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MODIFICATION DE L'INVITATION**

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

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<b>Title - Sujet</b> ADIS PROJECT- Draft RFP	
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## Summary of Industry Feedback for the Area Detection and Identification System (ADIS) W8476-145109/A



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## 1. Summary of Feedback and Outcomes

Item	Recommendation	Canada's Response
1	<p><u>Bidder experience with Fourier Transform Spectroscopy (FTS) / Fourier Transform Infra-Red (FTIR) technology:</u></p> <p>It was recommended that the mandatory evaluation criterion includes a minimum experience in developing gas detection and identification systems using FTS/FTIR spectroscopy.</p> <p>It was also recommended that the Government of Canada (GoC) evaluates the demonstrated capability for the Bidder to exploit the optical subtraction FTIR spectroscopy fundamental technology of Compact Atmospheric Sensing Interferometer -Engineering Development Model (CATSI- EDM) to its full potential. More points should be awarded for a Bidder having significant experience in developing gas detection and identification systems using FTIR spectroscopy with optical subtraction.</p> <p>It was further recommended that a maturation plan be provided by Bidders at the proposal stage to demonstrate understating of the requirements, the mandatory technology, the risks involved in maturing such technology.</p>	<p>Canada agrees that experience in this technology will help mitigate technical risk. However it is not essential for a contractor to achieve the end goal to have this experience. Canada will seek to incorporate the maturation plan into the System Engineering Management Plan (SEMP).</p>
2	<p><u>Gas detection performance versus system level technology requirements:</u></p> <p>It was recommended that gas performance detection requirements not be specified in the RFP. The GoC should rely on the Noise Equivalent Spectral Radiance (NESR), the Field of View (FOV), the relative imbalance of the Double-Input-Beam Interferometer and other optical and system requirements that form the essence and system level performance fundamentals of the CATSI-EDM.</p>	<p>Canada disagrees with this recommendation. The gas detection performance specified has been achieved by CATSI-EDM with the parameters listed in the recommendation. ADIS is a maturation of CATSI-EDM.</p>
3	<p><u>SVR #3 contractor responsibility:</u></p> <p>Assuming that the GoC still intends to perform the SVR #3 tests, it was recommended that the SVR #3 be modified to only require the industry to support the testing.</p>	<p>Canada will require that the contractor be responsible for the verification of ALL requirements in the SysRS.</p>

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	<p>Additionally, since the level of support is difficult to assess at this time, it was recommended that such support be provided under an Additional Work Requests (AWR) task authorization.</p>	
4	<p><u>Bidder technical capabilities evaluation criteria (Mil-Stds):</u></p> <p>It was recommended that bidder's experience in developing, testing, certifying, fielding and supporting operational orbiting space technologies be considered equivalent to experience with Mil-Std-810.</p> <p>It was also recommended that experience in developing, testing, certifying, fielding and supporting operational product to commercial EMI/EMC standards added to experience of space qualification of technologies for the radiation space environment be considered equivalent to experience with Mil-Std-461.</p> <p>This experience when applied to FTS/FTIR systems is even more applicable and could be valued accordingly in point rated criteria.</p>	<p>This recommendation is being considered for bid evaluation. Space standards are not less stringent than military standards.</p>
5	<p><u>Key personnel experience:</u></p> <p>It was recommended that the mandatory and the point rated experience for the key personnel/function be revised to allow a bidder to propose a team of 2 individuals to meet the broad range of listed experience. For example, the Project Manager (PM) or project management team required experience could be met by the assigned PM and his deputy PM.</p> <p>Additionally, it was recommended that the generic EO experience be replaced by FTS/FTIR spectroscopy experience and that FTS/FTIR spectroscopy using optical subtraction experience be valued in pointed rated criteria.</p> <p>Similarly to the recommendation in item 4 Bidder technical capabilities evaluation criteria (Mil-Stds), it was recommended that key personnel experience in developing, testing, certifying, fielding and supporting operational orbiting space and commercial (for EMI/EMC) products be considered equivalent for the militarization experience (Mil-Std-810/461).</p>	<p>Canada will review and decide experience based on project risk mitigation.</p> <p>From a technical perspective, it is not necessary to have this particular experience.</p> <p>This recommendation is being considered for bid evaluation.</p>

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6	<p><u>Aggressive and rigid schedule</u></p> <p>It was recommended that two (2) Long Lead-time Items (LLI) milestones (1- ordered, 2- received) with associated payments be added to the milestones. Additionally, it was proposed that the RFP provides more flexibility for bidders to propose a schedule that would meet the overall intent of 36 months but where the maturation and production milestone schedule would not be limited by the 3 / 6 / 12 / 18 / 24 and 36 months specified in the current draft. This provides the ability for a bidder to present a plan that better optimizes time delivery and mitigation of schedule risks.</p>	<p>In Canada's view, the LLI procurement is a cost of doing business. However, Canada may consider progressive payment milestones for LLI equipment. Canada will revisit the schedule milestones with the aim of providing more flexibility to the bidder.</p>
7	<p><u>Cost concerns, GO/NOGO clauses and milestone payment limitations:</u></p> <p>It was strongly recommended the GoC seeks industry comments regarding feasibility of expected work within an allocated budget for each phases of the acquisition contract (maturation &amp; production). The GoC could request industry feedback by amending the current LOI/RFP with a more realistic spending profile and associated milestone payment limits.</p> <p>The LOI/RFP should also include a maximum price for each contract. These actions, taken before the release of formal RFP, would reduce the likelihood for the GoC not to receive responsive bids due to spending profiles risks that would be unacceptable to industry. This would also reduce the likelihood that prices of responsive bids be above the GoC approved budget for this project.</p>	<p>Canada disagrees with putting a ceiling price on the RFP. Canada feels the bidder's proposal should stand on its own technical and financial merits.</p>
8	<p><u>Undefined work requirements in a RFP context:</u></p> <p>It was recommended that this work be requested by an AWR task Authorization. The current draft specifies work at SVR #3 that cannot be estimated in terms of effort and risk. The work mandated between the laboratory test and the user trial is not defined. The scope, GoC outcome expectations and what will be required are not bounded nor described.</p>	<p>The Test and Evaluation section of the SOW will be rewritten, and Canada will require that the contractor be responsible for the verification of ALL requirements in the SysRS.</p>

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	<i>"The Contractor must use the results of the laboratory tests to optimize the ADIS detection and identification software algorithm parameters, and to make any other required hardware or optics adjustments before entering the field and user trial portion of the SAT"</i>	
9	<p><u>Security of facility (Secret):</u></p> <p>It was recommended that the GoC specifies more clearly the minimum size of the classified storage and production facility that is required before a contract can be awarded.</p> <p>It was also recommended the GoC publishes these clarifications in an amended LOI as soon as possible to minimize the schedule delays risk associated to certification or recertification of a facility by potential Bidders.</p>	The size required for the classified storage and production facility is the Contractor's responsibility, while being compliant with the SRCL.
10	<p><u>SysRS Section 1.4, 3.2.4.1, 3.3.1 &amp; others – CPC design constraints:</u></p> <p>It was recommended the SysRS allows the Bidder to propose an ADIS Electronic architecture where some of the processing CPC functions could be embedded into the OH instead of being specified to be accomplished as a separate entity in the CPC.</p>	Canada will have design restraints on the CPC based on technical risk and security engineering requirements.
11	<p><u>SysRS Section 1.4, 3.2.2.2 &amp; others HD camera and real-time video:</u></p> <p>It was recommended the SysRS be modified for the display of <b>HD imagery</b> (stills) with no or low compression be upon requests only on the console. The nominal <b>live video feed</b> (if still required) could be displayed as a compressed and/or low frame rate to overcome the Ethernet and P&amp;T limitations and other data throughput issues.</p> <p>It was also recommended that the <b>low illumination</b> HD requirements be only a target and not mandatory requirement to avoid an expensive complete camera design in this project.</p>	The requirement included in the SysRS will take into consideration of operational requirements and the potential tech difficulty in achieving the requirement as written in the draft RFP.
12	<p><u>SysRS Section 3.2.2.7, 3.2.2.8 &amp; others GPS, Compass and CPC:</u></p> <p>It was recommended the SysRS be modified to only specify the function and performance of the GPS and Compass in order to not constrain the design</p>	The requirement included in the SysRS will take into consideration of operational requirements.

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	<p>solution by specifying the location, the data handling, etc.</p> <p>It was also recommended to either remove the target requirement of an integrated GPS/Compass since it limits severally the potential suppliers, or to provide a clear rationale.</p>	
13	<p><u>SysRS Section 3.4.4.2 Acoustic Signature:</u></p> <p>It was recommended that the current acoustic signature of CATSI EDM operating in a warm to hot environment be measured and that that the GoC does not apply a more severe requirement to ADIS.</p>	<p>Canada has specified a requirement in accordance with a standard for military equipment in the SysRS.</p>
14	<p><u>SysRS Section 3.2.2.1 NESR:</u></p> <p>It was recommended to only keep the mandatory requirement that is already a demanding requirement in itself.</p>	<p>Canada encourages industry to push the boundaries of innovation through desirable requirements.</p>
	<p><u>SysRS Section 1.3 &amp; others Ethernet Radio &amp; multisensor mobile ad-hoc network (MANET):</u></p> <p>It is recommended the GoC considers using their own Ethernet existing radios or procure a solution that would meet this requirement and other GoC Ethernet radios requirements. Each ADIS could be built with an Ethernet port dedicated for the wireless radio with a specific communication protocol defined by the GoC. If the GoC still elects to procure Ethernet radios through the ADIS project, the specification should be reviewed to clearly specify the essential requirements. High data throughput wireless network that are flexible and fully configured for an ADIS solution can represent a very large portion of the total cost that has not been adequately reflected in ROM costs previously provided.</p>	<p>For the integrity of the ADIS design, Canada requires the Contractor to supply the radio. However, the Contractor will have the freedom to select a radio currently in service with the CAF if it meets the SysRS.</p>
15	<p><u>SysRS Unclear requirements:</u></p> <p>It was recommended that the requirements below be clarified in order that a compliance demonstration plan can be developed accordingly:</p> <p>It was believed that the intent and specification of the following requirements is either not clear or missing:</p> <ul style="list-style-type: none"> <li>a. Sections 3.8.16 Decontamination agent specification</li> <li>b. Section 1.4 SSM vehicle mount</li> </ul>	<p>Canada thanks industry for the recommendations and will take them under consideration in order to improve the clarity of the spec.</p>

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	<p>c· Section 3.5.2 Definition of the 5th percentile female to the 95th percentile male of the CF population</p> <p>d· Section 3.5.2 Definition of the Individual Protective Equipment (IPE)</p> <p>e· Section 3.3.1.3 Dynamic Selection of Field of Regard constraints in opposition of the coaddition and speed adjustment.</p>	
16	<p><u>SysRS Section 3.6.1 radiated susceptibility:</u></p> <p>It was recommended specifying the highest frequency for RS103 method.</p> <p>The method RS103, Table VII, Army Ground. can be applied up to 18 GHz or up to 40 GHz. Requesting radiated susceptibility to be applicable to 40 GHz has important design considerations that go beyond typical EMI/EMC shielding methods. Higher frequencies can penetrate electronic shield boxes via smaller openings. With a requirement that the OH be sealed, heat needs to be carefully managed. Internal to the OH heat dissipation methods via mesh and grids will require careful design and would induce mass increases if the RS103 method is overly specified to 40 GHz.</p>	Canada will carefully examine the requirement in terms of frequency bandwidth.
17	<p><u>SysRS Section 3.4.3 dimensions:</u></p> <p>As it is impossible to hold a CATSI-EDM system in MRZR4 trunk area without tripod and P&amp;T system complete customization, it was recommended that the volume requirements be clarified and be comparable to CATSI-EDM.</p>	Canada encourages industry to push the boundaries of innovation through desirable requirements.
18	<p><u>SysRS Section 3.2.5.2.2 and 3.2.6 battery autonomy:</u></p> <p>It was recommended that the external battery pack minimum requirements be limited to a maximum of 8 hours and the console autonomy minimum requirements be limited to a maximum of 4 hours.</p>	The mandatory requirements are clear and succinct. The desirable requirements are derived from operational needs.
19	<p><u>SysRS Section 3.2.1.3 and 3.3.1.1 both edges detection and exclusion zone:</u></p> <p>It was recommended to exclude these two requirements from this RFP and to manage these as AWR.</p>	Edge detection is a desirable requirement, while the exclusion zone remains a need. Canada will not change the requirements.



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	<p>Baselining the implementation details of these functionalities in interchange meetings with the GoC is recommended in order to optimize the different scenarios without scarifying the alarm time delay.</p>	
20	<p><u>SysRS Section 3.2.2.3.3 fast shutters:</u></p> <p>The frequency of shutter mode changes is not required to be high, it was recommended to limit the number of shutters position changes and to accept that an interferogram may be lost during the position transition in order to improve the system reliability and reduce the overall system cost (fast shutters constraint impact, time to integrate and to align, shutter drive power consumption, etc.).</p>	<p>Canada will investigate the requirement and clarify as needed.</p>
21	<p>The following suggestions were made to increase level of functionality:</p> <ol style="list-style-type: none"> <li>1. Consider options for the addition of Chemical Point Detection</li> <li>2. Consider options for the addition of Radiological Detection/Identification</li> <li>3. Consider options for the addition of Biological Detection/Collection</li> <li>4. Consider options for the addition of a Meteorological Sensor</li> <li>5. Consider options for Initial Hazard Warning Templates</li> <li>6. Consider options for Sensor Maintenance Logs</li> <li>7. Consider options for Situational Awareness/Sensors on Map</li> <li>8. Consider options for Cabled connectivity for Fixed Installations/Fall Back</li> </ol>	<p>Items 1 through 4 are outside of the scope of the ADIS project and will not be considered. Items 5 through 8 are presently part of the ADIS specification.</p>
22	<p>To improve market opportunities for ADIS, the system should be capable of being vehicle mounted</p>	<p>This is already a requirement for ADIS.</p>
23	<p>It was suggested that some of the sub-components should be merged together to reduce the overall foot print of the system. Furthermore, much of the CPC functionality could potentially be replaced with software based controls which would reduce the foot print and complexity of the system to an even greater extent.</p> <p>Rational being, with a reduction in size and weight will have a positive impact by reducing the logistic burden and also make the product more attractive to potential customers. Additionally, the fewer the</p>	<p>While this is a good suggestion in general, the ADIS is the maturation of the current CATSI-EDM.</p>

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	component parts within the overall system will enable faster deployment and reduce the level of training, support and maintenance.	
24	To improve market opportunities for export, interoperability using CBRN Analysis with SCIM module was suggested.	SI&DS as a project is endeavoring to achieve the goals of SCIM.
25	Suggest renaming CPC and AC-DC/DC-DC converters to Power Control and Communication Assembly (PCCA) as well as combining these two components into one to make it more useable and operator friendly.	Canada appreciates the suggestion. The SysRS will be reviewed.
26	Suggest HazKey hardware as part of the solution to meet ADIS requirements with possible MIMO-MANET radio in use within the CF.	Canada welcomes all bids that will meet the requirements of ADIS.

## 2. Outcomes / Actions / Next Steps

The outcomes will effectively help Canada to better understand the market and prospective bidders' Canadian industrial footprint. All the information gathered will support Canada as it moves the project forward.

Information provided to Canada will be considered in the development of the RFP document. Canada is planning on publishing the RFP in the Spring of 2017.

The Government of Canada ADIS team members thank all Participants for taking part in the Industry Engagement Process.

**Annex A – List of companies that attended a one-on-one meeting and/or responded to the Request of Information**

- Bruhn Newtech-Salisbury-UK
- ABB Inc. and Telops
- Bertin Corp. and Visiontec Systems