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SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
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Issuing Office - Bureau de distribution
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Title - Sujet ARMOUR TDP	
Solicitation No. - N° de l'invitation W7714-115274/E	Amendment No. - N° modif. 004
Client Reference No. - N° de référence du client W7714-115274	Date 2013-05-03
GETS Reference No. - N° de référence de SEAG PW-\$\$\$V-051-25450	
File No. - N° de dossier 051sv.W7714-115274	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-05-30	Time Zone Fuseau horaire Eastern Daylight Saving Time EDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Kate Mulligan	Buyer Id - Id de l'acheteur 051sv
Telephone No. - N° de téléphone (819) 956-1325 ()	FAX No. - N° de FAX (819) 997-2229
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

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Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

This solicitation amendment is raised to:

- i. provide clarifications to items that have changed or generated many questions;
- ii. address questions not addressed in solicitation amendment 003;
- iii. address the questions asked during the One-on-One meetings; and
- iv. incorporate applicable amendments the solicitation document.

Clarifications

Canadian Content

After further evaluation of the points allocated for achieving various levels of Canadian Content, Canada has decided that awarding points for Canadian Content in addition to conditionally limiting the procurement to Canadian services does not provide any significant value to Canada.

Therefore, the application of Canadian Content to this procurement is solely for the purpose of conditionally limiting the procurement to Canadian services. The appropriate sections of the solicitation are amended in the amendments to the solicitation in this solicitation amendment.

Maximum Budget for the Optional Services Requirement

The maximum budget for the Optional Services Requirement is \$10.55M. \$1M of the maximum budget for the Optional Services Requirement is allocated for procurement of hardware and software that may be required to support tasks raised under the Optional Services Requirement. Removing the \$1M allocation for hardware and software from the maximum budget leaves \$9.55M for labour and the calculated mark-up on hardware and software.

To simplify the maximum budget for the Optional Services Requirement and its impact on the evaluation of the bid price for the Optional Service Requirement, the solicitation has been revised to reflect \$10.55M as the maximum budget for the Optional Services Requirement.

The Harmonized Sales Tax in Prince Edward Island, Payment of the Quebec Sales Tax (QST) and Re-implementation of the Provincial Sales Tax in British Columbia

During the solicitation period, HST changes in PEI and BC, as well as, the introduction of the QST resulted in a change to the definition of Taxes and the associated clauses of the general conditions and other aspects of the solicitation.

All clauses affected by these tax changes have been updated in this solicitation amendment.

Transition from MERX to Buyandsell.gc.ca/tenders

Starting June 1, 2013, federal government tenders (tender notices and bid solicitation documents) will be published and available free of charge on a Government of Canada Web site on Buyandsell.gc.ca/tenders.

Questions and Answers

Questions submitted in response to the Solicitation

Q39.

RFP pg. 65 of 169 requires the bidder to select one Canadian Content category for the % level of services, and one category for the % level for goods, all under paragraph 5 of A3050T.

Paragraph 5 of A3050T is for a mix of goods and services which produces only one output number, as further amplified by the example quoted at the bottom of RFP page 65

(<https://buyandsell.gc.ca/policy-and-guidelines/supply-manual/annex/3/6> example 2). Would Canada please confirm that bidders should calculate one number, following the example, and use that number for both Goods and Services segments of Attachment 6, Section 1, Canadian Content?

A39.

Page 65 of the RFP incorrectly references paragraph 5 of A3050T. The amendments to the solicitation in this solicitation amendment address these references and Attachment 6.

Q40.

Given that the services component is likely in excess of 95% of the value of the Basic Requirement, would Canada consider removing the 'goods' requirement and adding the 4 points for goods to the services, thereby bringing it up to 14 points for Services – Canadian Content?

A40.

The award of points for different levels of Canadian Content has been removed from the basis of selection.

Q59.

Explain how Canadian content will be treated? Is anything rated above 0 considered to be qualified as having Canadian content?

A59.

The Canadian Content and Attachment 6 are clarified in the amendments to the solicitation.

Questions from the Bidders' Conference

Q85.

The period during which the options can be exercised is between Contract Award and 42 months ACA, yet only one rate is intended to span a potential 54 month period before Labour Rates are escalated in Year 2 of the Optional Services Requirement. This is a difficult rate to determine and price.

A85.

The economic price adjustment formula has been revised to reflect escalation every year after contract award. This revised formula is included in the Basis of Payment of the resulting contract clauses by the amendments to the solicitation.

Q90.

Does Canadian Content apply to the Basic Requirement only or to both the Basic Requirement and the Optional Services Requirement?

A90.

The calculation of the Canadian Content applies to the Basic Requirement and the Labour portion of the Optional Services Requirement.

Q91.

How is open source interpreted as part of Canadian Content?

A91.

Open-source software is treated the same way any other software would be treated in the Bidder's determination of Canadian Content.

Q92.

Canadian Content. How is GFI considered part of Canadian Content?

A92.

GFI is not considered in the determination of Canadian Content.

Q93.

What is the impact of on Canadian Content if the Bidder decides not to use the GFI originally considered in their bid?

A93.

GFI is not considered in the determination of Canadian Content. However, if a Bidder certifies that 80% of the service provided is 80% Canadian, then the Bidder is obligated to ensure that this percentage of services is achieved throughout the period of the Contract.

Questions submitted in response to the Solicitation

Q98.

Please refer to SRCL at Annex D – Armour Technology Demonstration – Security Clearance Requirements (1st paragraph). The requirement stipulates 'all personnel included in the contract proposal must have this clearance (RELIABILITY STATUS) at the time of bid submission'. It further explains that Key Technical Personnel will require Level II (SECRET) clearance (2nd

paragraph). As only Key Technical Personnel must form part of the bid submission, please confirm that those key individuals who possess a RELIABILITY STATUS at time of bid submission with SECRET in process will be deemed acceptable.

A98.

The Key Technical Personnel must have Level II (SECRET) clearance at time of bid submission. The wording of the Security Clearance Requirements has been updated in the amendments to the solicitation to remove ambiguity.

Q99.

Please refer to Part 6 – Security and Financial Requirements (p.17), 1.1(c). The Bidder must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites. This information must be submitted with the bid. This would seem to contradict the instructions as presented in the SRCL (refer above for wording in Q98). The requirement of the SRCL stipulates those individuals that must be presented with the bid and specifies the required clearance at time of bid submission. Furthermore, for optional services requirements, the resources will be called-up on a task basis, which will specify the level of clearance required by task. Please clarify what the Crown seeks by means of a response to Part 6 – Security and Financial Requirements, 1.1 (c).

A99.

For the Basic Requirement, it is expected that the Key Technical Personnel may require access to classified or protected information, assets or sensitive work sites. The names of these individuals is required to meet Mandatory Technical Evaluation Criteria M3. The Security Clearance Requirements in Annex D also states that if the Bidder requires any other individuals to deploy the system at DRDC for the demonstrations, these other individuals must be identified in the bid and these identified individuals must have a Level II (SECRET) clearance at time of bid submission.

For the optional services requirement, each task will specify the required security clearance level of personnel performing work under the task. Given that the Key Technical Personnel and other individuals required to deploy the system will be identified for the Basis Requirement and that these resources are expected to be available to perform tasks raised under the optional services requirement, bidders are not expected to identify additional individuals who will require access to classified or protected information, assets or sensitive work sites for potential tasks raised during the optional services requirement in the bid.

Q104.

Refer to Annex A, Statement of Work, 2. Phases,

- 2.3 Phase 3 (p.14 of 19), first paragraph after bulleted list (Phase 3 should be completed within 10 months)

- 2.4 Phase 4 (p.16 of 19), first paragraph after bulleted list (Phase 4 should be completed within 10 months)
- 2.5 Phase 5 (p.17 of 19), first paragraph after bulleted list (Phase 5 should be completed within 7 months)

Refer to Appendix B – Deliverables, Table B-1: List of Project Phases and Estimated Schedule for delivery:

- Phase 3: Proactive Observe and Orient / 11 months
- Phase 4: Proactive Decide and Act / 11 months
- Phase 5: Reactive Response / 8 months

Please confirm that the estimated completion dates specified in the statement of work should be consistent with Table B-1. (e.g. Phase 3 – 11 months vs. 10 months, Phase 4 – 11 months vs. 10 and Phase 5 – 8 months vs. 7).

A104.

The estimated phase completion dates specified in the statement of work should be consistent with Table B-1. (e.g. Phase 3 – 11 months vs. 10 months, Phase 4 – 11 months vs. 10 and Phase 5 – 8 months vs. 7).

The Statement of Work is updated in the amendment to the solicitation of this solicitation amendment.

Q107.

RFP Attachment 4 §3.1.1 describes Criterion 3.1.1 thus:

Relevant applications and products [to ARMOUR] are part of the core business of the Prime Bidder, including delivery of turn-key integration services; and says applications and products relevant to Criterion 3.1.1 include: Integrated Computer Network Defence Systems, Security Information and Event Management Systems, Intrusion Detection and Prevention Systems, Vulnerability and Patch Management Systems, Security Incident Analysis or Forensics Systems.

In order to better cover relevant areas of expertise, we request that the following categories also be included as relevant to Criterion 3.1.1: Enterprise Information Management (EIM) and Network and Server Management (NSM) applications/products.

A107.

Given the specific nature of the ARMOUR project and its detailed security requirements, experience in non-security related equipment as proposed does not meet the needs of the project for this evaluation criteria. The criteria remains unchanged.

Q108.

What does “an individual based in Canada” mean in A3050T §2? Can an “individual” include a company, which is an individual under law, or does it mean “individual human being”? Does “based in Canada”, mean “is located in Canada while providing the service”, or does it mean “resides in Canada at the time the service is provided”?

A108.

The individual based in Canada is the human being performing the work in Canada. While the individual does not necessarily need to reside permanently in Canada, the notion of being based in Canada suggests that the individual will perform the service from a location in Canada.

Q109.

When are services provided by more than one individual the same service? For example, if we proposed to supply the Crown with a service, provided by 5 individuals, 4 of whom are “based in Canada” and one in the US, and the same cost is included in our total bid price for each individual, can we still certify 100 percent Canadian services given that “80 percent of the total bid price for the service is provided by individuals based in Canada” in accordance with A3050T §2?

A109.

If 80% of the services are provided by individuals based in Canada, then the services are considered Canadian services.

Q111.

Question Q111 will be addressed in a subsequent solicitation amendment.

Q112.

In ANNEX C BASIS OF PAYMENT Table C-2 indicates interim rates to be used for the Optional Services Requirements covering a period of six years with Year 1 of the work to commence no later than the completion of the Basic Requirement. However, there is no indication as to how soon the work could commence and therefore Year 1 could be any year after initial Contract Award. The Year 1 rates proposed in table C-2 will have a significant impact on rates in the following years due to escalation in labour rates. What year should be used to calculate rates for Year 1 in Table C-2?

A112.

The economic price adjustment formula has been revised to reflect escalation every year after contract award. This revised formula is included in the Basis of Payment of the resulting contract clauses by the amendments to the solicitation.

Q113.

Section 2.1.1 describes the methodology to be used to calculate the Escalation in Labour Rates to be applied in Table C-2. However, the wording requires some clarification. As these are interim

rates to be adjusted according to the appropriate CPI index, is the base inflation applied to the rates 2% year over year and the rates as proposed will be increased beyond 2% if the CPI index is greater than 2%?

The table is not clear in this regard and one could argue the proposed year one rate could be held constant for six years if the annual CPI index does not rise above 2% during the six year period.

What is the expectation of rates for this table; inclusive of inflation of 2% adjusted if CPI is greater than 2%, inclusive of inflation but each year adjusted based on the actual CPI index only if the index is above 2%?

If the CPI index is 3% would the adjustment be the full 3% or the 1% above 2% as suggested in the RFP?

Would the previous year adjusted rate the starting rate for the following year?

A113.

The economic price adjustment formula has been revised to reflect escalation every year after contract award. This revised formula is included in the Basis of Payment of the resulting contract clauses by the amendments to the solicitation.

Q114.

Table 2 in Attachment 2 FINANCIAL BID PRESENTATION SHEET for the Optional Services Requirement indicates an estimated level of effort for evaluation purposes. If the proposed rates in Table 2 are to be used for Optional Services executed in parallel with the Basic Requirement and the anticipated duration of the Basic Requirement is no greater than 42 months, is the rate proposed in Table 2 of Attachment 2 a blended rate over a proposed 42 month period or will Table 2 be amended with a requirement to provide rates for each year of the Basic Requirement starting with rates for 2013?

A114.

The escalation of the rates for the option periods has been reconsidered. Please refer to **Q85** and to the revisions in the amendments to the solicitation in this solicitation amendment.

Q115.

Section 3 of the Evaluation of Price Attachment 3 indicates an estimated value of hardware and software components of \$1,000,000.00 to which markup would be applied for evaluation purposes. Annex C, Basis of Payment section 2.3 indicates a value of \$100,000 for what appears to be the same hardware and software components for evaluation purposes. Should the value in Annex C, Basis of Payment section 2.3 be \$1,000,000.00?

A115.

Yes. The value in section 2.3 should be \$1,000,000.00. Annex C, Basis of Payment has been revised for reflect \$1,000,000.00.

Q116 - Q118.

Questions Q116 to Q118 will be addressed in a subsequent solicitation amendment.

Q119.

SACC 4001 08 3 requires monthly reports on the hardware, unless the contract specifies otherwise per SACC 4001 08 4. Would Canada add to the resulting contract clauses that no availability level reports are required identified in 4001 08 3 and exempted in 4001 08 4?

A119.

SACC 4001 08 1 states that 4001 08 is applicable to the Contract if a minimum availability level is specified in the Contract.

The Resulting Contract Clauses in Part 7 do not specify a minimum availability level. Therefore, SACC 4001 08, in its entirety, does not apply to the ARMOUR TDP requirement.

Q120.

Please refer to Attachment 4, Mandatory and Point Rated Criteria, Section 2.2 Personnel, specifically criteria 2.2.2 Key Personnel. The note that is included within this criterion states "the following resources may fill multiple roles: LSA may also fill the SSA position or vice versa; and ITSA may also fill the CAS position or vice versa. Please also refer to requirements a), c), d) and e) which award points based on team experience (i.e., 3 of the key team members; 2 of the key team members, etc.). Please confirm that an individual who is permitted to fill 2 roles may be counted as having the experience of 2 key team members for the team's collective experience portion of the response requirement.

A120.

Please refer to Solicitation Amendment 003, **Q105** for an answer to this question.

Q121.

RFP Attachment 4 Technical Evaluation Criterion 1.2 a) (p.43/76) specifies the points that will be awarded if the proposed solution "at completion of the relevant demonstration phase(s), meets X% of the stated requirements with TRL Y (or higher level) technologies", for values of X = 60, 80, 95, 100% and Y = TRL 5, 6, 7.

The interpretation of and the method of bid evaluation against Technical Evaluation Criterion 1.2 a) are crucial, in that bids that fail to score 14/20 will be counted non-compliant and thereafter disregarded. With this in mind, we provide the following detailed background to our questions about the interpretation of and method of evaluation against this criterion.

Background

The term “demonstration phase” occurs only once in the RFP document at Annex A, SOW, Appendix D, Deliverables, §1.11, Verification and Validation (p.A5/A6). The term is used here only to indicate the delivery date for software images, and the paragraph does not associate any requirements with demonstration phases.

The System Technical Specification (STS) also uses the term “demonstration phase” once only. STS §6.1 describes three demonstrations. §6.2 lists ARMOUR “functional capabilities according to the demonstration phase where they must be demonstrated by the vendor”, and appears to refer to these demonstration phases in terms of the demonstrations described in §6.1.

The STS Table spreadsheet incorporated by STS §5 includes a “Demonstration Phase” column, presumably referring to the three demonstrations/phases described in STS §6. So the “stated requirements” for each demonstration phase appear to be confined to the STS Table spreadsheet.

Please confirm that the “stated requirements” for each demonstration phase for purposes of Technical Evaluation Criterion 1.2 a) are confined to the STS Table spreadsheet, and do not include e.g. “must” statements in the STS itself, or functional capabilities as described in STS §6.2. If this is not the case, please specify precisely which requirements are the “stated requirements” for each demonstration phase.

A121.

It is confirmed that the "stated requirements" for each demonstration phase for purposes of Technical Evaluation Criterion 1.2 a) are confined to the STS Table spreadsheet. However, the STS Table itself incorporates functional capabilities described in the Automated Computer Network Defence (ARMOUR) Technology Demonstration (TD) Version 2.1 (STS) document text by reference in two places:

- STS Table item Tracking ID Category "DP" and Tracking ID Number "3" states "The Design of the ARMOUR GUI module MUST follow the design guidance provided in the ARMOUR STS Text." For clarification, this requirement refers to Section 3.3.2 of the ARMOUR STS document, which is therefore incorporated and form part of the STS Table by reference.

- STS Table item Tracking ID Category "PER" and Tracking ID Number "1" states "Performance requirements MUST be met as described in the Performance Targets and Metrics section of the STS." For clarification, this requirement refers to Section 6.2 of the ARMOUR STS document, which is therefore incorporated and form part of the STS Table by reference.

For the purposes of Technical Evaluation Criterion 1.2 a), the TRL rating for these reference inclusions should be reported in their respective single row entry in the STS Table.

Q122.

Given the answer to Q121, what counts as a single requirement for purposes of calculating percentages of requirements met at the completion of each demonstration phase? Is each row of

the STS Table spreadsheet with a value in the Tracking ID Category and Number columns a separate requirement? Alternatively, are only those rows containing the word “MUST” to be counted as separate requirements for purposes of Technical Evaluation Criterion 1.2 a), since those rows containing the word “SHOULD” are presumably not mandatory requirements, and so should not be included in any requirements baseline that can be used to render a bid non-compliant?

A122.

Each row of the STS Table spreadsheet with a value in the Tracking ID Category and Number columns is considered a separate requirement for the purposes of calculating percentages of requirements met at the completion of each demonstration phase. This includes rows containing both the word "Must" and the word "Should". Inclusion of the rows containing the word "Should" provides the bidder with flexibility in the design and development approach while the stated minimum required evaluated score establishes a required minimum level of overall functional capability.

Q123.

Given the answer to Q122, how will Canada evaluate Bidders' solutions against Technical Evaluation Criterion 1.2 a) ? The matrix response to the STS Table requested at RFP p.41/76 is to state only the TRL (if any) for each requirement at bid closing, not the TRL at the completion of each demonstration phase, and not whether the requirement will be met in any demonstration phase. None of the other items requested at RFP p.41/76 as part of the draft Architectural Design Document (ADD) asks for the projected ability of the proposed architecture to meet the STS Table requirements. Even if Bidders were to state what percentage of requirements they expect to meet at which TRLs at completion of each demonstration phase, what material facts could the evaluators use to evaluate Bidders' statements of what they expect their solutions will achieve in the future?

A123.

The text of the first bullet point under Section 1. TECHNICAL EVALUATION CRITERIA, page 41 of 76, is revised as per the amendments to the solicitation in this solicitation amendment. The revised text:

"A completed matrix response to the System Technical Specification for Automated Computer Network Defence (ARMOUR) Technology Demonstration (TD) Version 2.0 (STS), Section 5, STS Table including the Technology Readiness Level (TRL)¹ at time of bid closing. The matrix response for each item should be the 'TRL rating' or, in the event that there is no TRL rating at time of bid closing, 'To be met through development.'"

Q124.

DRDC was to clarify the standards for the Integration framework (SOA) could be any well known, documented industry standard or if it was limited to the examples provided in the SOW.

A124.

The standards listed are intended to be examples. Any open and well established standard that fulfills the open concept and modularity requirements will be considered on equal footing.

Q125.

Question Q125 will be addressed in a subsequent solicitation amendment.

Q126.

In the STS it is stated that the bidder must collect certain information from ALL devices. Can we clarify that this refers to "Windowx XP, Windows 7, Windows Server 2008 R2, Linux (Ubuntu 12.04 LTS) and Linux RHEL 6. Are there any additional platforms that are considered end-devices.

A126.

There is no statement in the STS document such that the bidder must collect certain information from "all devices." However, in the STS Table, version 2.1, Tracking ID Category "DSC" and Tracking ID Number 11 states that "Network infrastructure information must be collected from all hosts, including servers, end user devices, network appliances (e.g., switches and routers) and security appliances (e.g., firewalls, Intrusion Preventions systems, and other security devices)."

If the question is referring to "end user devices" then, this refers to user systems currently including ... However, these end user devices are part of the DREnet configuration and may change during the course of the ARMOUR TD project. This change is outside the control of the ARMOUR TD project.

If the question is referring to "all hosts", then the scope includes additional platforms encompassing all hosts described in DSC11. These are all considered "end-devices."

The description of the number of "end-devices" included in the scope of the ARMOUR TD project is contained in the Automated Computer Network Defence (ARMOUR) Technology Demonstration (TD) Version 2.1 (STS), Section 6.2, Table 2. In this table, the term "node" is used to describe "end-devices."

Q127.

This section indicates that there are existing deployed data sources in the DREnet, suggests that existing solutions in the DREnet environment should be leveraged as much as possible and provides a list of data sources that should be included in the ARMOUR technical bid. Is DRDC expecting, then, that a successful bid will include the specification and deployment of a lab infrastructure at the contractor's facilities that will match the target DREnet operational infrastructure and that the costs for provisioning and deploying these data sources in the

contractor's lab are to be included as part of the financial structure of the bid? In other words the complete cost of a lab is at the contractors expense, versus purely simulating input.

A127.

Setion 1.10 of the ARMOUR Annex A, Statement of work has been completed and sent for translation prior to this question being submitted. The revised section clarifies, in the view of Canada, the requirements expectations for these device.

The devices listed in section 1.10 are available for a bidder to use should they choose to do this. The devices would be available for the DREnet demonstration portions of the project only but would help lower costs of deploying an additional device. The contractor is under no obligation to use any of these devices.

However, the contractor is responisble to provide any/all equipment that is needed to demonstrate the ARMOUR solution functionality on the DREnet during demonstration phases of the project. What equipment is needed at the contractors facilities to successfully develop a solution to meet the ARMOUR specifications is left to the descretion of the bidder.

Q128.

For an ARMOUR solution to be properly verified and validated, the inputs (or data source feeds) used during solution development must closely match those inputs that will be present in the target deployed architecture. It will not be possible to thoroughly represent, in a lab environment, the number of sources or the amount of throughput that an ARMOUR solution must be able to ingest. The inability to match the activity profile of an operational environment is seen as a technical risk to the success of the project. If we understand the requirement to set up the lab correctly, the effort to stand up and maintain a simulated lab is seen as an expenditure of time and material that will significantly consume valuable research dollars while not advancing the goals of the ARMOUR project itself.

Would DRDC be amenable to allowing ARMOUR development to take place on the DREnet itself where actual data sources can be leveraged? This approach will ensure that valid input is being used to develop the solution and will allow the project to focus on the research activities rather than on maintaining a redundant lab. If work on site is not possible, would DRDC allow the creation of a point-to-point encrypted link between the DREnet and the contractor's facilities where actual data source data can be transmitted to the development lab and used in the creation of the ARMOUR solution? Would there be any requirements to sanitize or obfuscate the data in the source feeds prior to transmission?

A128.

Section 1.10 of the ARMOUR Annex A, Statement of work has been completed and sent for translation prior to this question being submitted. The revised section clarifies, in the view of Canada, the requirements expectations for these devices.

In response to the specific question, DRDC will not permit any development to occur on the DREnet nor would connectivity, between DREnet and the Contractor's facilities, be permitted to allow DREnet data to be sent to the contractor's lab for testing/development work.

Data requirements that are needed for a bidder's solution are specific to the each bidder's solution. Refer also **Q79** and **Q80** in Solicitation Amendment 003 for other questions regarding performance and data sets.

Q129.

Armour TD System Technical Specification Table – version 2.0, Requirement 79 – Section: Data Source Connectors. Requirement definition is as follows: “The Data Source Connectors **MUST** include mechanisms to collect network infrastructure and non-infrastructure information from Data Sources”.

Could the Crown explain what defines network infrastructure and non-infrastructure information?

A129.

Network infrastructure information is defined according to ARMOUR TD STS Table, version 2.1, Tracking ID Category "DSC" and Tracking ID Numbers 4 to 30 (inclusive).

Non-infrastructure information is defined according to ARMOUR TD STS Table, version 2.1, Tracking ID Category "DSC" and Tracking ID Numbers 33 to 46 (inclusive).

Q130 to Q131..

Questions Q130 to Q131 will be addressed in a subsequent solicitation amendment.

Q132.

Ref: RFP 2.2.2 a), RFP pg. 54 requires "7) Certification and accreditation in accordance with the Government of Canada (GC) Policy on Government Security (PGS)".

The referenced Policy does not mention "Certification and accreditation" in the text. In response to this section, does Canada want the clearance level (Reliability, Secret, Top Secret, etc.) of the individual team members? If not, what does Canada want as a response? If the security level is what is desired, and given that the security levels of the individuals is covered elsewhere in the RFP (pgs 22, 151 and 154 of 169) as reliability (off-DRDC-site) or Secret (on-DRDC-site), is this requirement needed?

A132.

Reference solicitation Attachment 4, Mandatory and Point Rated Criteria, evaluation criteria 2.2.2 a), Relevant areas of IT Security sub-item 7) text is modified in the amendments to solicitation of this solicitation aementment.

Summarized Questions and Answers from the One on One Meetings

Q133.

There are some research components to the solicitation and some of the technology challenges mentioned are open-ended problems, but always an engineering solution is possible, depending on the desired scalability of the solution (10 – 100 – 1000 nodes). How will you handle that?

A133.

For the demonstrator, the solicitation has outlined the size of the demonstration network and the performance specifications, starting on page 36 of 47 of the STS, Section 6.2 Summary of Demonstrations, performance Targets and Metrics, Table 2. Performance specifications for scalability of an operational solution are also provided within the same table. Bidders are expected to provide a solution engineered to meet these specifications.

Q134.

Question Q134 will be addressed in a subsequent solicitation amendment.

Q135.

There are open source (OS) solutions available and there are COTS available that are perhaps better. Open Source has its advantages, but can lead to rat holes. What is your thinking here? Can both co-exist?

A135.

Both can co-exist. There are points in the evaluation criteria relating to use of COTS and the use of unproven technology may also factor into the risk evaluation. There are benefits and drawbacks of choice of COTS, OS and doing raw development. It all comes down to the trade-off between them within the proposed solution.

Q136.

Project planning and payment – payments are milestone based for a \$4.4 M program. Different milestones have different amounts. So there are no monthly payments then?

A136.

Payments are purely milestone based and that is why there are more milestones than phases. There are only 6 phases but there are more milestones. These additional payment milestones are added to break-up and distribute the payments across the schedule.

Q137.

We understand from the Bidder's Conference briefing that ADGA is precluded from bidding. But Bell and TrendMicro are not precluded from bidding. Is this correct? And this hasn't changed from the RFI stage?

A137.

This is correct with clarification that it is the ADGA Group that is precluded from bidding. This was agreed prior to the start of the DPM and Software Support services contracts. The ADGA Group is the only company precluded from bidding. Bell and TrendMicro are not precluded from bidding.

Q138.

There are lots of interfaces in the system. Issues arise when two interfaces are not the same; the inputs and outputs may be different. In this project the bidder will have to figure out what the interfaces are. These things aren't standardized. The bidder will have to pick a point of reference. Is there an expectation that products will have to make changes on their end to fit into the system?

A138.

Not necessarily. There are a number of standards identified for interfaces. Specific interfaces will be designed within the Integration Framework. For the initial ARMOUR delivery, the interface needs to be designed and documented so that developers will know what is needed by the interface and can be determined the requirements to fit into the ARMOUR integration framework. For the solution that is provided the interface needs to be designed, working and documented while meeting the STS and project requirements. There is no expectation that an interface that would be compatible with all possible products out there.

Q139.

For the list of DRDC equipment vendors in the RFP (e.g., McAfee, NetScout, etc), we understand the proposed solution must work with all of them. Is this a must or a maybe?

A139.

Please see Amendment 3, **Q51** for an answer to this question. As well, Amendment 3 modified Annex A, Statement of Work, Section 1.8 page 9 of 19 of the RFP.

Q140.

Some infrastructure products deploy in a hardware model. We are not aware of a software version available. For the research license, how will you make available an all-in-one solution that has this dependency? When someone downloads something from a website and installs it, then it seems you will need a substitute for some of these hardware based solutions.

A140.

The infrastructure level and infrastructure level hardware don't get released with the research license of the ARMOUR solution. The bidder must propose some means or substitute to be included so that the demonstrator released under the research license can still demonstrate what is intended without the infrastructure elements there.

Q141.

How will extensions of open source be handled when the open source needs to be returned whether or not as part of good citizen practice? Sometimes this is not so easy to determine ahead of time. We understand the need, but a lot of times something happens that you fix a bug and there is no IP generated. In other cases, you make an extension and you are crossing the line of IP generation and it has to be returned to the community. Will this release be ok?

A141.

It depends on the license but, there is no issue in using open source products as long as it meets the existing SACC and other IP clauses that have been modified to meet the ARMOUR requirements in the solicitation and also meets the system technical specifications. It is up to the bidder to be aware of the IP requirements of the solution being proposed, recognizing that IP ownership and distribution requirements are different things. A processing module based on open source, changes may need to be released open source, but this IP is the domain of the successful bidder, and it is not a concern for DRDC if the contractor needs/wishes to release the source. That is a bidder decision.

Bidders will need to consider the impacts if the integration framework itself is based on open source. The bidder will need to ensure compliance of the proposed solution with the IP requirements and system technical specification.

Q142.

Question Q142 will be addressed in a subsequent solicitation amendment.

Q143.

There are a bunch of requirements in the RFP about attack graph generation, etc. But there are no requirements for anyone with experience doing that type of work. Is there any thought to adding requirements for experience around an attack graph specialist role, because it is a very specialized piece of knowledge?

A143.

It is up to the Bidders to formulate a team with sufficient knowledge and experience to execute the proposed work plan (ref: Point Rated Evaluation Criteria 2.1 (d) bullet 3, "An assessment of ... qualified resources are available to meet the project demands ..."). The identified key technical personnel to be included in the bid are not expected to form the entire development team used by the Contractor. The bidder is free to include additional resources as needed to cover the scope of the research and development activities.

Q144.

Are you willing to accept requests for adjustment of some of the standard clauses?

A144.

The RFP contains the condition that by submitting a bid you accept the terms and conditions of the RFP and the resulting contract clauses. A bidder can propose changes to the clauses in their bid; however the bid would be evaluated based on the acceptance of the terms and conditions of the RFP. If proposed changes to the terms and conditions were included in the winning bid, Canada has the right to award a contract without accepting the proposed changes to the terms and conditions.

Canada may review the proposed changes to the terms and conditions to determine if they are beneficial to Canada. If deemed beneficial to Canada, they may be incorporated into the resulting contract.

If the validity of the bid is dependent on incorporation of the changes to the terms and conditions proposed in the bid into the resulting contract clauses, Canada will deem the bid non-responsive.

Therefore, bidders are advised to submit proposed changes as questions during the solicitation period rather than in their proposal.

Q145.

Question Q145 will be addressed in a subsequent solicitation amendment.

Q146.

In terms of the overall architecture, there is need to have security between the interfaces. Is the ARMOUR solution envisioned to be contained in one location? Or is it intended to involve devices in different physical locations, perhaps accessed via the user interface from separate locations? Do you envision or required that all parts of the solution be contained in one location?

A146.

Yes there may be a need for security between interfaces within the ARMOUR solution. This is left to the bidder to propose the locations and types of security to meet the requirements of the ARMOUR solicitation. The solicitation is intended to be open to proposed bidder solutions without specifying that it needs to be physically located at only one location, nor stating that it needs to be distributed. This is an architectural decision that is left to the bidder to determine and propose.

Q147.

Some of the diagrams are exposing an operational view that allow for drilling down into services, missions, instances, and devices. Is there a physical view version or do you always start from operational view? There is usually a logical or physical component to certain views.

A147.

Those views are all intended are presented as guidelines that must be considered but they are not intended as prescriptive. The Bidder should determine how best to propose a solution to meet the specifications.

Q148.

Question Q148 will be addressed in a subsequent solicitation amendment.

Q149.

Does the operational mission contribute through the infrastructure management system by providing input to the ARMOUR, and then components of ARMOUR can inference how the deployed operation functions or protects?

A149.

No. From a defence perspective, an operation or mission is similar to a business process. In a business process there is the process and the systems that support the process. ARMOUR may connect to a system supporting a business process through an effector connector. Information on business process dependencies, or mission dependencies, will not be readily available from an existing data source. There are no systems currently available that capture the dependencies between a business process, a mission, and the services that support them.

Q150.

In terms of support to obtain that data, are there any assumptions? What sort of support would be available in terms of obtaining those operational dependencies within the network? At this point we assume there will be interactions with DRDC network personnel.

A150.

One of the core tasks is interactions with the stakeholders. Through those interactions with the stakeholder we are expecting that that will be an interactive process to understand what the requirements. DRDC staff will be available to assist in this interaction and gathering, but should not be considered a resource that the contractor has working for them.

Q151.

How much weight do we put on the Observe-Orient-Decide-Act? Because that is a military concept, and in the Cisco, cyber space, there is some of that. We can map and support those workflows. However in some cases the OODA loop concept may not be suitable for the user interface.

A151.

The main emphasis is on being able to map to the conceptual architecture and delivering the functional requirements. The work flow should follow the functional requirements. For example, an operator's regular workflow may only include the Decide phase while the other OODA phases

are mapped to system automated functions which the user would only interact with if some manual intervention is required.

Q152.

ARMOUR itself reflects a business process. Is it the intention that the data presentation module will be the main component or a set of components hosting those processes?

A152.

The data presentation components are required to be modular in such a way that the specifics of a view are provided for. For example, to display a mission dependency, a computational component maps out or calculates the graph associated with a mission dependency. A specific user interface plug-in may be required to view that calculated mission dependency. The computational service component computing the graph data is likely associated with the user interface plug-in visualizing it. If a user interface plugin has a software or library dependency required to visualize the graph, the modularity requirement must be considered.

Q153.

Would a widget based user interface where an operator could select and arrange widgets that implement portions of the data presentation functionality meet the needs of ARMOUR? Should the user interface be a mash-up style of widgets and workflows mapping to the OODA phases, or should it be a pre-designed portal?

A153.

The data presentation functionality would be up to the bidder and is not intended to follow a prescribed user-oriented workflow. The OODA Observe and Orient phases are automated, and the list of actionable priorities in the Decide phase are automated. If the Decide phase results in multiple priorities, user input may be required to select the right priority to implement. At that point, the user may need to go to a visual interface to select the priorities to implement, with the knowledge that a mission may be impacted by the action. The user might need to investigate information that is related to the Observe and Orient phases in order to make such a decision, but the user interface is not intended to map OODA into a user-oriented workflow. The STS document provides mock up diagrams that illustrate what should be important to any provided flow.

Q154.

Would moving a computational service component into the database and exposing it as SQL be acceptable? When there is a large amount of data, the data can be moved to where the logic is, or the logic can be moved to where the data is. The logical architecture doesn't necessarily allow for this type of design choice. It could be possible to maintain modularity and move the logic to the data in the database. The server-side logic or structure will still be well-laid out.

A154.

The ARMOUR architecture is conceptual. A proposed architecture must map its modular computation service components to the conceptual architecture, but does not have to mimic it. Modularity is a requirement, and the meeting those conceptual aspects will have to be demonstrated. Proposing a different architecture is acceptable as long as it delivers all the computational services components defined and provides for the modularity required.

Q155.

Question Q155 will be addressed in a subsequent solicitation amendment.

Q156.

An example of a standards-based interface could be SQL. Web services such as SOAP or REST have a higher performance overhead and are more specific than SQL. If the computational service components were to be developed in procedural SQL that logic could reside with the data to be processed. How large is the data to be processed?

A156.

The size of the source data is unknown as it would be specific and affected by the information requirements of a proposed design.

Q157 to Q158.

Questions Q157 to Q158 will be addressed in a subsequent solicitation amendment.

Q159.

The conceptual architecture has the infrastructure source data being accessed through the database. Can these infrastructure sources be wrapped in a web service that can be directly consumed by computational services instead of going through the database?

A159.

The data source connectors and computational service components must be modular. Combining the functions of a data source connector and computational service component could impact the ability to replace one or the other with an alternative component. Additionally, in the conceptual architecture, the grey arrow coming from data source connectors is identified as having to meet the needs of a single direction data diode. An interactive web service would most likely not be possible through a data diode.

Q160.

Is common infrastructure abstraction necessary if the system is capable of handling all the data?

A160.

If the user interface and computational service components can manage processing, viewing and nesting large numbers of unique systems, then common infrastructure abstraction is not necessary.

Q161.

How were the performance numbers derived? Was an assessment done for the amount of data source records expected, in terms of an aggregate on a second by second basis?

A161.

The performance requirements for the demonstration are based on an expectation of the subset of the DREnet that the demonstration would run on, not the entire DREnet. The number of records populated in the database will depend on the data source infrastructure components included in the solution. As a consequence of the proposed solution defining what is populated in the database, the performance requirements focus only on the size of the network

More generally, the requirements are based on the expectations around the demonstration, and an expectation on what the architecture should achieve. The performance requirements for the expected architecture is an extrapolation based on the needs of the Canadian Forces, depending on the network they choose to deploy on.

Q162.

How can we propose a system that meets the performance criteria without knowing the volumes of data this system will be required to handle?

A162.

The analysis phase (Phase 1) is designed to address this. This phase offers the contractor an opportunity to better assess things like the data volumes required, and refine the development plan accordingly. Also the Architectural Design Document which explains how the design addresses the requirements is a living document, i.e. will be updated as needed.

Q163.

An architecture built on modularity and plugable components might end up in a system with less performance. If all communications need to go through the SOA architecture, this will make meeting the performance requirements difficult. Even though the tech spec table allows bypassing SOA interfaces for performance requirements; will a bid that bypasses the SOA interfaces be more negatively evaluated?

A163.

No. The evaluation criteria states that the solution must have an SOA architecture (to support ongoing research, modularity, etc), but there is no penalty if certain interfaces are bypassed for performance reasons. It is always possible to maintain good structure while improving performance. Nonetheless, architectures adhering to well established standards could involve design tradeoffs to use non standardised interfaces for higher level requirements, e.g. performance.

Q164.

The performance is paramount as a driving influence, or limiting factor. Will you consider increasing the weight on performance in the evaluation criteria?

A164.

DRDC has considered the proposed change and there will be no modifications to the RFP performance requirements at this time.

Q165.

Question Q165 will be addressed in a subsequent solicitation amendment.

Q166.

Is there any concern about how much analysis is actually encoded inside the data model itself?

A166.

No, as long as the required functionality exists, and can be mapped to the conceptual architecture. The bidder is required to explain how their solution maps to the conceptual architecture.

Q167.

In many places in the RFP there is discussion about abstraction, categorization, and rolling up data sets. In many cases that is presented as a means to handle a large amount of data, and is also described as optional. If our solution is capable of meeting the performance requirements without abstraction, do we still need to provide data abstraction? May we provide it only at the visualization layer as required?

A167.

Abstraction is also used to reduce complexity and to allow controlled exposure to unnecessary details. Abstraction described in the RFP is optional as long as performance, complexity reduction, and controlled exposure requirements can be met. Any abstractions described as mandatory must be provided.

Q168.

The lists of data sources that are available on the DREnet are not consistent in the RFP. In particular, in one diagram packet capture is shown but is omitted from another list. Is there a fixed list of sources that should be drawn from, or is it up to the bidder to decide which ones to use? Will additional credit be given to solutions that can draw from a wider set of sources?

A168.

The list of available data sources from the DREnet is listed in Annex A, Statement of Work, section 1.10 Available Data Sources and Effectors, page 9 and 10 of 19 as amended. There are no evaluation criteria that award points for drawing from a specific number of data sources.

However the bidder's choices in data sources may indirectly affect the quality of the solution. The bidder may choose to use any and all of the data sources that are available.

Q169.

Does the database have to be relational, or is this just a suggestion? Do you really care how the back-end is implemented, or can you just specify the required interface (e.g. SQL).

A169.

One of the key advantages of relational databases is its wider usage; nonetheless, any database management systems (e.g. relational, hierarchical, network, or object-oriented) is acceptable as long as the modularity, the flexibility as well as performance requirements are met.

Q170 to Q197.

Questions Q170 to Q197 will be addressed in a subsequent solicitation amendment.

Questions submitted in response to the Solicitation

Q198.

It is not clear if the \$1M H/W and S/W allocation for the in the Optional Services Requirement is included in the \$9.55M budget or excluded from the \$9.55M budget.

A198.

The maximum budget is \$10.55M budget for the Optional Services Requirement includes: the labour; \$1M allocation for hardware and software; and the mark-up on the \$1M hardware and software allocation.

Amendments to the Solicitation

- 1) **Reference:** Table of Contents on page 2 of 76 of the solicitation
Delete: "9. Maximum Funding" and
Insert: "9. Maximum Funding and Budget" to replace the above deletion.
- 2) **Reference:** Part 2, Section 6. DRDC Software Module Demonstration and Graph Processing on page 7 of 76 of the solicitation
Delete: Section 6. DRDC Software Module Demonstration and Graph Processing, in its entirety, and
Insert: the following Section 6. DRDC Software Module Demonstration and Graph Processing to replace the above deletion:

"6. DRDC Software Module Demonstration and Graph Processing

DRDC will be providing an in person demonstration of their supporting research and technology which may be used in the performance of the Work.

Demonstration of the software modules will be conducted in Ottawa on March 5, 2013.

Bidders who wish to attend the demonstration must communicate with the Contracting Authority no later than seven (7) calendar day(s) before the scheduled demonstration to confirm attendance and provide the name(s) of the person(s) who will attend. On confirmation of attendance, the Contracting Authority will provide the Bidder with the specific time and location of the demonstration. Bidders who do not confirm attendance and provide the name(s) of the person(s) who will attend as required will not be allowed access to the demonstration. Bidders will be requested to sign an attendance form. Bidders who do not attend the demonstration will not be precluded from submitting a bid.

Any clarifications or changes to the bid solicitation resulting from the demonstration will be included as an amendment to the bid solicitation.

Processing of Bidder provided graphs by AssetRank and COADS

The Bidder may submit an AND/OR graph to the DRDC ARMOUR TD team for processing by the DRDC developed processing modules AssetRank and COADS graph analysis systems. The ARMOUR TD team will make an effort to process and return the results of all graphs submitted in order of their submission to DRDC. Any Bidder who uses the results of any processed graph received from Canada to determine a technical solution does so at the Bidder's sole discretion. As a result, Canada is not responsible for any use of the results by the Bidder in the Bidder's development of their proposal or any interpretations or assumptions made by the Bidder regarding the functionality, performance or capability of the analysis systems. Also, Canada will not extend the solicitation period for any purposes related to the processing of any submitted graphs. The following list details the reasonable limits established for this effort:

- All submitted graphs must adhere to the described submission guidelines.
- Any single graph that exceeds a 24 hour processing time will be halted.
- Any reasonable number of graphs may be submitted at one time with a maximum of 100 graphs accepted.
- Graphs are to be submitted via email to ARMOUR_TDP@drdc-rddc.gc.ca
- Graphs must be submitted no later than 7 calendar days before date of bid closing

Any graphs submissions which fall outside these limitations will be returned with an explanation of the issue. Bidders may adjust and resubmit their graph if needed.

Submission Guidelines

Each submitted graph must include:

- 1) A Python application file (.py) intended to process the graph using the AssetRank and COADS library. The Python application should be based on the AssetRank and COADS samples. Bidders should review the AssetRank and COADS 0.3 API documentation and sample package for more information on how to load supported graph Comma Separated Value (CSV) files, implement graph ranking, course of action computation, export results, and visualize graph data:

https://partners.drdc-rddc.gc.ca/centres/Ottawa/NIO/ARMOUR_TD/rfp/Shared%20Documents/drdc_assetrank_and_coads_documentation_0.3.zip

If the AssetRank and COADS 0.3 API code samples are used, ensure that the imported graph files are correct relative to the Python application file. For example, in the nato-rto-ist-091_example1.py sample, the experiment directory specifies the graph files are located under a sub-directory named "example1".

Ensure that the API `import_graph_from_csv()` method specifies if the header row is included in the submitted graph VERTICES.CSV and ARCS.CSV files. The graph processing will fail to complete if the presence of the header row is incorrectly specified.

Experiment isolation:

Each Python application file should execute the processing of a single graph with a single set of parameters (e.g. damping, algorithm, cost and budget). If multiple experiments are attempted in the same Python application file, it will be difficult to determine which experiment failed.

Experiment recommendations:

It is possible for the graph processing to exceed the 24 hour processing time or available system resources depending on the graph size and experiment parameters submitted. The following recommendations should be considered when submitted a graph for processing:

- a) A budget which exceeds the total cost of all the graph SINK/LEAF vertices will allow for all applicable vertices to be considered during COADS COA decision making. Submitting multiple experiments with larger and larger budgets which exceed this value can produce redundant results.
- b) The COADS OptimumCOA algorithm is a time-exponential algorithm which will attempt to explore all permutations of the SINK/LEAF vertices where the sum total of the cost of each permutation does not exceed the budget provided. The current implementation of OptimumCOA will use the Python built-in sorted() function to sort those generated permutations by the total cost of each. The built-in sorted function will attempt to sort all the generated vertex permutations in memory. Depending on the number of SINK/LEAF vertices, their costs, and the budget selected, the system resources required to successfully complete processing the graph can exceed the processing time limit and/or available system resources and fail.

For example, a graph with 40 SINK/LEFT vertices with total assigned cost of 400, and budget of 500, would result in the generation and sorting of 240 vertex permutations. The total memory required to maintain all permutations at once for sorting could be over 1 Terabyte. The OptimumCOA algorithm implementation is only practical for smaller graphs or graphs where the budget is a small percentage of the total cost.

The Python application source code and resulting output will be reviewed by the ARMOUR TD team and the submission will be rejected if any of the following criteria is violated:

- a) Collection of system data other than CPU, time, memory, Python and loaded module versions;
- b) Modification of the test system environment;
- c) Creation of files which are not graph related;
- d) All logging must be to standard out;
- e) Python modules which are not related to graph processing; or
- f) Any other item contained in the source code or resulting output that is deemed, at DRDC's sole discretion, to be of harm to Canada or Canada's information systems; or not necessary for assessment of the analysis systems.

Each Python application will be executed using cProfile and the summary function call time will be used to determine overall processing time. The detailed function call names and timing will not be included.

- 2) AssetRank and COADS supported graph arcs and vertices in separate CSV (Comma Separated Value) format files.

Execution:

The Python application file will be executed and all output saved to an output.txt file in the same directory. If multiple Python application files are present for a single graph sub-directory, the output from each will be appended to the same output.txt file.

The ARMOUR TD team will make a best effort to ensure the Python application can execute successfully and reserve the right to modify the application code in order to do so. All execution results and necessary changes will be communicated to the submitter.

Packaging:

For each graph, the required files should be organized in their own sub-directory within a zip file. The zip filename must be prefixed with the submitter's name. The following is the organization of a sample submission:

```
companyA_graphs_2012-12-21.zip
./graph1a/
./VERTICES.CSV
./ARCS.CSV
./graph1a_budget10_BestFirstSearch.py
./graph1a_budget100_BestFirstSearch.py
```

```
./graph1b/
./VERTICES.CSV
./ARCS.CSV
./graph1b_budget1000_BestFirstSearch.py
```

The resulting processed package returned to submitter will be identical in organization, with the addition of the execution output file for each graph sub-directory."

- 3) **Reference:** Part 2, Section 7. Applicable and Reference Documentation on page 9 of 76 of the solicitation
Add: the following reference documentation which are available on the DRDC sharepoint site to the document list:
 "Bidders' Conference Presentation"

- 4) **Reference:** Part 2, Section 9. Maximum Funding on page 10 of 76
Delete: Section 9. Maximum Funding, in its entirety, and
Insert: the following to replace the above deletion:

"9. Maximum Funding and Budget

9.1 Maximum Funding for Basic Requirement

The maximum funding available for the Basic Requirement of the contract resulting from the bid solicitation is \$4,400,000.00 CAD, GST/HST/QST extra. Bids with a Basic Requirement valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available.

9.2 Maximum Budget for the Optional Services Requirement

The maximum budget available for the Optional Services Requirement of the contract resulting from the bid solicitation is \$10,550,000.00 CAD, GST/HST/QST extra. Bids with a Optional Services Requirement valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum budget available."

- 5) **Reference:** Part 4, Section 1.2 Evaluation of Price on page 13 of 76
Delete: "Goods and Services Tax or Harmonized Sales Tax" and
Insert: "Goods and Services Tax or Harmonized Sales Tax or Quebec Sales Tax" to replace the above deletion.

- 6) **Reference:** Part 4, Section 2. Basis of Selection on page 13 of 76 of the solicitation
Delete: Section 2. Basis of Selection, in its entirety, and
Insert: the following Section 2. Basis of Selection to replace the above deletion:

"2. Basis of Selection - Highest Total Point Score

1. To be considered compliant a proposal must:

- (a) comply with all the requirements of the bid solicitation;
- (b) meet all Mandatory Evaluation Criteria;
- (c) obtain the required minimum points for each criterion with a pass mark;
- (d) obtain the required overall minimum points for the Point Rated Technical, Management and Corporate Experience Evaluation Criteria;

- (e) be within the stipulated maximum budget for the Basic Requirement as stated in Attachment 3 Evaluation of Price, Item 1;
- (f) be within the stipulated maximum budget for the firm per diem rates, hardware and software allocation, and mark-up on hardware and software as stated in Attachment 3 Evaluation of Price, Item 2 and
- (g) obtain a point rated evaluation score for the Architectural Design Document (Section 1.0 of the Attachment 4 Point Rated Evaluation Criteria) within 6 points of the top ranked Architectural Design Document point rated evaluation score.
2. Bids not meeting (a) or (b) or (c) or (d) or (e) or (f) or (g) will be declared non-responsive.
 3. The evaluation will be based on the highest total point score of technical merit and price.
 4. To establish the technical merit score, the overall technical score achieved for the Point Rated Technical, Management and Corporate Experience Evaluation Criteria will be the technical merit score.
 5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and multiplied by a factor of 20.
 6. For each responsive bid the technical merit score and the pricing score will be added to determine its Total Point Score.
 7. Neither the responsive bid that receives the highest number of points for the Point Rated Evaluation Criteria, nor the one that proposed the lowest price will necessarily be accepted. Instead the bidder with the Highest Total Point Score will be recommended for award of a contract. In the event that two or more responsive bids achieve the same Highest Total Point Score, the responsive bid which obtained the highest number of points for the Architectural Design Document point rated evaluation criteria will be recommended for award of a contract.
 8. Total Point Scores will be calculated to 4 decimal places.

Table, Example 1, below illustrates an example where all three bids are responsive and the selection of the contractor is determined by the Total Point Score. The total available technical merit point available equals 135 and the lowest evaluated price is \$60,000.

Example 1

	Bidder		
	Bidder 1	Bidder 2	Bidder 3
Overall Technical Score	130	125	110
Evaluated Bid Price	\$77,000	\$75,000	\$60,000
Calculations			
Pricing score	$60/77 \times 20 = 15.5844$	$60/75 \times 20 = 16$	$60/60 \times 20 = 20$
Total Point Score	$130 + 15.5844 = 145.5844$	$125 + 16 = 141$	$110 + 20 = 130$
Overall Ranking	1 st	2 nd	3 rd

- 7) **Reference:** Part 7, Resulting Contract Clauses, Section 1.2.1 Task Authorization on page 18 of 76 of the solicitation

- Delete:** all references to "Goods and Services Tax or Harmonized Sales Tax" and "GST/HST", and
- Insert:** "Goods and Services Tax / Harmonized Sales Tax / Quebec Sales Tax" to replace the above deletions.
- 8) **Reference:** Part 7, Resulting Contract Clauses, Section 2.1 General Conditions on page 20 of 76 of the solicitation
- Delete:** "2040 (2012-11-19), General Conditions - Research & Development", and
- Insert:** "2040 (2013-03-21), General Conditions - Research & Development", to replace the above deletion.
- 9) **Reference:** Part 7, Resulting Contract Clauses, Section 5.1 Contracting Authority on page 22 of 76 of the solicitation
- Delete:** 5.1 Contracting Authority, in its entirety, and
- Insert:** the following to replace the above deletion:

"5.1 Contracting Authority

The Contracting Authority for the Contract is:

Kate Mulligan
Public Works and Government Services Canada
Acquisitions Branch
Science Procurement Directorate
Place du Portage, Phase III, 11C1
11 Laurier Street
Gatineau, Quebec
K1A 0S5

Telephone: 819-956-1325
Facsimile: 819-997-2229
E-mail address: Kate.Mulligan@tpsgc-pwgsc.gc.ca

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

- 10) **Reference:** Part 7, Resulting Contract Clauses, Section 6. Payment on page 24 of 76 of the solicitation
- Delete:** all references to "Goods and Services Tax or Harmonized Sales Tax" and
- Insert:** "Goods and Services Tax or Harmonized Sales Tax or Quebec Sales Tax" to replace the above deletions.
- 11) **Reference:** Part 7, Resulting Contract Clauses, Section 6.1 Basis Payment (Basic Requirement) on page 24 of 76 of the solicitation

- Delete:** all references to "firm, all-inclusive lot price" and
Insert: "firm all inclusive price" to replace the above deletions.
- 12) Reference:** Part 7, Resulting Contract Clauses, Section 7.1 Basic Requirement, item 2 on page 28 of 76 of the solicitation
Delete: "Goods and Services Tax (GST) of Harmonized Sales Tax (HST)" and
Insert: "Goods and Services Tax or Harmonized Sales Tax or Quebec Sales Tax" to replace the above deletions.
- 13) Reference:** Part 7, Resulting Contract Clauses, Section 10. Priority of Documents on page 29 of 76 of the solicitation
Delete: "(f) the General Conditions - Research & Development 2040 (2012-11-19)" and
Insert: "(f) the General Conditions - Research and Development 2040 (2013-03-21)" to replace the above deletion.
- 14) Reference:** Attachment 1 Financial Bid Instructions on page 31 of 76 of the solicitation
Delete: Attachment 1 Financial Bid Instructions, in its entirety, and
Insert: Attachment 1, appended to this solicitation amendment, to replace the above deletion.
- 15) Reference:** Attachment 2 Financial Bid Presentation Sheet on page 33 of 76 of the solicitation
Delete: Section 1. Firm, all inclusive, lot price for the Basic Requirement in Attachment 2, in its entirety, and
Insert: the following Section 1. to replace the above deletion:

"1. Firm all inclusive price for the Basic Requirement

Table 1

Item	Firm All Inclusive Price
Basic Requirement as described in Annex A (excluding Appendix C)	

Bidders may propose a Milestone Schedule for the Basic Requirement that reflects a neutral cashflow. The Bidder's proposed Milestone Schedule should be substantiated by a price breakdown for the Basic Requirement."

- 16) Reference:** Attachment 3 Evaluation of Price on page 35 of 76 of the solicitation
Delete: Attachment 3, in its entirety, and
Insert: Attachment 3, appended to this solicitation amendment, to replace the above deletion.

- 17) Reference:** Attachment 4 Mandatory and Point Rated Criteria, Section 1 Technical Evaluation Criteria on page 41 of 76 of the solicitation

Delete: the following text of the first bullet point:

"A completed matrix response to the System Technical Specification for Automated Computer Network Defence (ARMOUR) Technology Demonstration (TD) Version 2.0 (STS), Section 5, STS Table including the Technology Readiness Level (TRL)¹ at time of bid closing. The matrix response for each item should be the 'TRL rating' or, in the event that there is no TRL rating at time of bid closing, 'To be met through development.'"

and

Insert: the following text to replace the above deletion:

"A completed matrix response to the System Technical Specification for the Automated Computer Network Defence (ARMOUR) Technology Demonstration (TD) Version 2.1 (STS), Section 5, STS Table including the Technology Readiness Level (TRL)¹ of the proposed solution (for each row with a Tracking ID Category and Tracking ID Number) representing the "TRL Rating At Bid" and the proposed "TRL Rating Through Development". Where the proposed "TRL Rating Through Development" represents the proposed TRL rating to be achieved at the corresponding Demonstration Phase. In the event that a "TRL Rating At Bid" is unavailable (e.g., in the case of new completely new development), the "TRL Rating At Bid" should be left blank."

- 18) Reference:** Attachment 4 Mandatory and Point Rated Criteria, evaluation criteria 2.2.2 a), Relevant areas of IT Security sub-item 7) on page 54 of 76 of the solicitation

Delete: "7) Certification and accreditation in accordance with the Government of Canada (GC) Policy on Government Security (PGS)", and

Insert: "7) Certification and accreditation in accordance with Department of National Defence/Canadian Forces certification and accreditation guidelines (for example, Information System Certification and Accreditation Guideline, Version 1.4, December 2006), or an alternate certification and accreditation guideline in use by other departments of the Government of Canada." to replace the above deletion.

- 19) Reference:** Attachment 6 Certifications Required With The Bid on page 65 of 76 of the solicitation

Delete: Attachment 6, in its entirety, and

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- Insert:** Attachment 6, appended to this solicitation amendment, to replace the above deletion.
- 20) Reference:** Annex A Statement of Work, Section 2.3 Phase 3: First Demonstration: Proactive Observe and Orient, first paragraph after bulleted list on page 14 of 19
- Delete:** "Phase 3 should be completed within 10 months after the approval of the Phase 3 Readiness Review (conclusion of phase 2) and concludes with a Phase 4 Readiness Review Meeting." and
- Insert:** "Phase 3 should be completed within 11 months after the approval of the Phase 3 Readiness Review (conclusion of phase 2) and concludes with a Phase 4 Readiness Review Meeting." to replace the above deletion.
- 21) Reference:** Annex A Statement of Work, Section 2.4 Phase 4: Second Demonstration: Proactive Decide and Act first paragraph after bulleted list on page 16 of 19
- Delete:** "Phase 4 should be completed within 10 months after the approval of the Phase 4 Readiness Review (conclusion of phase 3) and concludes with a Phase 5 Readiness Review Meeting." and
- Insert:** "Phase 4 should be completed within 11 months after the approval of the Phase 4 Readiness Review (conclusion of phase 3) and concludes with a Phase 5 Readiness Review Meeting." to replace the above deletion.
- 22) Reference:** Annex A Statement of Work, Section 2.5 Phase 5: Third Demonstration: Reactive Response, first paragraph after bulleted list on page 17 of 19
- Delete:** "Phase 5 should be completed within 7 months after the approval of the Phase 5 Readiness Review (conclusion of phase 4) and concludes with the Phase 6 Readiness Review Meeting." and
- Insert:** "Phase 5 should be completed within 8 months after the approval of the Phase 5 Readiness Review (conclusion of phase 4) and concludes with a Phase 6 Readiness Review Meeting." to replace the above deletion.
- 23) Reference:** Annex C Basis of Payment, Section 1. Basic Requirement on page 69 of 76 of the solicitation
- Delete:** Section 1. Basic Requirement, in its entirety, and
- Insert:** the following Section 1. Basic Requirement to replace the above deletion:

"1. Basic Requirement

A firm all inclusive price for the Basic Requirement, as described in Annex A (excluding Appendix C - Optional Services Requirement), Statement of Work:

Table C-1

Item	Firm all inclusive price
Basic Requirement as described in Annex A (excluding Appendix C)	

"

- 24) Reference:** Annex C Basis of Payment, Section 2.1. Labour: at the following Firm All Inclusive Hourly Rates on page 69 of 76 of the solicitation
- Delete:** Section 2.1. Labour: at the following Firm All Inclusive Hourly Rates, in its entirety, and
- Insert:** the following Section 2.1. Labour: at the following Firm All Inclusive Hourly Rates to replace the above deletion:

"**2.1 Labour:** at the following firm all inclusive hourly rates

Table C-2

Labour Category	Firm All Inclusive Hourly Rates						
	Interim Labour Rates subject to escalation in accordance with 2.1.1						
	Escalation of Labour Rates of this Annex						
	Option Period 1*		Option Period 2	Option Period 3	Option Period 4	Option Period 5	Option Period 6
	Contract Award to 12 months after Contract Award	Each 12 month interval before Option Period 2					
Project Management							
Project Manager (PM)							
Project Communications Specialist (PCS)							
Project Control Officer (PCO)							
Webmaster (WM)							
System Architecture and Design							
Lead System of Systems Architect (LSA)							
Software Solution Architect (SSA)							
System/Network							

Analyst (SNA)							
Technical Writer (TW)							
User Interface Analyst (UIA)							
Hardware Architect (HA)							
Data Warehouse Architect (DWA)							
Computer Network Defence Functional Analyst (CNDFA)							
Information Technology Security Analyst (ITSA)							
Information Technology Certification and Accreditation Specialist (CAS)							
System Programming							
Senior Programmer (SP)							
Intermediate Programmer (IP)							
Junior Programmer (JP)							
Senior Web-Services Developer (SWD)							
System Engineering and Operations							
Operating Systems Administrator (OSA)							
Project Test Coordinator (PTC)							
Quality Assurance Specialist (QAS)							
Tester (TES)							

* Option Period 1 of the Optional Services Requirement option period, if exercised, will begin no later than completion of the Basic Requirement work and end 12 months after completion of the Basic Requirement. The Labour rates provided in the Contractor's Financial Proposal for the Optional Service Requirement will populate the first column for the potential period of Contract Award to 12 months after Contract Award.

2.1.1 Escalation of Labour Rates

For each subsequent year after Contract Award, the labour rates will be subject to adjustment equivalent to the annual percent change in the Consumer Price Index, "All Items", (Not Seasonally Adjusted) for Ottawa-Gatineau, Statistics Canada Table 11, for the eleventh (11th) month of the previous year or, in the case of the Option Period 2, the eleventh (11th) month after completion of the Basic Requirement, as published by Statistics Canada."

- 25) Reference:** Annex D Security Requirements Check List (SRCL) appended to the solicitation
- Delete:** the section titled, ARMOUR Technology Demonstration - Security Clearance Requirements, in its entirety, and
- Insert:** the following to replace the above deletion:

"ARMOUR Technology Demonstration - Security Clearance Requirements

Within the ARMOUR Technology Demonstration (TD), there is a requirement to have personnel authorized to access different levels of information. For the majority of the personnel working on the project, a current RELIABILITY STATUS clearance will be sufficient. This valid and current clearance is required for the entire duration of the project. All personnel working on the ARMOUR TDP must have this clearance active prior to commencing work on the project.

In addition to the above requirement, the Key Technical Personnel on the project team require Level II (SECRET) clearance. The Key Technical Personnel, as outlined in the RFP, are individuals who fill the following positions:

- Project Manager (PM);
- Lead System Architect (LSA);
- Software Solution Architect (SSA);
- User Interface Analyst (UIA);
- Computer Network Defence Functional Analyst (CNDFA);
- Information Technology Security Analyst (ITSA);
- Certification and Accreditation Specialist (CAS);
- Senior Programmer (SP); and
- Quality Assurance Specialist (QAS).

Some additional personnel beyond the above list require a Level II (SECRET) security clearance during the course of the ARMOUR TD project main contract. This includes any individual(s) who will be involved in the deployment of the ARMOUR TD project demonstration system on the DRENet at DRDC-Ottawa site(s). This level of clearance will be required for the entire duration of the project and this clearance must be active prior to commencing work on the project.

Some personnel will require a Level II (SECRET) security clearance to perform tasks as part of the Optional Work outlined in the RFP, if such Optional Work is exercised. At minimum, any individual(s) who will be involved in the deployment of capabilities related to the ARMOUR TD project results on the CFNOC or any other DND/CF operational network will require Level II (SECRET) clearance. Where this clearance is required, it will be clearly identified on the DND/CF Task Authorization - Form 626. All resources assigned to work on these tasks must have this level of clearance at the time of contractor response to the DND/CF Task Authorization - Form 626."

Solicitation No. - N° de l'invitation

W7714-115274/E

Amd. No. - N° de la modif.

004

Buyer ID - Id de l'acheteur

051sv

Client Ref. No. - N° de réf. du client

W7714-115274

File No. - N° du dossier

051svW7714-115274

CCC No./N° CCC - FMS No/ N° VME

All other terms and conditions remain unchanged.

ATTACHMENT 1

FINANCIAL BID PREPARATION INSTRUCTIONS

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

- (a) A firm all inclusive price for the Basic Requirement, as described in Annex A, Statement of Work, excluding Appendix C, not exceeding \$4,400,000.00 CAD, GST/HST/QST excluded, FOB Destination (for goods), all applicable customs duty and excise taxes included.
- (b) Firm all inclusive hourly rates for each category of resources listed in Attachment 2 FINANCIAL BID PRESENTATION SHEET for the Optional Services Requirement as outlined in Appendix C of the Annex A, Statement of Work.

The firm all inclusive rates are subject to escalation in accordance with Section 2.1.1 of the Basis of Payment in Annex C.

- (c) Firm mark-up on hardware and software procured under the Optional Services Requirement as outlined in Appendix C of the Annex A, Statement of Work and 2.3 of the Basis of Payment in Annex C.
- (d) The total evaluated value of the Optional Services Requirement, which includes: the total estimated cost for labour; the \$1,000,000 allocation for hardware and software; and the mark-up on the \$1,000,000 allocation for hardware and software, must not exceed \$10,550,000.00 CAD GST/HST/QST excluded, FOB Destination (for goods), all applicable customs duty and excise taxes included.
- (e) The total amount of Goods and Services Tax or Harmonized Sales Tax or Quebec Sales Tax is to be shown separately, if applicable.
- (f) For Canadian-based bidders, prices must be in Canadian funds, Canadian customs duties and excise taxes included, and Goods and Services Tax (GST) or Harmonized Sales Tax (HST) or Quebec Sales Tax (QST) excluded.

For foreign-based bidders, prices must be in Canadian funds, Canadian customs duties and excise taxes and GST or HST or QST excluded. Canadian customs duties and excise taxes payable by Canada will be added, for evaluation purposes only, to the prices submitted by foreign-based bidders.

For the purpose of the bid solicitation, bidders with an address in Canada are considered Canadian-based bidders and bidders with an address outside of Canada are considered foreign-based bidders.

1.1.1 Price Breakdown

Bidders are requested to detail the following elements for each phase of the Basic Requirement of the Work, as applicable:

- (a) Labour : For each individual and (or) labour category to be assigned to the Work, indicate: i) the hourly rate, inclusive of overhead and profit; and ii) the estimated number of hours.

The labour categories are expected to be common between the Basic Requirement and the Optional Services Requirement. The hourly rate, inclusive of overhead and profit, will be used to validate the rates

proposed for the labour categories listed in Attachment 2 FINANCIAL BID PRESENTATION SHEET for the Optional Services Requirement.

- (b) Equipment : Specify each item required to complete the Work and provide the pricing basis of each one, Canadian customs duty and excise taxes included, as applicable. These items will be deliverable to Canada upon completion of the contract.
- (c) Materials and Supplies : Identify each category of materials and supplies required to complete the Work and provide the pricing basis.
- (d) Travel and Living Expenses : Indicate the number of trips and the number of days for each trip, the cost , destination and purpose of each journey, together with the basis of these costs.
- (e) Subcontracts : Identify any proposed subcontractor and provide for each one the same price breakdown information as contained in this article.
- (f) Other Direct Charges : Identify any other direct charges anticipated, such as long distance communications and rentals, and provide the pricing basis .
- (g) GST/HST/QST : Identify any applicable GST or HST or QST separately.

ATTACHMENT 3**EVALUATION OF PRICE**

For evaluation purposes only, the price of the bid will be determined as follows:

1. **BASIC REQUIREMENT:** The firm all inclusive price for the Basic Requirement as detailed in Table 1 of Attachment 2, Financial Bid Presentation Sheet.

\$_____ (GST/HST/QST extra)

2. **LABOUR COMPONENT:** The firm all inclusive hourly rate will be multiplied by a factor of 8 (8 hours in a working day) against corresponding level of effort as detailed in Table 2 of Attachment 2, Financial Bid Presentation Sheet for each resource category. The sum across all labour categories and days in Table 2 will form the total estimated price for labour for evaluation purposes.

\$_____ (GST/HST/QST extra)

Note: The estimated level of effort specified is only an approximation of requirements given in good faith and is provided for financial bid evaluation purposes only. It does not represent a commitment by Canada.

3. **MARK-UP ON HARDWARE AND SOFTWARE COMPONENTS PROCURED UNDER THE OPTIONAL SERVICES REQUIREMENT:** Mark - up on laid down costs of Hardware and Software Components as provided by 2.2 Hardware and Software in Annex C Basis of Payment.

TOTAL ESTIMATED COST OF HARDWARE AND SOFTWARE COMPONENTS PROCURED UNDER THE OPTIONAL SERVICES REQUIREMENT INCLUDING MARK-UP FOR EVALUATION PURPOSES:

\$ 1,000,000.00(GST/HST/QST extra) * (1 + proposed Mark-up) = \$_____ (GST/HST/QST extra)"

BID PRICE: TOTAL ESTIMATED COST FOR EVALUATION PURPOSES:
(Calculated as the sum of Items 1, 2 and 3 above) \$_____ (GST/HST extra)

The estimated level of effort specified is only an approximation of requirements given in good faith and is provided for financial bid evaluation purposes only. It does not represent a commitment by Canada.

PRICING SCORE

The Pricing score will be determined based on a proportional formula relative to the lowest Bid Price, **to a maximum of 20 points for the lowest Bid Price**, as follows:

$$\text{Points for Price} = 20 \times \frac{\text{Lowest Bid Price of all compliant bidders}}{\text{Bid Price of the Proposal Being Evaluated}}$$

Examples:

Bid Price	Calculation	Price Points
\$8M (lowest Bid Price)	20 X 8/8	20 pts
\$9M	20 X 8/9	17.7 pts
\$9.5M	20 X 8/9.5	16.9 pts
\$10M (highest Bid Price)	20 X 8/10	16 pts

ATTACHMENT 6**CERTIFICATIONS REQUIRED WITH THE BID****1. Canadian Content Certification**

This procurement is conditionally limited to Canadian services.

Subject to the evaluation procedures contained in the bid solicitation, bidders acknowledge that only bids with a certification that the service offered is a Canadian service, as defined in clause A3050T, may be considered.

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

The Bidder certifies that:

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

1.1 SACC Manual clause A3050T (2010-01-11), Canadian Content Definition**2. Certification of Summary of Corporate Experience Presentation Sheets**

This procurement includes an evaluation of demonstration of successful client acceptance of previously completed projects.

The Bidder certifies that:

() all projects included for the purpose of evaluating past project experience through completion of Summary of Corporate Experience Presentation Sheets, have been successfully completed as evidenced by client acceptance of project deliverables.