



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Réception des soumissions - TPSGC / Bid
Receiving - PWGSC
1550, Avenue d'Estimauville
1550, D'Estimauville Avenue
Québec
Québec
G1J 0C7

REQUEST FOR PROPOSAL DEMANDE DE PROPOSITION

Proposal To: Public Works and Government Services Canada

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

Proposition aux: Travaux Publics et Services Gouvernementaux Canada

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

Comments - Commentaires

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

Issuing Office - Bureau de distribution
TPSGC/PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

Title - Sujet Dev of Characterization Methodology	
Solicitation No. - N° de l'invitation W7701-176214/A	Date 2017-06-01
Client Reference No. - N° de référence du client W7701-176214	
GETS Reference No. - N° de référence de SEAG PW-\$QCL-029-17126	
File No. - N° de dossier QCL-6-39128 (029)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2017-06-27	Time Zone Fuseau horaire Heure Avancée de l'Est HAE
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Champoux, Nicolas	Buyer Id - Id de l'acheteur qcl029
Telephone No. - N° de téléphone (418) 649-2821 ()	FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: RDDC-R ET Défense Canada Valcartier DRDC-Défense R & D Canada Valcartie BATISSE 53 2459 ROUTE DE LA BRAVOURE QUEBEC Québec G3J 1X5 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

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

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TITLE : DEVELOPMENT OF CHARACTERIZATION METHODOLOGY FOR ELECTRO-OPTICAL SYSTEMS

PART 1 - GENERAL INFORMATION

1. Introduction

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

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

The Annexes include the Statement of Work, the Basis of Payment, the Contractor Disclosure of Foreground Information form, the Security Requirements Checklist, DND 626 Task Authorization Form, and the Point Rated Technical Evaluation Criteria – Support Resources.

2. Summary

2.1 Background / History

The Canadian Forces (CF) must regularly select equipment to support operations. Sensors are an integral part of the electro-optical systems used to detect and locate threats. One of Defence Research and Development Canada (DRDC)'s mandates is to support the CF in its electro-optical system acquisition process by technically translating their operational needs, evaluating the performance of sensors currently in use, evaluating the potential of sensors from emerging technologies, analyzing options and issuing recommendations.

Sensor performance is evaluated in the following four ways, depending on time and objectives:

1. Laboratory characterization of basic sensor parameters via quantitative measurements;
2. Exterior testing to emulate sensor performance in conditions similar to those encountered in operation (e.g. low light, natural spectral content, difficult environment, etc.);
3. Sensor performance modelling; and
4. Laboratory application of comparative evaluation methods to measure performances similar to those encountered in operation.

The last method is included in activities that aim to develop new methodologies for performance characterization representative of those encountered in an operational environment.

Another DRDC mandate is to find methods for improving vision system performance. This field includes the development of image processing algorithms that modify the local dynamic or contrast mapping, or that compress images to make them easier to transmit on a network. The performance of the algorithms developed is then evaluated using processing and image analysis software.

2.2 Objective

The objective of this Statement of Work is the provision of scientific and engineering services to:

1. Develop new characterization methods to more accurately evaluate performance in operating environments of electro-optical systems covering spectral bands from ultraviolet (UV) to infrared and including image intensifier systems (I2); and
2. Develop image processing algorithms to improve the performance of vision systems and measure their impact on image quality.

The work must be carried out on-site at DRDC Valcartier Research Centre.

2.3 Scope of Work (Tasks)

Tasks 3.1 through 3.4 focus on test method development and improvement. Tasks 3.5 through 3.9 support the design of computer tools and assemblies for the measurement, analysis and improvement of images

- 3.1 Development of test methods for image intensifier tubes in order to more accurately evaluate performance in an operational environment
- 3.2 Development of test methods for infrared sensors (0.9 μm to 15 μm) or their components in order to more accurately evaluate performance in an operational environment
- 3.3 Development of test methods for digital vision systems or their components in order to more accurately evaluate performance in an operational environment
- 3.4. Development of test methods for characterizing the performance of optical components
- 3.5 Optical design services
- 3.6 Opto-mechanical design and manufacturing services
- 3.7 Software development for data analysis
- 3.8 Development of image-processing algorithms
- 3.9 Electronics support services

2.4 Additional Information

The organization for which the services are to be rendered is Defence Research and Development Canada - Valcartier (DRDC - Valcartier).

The Contract Period is five (5) years from the date of award of the Contract.

The work will be carried out entirely on an "as and when requested basis" using a Task Authorization (TA).

A contract with Task Authorizations (TAs) is a method of supply for services under which all of the work or a portion of the work will be performed on an "as and when requested basis". Under contracts with TAs, the work to be carried out can be defined but the exact nature and timeframes of the required services, activities and deliverables will only be known as and when the service(s) will be required during the period of the contract. A TA is a structured administrative tool enabling the Crown to authorize work by a contractor on an "as and when requested" basis in accordance with the conditions of the contract. TAs are not individual contracts.

The work must be carried out on-site at DRDC Valcartier Research Centre, located at 2459 de la Bravoure Road, Québec, Qc, G3J 1X5.

The estimated amount of available funding for this Contract is \$3,000,000.00, Applicable Taxes extra.

In accordance with clause "Minimum Work Guarantee - All the Work – Task Authorizations" of the Contract, Canada's obligation under the Contract is limited to 10% of the estimated amount of available funding specified above

Defence Research and Development Canada - Valcartier has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada.

There are security requirements associated with this requirement. For additional information, consult Part 6 - Security, Financial and Other Requirements, and Part 7 - Resulting Contract Clauses. For more information on personnel and organization security screening or security clauses, Bidders should refer to the Industrial Security Program (ISP) of Public Works and Government Services Canada (<http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>) website

Bidders must provide a list of names, or other related information as needed, pursuant to section 01 of Standard Instructions 2003

For services requirements, Bidders in receipt of a pension or a lump sum payment must provide the required information as detailed in article 3 of Part 2 of the bid solicitation.

The requirement is limited to Canadian goods and/or services.

This procurement is subject to the Controlled Goods Program.

There is a Federal Contractors Program (FCP) for employment equity requirement associated with this procurement; see Part 5 - Certifications, Part 7 - Resulting Contract Clauses and the attachment named Federal Contractors Program for Employment Equity - Certification.

3. Debriefings

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

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions

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

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

The 2003 (2016-04-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: sixty (60) days

Insert: one hundred and eighty (180) days

1.1 SACC Manual Clauses

A7035T (2007-05-25), List of Proposed Subcontractors

2. Submission of Bids

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

Bid Receiving - PWGSC
1550, D'Estimauville Avenue
Quebec, Quebec
G1J 0C7

Due to the nature of the bid solicitation, bids transmitted by facsimile or email to PWGSC will not be accepted.

3. Former Public Servant

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

Definitions

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

- (i) an individual;
- (ii) an individual who has incorporated;
- (iii) a partnership made of former public servants; or
- (iv) a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

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

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

Former Public Servant in Receipt of a Pension

As per the above definitions, is the Bidder a FPS in receipt of a pension?

Yes ()

No ()

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

- (i) name of former public servant;
- (ii) date of termination of employment or retirement from the Public Service.

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

Work Force Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive?

Yes ()

No ()

If so, the Bidder must provide the following information:

- (i) name of former public servant;
- (ii) conditions of the lump sum payment incentive;
- (iii) date of termination of employment;

- (iv) amount of lump sum payment;
- (v) rate of pay on which lump sum payment is based;
- (vi) period of lump sum payment including start date, end date and number of weeks;
- (vii) number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

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

4. Communications - Solicitation Period

All enquiries must be submitted in writing to the Contracting Authority, preferably via email at nicolas.champoux@tpsgc-pwgscc.gc.ca, no later than five (5) business days before the bid closing date. Enquiries received after that time may not be answered.

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

5. Applicable Laws

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

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

6. Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least five (5) business days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

7. Basis for Canada's Ownership of Intellectual Property

Defence Research and Development Canada has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada on the following grounds:

Solicitation No – N° de l'invitation
W7701-176214/A
Client Ref No. – N° de réf. du client
W7701-176214

Amd. No. – N° de la modif.
File No. – N° du dossier
QCL-6-39128

Buyer ID – id de l'acheteur
qcl 029

-
- **National security;**

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (**five (5)** hard copies)

Section II: Financial Bid (**two (2)** hard copies)

Section III: Certifications and Additional Information (**one (1)** hard copy)

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

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper; and
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, bidders should:

- (1) use paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- (2) use an environmentally-preferable format including black and white printing instead of colour printing, print double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

1.1 Section I: Technical Bid

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

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

1.2 Section II: Financial Bid

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

- (a) **Pricing :**

Key Resources

Bidders must submit a firm all-inclusive hourly rate for each resource proposed, for each year of the contract period.

Each proposed resource for a category must be indicated in the category(ies) for which they are being proposed in Section 1. "Labour" of the Basis of Payment. Only resources proposed in the categories mentioned in the basis of payment will be considered.

If a resource is proposed in more than one category, it must be proposed at the same hourly rate.

Support Ressources

A single hourly rate must be proposed per category, for each year of the contract.

- (b) The information must be provided in accordance with the Basis of Payment in Annex B.
- (c) No travel and living expenses will be paid for services provided within 50 km from DRDC Valcartier facilities. Further, Canada will not accept any travel and living expenses for travel between the contractor's place of business and the DRDC Valcartier facilities. All these cost must be included in the firm all-inclusive hourly rates.
- (d) Prices must be in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

1.2.2 Exchange Rate Fluctuation

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

1.3 Section III: Certifications and Additional Information

1.3.1 Certifications

Bidders must submit the certifications required under Part 5.

1.3.2 Additional Information

- i. Bidders must provide a list of names, or other related information as needed, pursuant to section 01 of Standard Instructions 2003.
- ii. For services requirements, Bidders in receipt of a pension or a lump sum payment must provide the required information as detailed in article 3 of Part 2 of the bid solicitation.
- iii. Canada requests that bidders provide the following information :

Administrative representative :

Name :
Telephone :
Facsimile :
Email :

Technical representative :

Name :
Telephone :
Facsimile :
Email :

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

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

1.1 Technical Evaluation

1.1.1 Bidder Experience

Except where expressly provided otherwise, the experience described in the bid must be the experience of the Bidder itself (which includes the experience of any companies that formed the Bidder by way of a merger but does not include any experience acquired through a purchase of assets or an assignment of contract). The experience of the Bidder's affiliates (i.e. parent, subsidiary or sister corporations), subcontractors, or suppliers will not be considered.

1.1.2 Mandatory and Point Rated Technical Evaluation

Mandatory and Point Rated Technical Evaluation Criteria are included in Attachment 1.

1.2 Financial Evaluation

1.2.1 Evaluation of Price

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, Canadian customs duties and excise taxes included. For evaluation purposes only, the price of the bid will be determined as detailed in Attachment 2, Evaluation of Price.

2. Basis of Selection

2.1 Basis of Selection - Highest Combined Rating of Technical Merit and Price

- 1. To be declared responsive, a bid must:
 - (a) comply with all the requirements of the bid solicitation;
 - (b) meet all mandatory criteria;
 - (c) obtain the required minimum of points for the point-rated technical evaluation criteria 5.1 to 5.9; and
 - (d) obtain the required minimum of points overall for the point-rated technical evaluation criteria at item 6.
- 2. Bids not meeting (a) or (b) or (c) or (d) will be declared non-responsive.
- 3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 70 % for the technical merit and 30 % for the price.

4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 70 %.
5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 30%.
6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates **an example** where all three bids are responsive and the selection of the contractor is determined by a 70/30 ratio of technical merit and price, respectively. The total available points equals 103 and the lowest evaluated price is \$45,000 (45).

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

	Bidder		
	Bidder 1	Bidder 2	Bidder 3
Overall Technical Score	90/103	70/103	85/103
Bid Evaluated Price	\$55,000.00	\$50,000.00	\$45,000.00
	Calculations		
Technical Merit Score	$90/103 \times 70 = 61.17$	$70/103 \times 70 = 47.57$	$85/103 \times 70 = 57.77$
Pricing Score	$45,000/55,000 \times 30 = 24.55$	$45,000/50,000 \times 30 = 27$	$45,000/45,000 \times 30 = 30$
Combined Rating	85.72	74.57	87.77
Overall Rating	2nd	3rd	1st

PART 5 - CERTIFICATIONS

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

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

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

1. Certifications Required with the Bid

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

1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

2. Certifications Precedent to Contract Award and Additional Information

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

2.1 Integrity Provisions – Required Documentation

In accordance with the *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Employment and Social Development Canada (ESDC) - Labour's website.

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

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

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

2.3 Additional Certifications Precedent to Contract Award

2.3.1 Canadian Content Certification

This procurement is limited to Canadian services.

The Bidder certifies that:

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

2.3.1.1 SACC Manual clause A3050T (2014-11-27) Canadian Content Definition.

2.3.2 Status and Availability of Resources

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

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

2.3.3 Education and Experience

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

2.3.4 Language Capability

The Bidder certifies that it has the language capability required to perform the Work, as stipulated in the Statement of Work.

PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

1. Security Requirement

1. Before award of a contract, the following conditions must be met:

- (a) the Bidder must hold a valid organization security clearance as indicated in Part 7 - Resulting Contract Clauses;
- (b) the Bidder's proposed individuals requiring access to classified or protected information, assets or sensitive work site(s) must meet the security requirement as indicated in Part 7 - Resulting Contract Clauses;

Before the award of a Contract, the bidder must meet the following minimum security requirements:

At least one of the proposed resources in each category must hold a valid personnel security screening at the level of **SECRET**, granted or approved by CISD/PWGSC.

- (c) the Bidder must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites;
 - (d) the Bidder's proposed location of work performance or document safeguarding must meet the security requirement as indicated in Part 7 - Resulting Contract Clauses;
 - (e) the Bidder must provide the address(es) of proposed location(s) of work performance or document safeguarding.
2. Bidders are reminded to obtain the required security clearance promptly. Any delay in the award of a contract to allow the successful bidder to obtain the required clearance will be at the entire discretion of the Contracting Authority.
3. For additional information on security requirements, bidders should consult the "Security Requirements for PWGSC Bid Solicitations - Instructions for Bidders" (<http://www.tpsgc-pwgsc.gc.ca/app-acq/lc-pl/lc-pl-eng.html#a31>) document on the Departmental Standard Procurement Documents website.

2. Financial Capability

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

3. Controlled Goods Requirement

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

PART 7 - RESULTING CONTRACT CLAUSES

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

1. Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex A and the Contractor's technical bid entitled _____, dated _____.

1.1 Task Authorization

The Work to be performed under the Contract will be on an "as and when requested basis" using a Task Authorization (TA). The Work described in the TA must be in accordance with the scope of the Contract.

1.1.1 Task Authorization Process

1.1.1.1 Description of Task Authorization (TA) tasks

Canada will provide the Contractor with a description of tasks.

The description of TA tasks will include information on activities to be performed, a description of the deliverables and a schedule indicating completion dates for the major activities or submission dates for the deliverables. It will also include the applicable bases and methods of payment as specified in the Contract.

More specifically, the description of TA tasks will include the following information:

- (a) the task number;
- (b) a detailed Statement of Work (SOW) for the task, outlining the activities to be performed and the deliverables (such as reports) to be submitted;
- (c) the required start and completion dates (if any);
- (d) a schedule of milestone completion dates for major work activities, deliverables and payments;
- (e) whether the work performance will require on-site activities at a given location;
- (f) the work site;
- (g) the level of security clearance required of the Contractor's personnel;

Where applicable, the description of TA tasks must also include the following:

- (a) a description of any travel requirements including the content and format of any required travel report;
- (b) the language profile required of the Contractor's personnel;
- (c) categories of key resources;
- (d) any other constraints that might affect task completion.

1.1.1.2 Contractor's TA proposal

Within **ten (10) business days** of receipt of the description of TA tasks, the Contractor must provide Canada with the proposed total estimated cost for performing the tasks and a breakdown of that cost, established in accordance with Annex B – Basis of Payment of the resulting Contract. The Contractor must submit a quote, identifying its proposed resources and detailing the cost and time to complete the task(s).

The proposal will be valid for **at least twenty (20) business days** from the date on which the offer was received. The Contractor will not be paid for preparing or submitting the quote or for providing other information required to prepare and issue the TA. The Contractor must provide all information requested and related to preparation of the TA, within five business days of the request by Canada.

When directed by Canada, the Contractor must also provide a technical proposal including, if applicable, the following:

- (a) a description of the understanding of the objectives and the scope of work;
- (b) a description of the approach and methodology that will be used to perform the work;
- (c) a description of the expected deliverables;
- (d) an estimate of the expected degree of success;
- (e) proposed deviations from the requirements;
- (f) identification of the major risks and a risk mitigation plan;
- (g) a comprehensive work schedule and prioritization of activities to be performed.

1.1.1.3 Approval of the Task Authorization

The Contractor must not begin the work until the approved TA has been received by Canada. The Contractor acknowledges that any work performed before the TA has been received will be done at the Contractor's own risk.

The work will be approved or confirmed by Canada through a Task Authorization Form – DND 626 in Annex E.

1.1.2 Task Authorization Limit

The DND Procurement Authority may authorize individual task authorizations up to a limit of **\$125,000.00**, Applicable Taxes included, inclusive of any revisions.

Any task authorization to be issued in excess of these limits must be authorized by the Contracting Authority before issuance

1.1.3 Minimum Work Guarantee - All the Work - Task Authorizations

1. In this clause,

"Maximum Contract Value" means the amount specified in the "Limitation of Expenditure" clause set out in the Contract; and

"Minimum Contract Value" means 10%.

2. Canada's obligation under the Contract is to request Work in the amount of the Minimum Contract Value or, at Canada's option, to pay the Contractor at the end of the Contract in accordance with paragraph 3. In consideration of such obligation, the Contractor agrees to stand in readiness throughout the Contract period to perform the Work described in the Contract. Canada's maximum liability for work performed under the Contract must not exceed the Maximum Contract Value, unless an increase is authorized in writing by the Contracting Authority.

3. In the event that Canada does not request work in the amount of the Minimum Contract Value during the period of the Contract, Canada must pay the Contractor the difference between the Minimum Contract Value and the total cost of the Work requested.
4. Canada will have no obligation to the Contractor under this clause if Canada terminates the Contract in whole or in part for default.

1.1.4 Task Authorization - Department of National Defence

The administration of the Task Authorization process will be carried out by The Procurement and Payment group at Defence Research and Development Canada – Valcartier Research Center, represented by the DND Procurement Authority. This process includes monitoring, controlling and reporting on expenditures of the contract with task authorizations to the Contracting Authority.

1.2 Disclosure Certification

On completion of the Work, the Contractor must submit to the Technical Authority and to the Contracting Authority a copy of the Contractor Disclosure of Foreground Information attached as Annex C stating that all applicable disclosures were submitted.

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.

2.1 General Conditions

2040 (2016-04-04), General Conditions - Research & Development, apply to and form part of the Contract.

2.2 Supplemental General Conditions

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

2.3 SACC Manual Clauses

K3410C (2015-02-25), Canada to Own Intellectual Property Rights in Foreground Information
K3305C (2008-05-12), License to Intellectual Property Rights in Foreground Information

3. Security Requirement

- 3.1 The following security requirement (SRCL and related clauses) applies and form part of the Contract.

SECURITY REQUIREMENT FOR CANADIAN SUPPLIER: PWGSC FILE: W7701-176214

1. The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer, hold a valid **Facility Security Clearance** at the level of **SECRET**, issued by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC).

2. The Contractor/Offeror personnel requiring access to **CLASSIFIED or PROTECTED** information, assets or sensitive work site(s) must **EACH** hold a valid personnel security screening at the level of **SECRET**, granted or approved by CISD/PWGSC.
3. This contract includes access to Controlled Goods. Prior to access, the contractor must be registered in the Controlled Goods Program of Public Works and Government Services Canada (PWGSC).
4. The Contractor/Offeror **MUST NOT** remove any **CLASSIFIED or PROTECTED** information from the identified work site(s), and the Contractor/Offeror must ensure that its personnel are made aware of and comply with this restriction.
5. Subcontracts which contain security requirements are **NOT** to be awarded without the prior written permission of CISD/PWGSC.
6. The Contractor/Offeror must comply with the provisions of the:
 - (a) Security Requirements Check List and security guide (if applicable), attached at Annex D:
 - (b) *Industrial Security Manual* (Latest Edition).

3.2 Visit Clearance Requests for Employees

As soon as the contract is awarded, the supplier will be required to obtain, without delay, visit clearance from ISS for each of its employees assigned to the contract.

A minimum lead time of 25 working days is required to obtain a visit clearance from ISS.

Without visit clearance, the supplier's employees will not have access to DRDC facilities, leaving the supplier liable for delays in delivery.

Suppliers can consult the ISS Web site on visit clearances at: <http://iss-ssi.pwgsc-tpsgc.gc.ca/msi-ism/index-eng.html> , chapter 6.

4. Term of Contract

4.1 Period of Contract

The Contract Period is five (5) years from the date of award of the Contract.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Nicolas Champoux
Supply Officer
Public Works and Government Services Canada
Acquisitions Branch
1550, D'Estimauville Avenue

Québec (Québec) G1J 0C7

Telephone: (418) 649-2821
Facsimile: (418) 648-2209
E-mail: nicolas.champoux@pwgsc-tpsgc.gc.ca

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

5.2 Technical Authority

The Technical Authority for the Contract is:

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

Telephone: _____
Facsimile: _____
E-mail address: _____

The Technical Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the 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.

5.3 Contractor's Representative

Administrative representative :

Name : _____
Telephone : _____
Facsimile : _____
Email : _____

Technical representative :

Name : _____
Telephone : _____
Facsimile : _____
Email : _____

5.4 DND Procurement Authority

The Procurement Authority for the Contract is:

_____ (Name of Procurement Authority)
_____ (Title)
_____ (Organization)
_____ (Address)

Telephone: _____
Facsimile: _____

E-mail: _____.

The DND Procurement Authority is the representative of the department or agency for whom the Work is being carried out under the Contract. The DND Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Contract. The Contractor may discuss administrative matters identified in the Contract with the DND Procurement Authority however the DND Procurement Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of Work can only be made through a contract amendment issued by the Contracting Authority.

6. Proactive Disclosure of Contracts with Former Public Servants

SACC Manual Clause A3025C (2013-03-21)

7. Payment

7.1 Basis of Payment

(i) For the Work provided under a Task Authorization subject to a Firm Price:

In consideration of the Contractor satisfactorily completing all of its obligations under the authorized Task Authorization (TA), the Contractor will be paid a firm price in accordance with the basis of payment, in Annex B, as specified in the authorized TA. Customs duties are included and Applicable Taxes are extra.

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

(ii) For the Work provided under a Task Authorization subject to a Ceiling Price:

The Contractor will be reimbursed its costs reasonably and properly incurred in the performance of the Work, plus a profit, as determined in accordance with the Basis of Payment in Annex B, to the ceiling price specified in the approved TA. Customs duties are included and Applicable Taxes are extra.

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

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

Ceiling price: A ceiling price is the maximum amount of money that may be paid to a contractor. By establishing a ceiling price, the contractor must fulfill all of its contractual obligations relative to the work to which this basis of payment applies without additional payment whether or not the actual costs incurred exceed the ceiling price.

(iii) For the Work provided under a Task Authorization subject to a Limitation of Expenditure:

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work specified in the authorized Task Authorization (TA), as determined in accordance with the Basis of Payment in Annex B, to the limitation of expenditure specified in the authorized TA.

Canada's liability to the Contractor under the authorized TA must not exceed the limitation of expenditure specified in the authorized TA. Customs duties are included and Applicable Taxes are extra.

No increase in the liability of Canada or in the price of the Work specified in the authorized TA resulting from any design changes, modifications or interpretations of the Work will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been authorized, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's liability to the Contractor under the authorized TA being exceeded before obtaining the written approval of the Contracting Authority.

(iv) Travel and Living Expenses:

There will be no travel time or travel and living expenses payable for services rendered within 50 kilometres from Defence Research and Development Canada - Valcartier, located at 2459 de la Bravoure Road, Quebec, Quebec, G3J 1X5. For services rendered further than 50 kilometres from Defence Research and Development Canada - Valcartier, the Contractor will be paid its actual travel time in accordance with the hourly rates detailed in Annex B, Basis of Payment.

The Contractor will be reimbursed for the authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for overhead or profit, in accordance with the meal, private vehicle and incidental expense allowances specified in Appendices B, C and D of the *National Joint Council Directive*, and with the other provisions of the directive referring to "travellers", rather than those referring to "employees".

All travel must have the prior authorization of the Technical Authority.

7.2 Limitation of Expenditure - Cumulative Total of all Task Authorizations

1. Canada's total liability to the Contractor under the Contract for all authorized Task Authorizations (TAs), inclusive of any revisions, must not exceed the sum of **\$3,000,000.00**. Customs duties are included and Applicable Taxes are extra.
2. No increase in the total liability of Canada will be authorized or paid to the Contractor unless an increase has been approved, in writing, by the Contracting Authority.
3. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:
 - (a) when it is 75 percent committed, or
 - (b) four (4) months before the contract expiry date, or
 - (c) as soon as the Contractor considers that the sum is inadequate for the completion of the Work required in all authorized TAs, inclusive of any revisions,

whichever comes first.

4. If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority, a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

7.3 Method of Payment

7.3.1 Payments will be made not more frequently than once a month.

7.3.2 Depending on the method of payment specified in the applicable TA, one of the following methods of payment clauses will apply.

7.3.2.1 Single Payment (For a Firm Price TA, for a TA subject to a Limitation of Expenditure or a Ceiling Price)

Canada will pay the Contractor upon completion and delivery of the Work associated with the Task Authorization in accordance with the payment provisions of the Contract if:

- (a) an accurate and complete claim for payment using PWGSC-TPSGC 1111, Claim for Progress Payment, and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- (b) all such documents have been verified by Canada;
- (c) the Work delivered has been accepted by Canada.

7.3.2.2 Milestone Payments (For a Firm Price TA)

For any task authorization issued under the Contract that includes a schedule of milestone payments to be made once specific portions of the work have been completed and accepted, Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Task Authorization and the payment provisions of the Contract if:

- (a) an accurate and complete claim for milestone payment using PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- (b) all the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives;
- (c) all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.

7.3.2.3 Progress Payments (For a TA subject to a Limitation of Expenditure or a Ceiling Price)

- (a) Canada will make progress payments in accordance with the payment provisions of the Task Authorization and the Contract, no more than

once a month, for costs incurred in the performance of the Work up to 90 percent of the amount claimed and approved by Canada if:

- (i) an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
 - (ii) the amount claimed is in accordance with the Basis of Payment and the Task Authorization;
 - (iii) the total amount for all progress payments paid by Canada does not exceed 90 percent of the total amount to be paid under the Task Authorization.
 - (iv) all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.
- (b) The balance of the amount payable will be paid in accordance with the payment provisions of the Task Authorization and the Contract upon completion and delivery of all work required under the Task Authorization if the Work has been accepted by Canada and a final claim for the payment is submitted.
- (c) Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the right to make adjustments to the Contract from time to time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

7.4 SACC Manual Clauses

A9117C (2007-11-30), T1204 - Direct Request by Customer Department
C0305C (2008-05-12), Cost Submission

7.5 Discretionary Audit

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

8. Invoicing Instructions

1. The Contractor must submit a claim for payment using form PWGSC-TPSGC 1111. Form PWGSC-TPSGC 1111 is available at the following Website <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>

Each claim must show:

- (a) all information required on form PWGSC-TPSGC 1111;
- (b) all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;
- (c) the Task Authorization (TA) number;
- (d) the description of the milestone invoiced, as applicable.

2. For TAs subject to a Limitation of Expenditure or a Ceiling Price, each invoice must be supported by :
 - (a) a list of all expenses, in accordance with the TA;
 - (b) a copy of time sheets to support the time claimed;
 - (c) a copy of the invoices, receipts, vouchers for all direct expenses, travel and living expenses;
 - (d) a copy of the monthly progress report.
3. Applicable Taxes must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no Applicable Taxes payable as it was claimed and payable under the previous claims for progress payments.
4. The Contractor must prepare and certify one original and two (2) copies of the claim on form PWGSC-TPSGC 1111, and forward it to the Contracting Authority for certification.

ATTN: _____
Public Works and Government Services Canada
601-1550 D'Estimauville
Québec, QC.
G1J 0C7

The Contracting Authority will then forward the original and two (2) copies of the claim to the Technical Authority for appropriate certification after inspection and acceptance of the Work takes place, and onward submission to the Payment Office for the remaining certification and payment.

5. The Contractor must not submit claims until all work identified in the claim is completed.

9. Certifications

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.

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

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

9.3 SACC Manual Clauses

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

10. Applicable Laws

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

11. Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the supplemental General Conditions 4002 (2010-08-16), Software Development or Modification Services;
- (c) the general conditions 2040 (2016-04-04), General Conditions - Research & Development;
- (d) Annex A, Statement of Work;
- (e) Annex B, Basis of Payment;
- (f) Annex C, Contractor Disclosure of Foreground Information (*if applicable*);
- (g) Annex D, Security Requirements Check List;
- (h) Annex E, DND 626, Task Authorization Form;
- (i) Annex F, Point Rated Technical Evaluation Criteria – Support Resources;
- (j) the signed Task Authorizations (including all of its annexes, if any);
- (k) the Contractor's bid dated _____.

12. Defence Contract

SACC Manual clause A9006C (2012-07-16), Defence Contract

13. Foreign Nationals (Canadian Contractor)

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

14. Insurance

SACC Manual clause G1005C (2016-01-28), Insurance

15. Controlled Goods Program

- 15.1 SACC Manual clause A9131C (2014-11-27), Controlled Goods Program
- 15.2 SACC Manual clause B4060C (2011-05-16), Controlled Goods

16. Progress Reports

- 1. The Contractor must submit monthly reports, in electronic format, on the progress of the Work, to both the Technical Authority and the Contracting Authority.
- 2. The progress report must contain two parts:
 - (a) PART 1: The Contractor must answer the following three questions:
 - (i) Is the project on schedule?
 - (ii) Is the project within budget?

- (iii) Is the project free of any areas of concern in which the assistance or guidance of Canada may be required?

Each negative response must be supported with an explanation.

- (b) PART 2: A narrative report, brief, yet sufficiently detailed to enable the Technical Authority to evaluate the progress of the Work, containing as a minimum:
- (i) A description of the progress of each task and of the Work as a whole during the period of the report. Sufficient sketches, diagrams, photographs, etc., must be included, if necessary, to describe the progress accomplished.
 - (ii) An explanation of any variation from the work plan.
 - (iii) A description of trips or conferences connected with the Contract during the period of the report.
 - (iv) A description of any major equipment purchased or constructed during the period of the report.

17. Canadian Forces Site Regulations

The Contractor must comply with all standing orders or other regulations, instructions and directives in force on the site where the Work is performed.

18. Identification Badge

SACC Manual clause A9065C (2006-06-16), Identification Badge

Solicitation No – N° de l'invitation
W7701-176214/A
Client Ref No. – N° de réf. du client
W7701-176214

Amd. No. – N° de la modif.
File No. – N° du dossier
QCL-6-39128

Buyer ID – id de l'acheteur
qcl 029

ATTACHMENT 1

MANDATORY AND POINT RATED TECHNICAL CRITERIA

See document attached

ATTACHMENT 2

EVALUATION OF PRICE

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

1 - Financial Bid

Bidders must submit their financial bid in accordance with **Annex B, Basis of Payment**.

2 - Calculation of bid price

The bid price will be calculated as follows:

Bid price = Cost of labour

The Total Bid Price will be calculated as set out in section 3 below

The Bid Price will be evaluated on the basis of the following estimated level of effort:

Task		Level of Effort
3,1	Development of test methods for image intensifier tubes in order to more accurately evaluate performance in an operational environment.	8%
3,2	Development of test methods for image intensifier tubes in order to more accurately evaluate performance in an operational environment.	12%
3,3	Development of test methods for digital vision systems or their components in order to more accurately evaluate performance in an operational environment.	4%
3,4	Development of test methods for characterizing the performance of optical components.	8%
3,5	Optical design services.	12%
3,6	Opto-mechanical design and manufacturing services.	8%
3,7	Software development for data analysis.	12%
3,8	Development of image-processing algorithms.	12%
3,9	Electronics support services.	4%
Global effort of support resources		20%

3 - Cost of labour:

To establish labour costs, the effort available in terms of hours (see last column in Table 4.1, below) must be determined. The effort available for each tasks will be calculated as follows:

$$\text{Effort available} = \frac{[\text{Total anticipated available funding}] \times [\text{Approximate level of effort}]}{[\text{Average hourly rate for the resource related to the level of effort}]}$$

The cost of labour for a given task (for a given bid) is then obtained by multiplying the effort available by the average hourly rate provided for the given task (for a given bid).

Lastly, the cost of labour is calculated by adding the labour costs per category for a given task.

For example:

- Anticipated funding for the work = \$3,000,000.00
- Percentage of use for task 3.1 = 8%
- If the average hourly rate for bid A = \$120, and that for bid B = \$80, then the average hourly rate for task 3.1 = \$100.00.

Therefore,

- Effort available $\$3,000,000.00 \times 0.8 / \$100.00 = 2400$ hours

and

- Labour costs for resource related to task 3.1, bid a
=2400 hours x \$120 = \$288,000.00.
- Labour costs for resource related to task 3.1, bid b
=2400 hours x \$80 = \$192,000.00.

4 - Sample calculations for the price of the two bids

Table 4.1 - Sample calculations for the two bids

Task no	Level of Effort	Rate A	Price for A	Rate B	Price for B	Qty
3,1	8%	\$120	288 000,00 \$	\$80	192 000,00 \$	2400
3,2	12%	\$120	432 000,00 \$	\$80	288 000,00 \$	3600
3,3	4%	\$120	144 000.00 \$	\$80	96 000,00 \$	1200
3,4	8%	\$120	288 000,00 \$	\$80	192 000,00 \$	2400
3,5	12%	\$120	432 000,00 \$	\$80	288 000,00 \$	3600
3,6	8%	\$120	288 000,00 \$	\$80	192 000,00 \$	2400
3,7	12%	\$120	432 000,00 \$	\$80	288 000,00 \$	3600
3,8	12%	\$120	432 000,00 \$	\$80	288 000,00 \$	3600
3,9	4%	\$120	144 000.00 \$	\$80	96 000,00 \$	1200
Support Ressources	20%	\$90	635 310,00 \$	\$80	2 484 720,00 \$	7059
TOTAL :			3 515 310.00 \$		4 726 100,00 \$	

The "level of Effort" listed in the table are provided solely for the purpose of determining the estimated price for each bid. They represent approximate needs, provided in good faith, and should not be considered as a contractual guarantee.

These rates are provided as an example only and must not be interpreted as an indicator of the experience of the labour categories.

ATTACHMENT 3

FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY – CERTIFICATION

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

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

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

Complete both A and B.

A. Check only one of the following:

- ☐ A1. The Bidder certifies having no work force in Canada.
- ☐ A2. The Bidder certifies being a public sector employer.
- ☐ A3. The Bidder certifies being a federally regulated employer being subject to the Employment Equity Act.
- ☐ A4. The Bidder certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).

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

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

OR

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

B. Check only one of the following:

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

OR

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

ANNEX A

STATEMENT OF WORK

1. General

1.1 Title

Development of Characterization Methodology for Electro-Optical Systems

1.2 Background / History

The Canadian Forces (CF) must regularly select equipment to support operations. Sensors are an integral part of the electro-optical systems used to detect and locate threats. One of Defence Research and Development Canada (DRDC)'s mandates is to support the CF in its electro-optical system acquisition process by technically translating their operational needs, evaluating the performance of sensors currently in use, evaluating the potential of sensors from emerging technologies, analyzing options and issuing recommendations.

Sensor performance is evaluated in the following four ways, depending on time and objectives:

1. Laboratory characterization of basic sensor parameters via quantitative measurements;
 2. Exterior testing to emulate sensor performance in conditions similar to those encountered in operation (e.g. low light, natural spectral content, difficult environment, etc.);
 3. Sensor performance modelling; and
 4. Laboratory application of comparative evaluation methods to measure performances similar to those encountered in operation.
- The last method is included in activities that aim to develop new methodologies for performance characterization representative of those encountered in an operational environment.

Another DRDC mandate is to find methods for improving vision system performance. This field includes the development of image processing algorithms that modify the local dynamic or contrast mapping, or that compress images to make them easier to transmit on a network. The performance of the algorithms developed is then evaluated using processing and image analysis software.

1.3 Objective

The objective of this Statement of Work is the provision of scientific and engineering services to:

1. Develop new characterization methods to more accurately evaluate performance in operating environments of electro-optical systems covering spectral bands from ultraviolet (UV) to infrared and including image intensifier systems (I2); and
2. Develop image processing algorithms to improve the performance of vision systems and measure their impact on image quality.

The work must be carried out on-site at DRDC Valcartier Research Centre.

1.4 Acronyms

AGC	Automatic gain control
CAD	Computer-aided design
CCD	Charge-coupled device
CMOS	Complementary metal-oxide semiconductor
DRDC	Defence Research and Development Canada
EBCMOS	Electron-bombarded CMOS
EMCCD	Electron-multiplying CCD
EO	Electro-optical
FC	Canadian Forces
FPGA	Filed Programmable Gate Array
I2	Image intensifier
PRM	Progress Review Meeting
UV	Ultraviolet
µm	Micrometre

2. APPLICABLE DOCUMENTS (references)

N/A

3. SCOPE OF WORK

Tasks 3.1 through 3.4 focus on test method development and improvement. Tasks 3.5 through 3.9 support the design of computer tools and assemblies for the measurement, analysis and improvement of images

3.1 Development of test methods for image intensifier tubes in order to more accurately evaluate performance in an operational environment

The Contractor shall participate in the development of innovative characterization methods to evaluate the performance of image intensifier tubes in an operational environment. The Contractor's role includes:

- a. Reviewing literature;
- b. Developing data measurement and acquisition systems;
- c. Helping to collect and save data;
- d. Participating in data analysis and reduction; and
- e. Participating in conferences and/or workshops on topics associated with electro-optics.

3.2 Development of test methods for infrared sensors (0.9 µm to 15 µm) or their components in order to more accurately evaluate performance in an operational environment

The Contractor shall participate in the development of innovative characterization methods to evaluate performance in an operational environment of infrared sensors (0.9 µm to 15 µm) or their components. The Contractor's role includes:

- a. Reviewing literature;
- b. Developing data measurement and acquisition systems;
- c. Helping to collect and save data;
- d. Participating in data analysis and reduction; and
- e. Participating in conferences and/or workshops on topics associated with electro-optics.

3.3 Development of test methods for digital vision systems or their components in order to more accurately evaluate performance in an operational environment

The Contractor shall participate in the development of innovative characterization methods in order to evaluate the performance in an operational environment of digital vision systems or their components (optical, sensor, electronics, display screen or other). The vision systems concerned include:

- a. Complementary metal-oxide semiconductor (CMOS) sensors;
- b. Charge-coupled device (CCD) sensors;
- c. Electron-bombarded CMOS sensors;
- d. Electron-multiplying CCD (EMCCD) sensors; and
- e. Sensors that function in UV.

The Contractor's role includes:

- a. Reviewing literature;
- b. Developing data measurement and acquisition systems;
- c. Helping to collect and save data;
- d. Participating in data analysis and reduction; and
- e. Participating in conferences and/or workshops on topics associated with electro-optics.

3.4 Development of test methods for characterizing the performance of optical components

The Contractor shall participate in the development of innovative characterization methods to evaluate the performance in an operational environment of optics associated with day/night vision sensors. The Contractor's role includes:

- a. Reviewing literature;
- b. Developing data measurement and acquisition systems;
- c. Helping to collect and save data;
- d. Participating in data analysis and reduction; and
- e. Participating in conferences and/or workshops on topics associated with electro-optics.

3.5 Optical design services

The Contractor shall provide support for optical design activities. The Contractor's role includes:

- a. Designing optical systems with spherical, aspherical, free-form and mirrored lenses using a computer-assisted optical design software program;
- b. Simulating the optical performance of systems, including aspects such as modulation transfer function (MTF), relative illumination, brightness distribution, aberrations and distortion; and
- c. Manufacturing or subcontracting the manufacturing of optical components.

3.6 Opto-mechanical design and manufacturing services

The Contractor shall provide support for opto-mechanical design and manufacturing activities. The Contractor's role includes:

- a. Carrying out opto-mechanical design using a computer-assisted mechanical design software program;
- b. Carrying out thermal analysis studies;
- c. Carrying out stress calculations using the finite element analysis method;
- d. Manufacturing or subcontracting the manufacturing of opto-mechanical components; and
- e. Assembling optical systems.

3.7 Software development for data analysis

The Contractor shall develop software for processing and analyzing data. The Contractor's role includes:

- a. Developing data validation tools for analysts;
- b. Developing data processing and analysis tools;
- c. Developing data classification tools; and
- d. Carrying out data analysis using an artificial intelligence-based approach.

According to needs, software shall be developed in C++, MATLAB or Python in the Windows environment (XP, Win7). A user interface may also be required.

Software shall be developed in versions that are compatible with DRDC versions or using DRDC Valcartier commercial licences.

3.8 Development of image-processing algorithms

The Contractor shall develop image-processing algorithms to improve the performance of vision systems. The Contractor's role includes:

- a. Reviewing literature;
- b. Developing image processing algorithms to improve the performance of vision systems (e.g. AGC, tone mapping, improvement of contrast and brightness, noise suppression, image compression while minimizing the loss of image quality to facilitate network transport, artificial intelligence-based algorithms, etc.);
- c. Implementing the algorithms developed; and
- d. Testing the algorithms developed.

According to needs, software shall be developed in C++, MATLAB or Python in the Windows environment (XP, Win7). A user interface may also be required.

Software shall be developed in versions that are compatible with DRDC versions or using DRDC Valcartier commercial licences.

3.9 Electronics support services

The contractor shall provide electronics support services. The Contractor's role includes:

- a. Designing electronic circuits (analog and digital) using standard commercial software;
- b. Producing designs based on FPGA (field programmable gate array) architectures;
- c. Designing, manufacturing and assembling printed circuit boards according to the layout of the electronic components; and
- d. Obtaining electronic components in order to assemble boards and subcontracting the manufacturing of printed circuit boards if the Contractor does not have the facilities on site.

REPORTS AND OTHER DELIVERABLES

For each task, documents and reports shall be written in English using the Microsoft Office suite. As required, one hard copy and/or one electronic copy on CD or DVD shall be submitted.

4.1 Deliverables for tasks 3.1 to 3.4

Depending on the nature of the work, the deliverables shall be:

- a. A literature review report; or
- b. Raw data in the output format of measurement instruments delivered on a CD or DVD; or
- c. Experimental data processed in a table and/or graph format that can be incorporated into a Microsoft Office suite document; or
- d. CAD source files of the schematic and printed circuit boards in a format compatible with Protel on CD in two copies;
- e. Electronic circuit produced and assembled;
- f. A report on performance evaluation and characterization describing:
 - methodology used;
 - experimental results obtained in table and/or graph format; and
 - a brief data analysis.

4.2 Deliverables for task 3.5

Depending on the nature of the work, the deliverables shall be:

- a. A drawing of the optical design;
- b. Graphs of optical design performance; and
- c. Optical components.

4.3 Deliverables for task 3.6

Depending on the nature of the work, the deliverables shall be:

- a. A CAD drawing of the mechanical design;
- b. A report summarizing the results of the thermal transfer analyses and/or stress calculations;
- c. Opto-mechanical components; and
- d. An assembled optical train.

4.4 Deliverables for task 3.7

Depending on the nature of the work, the deliverables shall be:

- a. A functional software program with the source code; or
- b. Documentation for the functional software program; or
- c. A user manual.

4.5 Deliverables for task 3.8

Depending on the nature of the work, the deliverables shall be:

- a. A literature review report; or
- b. An algorithm with the source code; or
- c. Documentation for the functional software; or
- d. A user manual.

4.6 Deliverables for task 3.9

Depending on the nature of the work, the deliverables shall be:

- a. CAD source files of the schematic and printed circuit boards in a format compatible with Protel on CD in two copies;
- b. Design based on FPGA architectures; or
- c. Electronic circuit produced and assembled.

4.7 Publications

Any manuscript for publication in magazines, newspapers or other, including presentation summaries or other types of publication, shall be submitted to the technical authority for review and approval within at least 90 days prior the presentation or publication date . An explicit reference regarding federal government funding must be included, and it must be clearly mentioned that the content is the authors' responsibility. The technical authority shall provide a written objection if there are specific elements (e.g. audience) that are not in the federal government's best interests. If the technical authority objects in writing, he/she shall send the written objection to the organization responsible for publication (the newspaper or conference).

5. MEETINGS

A preliminary task presentation meeting must be held when a new task authorization is started. The meeting must involve the technical authority and additional technical members as appropriate and Contractor personnel. The meeting objective is to review in detail the objectives of each task authorization.

Other progress meetings may be required during the TA contract period, and will be agreed upon by the DRDC Technical Authority and the Contractor. These meetings will be to discuss progress of the technical work, the schedule compliance and the budget as required by the technical authority.

A final task review meeting will be held upon completion of the project.

These meetings will be held via teleconference, at DRDC or at the Contractor's facilities. The Contractor will be responsible for publishing the minutes of all meetings.

6. GOVERNMENT SUPPLIED MATERIAL (GSM)

6.1 General

Although each task authorization request will contain detailed definitions of government supplied material, the following paragraph provides an incomplete list of material that could be provided.

6.2 List of material

This list is based on commercially unavailable material or material that is difficult to fabricate in a timely or cost-effective manner in order to execute the task authorization issued in response to CF requirements. This list contains:

- a. material available only in CF inventory (all tasks);
- b. material developed by DRDC (all tasks).

7. GOVERNMENT FURNISHED EQUIPMENT (GFE)

7.1 General

Although each task authorization request will contain detailed definitions of government furnished equipment, the following paragraphs provide an incomplete list of equipment that could be provided.

7.2 List of equipment

This list includes equipment parts that are not commercially available or that would be difficult to manufacture in a timely manner or sufficiently cost-effective to perform the task authorization issued to meet a CF need. This list contains:

- a. equipment available only in CF inventory (all tasks);
- b. Specialized equipment (e.g. night vision goggles) (all tasks).

8. RESOURCE TEAM

The Contractor shall provide or have access to a team of qualified, competent and experienced resources that have complementary expertise that may be adapted to the various needs set out in each task, be they resources in the Contractor's firm or resources obtained through subcontractors. The team includes key resources and support resources.

8.1 Key Resources

Key resources are identified in the contract (Appendix B – Basis of Payment) and have been evaluated according to the mandatory and point-rated technical criteria of the Request for Proposal. These resources must be proposed in the Contractor's original bid in reply to the Request for Proposal.

The role of the key resources is to:

- a. Help carry out tasks as specialists;
- b. Be involved as key resources responsible for most of the work (more than 80% of the time) involved in the task;
- c. Attend project meetings with the scientific authority;
- d. Propose solutions; and
- e. Act as project manager and manage a group of resources made up of technicians, engineers and/or physicists.

8.2 Support Resources

Support resources may be proposed during the term of the contract. In order to be accepted, a support resource must be evaluated and obtain the required minimum of points indicated in the point-rated technical criteria in Appendix F – Point-Rated Technical Criteria – Support Resources, based on the task for which the support resource is proposed.

The role of support resources is to complement the expertise of the key resources. This team must have skills and expertise appropriate to the requirements of the tasks. Support resources may not substitute for key resources.

9. LOCATION OF WORK

The work shall be carried out in the offices of DRDC Valcartier.

10. SPECIAL CONSIDERATIONS

The Contractor may be required to travel as a passenger in a government vehicle within a 1,000-km radius.

ANNEX B

BASIS OF PAYMENT

1. LABOUR:

The Contractor agrees to provide the following resources as and when requested by Canada at the following firm all inclusive rates (including profit, administration fees and overhead), applicable taxes extra;

1.1 KEY RESOURCES

CATEGORY	Task no	Firm Hourly Rate				
		From Contract Award to March 31, 2018	From April 1, 2018 to March 31, 2019	From April 1, 2019 to March 31, 2020	From April 1, 2020 to March 31, 2021	From April 1, 2021 up to 5 years after Contract Award
Senior Engineer/Scientist						
		\$	\$	\$	\$	\$
		\$	\$	\$	\$	\$
		\$	\$	\$	\$	\$
		\$	\$	\$	\$	\$
		\$	\$	\$	\$	\$
Intermediate Engineer/Scientist						
		\$	\$	\$	\$	\$
		\$	\$	\$	\$	\$
		\$	\$	\$	\$	\$
		\$	\$	\$	\$	\$
		\$	\$	\$	\$	\$
Intermediate Technician						
		\$	\$	\$	\$	\$

		\$	\$	\$	\$	\$
		\$	\$	\$	\$	\$
		\$	\$	\$	\$	\$
		\$	\$	\$	\$	\$

1.2 SUPPORT RESOURCES

CATEGORY	Task no	Firm Hourly Rate				
		From Contract Award to March 31, 2018	From April 1, 2018 to March 31, 2019	From April 1, 2019 to March 31, 2020	From April 1, 2020 to March 31, 2021	From April 1, 2021 up to 5 years after Contract Award
Senior Engineer/Scientist		\$	\$	\$	\$	\$
Intermediate Engineer/Scientist		\$	\$	\$	\$	\$
Junior Engineer/Scientist		\$	\$	\$	\$	\$
Intermediate Technician		\$	\$	\$	\$	\$
Junior Technician		\$	\$	\$	\$	\$

Note for services provided during field trials only:

After a working period of 8 consecutive hours, the Contractor can claim one and a half time (1.5) the rate indicate at the table above for the working time exceeding the period of work of 8 hours. Any working period that can result in such claim must have the prior authorization of the Technical Authority.

2. **EQUIPMENT:** at laid down cost* without markup
3. **RENTALS:** at actual cost without markup
4. **MATERIALS AND SUPPLIES:** at laid down cost* without markup
5. **TRAVEL AND LIVING EXPENSES:** in accordance with Section 7.1(iv) of the Contract.
6. **SUBCONTRACTS:** at actual cost without markup

Note:

Resources cannot be included in this Section; all resources must be included at Section 1.
"Labour".

7. OTHER DIRECT CHARGES: at actual cost without markup

***Laid-down cost means:** The cost incurred by a supplier to acquire a specific product or service for resale to the government. This includes the supplier's invoice price (less trade discounts), plus any applicable charges for incoming transportation, foreign exchange, customs duty and brokerage, but excludes the Goods and Services Tax and the Harmonized Sales Tax.

Estimated Cost to a Limitation of Expenditure: \$ 3,000,000.00
(Applicable Taxes extra)

ANNEX C

CONTRACTOR DISCLOSURE OF FOREGROUND INFORMATION

Please refer to Article 1 - Interpretation of 2040 General Conditions for the definition of Foreground Information to determine what information must be disclosed.

The Contractor must provide the following information:

1. Contract No.:
2. What is the descriptive title of the FIP (Foreground Intellectual Property)?
3. Abbreviated description of the FIP and, if applicable, of the different systems and sub-systems.
4. What is or was the objective of the project?
5. Explain how the FIP meets the objective of the project (for example: the advantage of the new solution, what problem did the FIP resolve or what benefits did the FIP deliver).
6. Under which category (ies) would you best describe the FIP and why: Patents, Inventions, Trade Secrets, Copyright, Industrial Designs, Rights in Integrated Circuit Topography, Know-how, Other?
7. Describe the features or aspects of the FIP that are novel, useful and not obvious.
8. Has the FIP been tested or demonstrated? If yes, please summarise the results.
9. Has any publication or disclosure to others been made? If so, to whom, when, where and how?
10. Provide names and addresses of the inventors.
11. Provide an explicit and detailed description of the FIP developed during the contract (Refer to pertinent section of the technical report, if necessary).

Please specify name and position of person approving / authorizing this disclosure. This person is to sign and date the disclosure.

Signature Date

Name Title

(Internal DRDC Valcartier)

Signature Date

Name Title (Technical authority)

Solicitation No – N° de l'invitation
W7701-176214/A
Client Ref No. – N° de réf. du client
W7701-176214

Amd. No. – N° de la modif.
File No. – N° du dossier
QCL-6-39128

Buyer ID – id de l'acheteur
qcl 029

ANNEX D

SECURITY REQUIREMENTS CHECK LIST

The Security Requirements Check List (SRCL) appended to the bid solicitation package is to be inserted at this point and forms part of this document.

Solicitation No – N° de l'invitation
W7701-176214/A
Client Ref No. – N° de réf. du client
W7701-176214

Amd. No. – N° de la modif.
File No. – N° du dossier
QCL-6-39128

Buyer ID – id de l'acheteur
qcl 029

ANNEX E

DND 626 TASK AUTHORIZATION FORM

The DND 626, *Task Authorization Form*, which is enclosed, is to be inserted at this point and forms part of this document.

ANNEX F

POINT-RATED TECHNICAL EVALUATION CRITERIA –SUPPORT RESOURCES

The experience of the proposed resources is defined as follows:

- a. Junior resource: between 1 and 3 years of experience
- b. Intermediate resource: between 4 and 12 years of experience
- c. Senior resource: more than 12 years of experience

NB: The number of years of experience associated with the junior, intermediate and senior levels corresponds to the number of years of work since obtaining the required degree on the date that the resource is proposed. The number of years of experience of resources who have completed post-graduate studies has been adjusted as follows: a Master's degree corresponds to one year of work experience, and a PhD corresponds to three. Overlapping experience will only be calculated once.

NOTE 1: Resources proposed for the Engineer/Scientist category must have a minimum of a Bachelor's degree (or higher) in physics, computer science, engineering physics, electrical engineering, software engineering or computer engineering.

NOTE 2: Resources proposed for the Technician category must have a minimum of a technical degree in physics, engineering physics, electrical engineering or mechanical engineering.

POINT-RATED TECHNICAL CRITERIA				Maximum Score	Minimum Score
<u>1. Evaluation of resources' experience</u>					
Instructions:					
To evaluate the relevance of the experience of the resources proposed, the Contractor must provide the following information for each activity set out in the criteria:					
Task x, Activity y					
a. Resource concerned;					
b. Project title (including the client, scope in budget-time and date);					
c. Project objective and its relationship with the task;					
d. Description of the resource's involvement: effort (% of time spent on the activity), skills used, systems characterized, parameters measured/analyzed or systems developed.					
To facilitate the review, the use of a table is suggested, as shown below.					
<i>Task 3.2, a)</i>					
<i>Resource</i>	<i>Project</i>	<i>Objective</i>	<i>Description of Resource's Involvement</i>		

Resource A	Project ABC, Client A, 6 months, \$10K, 2006	MTF measurement assembly	Opto-mechanical design and MTF assembly manufacturing for systems A, B and C. Involvement from mm/yyyy to mm/yyyy, at XX% of his/her time.		
Task 3.2, b) et c)					
Resource	Project	Objective	Description of Resource's Involvement		
Resource B	Project ABC, Client A, 6 months, \$10K, 2006	Collection and analysis	Data collection for systems A, B and C. Involvement of Y per/month. MTF measurement analysis. Involvement from mm/yyyy to mm/yyyy, at XX% of his/her time.		
<p>In the Description of Resource's Involvement column, the Contractor must clearly describe the tasks completed by the proposed resource that are related to the activities set out in the Statement of Work. As applicable, the type of systems characterized must also be provided, as well as the parameters measured and/or analyzed.</p> <p>In order to be considered in this evaluation, each project must meet both of the following conditions:</p> <ul style="list-style-type: none"> a. The value of the project must be \$10,000 or more ; b. Only projects completed after January 1, 2000 will be considered. 					
<p>1.1 <u>Development of test methods for image intensifier tubes in order to more accurately evaluate performance in an operational environment</u></p> <p>The Contractor must present one or more projects associated with the development of test methods for image intensifiers in order to measure performance.</p> <p>The Contractor must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Data measurement and acquisition systems for image intensifier tubes; <ul style="list-style-type: none"> • 2 pts per parameter (see Note 1) for which a data measurement and acquisition system was developed b. Collection and saving of data on image intensifier tubes; <ul style="list-style-type: none"> • 1 pt per parameter measured (see Note 1) c. Participation in analysis and reduction of data on image intensifier tubes; <ul style="list-style-type: none"> • 1 pt per parameter analyzed (see Notes 1 and 2) <p>Points will be added based on the number of image intensifier tubes measured</p>				40	18

<p>and/or analyzed by the proposed resources (see Notes 1 and 2), as follows:</p> <ol style="list-style-type: none"> One system was measured or analyzed: 1pt Between 2 and 5 systems were measured or analyzed: 2 pts More than 5 systems were measured or analyzed: 4 pts <p>NOTE 1: Only the following parameters that can be measured and analyzed on image intensifier tubes will be considered in calculating points:</p> <ol style="list-style-type: none"> Impulse Response (Modulation Transfer Function [MTF]); Resolution response (Minimum Resolvable Contrast [MRC]); Image noise (Signal-to-Noise Ratio [SNR]); Equivalent Background Illumination (EBI) and luminous gain as a function of temperature; Luminous gain as a function of the input illumination; Halo; Phosphorus output luminance or phosphorus emission spectrum; Response to flashes of light; and Power consumption. <p>NOTE 2: Analysis of simulation results will not be considered.</p>		
<p><u>1.2 Development of test methods for infrared sensors (0.9 µm to 15 µm) or their components in order to more accurately evaluate performance in an operational environment</u></p> <p>The Contractor must present one or more projects associated with the development of test methods for infrared sensors (0.9 µm to 15 µm) or their components in order to measure their performances.</p> <p>The Contractor must use projects to present work that shows the experience and skills of the resources in the following types of activities:</p> <ol style="list-style-type: none"> Data measurement and acquisition systems for infrared sensors or their components; <ul style="list-style-type: none"> 2 pts per parameter (see Note 1) for which a data measurement and acquisition system was developed Collection and saving of data on infrared sensors or their components; <ul style="list-style-type: none"> 1 pt per parameter measured (see Note 1) Participation in analysis and reduction of data on infrared sensors or their components; <ul style="list-style-type: none"> 1 pt per parameter analyzed (see Notes 1 and 2) <p>Points will be added based on the number of infrared sensors (0.9 µm to 15 µm) measured and/or analyzed by the proposed resources (see Notes 1 and 2), as follows:</p> <ol style="list-style-type: none"> One system was measured or analyzed: 1pt Between 2 and 5 systems were measured or analyzed: 2 pts More than 5 systems were measured or analyzed: 4 pts <p>NOTE 1: Only the following parameters for infrared sensors (0.9 µm to 15 µm)</p>	24	11

<p>or their components will be considered in calculating points:</p> <ul style="list-style-type: none"> a. Impulse Response (Modulation Transfer Function [MTF]); b. Resolution response (Minimum Resolvable Temperature Differential [MRTD]); c. Image noise (3D-Noise and Noise Equivalent Temperature Difference [NETD]); d. Transfer function (Signal Transfer Function [SiTF]); and e. Spectral response. <p>NOTE 2: Analysis of simulation results will not be considered.</p>		
<p><u>1.3 Development of test methods for digital vision systems and their components in order to more accurately evaluate performance in an operational environment</u></p> <p>The Contractor must present one or more projects related to the development of innovative characterization methods to evaluate performance in an operational environment of digital vision systems or their components (optical, sensor, electronics, display screen or other). The vision systems concerned include, but are not limited to, the following:</p> <ul style="list-style-type: none"> a. Complementary metal-oxide semiconductor (CMOS) sensors; b. Charge-coupled device (CCD) sensors; c. Electron-bombarded CMOS sensors; d. Electron-multiplying CCD (EMCCD) sensors; and e. Sensors that function in UV. <p>The Contractor must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Data measurement and acquisition systems for digital vision systems or their components; b. Collection and saving of data on digital vision systems or their components; c. Participation in analysis and reduction of data on digital vision systems or their components. d. <p>Points will be allocated based on the number of months of experience of the proposed resources in one of the three activities (a, b and c) listed above and according to the following weighting:</p> <ul style="list-style-type: none"> a. Less than 3 full-time months of relevant experience: 0 pt b. Between 3 and 12 months of full-time relevant experience: 2 pts c. More than 12 months of full-time relevant experience: 4 pts <p>NOTE 1: Analysis of simulation results will not be considered.</p>	4	2
<p><u>1.4 Development of test methods for characterizing the performance of optical components</u></p> <p>The Contractor must present one or more projects associated with the development of test methods for characterizing the performance of optical</p>	32	15

<p>components.</p> <p>The Contractor must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ol style="list-style-type: none"> Data measurement and acquisition systems for measuring optical components; <ul style="list-style-type: none"> 2 pts per parameter (see Note 1) for which a data measurement and acquisition system was developed Collection and saving of data on measurements of optical components; <ul style="list-style-type: none"> 1 pt per parameter measured (see Note 1) Participation in analysis and reduction of data on measurements of optical components; <ul style="list-style-type: none"> 1 pt per parameter analyzed (see Notes 1 and 2) <p>Points will be added based on the number systems measured and/or analyzed by the proposed resources (see Notes 1 and 2), as follows:</p> <ol style="list-style-type: none"> One system was measured or analyzed: 1pt Between 2 and 5 systems were measured or analyzed: 2 pts More than 5 systems were measured or analyzed: 4 pts <p>NOTE 1: Only the following parameters for measurements of optical components will be considered in calculating points:</p> <ol style="list-style-type: none"> Impulse response (Modulation Transfer Function [MTF]) on and off axis; Distortion; Transmission; Relative illumination; f/#; Field of view; and Irregularity of surfaces determined using an interferometer or the radius of the lenses. <p>NOTE 2: Analysis of simulation results will not be considered.</p>		
<p>1.5 <u>Optical design services</u></p> <p>The Contractor must present one or more projects in which it has carried out optical design.</p> <p>The Contractor must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ol style="list-style-type: none"> Design optical systems with spherical, aspherical, free-form and mirrored lenses using a computer-assisted optical design software program; Simulate the optical performance of systems, including aspects such as modulation transfer function (MTF), relative illumination, brightness distribution, aberrations and distortion; Produce a tolerance analysis; and Interact with manufacturers of custom-manufactured optical 	32	15

<p>components.</p> <p>Points will be allocated based on the number of months of experience of the proposed resources in one of the three activities (a, b and c) listed above and according to the following weighting:</p> <ul style="list-style-type: none"> a. Less than 12 months of relevant experience: 2 points per activity b. Between 1 and 3 years of relevant experience: 4 points per activity c. Between 3 and 5 years of relevant experience: 6 points per activity d. More than 5 years of relevant experience: 8 points per activity 		
<p>1.6 <u>Opto-mechanical design and manufacturing services</u></p> <p>The Contractor must present one or more projects in which it has made opto-mechanical assemblies.</p> <p>The Contractor must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Carry out opto-mechanical design using a computer-assisted opto-mechanical design software program; b. Carry out thermal analysis studies; c. Carry out stress calculations using the finite element analysis method; d. Interact with manufacturers of custom-manufactured opto-mechanical components; and e. Assemble optical systems. <p>Points will be allocated based on the number of months of experience of the proposed resources in each of the five activities listed above and according to the following weighting:</p> <ul style="list-style-type: none"> a. Less than 6 months of relevant experience: 1 point per activity b. Between 7 and 12 months of relevant experience: 3 points per activity c. Between 13 and 36 months of relevant experience: 4 points per activity d. More than 36 months of relevant experience: 5 points per activity 	25	12

<p>1.7 <u>Development data analysis software programs</u></p> <p>The Contractor must present one or more projects related to the development of data-processing and analysis software.</p> <p>The Contractor must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <p>a. Development of data validation for analyses:</p> <ul style="list-style-type: none"> It is not demonstrated in the project that the resource participated in a development task : 0 pt The resource participated in one or more development tasks: 2 pts The resource supervised one or more development tasks: 4 pts <p>b. Development data-processing and analysis tools:</p> <ul style="list-style-type: none"> It is not demonstrated in the project that the resource participated in a development task : 0 pt The resource participated in one or more development tasks: 2 pts The resource supervised one or more development tasks: 4 pts <p>c. Development of data classification tools (e.g., database):</p> <ul style="list-style-type: none"> It is not demonstrated in the project that the resource participated in a development task: 0 pt The resource participated in one or more development tasks: 2 pts The resource supervised one or more development tasks: 4 pts <p>d. Carrying out of data analysis using a method based on artificial intelligence:</p> <ul style="list-style-type: none"> It is not demonstrated in the project that the resource participated in an artificial intelligence-based development task: 0 pt The resource participated in one or more artificial intelligence-based development tasks: 1 pt The resource supervised one or more artificial intelligence-based development tasks: 2 pts <p>Points will be added based on the number of months of experience of the proposed resources in each of the four activities listed above and in accordance with the following weighting:</p> <p>a. Less than 3 full-time months of relevant experience: 0 pt per activity</p> <p>b. Between 3 and 6 full-time months of relevant experience: 1 pt per activity</p>	<p>30</p>	<p>14</p>
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<p>c. Between 7 and 12 full-time months of relevant experience: 2 pts per activity</p> <p>d. Between 13 and 24 full-time months of relevant experience: 3 pts per activity</p> <p>e. More than 24 full-time months of relevant experience: 4 pts per activity</p>		
<p>1.8 <u>Development of image processing algorithms</u></p> <p>The Contractor must present one or more projects related to the development of image processing and enhancement algorithm software programs to improve the performance of vision systems.</p> <p>The Contractor must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <p>a. Development of image processing and enhancement algorithms to improve the performance of vision systems:</p> <ul style="list-style-type: none"> The project does not demonstrate that the resource has participated in development tasks: 0 pt The resource has participated in one or more tasks involving the standard development of image processing algorithms (e.g. gain and contrast operator, contrast and brightness operator, noise suppression): 2 pts The resource has managed one or more significant tasks involving the development of image processing algorithms (e.g. automatic gain and contrast operator, local enhancement operator, dynamic adaptation (HDR), tone mapping): 4 pts <p>b. Implementation of algorithms (e.g.: real time, microprocessor, DSP):</p> <ul style="list-style-type: none"> The project does not demonstrate that the resource has participated in the implementation of image processing algorithms: 0 pt The resource has participated in one or more implementations of image processing algorithms: 2 pts The resource has supervised one or more implementations of image processing algorithms: 4 pts <p>c. Testing and evaluation of image processing and enhancement algorithms:</p> <ul style="list-style-type: none"> The project does not demonstrate that the resource has participated in the testing and evaluation of image processing algorithms: 0 pt The resource has participated in one or more image processing algorithm evaluation tests: 2 pts The resource has supervised one or more image processing algorithm evaluation tests: 4 pts <p>Points will be added based on the number of months of experience of the</p>	24	10

<p>proposed resources in each of the three activities listed above and in accordance with the following weighting:</p> <ul style="list-style-type: none"> a. Less than 3 full-time months of relevant experience: 0 pt per activity b. Between 3 and 6 full-time months of relevant experience: 1 pt per activity c. Between 7 and 12 full-time months of relevant experience: 2 pts per activity d. Between 13 and 24 full-time months of relevant experience: 3 pts per activity e. More than 24 full-time months of relevant experience: 4 pts per activity 		
<p>1.9 <u>Electronics support services</u></p> <p>The Contractor must present one or more projects in which it manufactured electronic components.</p> <p>The Contractor must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Design electronic circuits (analog and digital) using standard commercial software; b. Produce designs based on FPGA (field programmable gate array) architectures; c. Design, manufacture and assemble printed circuit boards according to the layout of the electronic components. <p>Points will be added based on the number of months of experience of the proposed resources in each of the three activities listed above and in accordance with the following weighting:</p> <ul style="list-style-type: none"> a. Less than 6 months of relevant experience: 1 pt per activity b. Between 7 and 12 months of relevant experience: 2 pts per activity c. Between 13 and 36 months of relevant experience: 3 pts per activity d. More than 36 months of relevant experience: 4 pts per activity 	12	6



Government
of Canada

Gouvernement
du Canada

RECEIVED

JUL 06 2016

Contract Number / Numéro du contrat

W7701-176214

Security Classification / Classification de sécurité
Sans classification

SECURITY REQUIREMENTS CHECK LIST (SRCL)

LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE

1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine		2. Branch or Directorate / Direction générale ou Direction	
DND		RDDC Valcartier	
3. a) Subcontract Number / Numéro du contrat de sous-traitance		3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant	
4. Brief Description of Work / Brève description du travail Contrat AT - Développement méthodes de caractérisation EO			
5. a) Will the supplier require access to Controlled Goods? Le fournisseur aura-t-il accès à des marchandises contrôlées?		<input type="checkbox"/> No / Non <input checked="" type="checkbox"/> Yes / Oui	
5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques?		<input type="checkbox"/> No / Non <input checked="" type="checkbox"/> Yes / Oui	
6. Indicate the type of access required / Indiquer le type d'accès requis			
6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c) (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c)		<input type="checkbox"/> No / Non <input checked="" type="checkbox"/> Yes / Oui	
6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé.		<input checked="" type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui	
6. c) Is this a commercial courier or delivery requirement with no overnight storage? S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit?		<input checked="" type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui	
7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès			
Canada <input checked="" type="checkbox"/>		NATO / OTAN <input type="checkbox"/>	
Foreign / Étranger <input type="checkbox"/>			
7. b) Release restrictions / Restrictions relatives à la diffusion			
No release restrictions Aucune restriction relative à la diffusion Not releasable À ne pas diffuser		All NATO countries Tous les pays de l'OTAN	
Restricted to: / Limité à: Specify country(ies): / Préciser le(s) pays: Inklus résidents permanents		Restricted to: / Limité à: Specify country(ies): / Préciser le(s) pays:	
7. c) Level of information / Niveau d'information			
PROTECTED A PROTÉGÉ A <input checked="" type="checkbox"/>		NATO UNCLASSIFIED <input type="checkbox"/>	
PROTECTED B PROTÉGÉ B <input checked="" type="checkbox"/>		NATO NON CLASSIFIÉ <input type="checkbox"/>	
PROTECTED C PROTÉGÉ C <input type="checkbox"/>		NATO RESTRICTED <input type="checkbox"/>	
CONFIDENTIAL CONFIDENTIEL <input checked="" type="checkbox"/>		NATO DIFFUSION RESTREINTE <input type="checkbox"/>	
SECRET <input checked="" type="checkbox"/>		NATO CONFIDENTIAL <input type="checkbox"/>	
TOP SECRET TRÈS SECRET <input type="checkbox"/>		NATO SECRET <input type="checkbox"/>	
TOP SECRET (SIGINT) TRÈS SECRET (SIGINT) <input type="checkbox"/>		NATO SECRET <input type="checkbox"/>	
		COSMIC TOP SECRET <input type="checkbox"/>	
		COSMIC TRÈS SECRET <input type="checkbox"/>	
		PROTECTED A <input type="checkbox"/>	
		PROTÉGÉ A <input type="checkbox"/>	
		PROTECTED B <input type="checkbox"/>	
		PROTÉGÉ B <input type="checkbox"/>	
		PROTECTED C <input type="checkbox"/>	
		PROTÉGÉ C <input type="checkbox"/>	
		CONFIDENTIAL <input type="checkbox"/>	
		CONFIDENTIEL <input type="checkbox"/>	
		SECRET <input type="checkbox"/>	
		SECRET <input type="checkbox"/>	
		TOP SECRET <input type="checkbox"/>	
		TRÈS SECRET <input type="checkbox"/>	
		TOP SECRET (SIGINT) <input type="checkbox"/>	
		TRÈS SECRET (SIGINT) <input type="checkbox"/>	



PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS? ☒ No / Non ☐ Yes / Oui

If Yes, indicate the level of sensitivity:

Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate? ☒ No / Non ☐ Yes / Oui

Short Title(s) of material / Titre(s) abrégé(s) du matériel :

Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

- | | | | |
|--|---|--|--|
| <input type="checkbox"/> RELIABILITY STATUS
COTE DE FIABILITÉ | <input type="checkbox"/> CONFIDENTIAL
CONFIDENTIEL | <input checked="" type="checkbox"/> SECRET
SECRET | <input type="checkbox"/> TOP SECRET
TRÈS SECRET |
| <input type="checkbox"/> TOP SECRET - SIGINT
TRÈS SECRET - SIGINT | <input type="checkbox"/> NATO CONFIDENTIAL
NATO CONFIDENTIEL | <input type="checkbox"/> NATO SECRET
NATO SECRET | <input type="checkbox"/> COSMIC TOP SECRET
COSMIC TRÈS SECRET |
| <input type="checkbox"/> SITE ACCESS
ACCÈS AUX EMPLACEMENTS | | | |

Special comments:

Commentaires spéciaux : Marchandises contrôlées

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.

REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work?
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail? ☒ No / Non ☐ Yes / Oui
If Yes, will unscreened personnel be escorted?
Dans l'affirmative, le personnel en question sera-t-il escorté? ☐ No / Non ☐ Yes / Oui

PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises?
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS? ☒ No / Non ☐ Yes / Oui

11. b) Will the supplier be required to safeguard COMSEC information or assets?
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC? ☒ No / Non ☐ Yes / Oui

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises?
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ? ☒ No / Non ☐ Yes / Oui

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data?
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS? ☒ No / Non ☐ Yes / Oui

11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency?
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale? ☒ No / Non ☐ Yes / Oui



PART C - (continued) / PARTIE C - (suite)

For users completing the form manually use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.

Les utilisateurs qui remplissent le formulaire manuellement doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form online (via the Internet), the summary chart is automatically populated by your responses to previous questions.

Dans le cas des utilisateurs qui remplissent le formulaire en ligne (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

Category Catégorie	PROTECTED PROTÉGÉ			CLASSIFIED CLASSIFIÉ			NATO				COMSEC					
	A	B	C	CONFIDENTIAL	SECRET	TOP SECRET	NATO RESTRICTED	NATO CONFIDENTIAL	NATO SECRET	COSMIC TOP SECRET	PROTECTED PROTÉGÉ			CONFIDENTIAL	SECRET	TOP SECRET
				CONFIDENTIEL		TRÈS SECRET	NATO DIFFUSION RESTREINTE	NATO CONFIDENTIEL			COSMIC TRÈS SECRET	A	B	C	CONFIDENTIEL	
Information / Assets Renseignements / Biens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IT Media / Support TI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IT Link / Lien électronique	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?
La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?

☒ No
Non

☐ Yes
Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".
Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée
« Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?
La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?

☒ No
Non

☐ Yes
Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).
Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée
« Classification de sécurité » au haut et au bas du formulaire et indiquer qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).

TASK AUTHORIZATION
AUTORISATION DES TÂCHES

All invoices/progress claims must show the reference Contract and Task numbers.
Toutes les factures doivent indiquer les numéros du contrat et de la tâche.

Contract no. – N° du contrat	
Task no. – N° de la tâche	
Amendment no. – N° de la modification	Increase/Decrease – Augmentation/Réduction Previous value – Valeur précédente
To – À	TO THE CONTRACTOR You are requested to supply the following services in accordance with the terms of the above reference contract. Only services included in the contract shall be supplied against this task. Please advise the undersigned if the completion date cannot be met. Invoices/progress claims shall be prepared in accordance with the instructions set out in the contract. À L'ENTREPRENEUR Vous êtes prié de fournir les services suivants en conformité des termes du contrat mentionné ci-dessus. Seuls les services mentionnés dans le contrat doivent être fournis à l'appui de cette demande. Prière d'aviser le signataire si la livraison ne peut se faire dans les délais prescrits. Les factures doivent être établies selon les instructions énoncées dans le contrat.
Delivery location – Expédiez à	
Delivery/Completion date – Date de livraison/d'achèvement	<div>Datefor the Department of National Defence pour le ministère de la Défense nationale</div>
Contract item no. N° d'article du contrat	ServicesCost Prix
	GST/HST TPS/TVH
	Total
APPLICABLE ONLY TO PWGSC CONTRACTS: The Contract Authority signature is required when the total value of the DND 626 exceeds the threshold specified in the contract. NE S'APPLIQUE QU'AUX CONTRATS DE TPSGC : La signature de l'autorité contractante est requise lorsque la valeur totale du formulaire DND 626 est supérieure au seuil précisé dans le contrat.	
for the Department of Public Works and Government Services pour le ministère des Travaux publics et services gouvernementaux	

Instructions for completing DND 626 - Task Authorization

Contract no.

Enter the PWGSC contract number in full.

Task no.

Enter the sequential Task number.

Amendment no.

Enter the amendment number when the original Task is amended to change the scope or the value.

Increase/Decrease

Enter the increase or decrease total dollar amount including taxes.

Previous value

Enter the previous total dollar amount including taxes.

To

Name of the contractor.

Delivery location

Location where the work will be completed, if other than the contractor's location.

Delivery/Completion date

Completion date for the task.

for the Department of National Defence

Signature of the DND person who has delegated **Authority** for signing DND 626 (level of authority based on the dollar value of the task and the equivalent signing authority in the PAM 1.4). **Note:** the person signing in this block ensures that the work is within the scope of the contract, that sufficient funds remain in the contract to cover this task and that the task is affordable within the Project/Unit budget.

Services

Define the requirement briefly (attach the SOW) and identify the cost of the task using the contractor's quote on the level of effort. The Task must use the basis of payment stipulated in the contract. If there are several basis of payment then list here the one(s) that will apply to the task quote (e.g. milestone payments; per diem rates/labour category hourly rates; travel and living rates; firm price/ceiling price, etc.). All the terms and conditions of the contract apply to this Task Authorization and cannot be ignored or amended for this task. Therefore it is not necessary to restate these general contract terms and conditions on the DND 626 Task form.

Cost

The cost of the Task broken out into the individual costed items in **Services**.

GST/HST

The GST/HST cost as appropriate.

Total

The total cost of the task. The contractor may not exceed this amount without the approval of DND indicated on an amended DND 626. The amendment value may not exceed 50% (or the percentage for amendments established in the contract) of the original value of the task authorization. The total cost of a DND 626, including all amendments, may not exceed the funding limit identified in the contract.

Applicable only to PWGSC contracts

This block only applies to those Task Authorization contracts awarded by PWGSC. The contract will include a specified threshold for DND sole approval of the DND 626 and a percentage for DND to approve amendments to the original DND 626. Tasks that will exceed these thresholds must be passed to the PWGSC Contracting Authority for review and signature prior to authorizing the contractor to begin work.

Note:

Work on the task may not commence prior to the date this form is signed by the DA Authority - for tasks within the DND threshold; and by both DND and PWGSC for those tasks over the DND threshold.

Instructions pour compléter le formulaire DND 626 - Autorisation des tâches

N° du contrat

Inscrivez le numéro du contrat de TPSGC en entier.

N° de la tâche

Inscrivez le numéro de tâche séquentiel.

N° de la modification

Inscrivez le numéro de modification lorsque la tâche originale est modifiée pour en changer la portée.

Augmentation/Réduction

Inscrivez le montant total de l'augmentation ou de la diminution, y compris les taxes.

Valeur précédente

Inscrivez le montant total précédent, y compris les taxes.

À

Nom de l'entrepreneur.

Expédiez à

Endroit où le travail sera effectué, si celui-ci diffère du lieu d'affaires de l'entrepreneur.

Date de livraison/d'achèvement

Date d'achèvement de la tâche.

pour le ministère de la Défense nationale

Signature du représentant du MDN auquel on a délégué le **pouvoir d'approbation** en ce qui a trait à la signature du formulaire DND 626 (niveau d'autorité basé sur la valeur de la tâche et le signataire autorisé équivalent mentionné dans le MAA 1.4). **Nota :** la personne qui signe cette attache de signature confirme que les travaux respectent la portée du contrat, que suffisamment de fonds sont prévus au contrat pour couvrir cette tâche et que le budget alloué à l'unité ou pour le projet le permet.

Services

Définissez brièvement le besoin (joignez l'ET) et établissez le coût de la tâche à l'aide de la soumission de l'entrepreneur selon le niveau de difficulté de celle-ci. Les modalités de paiement stipulées dans le contrat s'appliquent à la tâche. Si plusieurs d'entre elles sont prévues, énumérez ici celle/celles qui s'appliquera/ront à la soumission pour la tâche à accomplir (p.ex. acompte fondé sur les étapes franchies; taux quotidien ou taux horaire établi selon la catégorie de main-d'œuvre; frais de déplacement et de séjour; prix fixe ou prix plafond; etc.). Toutes les modalités du contrat s'appliquent à cette autorisation de tâche et ne peuvent être négligées ou modifiées quant à la tâche en question. Il n'est donc pas nécessaire de répéter ces modalités générales afférentes au contrat sur le formulaire DND 626.

Prix

Mentionnez le coût de la tâche en le répartissant selon les frais afférents à chaque item mentionné dans la rubrique **Services**.

TPS/TVH

Mentionnez le montant de la TPS/TVH, s'il y a lieu.

Total

Mentionnez le coût total de la tâche. L'entrepreneur ne peut dépasser ce montant sans l'approbation du MDN, formulaire DND 626 modifié à l'appui. Le coût de la modification ne peut pas être supérieur à 50 p. 100 du montant initial prévu dans l'autorisation de tâche (ou au pourcentage prévu dans le contrat pour les modifications). Le coût total spécifié dans le formulaire DND 626, y compris toutes les modifications, ne peut dépasser le plafond de financement mentionné dans le contrat.

Ne s'applique qu'aux contrats de TPSGC

Le présent paragraphe s'applique uniquement aux autorisations de tâche accordées par TPSGC. On inscrira dans le formulaire DND 626 un plafond précis qui ne pourra être approuvé que par le MDN et un pourcentage selon lequel le MDN pourra approuver des modifications au formulaire DND 626 original. Les tâches dont le coût dépasse ces plafonds doivent être soumises à l'autorité contractante de TPSGC pour examen et signature avant qu'on autorise l'entrepreneur à débiter les travaux.

Nota :

Les travaux ne peuvent commencer avant la date de signature de ce formulaire par le responsable du MDN, pour les tâches dont le coût est inférieur au plafond établi par le MDN, et par le MDN et TPSGC pour les tâches dont le coût dépasse le plafond établi par le MDN.

ATTACHMENT 2

MANDATORY AND POINT-RATED TECHNICAL CRITERIA

Development of Characterization Methodology for Electro-Optical (EO) Systems

1) Mandatory technical criteria

At the closing date and time of the bid solicitation, bidders must meet the mandatory requirements below and provide the documentation needed to demonstrate that they meet these requirements. Bids that do not satisfy any of the following mandatory requirements will be declared non-responsive. Each requirement should be addressed separately.

To enable the evaluation team to properly evaluate the following criteria, the bidder should provide the CV of each resource proposed in order to meet each criterion in this section. The CVs should clearly and explicitly demonstrate that the proposed resources meet the minimum requirement with regard to the education and experience of the labour category. Each resource CV should include the following information:

- a) Name;
- b) Institution, degree, program, year;
- c) Additional courses;
- d) Special skills;
- e) Work experience (date in month/years, company, tasks).

Failure to meet one or more of the mandatory requirements will preclude the proposal from further consideration and disqualify the proposal from any contract award.

The bidder must meet the following mandatory requirements:

MANDATORY CRITERIA	Met	Not Met
<p>1. <u>The bidder must propose a team of resources comprising a minimum of the following:</u></p> <ul style="list-style-type: none">• 3 intermediate engineers/scientists• 1 senior engineer/scientist• 2 intermediate technicians		

MANDATORY CRITERIA	Met	Not Met
<p>The experience of the proposed resources is defined as follows:</p> <ul style="list-style-type: none"> a. Junior resource: between 1 and 3 years of experience b. Intermediate resource: between 4 and 12 years of experience c. Senior resource: more than 12 years of experience <p>NB: The number of years of experience associated with the junior, intermediate and senior levels corresponds to the number of years of work since obtaining the required degree on the date that the bidder's proposal is submitted. The number of years of experience of resources who have completed post-graduate studies has been adjusted as follows: a Master's degree corresponds to one year of work experience, and a PhD corresponds to three. Overlapping experience will only be calculated once.</p> <p>NOTE 1: Resources proposed for the Engineer/Scientist category must have a minimum of a Bachelor's degree (or higher) in physics, computer science, engineering physics, electrical engineering, software engineering or computer engineering.</p> <p>NOTE 2: Resources proposed for the Technician category must have a minimum of a technical degree in physics, engineering physics, electrical engineering or mechanical engineering.</p> <p>NOTE 3: It is possible to propose more resources than the minimum number required, but each team member must be proposed for at least one of the point-rated technical criteria listed below (5.1 to 5.9).</p>		
<p>2. For the Engineer/Scientist category, there must be at least:</p> <ul style="list-style-type: none"> • one resource with a Master's (or higher) degree in physics or engineering physics; <p>and</p> <ul style="list-style-type: none"> • one resource with a Bachelor's (or higher) degree in electrical engineering or computer engineering. 		

MANDATORY CRITERIA	Met	Not Met
3. For the technician category, there must be at least one resource with a technical degree in physics or engineering physics.		
<p>4. <u>The bidder must propose resources for each of the nine tasks (see 3.1 to 3.9 in the Statement of Work).</u></p> <p>NOTE 1: The same resource may be associated with more than one activity.</p> <p>NOTE 2: The proposed resources below must be part of the resources named in Point 1 above.</p>		
<p>4.1 <u>Development of test methods for image intensifier tubes in order to more accurately evaluate performance in an operational environment</u></p> <p>A minimum of two (2) resources must be clearly identified for this task.</p>		
<p>4.2 <u>Development of test methods for infrared sensors (0.9 µm to 15 µm) or their components in order to more accurately evaluate performance in an operational environment</u></p> <p>A minimum of one (1) resource must be clearly identified for this task.</p>		
<p>4.3 <u>Development of test methods for digital vision systems and their components in order to more accurately evaluate performance in an operational environment</u></p> <p>A minimum of one (1) resource must be clearly identified for this task.</p>		
<p>4.4 <u>Development of test methods for characterizing the performance of optical components</u></p> <p>A minimum of one (1) resource must be clearly identified for this task.</p>		

4.5 <u>Optical design services</u> A minimum of one (1) resource specializing in optical design must be clearly identified for this task.		
4.6 <u>Opto-mechanical design and manufacturing services</u> A minimum of one (1) resource with a degree in mechanical engineering must be clearly identified for this task.		
4.7 <u>Development of data analysis software programs</u> A minimum of two (2) resources must be clearly identified for this task.		
4.8 <u>Development of image-processing algorithms</u> A minimum of two (2) resources must be clearly identified for this task.		
4.9 <u>Electronics support services</u> A minimum of one (1) resource must be clearly identified for this task.		

2) Point-rated technical criteria

The various proposals received that meet the mandatory criteria will be evaluated and marked according to the criteria described below. The minimum score required for each of the criteria and group of criteria is also indicated.

The point-rated criteria will be scored according to the description accompanying each of the criteria listed in the table below. Bids must obtain the minimum number of points required as indicated in the following table.

POINT-RATED TECHNICAL CRITERIA	Maximum Score	Minimum Score
5. <u>Evaluation of resources' experience</u> Instructions Resources will be evaluated on past achievements that demonstrate their skills, abilities and experience. For criteria 5.1 to 5.9, the total number of		

points for each criterion will be an average of the points obtained individually by each member of the team of proposed resources. Only resources obtaining the minimum score indicated for a given criterion will be considered.

To evaluate the relevance of the experience of the resources proposed, the bidder must provide the following information for each activity set out in the criteria:

Task x, Activity y

- a. Resource concerned;
- b. Project title (including the client, scope in budget-time and date);
- c. Project objective and its relationship with the task;
- d. Description of the resource's involvement: effort (% of time spent on the activity), skills used, systems characterized, parameters measured/analyzed or systems developed.

To facilitate the review, the use of a table is suggested, as shown below.

Task 3.2, a)

<i>Resource</i>	<i>Project</i>	<i>Objective</i>	<i>Description of Resource's Involvement</i>
Resource A	Project ABC, Client A, 6 months, \$10K, 2006	MTF measurement assembly	Opto-mechanical design and MTF assembly manufacturing for systems A, B and C. Involvement from mm/yyyy to mm/yyyy, at XX% of his/her time.

Task 3.2, b) et c)

<i>Resource</i>	<i>Project</i>	<i>Objective</i>	<i>Description of Resource's Involvement</i>
Resource B	Project ABC, Client A, 6 months, \$10K, 2006	Collection and analysis	Data collection for systems A, B and C. Involvement of Y per/month. MTF measurement analysis. Involvement from mm/yyyy to mm/yyyy, at XX% of his/her time.

In the Description of Resource's Involvement column, the bidder must clearly describe the tasks completed by the proposed resource that are related to the activities set out in the Statement of Work. As applicable, the type of systems characterized must also be provided, as well as the

<p>parameters measured and/or analyzed.</p> <p>In order to be considered in this evaluation, each project must meet both of the following conditions:</p> <ul style="list-style-type: none"> a. The value of the project must be \$10,000 or more ; b. Only projects completed after January 1, 2000 will be considered. 		
<p><u>5.1 Development of test methods for image intensifier tubes in order to more accurately evaluate performance in an operational environment</u></p> <p>The bidder must present one or more projects associated with the development of test methods for image intensifiers in order to measure performance.</p> <p>The bidder must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Data measurement and acquisition systems for image intensifier tubes; <ul style="list-style-type: none"> o 2 pts per parameter (see Note 1) for which a data measurement and acquisition system was developed b. Collection and saving of data on image intensifier tubes; <ul style="list-style-type: none"> o 1 pt per parameter measured (see Note 1) c. Participation in analysis and reduction of data on image intensifier tubes; <ul style="list-style-type: none"> o 1 pt per parameter analyzed (see Notes 1 and 2) <p>Points will be added based on the number of image intensifier tubes measured and/or analyzed by the proposed resources (see Notes 1 and 2), as follows:</p> <ul style="list-style-type: none"> a. One system was measured or analyzed: 1pt b. Between 2 and 5 systems were measured or analyzed: 2 pts c. More than 5 systems were measured or analyzed: 4 pts <p>NOTE 1: Only the following parameters that can be measured and analyzed on image intensifier tubes will be considered in calculating points:</p> <ul style="list-style-type: none"> a. Impulse Response (Modulation Transfer Function [MTF]); b. Resolution response (Minimum Resolvable Contrast [MRC]); c. Image noise (Signal-to-Noise Ratio [SNR]); d. Equivalent Background Illumination (EBI) and luminous gain as a function of temperature; e. Luminous gain as a function of the input illumination; f. Halo; 	<p>40</p>	<p>18</p>

<p>g. Phosphorus output luminance or phosphorus emission spectrum; h. Response to flashes of light; and i. Power consumption.</p> <p>NOTE 2: Analysis of simulation results will not be considered.</p>		
<p><u>5.2 Development of test methods for infrared sensors (0.9 µm to 15 µm) or their components in order to more accurately evaluate performance in an operational environment</u></p> <p>The bidder must present one or more projects associated with the development of test methods for infrared sensors (0.9 µm to 15 µm) or their components in order to measure their performances.</p> <p>The bidder must use projects to present work that shows the experience and skills of the resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Data measurement and acquisition systems for infrared sensors or their components; <ul style="list-style-type: none"> • 2 pts per parameter (see Note 1) for which a data measurement and acquisition system was developed b. Collection and saving of data on infrared sensors or their components; <ul style="list-style-type: none"> • 1 pt per parameter measured (see Note 1) c. Participation in analysis and reduction of data on infrared sensors or their components; <ul style="list-style-type: none"> • 1 pt per parameter analyzed (see Notes 1 and 2) <p>Points will be added based on the number of infrared sensors (0.9 µm to 15 µm) measured and/or analyzed by the proposed resources (see Notes 1 and 2), as follows:</p> <ul style="list-style-type: none"> a. One system was measured or analyzed: 1pt b. Between 2 and 5 systems were measured or analyzed: 2 pts c. More than 5 systems were measured or analyzed: 4 pts <p>NOTE 1: Only the following parameters for infrared sensors (0.9 µm to 15 µm) or their components will be considered in calculating points:</p> <ul style="list-style-type: none"> a. Impulse Response (Modulation Transfer Function [MTF]); b. Resolution response (Minimum Resolvable Temperature Differential [MRTD]); c. Image noise (3D-Noise and Noise Equivalent Temperature Difference [NETD]); d. Transfer function (Signal Transfer Function [SiTF]); and e. Spectral response. 	24	11

<p>NOTE 2: Analysis of simulation results will not be considered.</p>		
<p><u>5.3 Development of test methods for digital vision systems and their components in order to more accurately evaluate performance in an operational environment</u></p> <p>The bidder must present one or more projects related to the development of innovative characterization methods to evaluate performance in an operational environment of digital vision systems or their components (optical, sensor, electronics, display screen or other). The vision systems concerned include, but are not limited to, the following:</p> <ul style="list-style-type: none"> a. Complementary metal-oxide semiconductor (CMOS) sensors; b. Charge-coupled device (CCD) sensors; c. Electron-bombarded CMOS sensors; d. Electron-multiplying CCD (EMCCD) sensors; and e. Sensors that function in UV. <p>The bidder must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Data measurement and acquisition systems for digital vision systems or their components; b. Collection and saving of data on digital vision systems or their components; c. Participation in analysis and reduction of data on digital vision systems or their components. <p>Points will be allocated based on the number of months of experience of the proposed resources in one of the three activities (a, b and c) listed above and according to the following weighting:</p> <ul style="list-style-type: none"> a. Less than 3 full-time months of relevant experience: 0 pt b. Between 3 and 12 months of full-time relevant experience: 2 pts c. More than 12 months of full-time relevant experience: 4 pts <p>NOTE 1: Analysis of simulation results will not be considered.</p>	<p>4</p>	<p>2</p>
<p><u>5.4 Development of test methods for characterizing the performance of optical components</u></p> <p>The bidder must present one or more projects associated with the development of test methods for characterizing the performance of optical components.</p> <p>The bidder must use projects to present work that shows the experience</p>	<p>32</p>	<p>15</p>

<p>and skills of the proposed resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Data measurement and acquisition systems for measuring optical components; <ul style="list-style-type: none"> • 2 pts per parameter (see Note 1) for which a data measurement and acquisition system was developed b. Collection and saving of data on measurements of optical components; <ul style="list-style-type: none"> • 1 pt per parameter measured (see Note 1) c. Participation in analysis and reduction of data on measurements of optical components; <ul style="list-style-type: none"> • 1 pt per parameter analyzed (see Notes 1 and 2) <p>Points will be added based on the number systems measured and/or analyzed by the proposed resources (see Notes 1 and 2), as follows:</p> <ul style="list-style-type: none"> a. One system was measured or analyzed: 1pt b. Between 2 and 5 systems were measured or analyzed: 2 pts c. More than 5 systems were measured or analyzed: 4 pts <p>NOTE 1: Only the following parameters for measurements of optical components will be considered in calculating points:</p> <ul style="list-style-type: none"> a. Impulse response (Modulation Transfer Function [MTF]) on and off axis; b. Distortion; c. Transmission; d. Relative illumination; e. f/#; f. Field of view; and g. Irregularity of surfaces determined using an interferometer or the radius of the lenses. <p>NOTE 2: Analysis of simulation results will not be considered.</p>		
<p><u>5.5 Optical design services</u></p> <p>The bidder must present one or more projects in which it has carried out optical design.</p> <p>The bidder must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Design optical systems with spherical, aspherical, free-form and mirrored lenses using a computer-assisted optical design software program; b. Simulate the optical performance of systems, including aspects such as modulation transfer function (MTF), relative illumination, 	32	15

<p>brightness distribution, aberrations and distortion;</p> <ul style="list-style-type: none"> c. Produce a tolerance analysis; and d. Interact with manufacturers of custom-manufactured optical components. <p>Points will be allocated based on the number of months of experience of the proposed resources in one of the three activities (a, b and c) listed above and according to the following weighting:</p> <ul style="list-style-type: none"> a. Less than 12 months of relevant experience: 2 points per activity b. Between 1 and 3 years of relevant experience: 4 points per activity c. Between 3 and 5 years of relevant experience: 6 points per activity d. More than 5 years of relevant experience: 8 points per activity 		
<p>5.6 <u>Opto-mechanical design and manufacturing services</u></p> <p>The bidder must present one or more projects in which it has made opto-mechanical assemblies.</p> <p>The bidder must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Carry out opto-mechanical design using a computer-assisted opto-mechanical design software program; b. Carry out thermal analysis studies; c. Carry out stress calculations using the finite element analysis method; d. Interact with manufacturers of custom-manufactured opto-mechanical components; and e. Assemble optical systems. <p>Points will be allocated based on the number of months of experience of the proposed resources in each of the five activities listed above and according to the following weighting:</p> <ul style="list-style-type: none"> a. Less than 6 months of relevant experience: 1 point per activity b. Between 7 and 12 months of relevant experience: 3 points per activity c. Between 13 and 36 months of relevant experience: 4 points per activity d. More than 36 months of relevant experience: 5 points per activity 	25	12

<p><u>5.7 Development data analysis software programs</u></p> <p>The bidder must present one or more projects related to the development of data-processing and analysis software.</p> <p>The bidder must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ol style="list-style-type: none"> a. Development of data validation for analyses: <ul style="list-style-type: none"> • It is not demonstrated in the project that the resource participated in a development task : 0 pt • The resource participated in one or more development tasks: 2 pts • The resource supervised one or more development tasks: 4 pts b. Development data-processing and analysis tools: <ul style="list-style-type: none"> • It is not demonstrated in the project that the resource participated in a development task : 0 pt • The resource participated in one or more development tasks: 2 pts • The resource supervised one or more development tasks: 4 pts c. Development of data classification tools (e.g., database): <ul style="list-style-type: none"> • It is not demonstrated in the project that the resource participated in a development task: 0 pt • The resource participated in one or more development tasks: 2 pts • The resource supervised one or more development tasks: 4 pts d. Carrying out of data analysis using a method based on artificial intelligence: <ul style="list-style-type: none"> • It is not demonstrated in the project that the resource participated in an artificial intelligence-based development task: 0 pt • The resource participated in one or more artificial intelligence-based development tasks: 1 pt • The resource supervised one or more artificial intelligence-based development tasks: 2 pts <p>Points will be added based on the number of months of experience of the</p>	30	14
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<p>proposed resources in each of the four activities listed above and in accordance with the following weighting:</p> <ul style="list-style-type: none"> a. Less than 3 full-time months of relevant experience: 0 pt per activity b. Between 3 and 6 full-time months of relevant experience: 1 pt per activity c. Between 7 and 12 full-time months of relevant experience: 2 pts per activity d. Between 13 and 24 full-time months of relevant experience: 3 pts per activity e. More than 24 full-time months of relevant experience: 4 pts per activity 		
<p><u>5.8 Development of image processing algorithms</u></p> <p>The bidder must present one or more projects related to the development of image processing and enhancement algorithm software programs to improve the performance of vision systems.</p> <p>The bidder must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Development of image processing and enhancement algorithms to improve the performance of vision systems: <ul style="list-style-type: none"> ○ The project does not demonstrate that the resource has participated in development tasks: 0 pt ○ The resource has participated in one or more tasks involving the standard development of image processing algorithms (e.g. gain and contrast operator, contrast and brightness operator, noise suppression): 2 pts ○ The resource has managed one or more significant tasks involving the development of image processing algorithms (e.g. automatic gain and contrast operator, local enhancement operator, dynamic adaptation (HDR), tone mapping): 4 pts b. Implementation of algorithms (e.g.: real time, microprocessor, DSP): <ul style="list-style-type: none"> ○ The project does not demonstrate that the resource has participated in the implementation of image processing algorithms: 0 pt ○ The resource has participated in one or more implementations of image processing algorithms: 2 pts ○ The resource has supervised one or more implementations of image processing algorithms: 4 pts 	24	10

<p>c. Testing and evaluation of image processing and enhancement algorithms:</p> <ul style="list-style-type: none"> ○ The project does not demonstrate that the resource has participated in the testing and evaluation of image processing algorithms: 0 pt ○ The resource has participated in one or more image processing algorithm evaluation tests: 2 pts ○ The resource has supervised one or more image processing algorithm evaluation tests: 4 pts <p>Points will be added based on the number of months of experience of the proposed resources in each of the three activities listed above and in accordance with the following weighting:</p> <ul style="list-style-type: none"> a. Less than 3 full-time months of relevant experience: 0 pt per activity b. Between 3 and 6 full-time months of relevant experience: 1 pt per activity c. Between 7 and 12 full-time months of relevant experience: 2 pts per activity d. Between 13 and 24 full-time months of relevant experience: 3 pts per activity e. More than 24 full-time months of relevant experience: 4 pts per activity 		
<p>5.9 <u>Electronics support services</u></p> <p>The bidder must present one or more projects in which it manufactured electronic components.</p> <p>The bidder must use projects to present work that shows the experience and skills of the proposed resources in the following types of activities:</p> <ul style="list-style-type: none"> a. Design electronic circuits (analog and digital) using standard commercial software; b. Produce designs based on FPGA (field programmable gate array) architectures; c. Design, manufacture and assemble printed circuit boards according to the layout of the electronic components. <p>Points will be added based on the number of months of experience of the proposed resources in each of the three activities listed above and in accordance with the following weighting:</p> <ul style="list-style-type: none"> a. Less than 6 months of relevant experience: 1 pt per activity 	12	6

b. Between 7 and 12 months of relevant experience: 2 pts per activity c. Between 13 and 36 months of relevant experience: 3 pts per activity d. More than 36 months of relevant experience: 4 pts per activity		
TOTAL	223	102

POINT-RATED CRITERIA FOR EVALUATING THE COMPANY'S EXPERIENCE AND MANAGEMENT MODEL

6. Experience and management model	Maximum Score	Minimum Score
<p><u>6.1 Bidder's experience in managing projects in the EO system characterization field within the past 10 years</u></p> <p>The bidder must describe its experience in managing projects in the EO system characterization field. The description must include a project title and description, value and year of completion.</p> <ul style="list-style-type: none"> a. 4 or more projects in the EO system characterization field with a total budget (for all projects) of more than \$5 million: 6 pts b. 4 or more projects in the EO system characterization field with a total budget (for all projects) of more than \$1 million: 3 pts c. 2 or more projects in the EO system characterization field with a total budget (for all projects) of more than \$500,000: 2 pts d. Less than two projects in the EO system characterization field and/or a total budget (for all projects) between \$250,000 and \$500,000: 1 pt e. Budget of less than \$250,000: 0 pt 	6	N/A
<p><u>6.2 Management tools/methods for planning and managing tasks and activities</u></p> <p>The bidder must propose appropriate project management techniques, including the production of schedules or Gantt charts, as well as risk management plans. The methods/tools proposed must be supported by concrete examples from projects completed in the past by the bidder. Tasks/activities, resources and deliverables must be clearly identified.</p> <ul style="list-style-type: none"> a. The bidder proposes a "flow chart process" (schedule or Gantt chart): 2 pts b. The bidder already uses a "flow chart process" (schedule or Gantt chart) as a project management technique and provides a sample 	10	N/A

<p>document associated with a past project completed by the bidder's company: 5 pts</p> <p>c. The bidder proposes a risk management plan based on recognized standards (such as PMBOX): 2 pts</p> <p>d. The bidder already uses a risk management plan based on recognized standards (such as PMBOX), and provides a sample document associated with a past project completed by the bidder's company: 5 pts</p> <p>NB: Points are cumulative (a or b + c or d).</p>		
<p><u>6.3 Quality assurance process</u></p> <p>The bidder must describe the quality assurance processes used within its company.</p> <p>a. The bidder submits a quality assurance process that is well documented and based on recognized standards (e.g. ISO). The process is well established in the bidder's company, and an example of the process, associated with a projected completed by the bidder's company, has been provided: 5 pts</p> <p>b. The bidder submits a quality assurance process. The process is not necessarily based on recognized standardized processes, but it is well established in the company, and an example of the process, associated with a projected completed by the bidder's company, has been provided: 3 pts</p> <p>c. Other: 0 pt</p>	5	N/A
<p><u>6.4 Resource management systems</u></p> <p>The bidder must propose an appropriate system for resource management. The bidder should describe how it plans to control the management of the project with respect to the evaluation of priorities, work overload, availability of resources and the quality of offered services within the task authorization process.</p> <p>a. The bidder proposes the use of resource management tools: 2 pts</p> <p>b. The bidder demonstrates that it regularly uses resource management tools (e.g. OpenProj). The methods/tools proposed must be supported by concrete examples from projects completed in the past by the bidder: 4 pts</p> <p>c. The bidder demonstrates that it regularly uses resource management</p>	8	N/A

tools (e.g. OpenProj). The methods/tools proposed must be supported by concrete examples from projects completed in the past by the bidder. The bidder also has a plan to resolve resource management problems. The bidder should provide at least two different solutions in its problem management plan to remedy personnel shortages. The solutions proposed must be relevant, effective and explained in detail in order to be taken into account in the evaluation: 8 pts		
TOTAL	29	12