIs, Amazon Web Services Cloudwatch and Microsoft Azure Monitor.

ENV3: The solution must be able to be deployed to existing applications without changes being required to the application code.

ENV4: The solution must provide 99.9% up-time on a 24/7/365 basis.

ENV5: The solution must be able to deploy upgrades without interfering with operations, including rolling back to prior working state if required.

ENV6: The solution must be capable of scaling to 1,000 applications running on 15,000 servers for applications supporting millions of end users.

ENV 7: The solution must be able to store all data for at least 1 year after it is captured.

6. The solution must be able to analyze and store data, perform anomaly detection, and identify root cause:

AS1: The solution must be able to capture data from ADTD, STM, and ITIM on an ad-hoc and a scheduled basis.

AS2: Anomalies must be detected based on data captured by ADTD, STM, RUM, and ITIM that do not conform to expected behavior patterns.

AS3: Anomalies must include complete failures, partial failures, performance degradation, and trends that may lead to any of the aforementioned.

AS4: Anomalies must include deviations from contracted service level availability and performance thresholds for the application.

AS5: Anomalies must be classified based on severity and impact on the user.

AS6: Related anomalies must be correlated and displayed as a single anomaly.

AS7: The solution must indicate the root cause of an anomaly.

AS8: The root cause must indicate which application component has lead to the anomaly.

AS9: The root cause must indicate if a non-application component has lead to the anomaly, such as a WAN issue, or web browser issue.

AS10: The solution must be able to link data from sessions and transactions with the specific trace(s) that handled the associated requests.

7. The solution must include advanced dashboards, notification, reporting, and APIs to disseminate information:

DIS1: The solution must provide a dashboard (web based interface). The dashboard must:

- provide role-based security for application owners, application operators, application developers, IT operators, and service desk staff;
- be available to at least 1000 concurrent dashboard users;
- include single-sign-on for all components of the dashboard;
- be able to display data captured from all components of the solution together;
- be able to display all data collected by the solution in various forms, minimally tabular, graph, and map;
- provide a list (tabular information) and map (diagrammatic information) of the relationships between application components;
- allow data to be sorted and filtered;
- provide views for application tuning, debugging and diagnostics;
- provide views of events and anomalies to assist in resolving failures;
- present baselines from data capture in the past and allow comparison with current performance data.

DIS2: The solution must be able to send notification of new events and anomalies via, email, SMS, and API.

DIS3: The solution must be able to direct events and anomalies to only interested users and APIs based on application impacted, root cause, and time of day.

DIS4: The solution must provide standard out the box reporting and custom reports against all captured data.

DIS5: The solution must provide comprehensive APIs for configuration, data import, and data export.

DIS6: Aspects of the solution may require support of both official languages (English and French).

8. Security:

SEC1: The solution must include remote management and administration through a management interface which provides secure (encrypted) connectivity.

SEC2: The solution must meet Government of Canada standards for Protected B Data / High Integrity / High Availability

SEC3: the monitoring solution must comply with the defined IT infrastructure security standards.

SEC4: The solution must integrate with enterprise authentication methods, at a minimum Lightweight Directory Access Protocol (LDAP), for user authentication and authorization.

SEC5: The solution must be able to transmit confidential information with adequate protection from malicious attacks and accidental exposure (e.g., cross-contamination) by using the security infrastructure within SSC.

SSC Persona: Enterprise – Service Desk - Phil (Phillip)

Service Desk Representatives collect low level info from clients and applications to initiate actions to resolve IT Issues. They receive an alert from a dashboard, and look at it to determine severity and who it needs to be forwarded to.



Levels: CS1 and CS2

<p>Goals</p> <ul style="list-style-type: none"> • Quickly collecting information and direct failures to the right service lines for resolution. Follow the event management process and support incident management. • Understanding overall view of application availability. • Knowing when something is wrong or working (and say it with confidence) • Wanting to have process well documented – want to follow the process 	<p>challenges</p> <ul style="list-style-type: none"> • Lack of information on what is really going on. Process is slow. • Overwhelmed with data that doesn't provide information. Receiving data from different sources and don't know how the data relates to one another. • Understaffed because of lack of proper tools.
<p>values</p> <ul style="list-style-type: none"> • Correct and timely information. • Resolution of immediate, current problems. • Processes they can follow. 	<p>fears</p> <ul style="list-style-type: none"> • Don't know what is going on
<p>expectations</p> <ul style="list-style-type: none"> • That they can see and say they know what is going on with confidence • Number of CIs per staff member to monitor the application – the higher the better. 	<p>Measures of success</p> <ul style="list-style-type: none"> • If a user calls and something is down, they can say they already know (proactive detection of issues) - the human has nothing new to tell them. • Tool gives them the right service line to contact (because root cause analysis could say the correct tool, dB, ... that had the real issue)

SSC Persona: Service Lines (support) - Zarah

Group that manages servers, dbs. Manages CIs or components on the CIs.



Levels: CS2 to CS4

<p>Goals</p> <ul style="list-style-type: none"> • Keep the lights on (infrastructure running). 99% up time. • Receive accurate information from tool – metrics such as CPU use, how long a db query took. • Help in troubleshooting. • Work on new projects they are supposed to be working on, rather than fixing breaks/issues. 	<p>challenges</p> <ul style="list-style-type: none"> • Told something is wrong by 1st level support, need to analyze and validate that information • Networking personnel frequently get blamed for any issues that arise, despite other root causes
<p>values</p> <ul style="list-style-type: none"> • Correct information • No false alarms 	<p>fears</p> <ul style="list-style-type: none"> • Don't know where to find their issues – even if they know it is their team's issue • Spend too much time fixing breaks
<p>expectations</p> <ul style="list-style-type: none"> • Tickets contain correct info and direct attention to what is actually broken • Don't want to be bothered with false alarms 	<p>Measures of success</p> <ul style="list-style-type: none"> • The data (availability, performance, root cause analysis data) is correct • Information to quickly fix problems • No false alarms

SSC Persona: Account Executives – Ginette

This includes account executives, service delivery managers and account operational managers. We will focus on account executives. Account executives manage interface SSC and partner departments. Voice of customer within SSC. Every account executive does this differently.



Levels : EX1

<p>Goals</p> <ul style="list-style-type: none"> • Customer satisfaction, customer is getting what they need from SSC. What customer satisfaction is varies from department to department. Their roles are as different as the partner departments. • 1) Show that SSC is meeting SLAs. SSC is delivering what is promised. Application up time, response time. • 2) SSC is evolving and improving to be able to do more. Offering better level of sophistication, showcasing roadmap and how SSC is improving. 	<p>challenges</p> <ul style="list-style-type: none"> • Lack of formal service for APM. Do have APM but don't offer as a formal service. • Not understanding what APM is. • Not being able to report on SSC's SLA compliance. Some specific applications have SLAs, in pockets. • Lack of time – responsible for all services. • Lack of being able to get in depth on any one topic.
<p>values</p> <ul style="list-style-type: none"> • Client satisfaction – happy customer. • Technical people that can back them up. Need SSC to provide timely information, responsive, accurate information, and be timely. Need data explained and 	<p>fears</p> <ul style="list-style-type: none"> • They say something or commit to something that isn't true or can't be delivered by SSC • The APM will be too expensive to sell to the partners • The APM will make things worse for applications.

<p>packaged for them. More information rather than data.</p> <ul style="list-style-type: none"> • Consistency – they don't want things to change every week. Consistent clear messaging over time of an APM service. Also, consistency between partners. Consistency across SSC service catalog across all partner departments. 	
<p>expectations</p> <ul style="list-style-type: none"> • APM is bridge between SSC and the client partner in terms of visibility for performance • APM provides impartial hard data on application performance. • Shorter meantime to fix (but this may be too detailed for them) because this underlines the need for APM. • Transform data from APM to provide information (tell me a story – story of how things are getting better). • All applications report for their partner(s) in one view. 	<p>Measures of success</p> <ul style="list-style-type: none"> • We detect application issues extremely early before it impacts users. • Being able to demonstrate they met the SLAs • Improved SSC rating (by partners) – because of more visibility

SSC Persona: Service owners - Raynald

Service Owners manage entire service lines and are responsible for delivery of services.



Levels: CS5 (director level)

<p>Goals</p> <ul style="list-style-type: none"> • To receive concise new data that is actionable • To understand how their service line is negatively impacting or positively supporting applications. 	<p>challenges</p> <ul style="list-style-type: none"> • Applications are a small part of what they do. They don't have as much time for application issues.
<p>values</p> <ul style="list-style-type: none"> • Care more about their own services 	<p>fears</p> <ul style="list-style-type: none"> • They are missing something. Too much on their plate • Phone call at 3 am – will get pulled out of bed if they have to delegate.
<p>expectations</p> <ul style="list-style-type: none"> • Low noise (don't show irrelevant information) • All information needs to be actioned by them • Provides data to support long term planning – ie capacity planning for life cycling 	<p>Measures of success</p> <ul style="list-style-type: none"> • No one is telling them something is wrong – not blaming them for an outage • Proactive – service line spends less time “firefighting” (reacting to breaks and issues) • Report showcasing SLAs have been met

Attachment 1
BID QUALIFICATION FORM

Provided as a separate document