Annex C

Questions to Industry

1 Proposed System

1.1 Description of Proposed System

1.1.1 The System Requirements Specification (SRS) for the LRF HHTI-LR System is presented in Annex A to this RFI.

1.1.2 Question 1. Description of Proposed System

1) Please identify your proposed system that could satisfy the requirements specified in the LRF HHTI-LR SRS.

2) Provide performance specifications and detailed technical information about your proposed system.

3) Based on an initial firm purchase of approximately 200 LRF HHTI-LR systems and the conceptual configuration of the system provided in Section 3 of the SRS, provide an indicative price per LRF HHTI-LR system. Describe inclusions and exclusions in the indicative price.

1.2 Draft System Requirement Specification for the LRF HHTI-LRS

1.2.1 The draft System Requirements Specification (SRS) for the LRF HHTI-LRS is provided for industry review at Annex A.

1.2.2 The draft SRS is subject to further revisions as Canada develops the requirements and gains a better understanding of the solutions that are available by industry.

1.2.3 The questions in this section can be answered by completing the comments field of the Excel spreadsheet provided.

1.2.4 Question 2. Clarity of Mandatory and Rated Requirements

Mandatory requirements in the SRS are indicated by the word “must”. Rated requirements in the SRS are indicated by the word “should”, with an additional “< rated >” annotation at the end of the requirement.

1) Identify any Mandatory and/or Rated requirement in the SRS that require clarification. Describe the nature of the clarifications that are required.

1.3 Maturity Requirements

1.3.1 Maturity requirements for the LRF HHTI-LR are specified in Annex A, Section 4.3 System Maturity Requirements.

1.3.2 Question 3. Maturity of Proposed System

1) Provide actual or forecast dates of the following milestones related to your proposed LRF HHTI-LR: Qualification complete, First production.

2) Describe how your proposed LRF HHTI-LR either meets or will meet the system maturity requirements.

1.4 Qualification of LRF HHTI-LR

1.4.1 The LRF HHTI-LR must satisfy a number of key performance and environmental requirements for which an OEM can offer evidence of that the requirements have been met.

1.4.2 Question 4. Performance Requirements – Thermal Channel

1) As part of your proposal in response to an RFP, will you be able to submit evidence that the requirements specified in the SRS Section 4.3.2.2.1 Nominal Static Range Performance - Determined in accordance with STANAG 4347 have been met?

1.4.3 Question 5. System Environment Requirements

1) For each environmental requirement described in the *SRS Section 6.3 System Environment Requirements*, when applied in context to the LRF HHTI-LR only (excluding other components), have you already carried out qualification testing that would satisfy this requirement, or intend to do so whether or not Canada proceeds with this procurement?

2) If so, identify any standardized test methodology that was applied, or that you intend to apply (e.g. AECTP 300 Method xyz, MIL-STD-810 Method abc, etc.)

3) As part of your proposal in response to an RFP, will you be able to submit evidence in the form of test results that the requirements above have been satisfied?

1.4.4 Question 6. Radio Frequency Hazards

1) For requirements specified in the *SRS Section 4.6 Radio Frequency Hazards*, have you already carried out qualification testing that would satisfy this requirement, or intend to do so whether or not Canada proceeds with this procurement?

2) If so, identify equivalent standards against which the testing was, or will be, carried out, such as those from the European Union or United States.

3) As part of your proposal in response to an RFP, will you be able to submit evidence in the form of test results that the requirements above have been satisfied?

1.5 Warranty

1.5.1 Question 7. Warranty

1) Describe the typical warranty that you offer for the proposed system. Describe inclusions and exclusions for components of the proposed system.

1.6 Delivery Lead Time

1.6.1 Question 8. Delivery Lead Time

1) What is the estimated lead time for LRF HHTI-LR System products and components given the current global supply chain delays? More specifically, what timelines would be a reasonable expectation for the delivery of the initial 200 units?

1.7 Controlled Goods & Export Restrictions

1.7.1 Question 9. Controlled Goods & Export Restrictions

1) What, if any, ITAR (International Traffic in Arms Regulations), Technical Assistance Agreement, or Controlled Goods Program restrictions exist for any part of your proposed Solution?

2) Does your proposed solution or its components have any export or licence restrictions? If so, list them.

2 Software

2.1 LRF HHIT-LR Embedded Software

2.1.1 Question 10. LRF HHTI-LR Embedded Software

1) Provide an indicative cost for modifications that must be made to LRF HHTI-LR embedded software in order to satisfy the requirements in Annex A, Section 4 LRF HHTI-LR Requirements

2) What, if any are your concerns with the use of SACC clause 4003 for the LRF HHTI-LR embedded software as part of your proposed solution? Canada will not be requesting delivery of source code for LRF HHIT-LR Embedded Software.

2.2 LRF HHTI-LR / ISS BMS Interface Application (LIBI App)

2.2.1 Refer to Annex A, Section 5.13 LRF HHTI-LR / ISS BMS Interface Application (LIBI App) for a description of the LIBI App.

2.2.2 It is Canada's intent that the LIBI App be developed by your company (LRF HHTI-LR OEM) in cooperation with the defence contractor that is developing the core functionality of the ISS BMS application. The software development process will be determined by your company, but will include the following activities:

- Development of an Software Requirements Specification, following clarification and confirmation of functional requirements with the DND technical authority, functional subject matter experts, and ISS BMS defence contractor.
- Development of an LRF HHTI-LR / ISS BMS ICD
- Iterative prototyping sessions with functional subject matter experts

2.2.3 Canada, through the LRF HHTI-LR project, will be funding the integration of the LIBI App with the ISS BMS application, as well as any changes that may be required to the ISS BMS application to support the integration.

2.2.4 Question 11. LIBI App Software

1) Describe your have experience developing ATAK plug-ins as a means of interfacing your proposed system with external systems such as the Integrated Soldier System.

2) Suggest a software development approach for the LIBI App that maximizes the probability of a successful implementation, in terms of scope, cost and schedule.

3) Suggest a contractual framework involving Canada, your company and the defence contractor developing the ISS BMS that maximizes the probability of a successful implementation of the LIBI App.

4) What, if any, are your concerns with the use of SACC clause 4003 for the LIBI App software as part of your proposed solution? Note that Canada will be requesting delivery of source code for LIBI App software.

5) Provide an indicative price for the development and qualification of the LIBI App.

2.3 General

2.4 Question 12. Software – General

1) Explain how you typically provide software support services, including any intellectual property rights and licencing, for your proposed solution both at delivery, and over its entire lifecycle.

2) Do you typically provide Software-as-a-Service (SaaS) on a subscription based-model, and if so how?

3) Are you capable of providing cloud-based software services to support in garrison, in the field, and on operations internationally. Describe your proposed technical interface with Canada?

4) Do you have any experience inserting features for new sensors or weapons that are delivered into the CAF inventory?

5) Is your proposed solution capable of evolving the software system over its entire life cycle in order to support changing capabilities such as security, technology, etc?.

6) Describe the cycle of updates your software(s) typically receives in terms of capability, interface, and time between updates.

3 Training

3.1 Question 13 – Training

1) Explain how operator training is typically provided to military clients, both at delivery and over the planned life cycle of your proposed solution?

2) Explain how you typically provide maintenance training to military clients, both at delivery and over the planned life cycle of your proposed solution?

3) What training aids are typically required for maintenance training for your proposed solution?

4) Are their specific qualifications necessary to safely and effectively perform maintenance on your proposed solution?

5) Provide an indicative price for the delivery, per serial, of each type of Initial Cadre Training course that you would typically deliver.

4 Preventative and Corrective Maintenance

4.1 Question 14. Preventative and Corrective Maintenance

1) What are your preventive and corrective maintenance strategies for your proposed solution?

2) Describe the corrective maintenance requirements for your proposed solution. Does your proposed solution have a Logistic Support Analysis Record (LSAR) completed? If so, what type of historical data is it based on?

3) Identify the Special Tools and Test Equipment (STTE) that Canada would require for each line of maintenance for your proposed solution. Provide an indicative price for each item of STTE.

4) For repairs that you recommend would be carried out by your organization, describe a typical minor repair, and a typical major repair. Provide an indicative price for a typical minor repair and a typical major repair. Provide an indicative price for a typical minor repair and a typical major repair undertaken in Canada, if different.

5) Identify typical turn-around-times for minor and major repairs. Identify typical turn-around-times for minor and major repairs undertaken in Canada, if different.

6) Describe the how repairs carried out under warranty affect the price of a repair.

7) Are you willing to provide repair and overhaul services from delivery and through-out the in-service life of the proposed system. Describe any constraints to the provision of these services.

4.2 Question 15 - Preventative Maintenance – Verification of Alignment

1) Do you recommend periodic verification of the alignment between the Laser Range Finder, Thermal Channel, Secondary channel and (if applicable) Laser Pointer as a preventative maintenance activity? If so, how often?

2) Identify the STTE required to carry out verification of alignment. Provide an indicative price for each item of STTE.

4.3 Question 16. Logistic Support Analysis and Spare Parts

1) What is your overall strategy to provide Logistic Support Analysis and the key factors considered for your proposed solution?

2) What would be your key considerations with regard to any sparing during an initial two-year provisioning period and for warehousing, maintenance and distribution thereafter?

3) What Mean Time to Deliver Spare Parts (MTTDSP) would be most cost effective to achieve to the main supply depots in Edmonton and Montreal?

4) Based on an initial firm purchase of approximately 200 LRF HHTI-LR systems and the conceptual configuration of the system provided in Section 3 of the SRS, provide an indicative price for an initial two-year spares package. Provided an itemized list of spare parts, recommended quantities, and indicative price per item.

4.4 Question 17. Availability

1) What would be reasonable targets for the Key Performance Indicators (KPI) referenced in Annex D to this RFI, Section 1.26 (e.g. Availability, Mean Time Between Critical Failure, Mean Time to Repair)? Please provide evidence to support these KPIs for your proposed solution.

2) Do you suggest alternative KPIs to those listed in Annex D to this RFI and for which you have information on your proposed solution? If so, describe them and why they are preferable and relevant.

3) Describe your processes, software and hardware used in the tracking of KPIs.

4) Can your KPI tracking software interface with SAP products? If so, how?

5 Technical Data Package Capabilities

5.1 Question 18 – Technical Data Package – Standard Offering

1) Which technical publications are normally provided for your proposed solution, as described in Annex D to this RFI?

2) Are you capable of updating and maintaining technical publications during the entire lifecycle of your proposed solution. Are they electronic publications? Are they

interactive electronic technical manuals (IETM)? Who would retain ownership? Please provide details.

3) Which if any of your publications are available in both English and French?

5.2 Technical data will be acquired within the scope of the acquisition contract. The technical data will likely include:

- Interface Control Document (ICD) for the interface between the LRF HHTI-LR and the LIBI App (see Annex A, Section 5.13 LRF HHTI-LR / ISS BMS Interface Application (LIBI App)).
- Cataloguing data and associated drawings (Level 2 Drawings)
- First level maintenance manual (English and French versions)
- Second level maintenance manual, if the approach of conducting second level maintenance at a DND facility is followed (English and French versions)
- User Manual (English and French versions)
- Quick Reference Guide (English and French versions)
- Operator training course package (English and French versions)
- First level maintenance training course package (English and French versions)
- Second level maintenance training course package if the approach of conducting second level maintenance at a DND facility is followed (English and French versions)

5.3 Question 19. Technical Data – Canada's Preliminary Requirements

1) Provide an indicative, itemized cost for the provision of the technical data described above.

2) What, if any, are your concerns with the use of SACC clause 4006 in the terms of the technical data to be delivered with your proposed solution?

6 Engineering (System, Sub-system, or Component Reliability Assessment / Failure Analysis) Services

6.1 Question 20. Engineering Services

1) For your proposed solution, are you capable of and willing to provide Technical Investigations/Studies and Engineering Support from its delivery, and over its entire lifecycle.

7 Configuration / Obsolescence Management

7.1 Question 21. Configuration / Obsolescence Management

1) Explain how configuration management services are typically provide during the entire lifecycle of your proposed solution.

2) Explain how obsolescence management is typically provided during its entire lifecycle for your proposed solution.

8 Repair and Overhaul of LRF HHTI-LR in Canada

8.1 There are operational, logistical, and economic benefit considerations for conducting LRF HHTI-LR repair and overhaul (R&O) activities in Canada.

8.2 For the purposes of the questions below, repair and overhaul includes:

8.2.1 Higher complexity tasks with access to Special Tools and Test Equipment (STTE) and requiring up to 24 hours to complete; and

8.2.2 Very complex tasks (such as overhauls and mid-life refits) using highly specialized tools and production equipment, requiring significant time to complete. This could include repair of failed Shop Replaceable Units.

8.3 Question 22. Establishment of a Repair and Overhaul Operation in Canada for LRF HHTI-LR

1) Is your company able to conduct R&O activities in Canada, either through a subsidiary, partner or sub-contractor?

2) If so, describe the general scope of R&O activities that could be conducted in Canada. Please include a description of activities that may be conducted outside of Canada.

3) Describe the benefits and constraints for conducting R&O activities in Canada.

9 Establishment of a DND Facility for Second Level Maintenance for LRF HHTI-LR

9.1 Canada is investigating the option of establishing a DND facility for the conduct of second level maintenance activities for the LRF HHTI-LR. This facility would be established in an existing electro-optical clean room located at 202 Workshop Depot (202 WD) in Montreal. The electro-optical clean room at 202 WD is equipped to support the Turret Day Sight and Laser Range Finder on the Light Armoured Vehicles (LAVs), including the LAV Reconnaissance Surveillance Systems fleet. It has been designed for 202 WD to provide a greater spectrum of service to the Canadian Armed Forces' electro-optical systems in the future.

9.2 Under this scenario, when a fault is confirmed at a second line field maintenance unit, the LRF HHTI-LR would be sent to 202 WD for further investigation and repair actions. DND electro-optical technicians at 202 WD, trained by your company, would:

- Investigate the failure (including calibration and alignment issues)
- Open the device (break the seal)
- Replace Shop-Replaceable Units as required
- Conduct calibration and re-alignment adjustments as required (where possible)
- Reseal and purge
- Conduct testing
- Return a restored device to operational service, or forward the failed device to OEM facilities for further investigation and repair

9.3 The maintenance tasks that would be undertaken at 202 WD would be those involving higher complexity tasks with access to STTE and requiring up to approximately 24 hours to complete.

9.4 The maintenance tasks that would be undertaken at 202 WD would NOT include very complex tasks (such as overhauls and mid-life refits) using highly specialized tools and production equipment, requiring significant time to complete.

9.5 Question 23. Feasibility of DND Second Level Maintenance Facility

9.5.1 Provide the following information:

1) Is the option described above feasible given your corporate policies and processes related to sustainment?
2) Are there any risks or constraints associated with this option?
3) How would DND maintenance actions affect warranty provisions for equipment still under warranty?
4) Are there any issues or costs related to intellectual property associated with this option?

9.6 Question 24. Facility Requirements for DND Second Level Maintenance Facility

9.6.1 Assuming a suitable, pre-existing electro-optical clean room repair facility at 202 WD, provide the following information:

1) What are the space requirements for this facility for LRF HHTI-LR maintenance actions?
2) How much bench space would be required for special tools and test equipment and to conduct testing and repairs?

3) Over and above the requirements for a clean room space, are there any unusual HVAC or other infrastructure-related requirements for this facility?

9.7 Question 25. STTE for DND Second Level Maintenance Facility

9.7.1 Provide the following information:

1) Identify the special tools and test equipment that would be required for this facility. Indicate which items of STTE would be specific to LRF HHTI-LR, and which would be suitable for use with other hand held or weapon-mounted electro-optical equipment.

2) Provide an itemized indicative prices for the required STTE.

9.8 Question 26. Training for Second Level Maintenance Technologists

1) Provide an estimate for the number of days to train an electro-optical technologist in the second level maintenance tasks. Assume that the electro-optical technicians are experienced in the repair of military electro-optical systems.

9.9 Question 27. Impact on Answers to Question 22

9.9.1 Should Canada decide to pursue the establishment of second line maintenance activities at 202 WD, it is understood that the Answers to Question 22 may no longer apply. Given a decision by Canada to pursue this option:

1) Is your company able to conduct those remaining R&O activities (i.e. not undertaken by 202 WD) in Canada, either through a subsidiary, partner or sub-contractor?

2) If so, describe the general scope of R&O activities that could be conducted in Canada. Please include a description of activities that may be conducted outside of Canada.

3) Describe the benefits and constraints for conducting R&O activities in Canada, given that second level maintenance activities would be undertaken by 202 WD.

10 Demilitarization and Disposal

10.1 It is Canada’s intent to return all non-serviceable LRF HHTI-LR to your company for repair, cannibalization, or scrap.

10.2 Question 28 Demilitarization and Disposal

1) Describe your experience with disposing of non-repairable components in accordance with their assigned Demilitarization Code (DMC).

2) Are you willing to undertake the disposal of non-repairable LRF HHTI-LR or components thereof in accordance with their assigned DMC?

11 Industrial and Technological Benefits Policy

11.1 Questions related to the Industrial and Technological Benefits (ITB) Policy were asked as part of the Laser Range Finder – Hand Held Thermal Imager – Long Range (LRF HHTI-LR) RFI W8476-226536 published on November 16, 2021. The ITB Policy questions in this RFI remain the same as the ones previously published.

11.2 Question 29. Defence Sector

11.2.1 The ITB Policy seeks to promote economic development and long-term sustainment of Canadian businesses engaged in the manufacturing and delivery of products and services used in government defence and security applications.

1) Based on the high level requirements put forward by the Department of National defence, describe what Direct Work activities your company would foresee undertaking in Canada for the production and sustainment of the LRF HHTI-LR.

2) Please identify existing Canadian content of your current solution.

3) What opportunities exist to add further Canadian content to your solution?

4) What percentage of Direct Work (acquisition and sustainment) could be completed in Canada in the KIC of EO/IR Systems.

11.3 Question 30. Supplier Development

11.3.1 The ITB Policy seeks to improve the competitiveness of Canadian industry by encouraging Canadian industrial participation and the scaling up of Canadian companies including small and medium-sized businesses (SMBs).

11.3.2 The ITB Policy requires that at least 15 percent of the Contractor's ITB obligation (equal to the value of the contract) be represented by work with Canadian SMBs with less than 250 employees.

1) To what extent can you commit to an SMB requirement of over 15% in order to nurture the development of Canadian SMBs within the defence sector (includes both direct work on this procurement and indirect work in other business areas)?

2) What new supply chain opportunities could be made available to Canadian suppliers within the KIC of EO/IR Systems. For the supplier development opportunities identified, please specify the direct and indirect activities that could be performed with Canadian SMBs. Please include in your response:

   a. What activities should be perceived as providing the highest value to Canada.

   b. Which opportunities could be specifically targeted at Canadian SMBs.

   c. Supplier development opportunities that could be performed in the KIC of EO/IR Systems.

11.4 Question 31. Skills Development and Training

11.4.1 The ITB Policy fosters the development and sustainment of a diverse, talented, and innovative Canadian workforce through access to training, education, opportunities and programs.

1) What types of Skills Development and Training investments would produce the maximum benefit for Canadians (Defence or commercial sector)?

Examples:

i. Work integrated learning programs (e.g., co-operative education; work placements);

ii. Apprenticeship programs;

iii. A new existing skills development program at or through a post-secondary institution

iv. Support for security certifications (e.g.: Top Secret, ITAR) or cybersecurity compliance certifications for Canadian companies, especially SMBs.

11.5 Question 32: Indirect Opportunities

11.5.1 The ITB Policy seeks to promote economic development and long-term sustainment of Canadian businesses engaged directly and indirectly on this project. Indirect opportunities refers to any business activities that is not Work under this project.

1) In terms of indirect activities that could be leveraged through this procurement, please describe possible opportunities for each category listed below:

a. Export opportunities for Canadian suppliers.

b. R&D opportunities in Canada.

c. Supplier development of Canadian companies, including any current initiatives you have to integrate SMBs into your supply chain.

11.6 Question 33. Key Industrial Capabilities

1) Are there other relevant KICs which align with the work to be conducted for the LRF HHTI-LR? If yes, please indicate which KICs should be considered and why. As part of your response, please describe how the proposed KICs would enhance the opportunities that could be leveraged through the Value Proposition for Canadian Industry.

11.7 Question 34. Value Proposition

1) Comparatively to price and technical merit, Value Proposition typically has a weight between 10% to 20% of the overall bid evaluation. What is your view on the weighting of the Value Proposition for the LRF HHTI-LR project?

2) Within the Value Proposition, what are your recommended minimum percentages of weighting for each of the Value Proposition pillars (i.e. defence, supplier development, R&D, export, and skills development and training).