

## **BRIEFING NOTE FOR DG CYBER**

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### **INNOVATION TRANSFER AND EVALUATION AGREEMENT**

#### **ISSUE**

1. It is requested that DG Cyber sign the attached Innovation Transfer and Evaluation Agreement (Flag A, two copies), so that a short-range, stand-off bio detector can be delivered to [redacted] for testing and assessment.

#### **BACKGROUND**

2. SR-BioSpectra is a stand-off technology very similar to, and developed in parallel with, the BioSense System technology demonstration project (TDP) which D CBRN D has supported since its inception. Both are based on aerosol detection, and probing of aerosol clouds via Laser Induced Fluorescence. The main difference is that SR-BioSpectra is much smaller and has a range of just 100 metres (approximately), whereas BioSense is mounted in a large truck and has a (still developing) range of three to five km.

3. Institut National d'Optique (INO), of Quebec City, was involved in the development of SR-BioSpectra, and has the lead for marketing the product. They indicated an interest in providing a SR-BioSpectra prototype to the CF for testing and assessment under the Canadian Innovation Commercialization Program (CICP). [redacted] was approached and expressed a strong interest in participating as the testing agency. In effect, PWGSC will purchase a prototype system, as well as training and support services, from INO. The system will be given to [redacted] DND with no financial strings attached. [redacted] DND will be responsible for ongoing management and control of "the innovation", for the agreed testing participation, and for feedback from that testing.

#### **DISCUSSION**

4. The Transfer and Evaluation Agreement that DG Cyber is requested to sign is a standard document used for CICP initiatives. It represents DND's commitment to invest a certain amount of time and resources to training on, and testing, the new technology. The detail of the transfer of the System, and INO's commitment to the initiative, is held in a Statement of Work (SOW) which has been developed by PWGSC and INO with D CBRN D and [redacted] input (see Flag B). Both documents as well as this BN have been reviewed and concurred with by [redacted] at the command level. The prototype should be delivered in May or June, and training and testing will take place in the summer/autumn.

## CONCLUSION

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5. DG Cyber is requested to sign the Transfer and Evaluation Agreement at Flag A.

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**Reviewed By:**

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**Date Prepared:** 22 Feb 13

### Attachments

Flag A – Innovation Transfer and Evaluation Agreement

Flag B - Statement of Work



Public Works and  
Government Services  
Canada

Travaux publics et  
Services gouvernementaux  
Canada

CICP MOU # 2012/13-CFP3-B0415

**INNOVATION TRANSFER AND EVALUATION AGREEMENT**

**BETWEEN**

**PUBLIC WORKS AND GOVERNMENT SERVICES CANADA  
ACQUISITIONS BRANCH**

**AND**

**DEPARTMENT OF NATIONAL DEFENCE  
Herein represented by the Directorate of CBRN Defence**

**IN RESPECT OF THE DELIVERY OF  
CANADIAN INNOVATION COMMERCIALIZATION PROGRAM –  
TESTING DEPARTMENT ROLES & RESPONSIBILITIES**

**Canada**

## 1. PURPOSE

Whereas Budget 2012 committed \$95 million over three years to the Canadian Innovation Commercialization Program (CICP), starting in 2013-14, and \$40 million per year thereafter to make the program permanent through which federal departments and agencies can adopt and demonstrate the use of innovative prototype products and technologies to support Innovation in Canada; and

Whereas Public Works and Government Services Canada (PWGSC) has been given the mandate to deliver the Program; and

Whereas **the Department of National Defence - Directorate of CBRN Defence** (the "Testing Department") has expressed interest in testing and evaluating a pre-qualified Innovation;

This Innovation Transfer and Evaluation Agreement (henceforth "The Agreement") authorizes the interdepartmental transfer of the **SR-BioSpectra: Standoff Biological Threat Detection** from PWGSC to the Testing Department. This Agreement transfers the responsibility of the **SR-BioSpectra: Standoff Biological Threat Detection** (management and control) to the Testing Department and establishes a joint agreement between PWGSC and the Testing Department, as detailed below.

The **SR-BioSpectra: Standoff Biological Threat Detection** will be referred throughout this document as the "Innovation".

## 2. ROLES AND RESPONSIBILITIES

- 2.1. PWGSC will be responsible for preparing and awarding the necessary Contract for the purchase of the Innovation from **Institut National d'Optique**.
- 2.2. As supported under the CICP, the Testing Department will be responsible for assisting in the development of the Statement of Work that will specify any technical and operational requirements for the testing of the Innovation.
- 2.3. The Testing Department will assume ongoing management and control of the Innovation upon contract award.
- 2.4. The Testing Department will provide to PWGSC a completed on-line feedback survey (Annex A) by no later than 30 days following the end of the contract.
- 2.5. The Testing Department assumes responsibility for the Health and Safety of its employees throughout the testing period.

## 3. FINANCIAL ARRANGEMENTS

- 3.1. As established in the Contract to procure the Innovation, PWGSC will purchase and pay the agreed price for the Innovation including the predetermined services portion from CICP financial resources.
- 3.2. The Testing Department will provide confirmation to PWGSC that the Innovation has been delivered. PWGSC will then complete the transaction in accordance with Section 34 of the

Financial Administration Act. The Testing Department will be responsible for the management of the Innovation upon delivery of the Innovation.

- 3.3. Service portions required to conduct the testing of the Innovation, and specified in the Contract to procure the Innovation, will be paid by PWGSC and delivered to the Testing Department. The Testing Department will provide confirmation to PWGSC that the services have been received. PWGSC will then complete the transaction in accordance with Section 34 of the Financial Administration Act.
- 3.4. Any additional charges outside the scope of the agreed upon Contract will be the responsibility of the Testing Department.

#### 4. ACCOUNTABILITY

- 4.1. The Innovation will be paid for by PWGSC and delivered to the Testing Department. Due to the precommercial nature of the Innovations, all innovations will be charged as an expense of the period in which they are incurred. Since this Innovation is purchased for the purpose of testing, there is no predetermined useful life beyond the testing period. In addition, CIGP does not control the Innovation's future economic benefits, nor does CIGP make any claims or guarantees relating to the innovation's economic benefits, present or future.
- 4.2. The cost of the service portion of the Contract to test the Innovation, which could include installation, training, etc., will be committed and incurred by PWGSC in accordance with the Contract as part of the total cost of the Innovation. The Testing Department is responsible for providing a confirmation that the service was delivered as planned.
- 4.3. Any additional charges not outlined in the Contract will be accounted by the Testing Department as ongoing operation costs and will be negotiated outside of this Agreement and the Contract.
- 4.4. Any modifications, upgrades or customizations of the innovation made at the request of the Testing Department during or after the testing period will be negotiated outside of this Agreement and the Contract.

#### 5. THIRD PARTY, NON-FEDERAL GOVERNMENT SUPPORT IN TESTING

**Note: For the purposes of this agreement, third parties are defined as any organization outside of the Government of Canada.**

Should the Testing Department require the involvement of a third party outside of the Signing Authority included on this Agreement:

- 5.1. The Testing Department would remain owner of the innovation as explained in section 6 of this Agreement.
- 5.2. The innovation would be delivered to the Testing Department as explained in section 3.2 and 3.3 of this Agreement.
- 5.3. The Testing Department would manage any risks encountered in involving a third party in the testing of the innovation.

- 5.4. Any additional charges generated by the involvement of a third party and not outlined in the Contract will be accounted for by the Testing Department and will be negotiated outside of this Agreement.
- 5.5. The Testing Department would remain responsible for all feedback and performance measurement as explained in section 7 of this Agreement.
- 5.6. The Testing Department will not transfer the innovation to any third party before the completion of the Contract and until all obligations under this Agreement have been met.

## **6. TRANSFER OF ASSETS AND THE MATERIEL MANAGEMENT FRAMEWORK**

- 6.1 This Agreement transfers the management and control of the Innovation from PWGSC to the Testing Department. The transaction follows the Treasury Board Secretariat Policy on Management of Materiel.
- 6.2 The overall extent to which the Innovation meets the Testing Department's operational requirements will be measured by an ongoing and systematic assessment of the physical condition, functionality and use of the Innovation against established targets based on appropriate benchmarks.
- 6.3 The Testing Department will be responsible for the control of the goods and is to follow the Treasury Board Secretariat Policy on Management of Materiel.
- 6.4 The Testing Department is responsible for providing feedback on the test results of the Innovation to PWGSC as per the predetermined commitment detailed in Section 7 below.

## **7. FEEDBACK AND PERFORMANCE MEASUREMENT**

- 7.1 The Testing Department will implement, utilize, and test the innovation in accordance with the Statement of Work, which is Annex A of the Contract. The Testing Department will test the innovation as thoroughly as possible in order to provide meaningful feedback to the Supplier regarding the strengths and weaknesses of the Innovation as well as any recommendations as to how the Innovation could be improved prior to commercialization. The details of the testing plan are described in the Contract.
- 7.2 An on-line feedback survey site link will be provided to the Testing Department by PWGSC. The feedback survey must be diligently completed with the results of the test and returned to PWGSC by the date specified in Section 2.4 above. The feedback must be provided using the PWGSC survey website (link: <http://tpsgc-pwgsc1.sondages-surveys.ca/surveys/CICP/cicp-innovation-testing-departmental-feedback/?code=> ). Once the testing has been completed, PWGSC will assess the feedback and provide it to the Supplier.
- 7.3 The Testing Department will ensure that employees have the skills, knowledge, and competencies to implement and manage the government's Innovation and acquired services.

## **8. PROTECTION OF ASSETS**

- 8.1 The Testing Department has a responsibility to safeguard public assets. This responsibility includes the implementation of measures for the protection of assets (materiel) and detection of losses. Security policies must include provisions for the regular inspection and monitoring of

asset holdings and the procedures that must be followed if incident arises. Any incidents are to be reported to PWGSC.

- 8.2 Privacy/security arrangements of this agreement will be consistent with the Testing Department's policy regarding privacy and security of data, information and access, and PWGSC compliance in meeting these requirements.
- 8.3 Each party retains accountability for the security and integrity of the Innovation, data and information held in their possession.

## 9. DISCLAIMER

In accordance with the Communications Policy of the Government of Canada, all information within this Innovation Transfer and Evaluation Agreement, (including Annex A -Feedback Survey) is a summary of how the innovation performed, given the unique test scenario made explicit in the contract, and is not an endorsement of the innovation by either the Test Department, the Canadian Innovation Commercialization Program or Public Works and Government Services Canada.

## 10. PRIMARY CONTACTS

The points of contact directly responsible for the implementation and administration of this Agreement are:

The Acquisitions Branch, PWGSC contact is:  
Helen Braiter  
Director, Strategic Initiatives and Innovation  
Office of Small and Medium Enterprises and Strategic Engagement  
Tel.: (819) 956-1613  
helen.braiter@pwgsc-tpsgc.gc.ca

The Department of National Defence - Directorate of CBRN Defence contact is:  
Gregory Moore  
Major  
DCBRND 2-2, Directorate of CBRN Defence  
Tel.: (613) 996-6808  
gregory.moore@forces.gc.ca

## 11. GENERAL

- 11.1 This Agreement will be effective upon the two signatures below and will terminate following delivery by PWGSC of the required feedback to the Supplier.
- 11.2 This Agreement may not be amended without the express written consent of both parties. Any requests for revision, extension or cancellation will be made solely through a formal amendment to this Agreement, as agreed to in writing by the responsible Executives identified in this Agreement, under section 11 below.
- 11.3 The parties agree to attempt to resolve any disputes that may arise between them in respect of this Agreement in a cooperative and collaborative manner, starting at the working level, and then escalating to more senior officials if required.

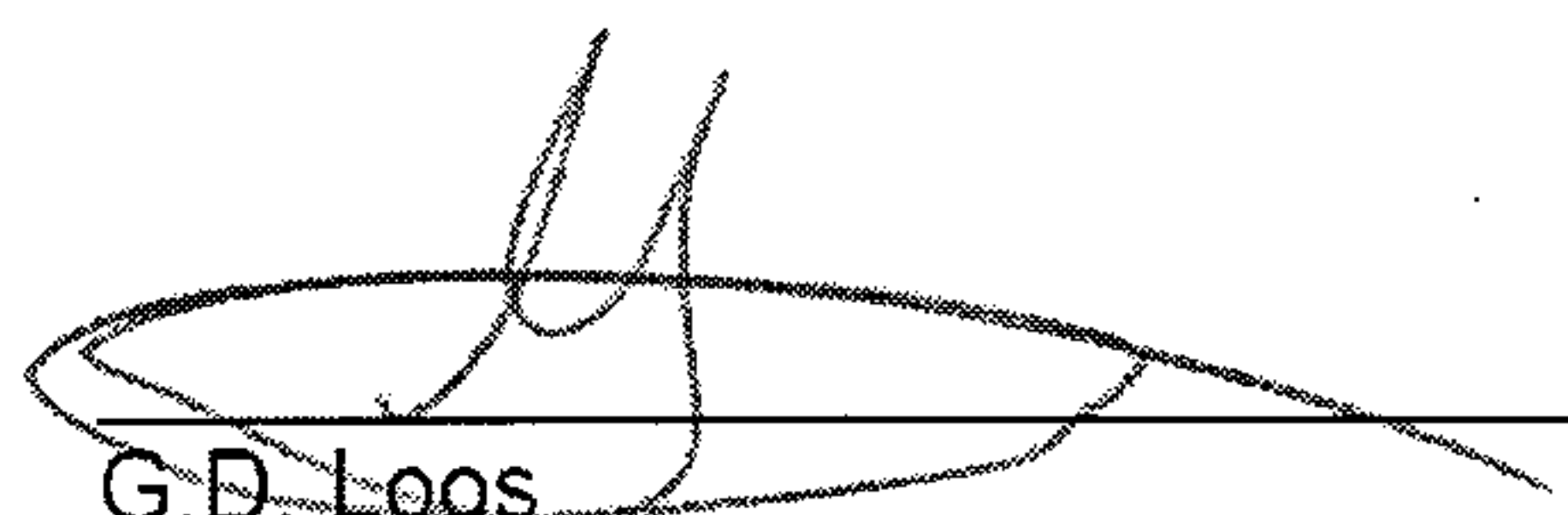
## 12. EXECUTION

The undersigned are the Executives responsible for this Agreement, and acknowledge and agree to the Terms and Conditions, specified herein.

12.1 This Agreement is executed in duplicate, both copies of which are equally valid.

12.2 In signing this Agreement, both parties hereby agree to the elements as set out above.

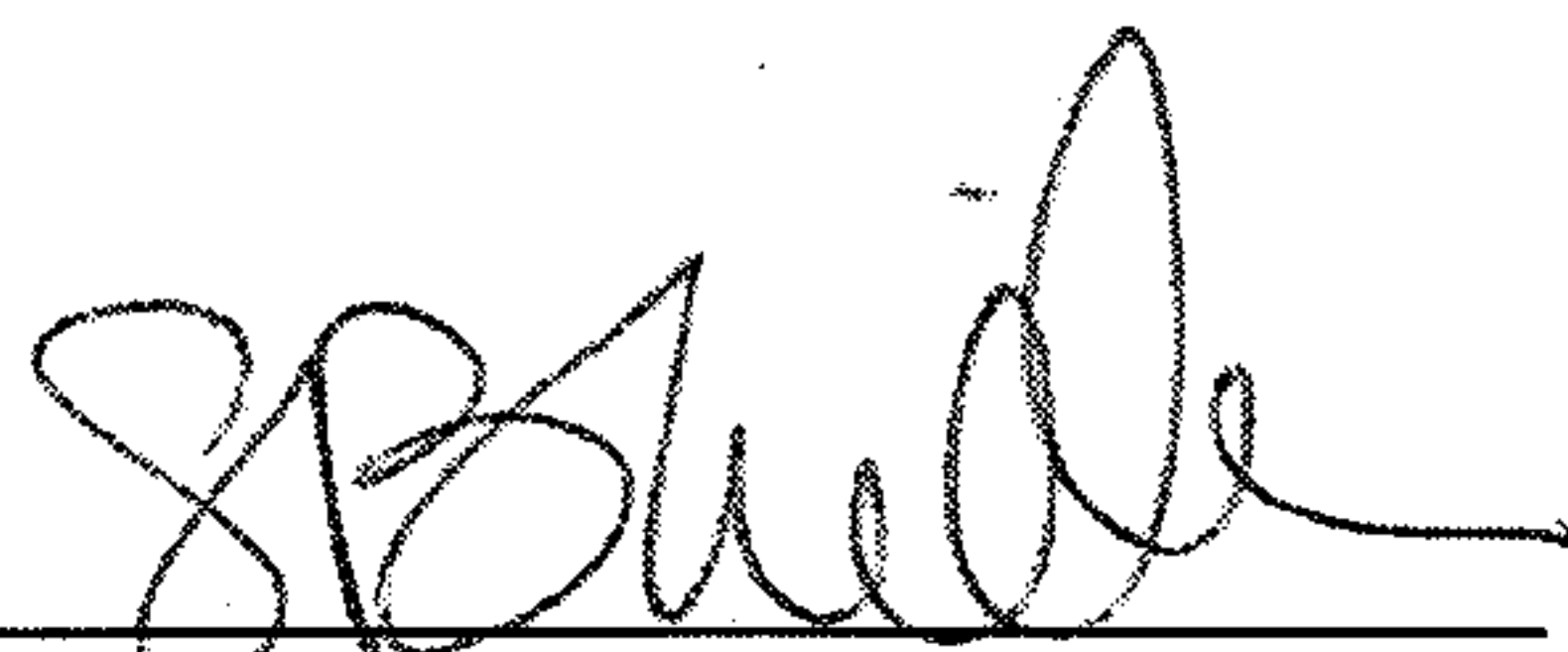
### DEPARTMENT OF NATIONAL DEFENCE



G.D. Loos  
Brigadier General  
Director General Cyber

20 Mar 13  
Date

### PUBLIC WORKS AND GOVERNMENT SERVICES CANADA



Shereen Benzvy Miller  
Director General  
Office of Small and Medium Enterprises and Strategic Engagement  
Acquisitions Branch

13-1-25  
Date

### ANNEX A: FEEDBACK SURVEY LINK

<http://tpsgc-pwgsc1.sondages-surveys.ca/surveys/CICP/cicp-innovation-testing-departmental-feedback/?code=>

### SUPPORTING DOCUMENTS

- Treasury Board Policy on Management of Materiel (November 1st, 2006)
- Treasury Board Guide to Management of Materiel (BT22-115/2008E-PDF)
- Financial Administration Act (R.S.C., 1985, c-F11)





## ANNEX "A" STATEMENT OF WORK

CICP-03-0415

### SR-BioSpectra: Standoff Biological Threat Detection

#### 1. Introduction

The Canadian Innovation Commercialization Program (CICP) is an initiative launched as part of the Government of Canada's commitment to promote Canada's economic growth as announced in Budget 2010. The Program is managed by the Office of Small and Medium Enterprises (OSME).

#### 2. Background

The CICP was created to bolster innovation in Canada's business sector and supports the federal commitment to bridge the pre-commercialization gap for innovative goods and/or services by:

- a) Supporting Canada's pre-commercial Innovation readiness; and,
- b) Providing innovators with the opportunity to enter the marketplace with a successful application of their new good and/or service.

Under the CICP Program, Innovators are matched with a federal government department to participate in the testing the Innovation.

#### 2.1 Innovation

SR-BioSpectra ("Innovation") is a compact and transportable device that uses laser technologies and optical phenomena to detect biological aerosols (bioaerosols) for Defense and Security applications. The unique capability of this instrument provides real-time detection against biological warfare agents over distances that range in excess of 100 m over 360 degrees. The Innovation can enhance the critical infrastructure protection of Canada, ease the decontamination efforts, and help manage the after-effects of a biological attack. Moreover, the Innovation enables first responders and Defense and Security organizations to quickly target and delineate the intervention area and to confirm when it is safe in the event of a biological attack. The Innovation requires no consumables, further reducing the operational cost of performing biodefence.

#### 2.2 Innovation Features and Benefits:

The Innovation allows the detection of bioagents over a large area with a near real-time detection sensitivity to enable rapid detection of a bioaerosol release and allow for timely implementation of measures to protect occupants and minimize the extent of contamination.

The Innovation offers the following benefits:

- easy to transport and use by non-specialized personnel
- fast deployment and re-localization
- continuous coverage over a large volume
- detect several types of bio-hazard simulants released in the atmosphere, day or night
- cost-effective



### 3. Testing Department

The Department of National Defence (DND) is the largest federal government department. DND and the Canadian Forces together have a budget of approximately 18 billion dollars, and over 110,000 employees. The mandate of the DND is to protect Canada and defending its sovereignty, to work with the United States to defend North America, and to contribute to international peace and security through operations around the world.

The Testing Department will participate by:

- a) Testing of the Innovation by providing the environment and federal government subject matter expertise; and,
- b) Providing feedback on the performance of the Innovation following completion of the contract, which could assist in the improvement and/or preparation of the Innovation for the Marketplace.

#### 3.1 Testing Department Objectives

The Testing Department will objectively assess and evaluate the Innovation in an operational environment to validate that the device is able to detect biothreats in a realistic setting, as well as to assess the multi-modal capacity related to explosives.

#### 3.2 Testing Department Responsibilities

The Testing Department will complete all testing identified in Article 3.4 and gather the performance metrics detailed in Article 3.5 as well as providing access to the environments required to facilitate the testing.

Testing is expected to help determine the performance of the Innovation in the presence of exhaust, dust, and other airborne contaminants. The degree of mechanical and thermal ruggedization required by the Innovation for an eventual deployment will be assessed considering the potentially harsh operational environments. The user-friendliness of the software will also be evaluated.

For each performance test, the Testing Department will provide test observers with biological detection identification and monitoring expertise, and trained on the Innovation, to conduct the test and qualitatively assess the results. The observers will:

- Confirm that the tests are conducted in a way that is representative of the eventual operating conditions;
- Make suggestions on the way tests are performed to better reflect the eventual operating conditions;
- Make use of their expertise to assess the Innovation

In addition to providing the expected outputs, the Testing Department is responsible for:

- site preparation in
- performing the testing of the Innovation;
- providing subject matters expertise and ensuring that experienced and competent personnel are available for all testing; and,
- procurement of explosive samples.



**3.3 Test Sites**

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The testing will be undertaken at two test sites:

- The Initial testing must be conducted outdoors in an area representing an urban environment (building, road and green space) at the Contractor's facilities located in Quebec City, Quebec;
- The remaining testing will be performed indoors in an area representing a typical public environment (such as a school, library, community center, sport hall) at the Testing Departments facilities located in

**3.4 Test Plan**

Tests are to be conducted during three test campaigns, each anticipated to last one week, and spread over a three-month working interval.

A variety of biosimulant aerosols and representative explosives will be utilized in the testing to ensure that meaningful data are obtained. Tests must be performed in a safe manner and must not present potential risk or hazard to the community, the testing personnel, or to the surrounding premises and environment.

The three tests will be undertaken to verify and validate the:

- Detection capability in a realistic operational environment in the presence of household aerosols and explosives.
- False alarm rate in an urban environment
- Detection sensitivity of different explosives.
- Assessment of the potential of a dual mode capability (aerosol and/or explosive detection).

The detection capability of simulated biothreats by the Innovation will be assessed by comparing the time dependence of the signal (time correlation of signatures with reference) as well as the spectral signatures (i.e., the variation of signal according to the wavelength) of household aerosol releases with the background signature. The background data will be recorded before and after a release. The use of calibrated instruments for the controlled release is not planned for either the outdoor and indoor test campaigns. A relative rather than quantitative, means of assessing the detection is planned.

The false alarm rate determination will be carried out under typical urban environments. The false alarm rate being a function, in part, of the parameters used in the detection algorithm, these will have to be fine tuned by experimentation. Moreover, the determination of the false alarm rate will depend on the quality and the amount of representative data acquired with the sensor prior to outdoor testing. Because lowering the false alarm rate comes at the expense of sensitivity, proper balance will have to be determined.

For the detection of explosives trace elements of known quantities will be deposited on a surface of different common materials and the spectral signatures will be compared with those obtained when the trace elements are on an optically inert surface.

In the light of the above mentioned experiments with household aerosols and explosives, an assessment of the dual-mode operation of the Innovation will be carried out.



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### 3.4.1 Test Instrumentation

An aerosol release station and a rudimentary meteorological station will be used during the tests. Standard meteorological parameters (ambient luminosity, air current (wind) direction and velocity, relative humidity, air temperature) will be measured to document the conditions under which the Innovation is tested. A car/van may also be used for the release of gasoline and diesel combustion gases to further mimic an urban environment.

### 3.4.2 Materials

Materials that may be investigated during testing include, but are not limited to:

- Natural (such as pollens, dust, mold)
- Man-made emissions occurring in a typical urban environment (such as industrial dust, vehicle gas exhaust) – outdoor testing only; Household aerosols, simulating bioaerosol in terms of molecular binding (carbon, carbon-hydrogen) and particle sizes. These may include, but are not limited to:
  - Stoddard solvent, petroleum, and mineral oil-based mixture,
  - mosquito repellent (organic compounds such as permethrin, tetramethrin, cypermethrin, and imiprothrin),
  - Bear repellent pepper spray (capsaicin and propylene glycol mixture),
  - air freshener (ethanol based product with corn extract), and
  - Other household sprays could be added to this illustrative list at a later date.
- trace elements of real explosives, explosive precursors.

To ensure that the quantity of a specific type of aerosol is similar from one release to another, a new spray can will be used for each release, fully depressing the trigger for an identical duration. Releases of aerosols will be performed at the very same location to maximize reproducibility.

### 3.4.3 Test 1

For the first campaign, the Innovation will be set up outdoors in an open space at the initial Test Site and data will be gathered to determine the false alarm rate in standard urban conditions. The Contractor must take responsibility for the testing environment and the related preparations and the Testing Department will deploy the Innovation and perform all required testing with the support of the Contractor. The goal is to probe the natural background to assess its contribution to fluorescence and thus to determine the level of false alarms. Testing will be conducted in different weather conditions.

#### Test Conditions

- Various illumination (sunny, cloudy, night lighting)
- Clear day, rainy weather
- Calm and windy weather
- Specific: summer weather (higher than 10 Celsius)

#### Testing Procedures

- Aerosol release station deployment
- Meteorological data measurement instrument deployment
- Internal combustion engine vehicle (car, van, etc.) transport to site
- Measurements (background and aerosol release) taken over several distances (e.g., in the 50 to 150 m range) and in several directions relative to the wind and sun position, as would be performed by a first responder in a real-case application.



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3.4.3 Test 2

For the second campaign, tests will be conducted indoors in the using several types of man-made household aerosols. The aerosols will be released to determine if they can be detected in an operational background. Any location representative of an indoor environment would be considered as acceptable for such tests.

*Test Conditions*

- Various illumination typical of a public location (such as sunlight, fluorescent lighting, LED lighting)

*Site Preparation*

- DND internal authorization request for testing
- DND internal information release about test day, time, and location
- Delimitating test area

*Testing Procedures*

- Aerosol release station deployment
- Meteorological data measurement instrument deployment
- Measurements taken over several distances (e.g., in the 10 to 20 m range) and in several directions, as would be performed by a first responder in a real-case application

3.4.4 Test 3

Test 3 will be performed to assess the multi-modal capacity of the Innovation to non-intrusively detect explosives. The tests will be conducted indoors in the The tests will either be performed with trace elements of real explosives provided by the Canadian Forces, or with precursors as available. This test will be conducted after the aerosol tests and will last for 2 days. The testing will include supporting material such as door knobs, door handles, and computer keyboards made out of different materials (such as metallic alloys, plastics).

*Test Conditions*

- Various illumination typical of a public location (such as sunlight, fluorescent lighting, LED lighting)

*Site Preparation*

- DND internal authorization request for testing
- DND internal information release about test day, time, and location
- Delimitating test area

*Testing Procedures*

- Prepare several samples with different masses and areas
- Apply the sample on a given surface (e.g., door knob)
- Measurements taken over several distances (e.g., in the 10 to 20 m range) and in several directions, as would be performed by a first responder in a real-case application
- Clean up of the surface and proceed to another sample

3.4.5 Survey

The hardware and software will be assessed on the basis of "user-friendliness". This will be undertaken by completing a survey, provided by the Contractor addressing the following:

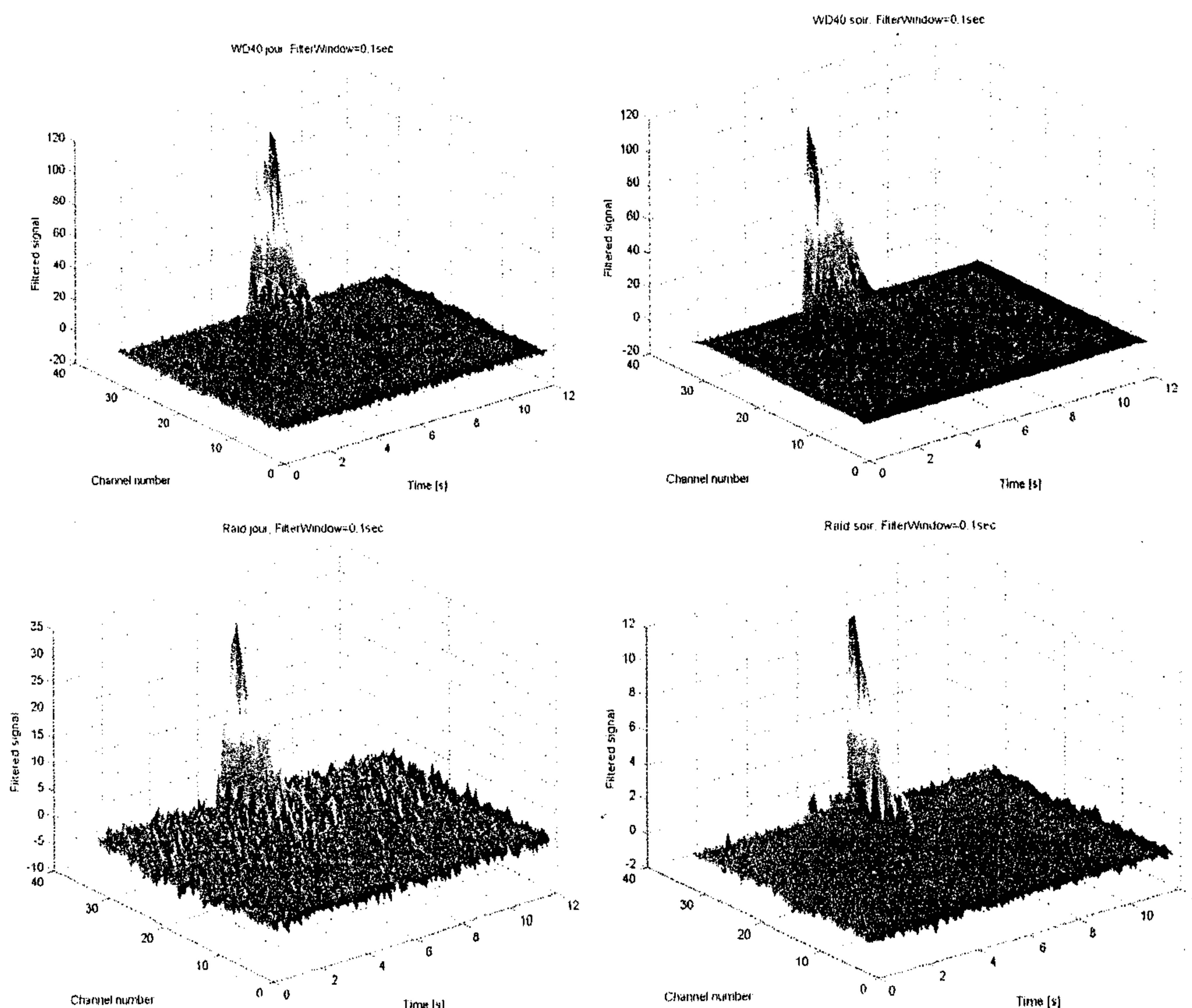


- Safety
- Startup and Deployment
- Operation
- Situational Awareness
- Human Capabilities and Limitations
- Anthropometrics and Biomechanics
- Environment
- Knowledge, Skills and Abilities
- Operational Suitability

### 3.5 Performance Metrics

For Test 1 and Test 2, the background signal measurements taken both before and after the aerosol release will be recorded which will provide a clear indication of the Innovation capability to capture the occurrence of a release and quantify its temporal evolution. The spectral characteristics of the signal could help in identification. The indoor measurements will also be compared to the outdoor tests, providing further information for capability assessment. For these tests, the sensitivity in the experiments is defined as the minimum signal with a deviation of  $4\sigma$  ( $\sigma$  being the standard deviation of the signal this is equivalent to a level of confidence better than 99.8 %) over the background noise. In addition, the data will be compared against prior testing undertaken by the Contractor. This data will be used as a performance benchmarks to validate.

The following represents the spectral and temporal evolution of an aerosol release at a distance of 100 m for WD-40™ (top) and Raid™ (bottom) sprays during both daytime (left) and nighttime (right).





For Test 3 (explosive tests) the performance metric will reflect the minimal quantity (surface mass) of a given type of explosive to be detected at a given distance.

#### 4. Requirement

The Contractor must deliver the Innovation to the Testing Department and provide training and technical support during the test period. The Contractor must also prepare the first test site and site plan, provide samples for testing, perform hardware alignment, and support the testing department during data analysis.

#### 5. Scope

##### 5.1 Training

The Contractor must provide training to up to 6 personnel selected by the Testing Departments' authority. Training will include:

- A ~1 hour lecture explaining the theoretical aspects of the Innovation
- A demonstration of the control software, features and GUI
- In-lab hardware adjustments
- Installation, configuration and deployment
- Preliminary data acquisition
- Day-to-day operation and monitoring

Training must include the user manual.

##### 5.2 Site Plan

The Contractor may be required to procure samples for testing identified in 3.4 Test Plan. A Site Plan must be developed for Test 1 at the Contractors' facilities that will address the following:

- Participant role and responsibility,
- safety information,
- exact location of hardware deployment (Innovation, aerosol release station, and weather station),
- exact test sequencing,
- aerosol type description, and
- aerosol release method to ensure reproducible and meaningful testing.

##### 5.3 Start up Testing

The Contractor must perform all hardware adjustments, alignment of the system and dummy tests to ensure that both hardware and software are functioning properly to ensure system optimization.

##### 5.4 Support

For each performance test, the Contractor must provide scientific and technical personnel (1 or 2 persons) with remote sensing detection and monitoring expertise, and to provide onsite support during each test.

Onsite support may include assisting the Testing Department in selecting a test site that mimic a typical indoor public environment;



**6. Deliverables**

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The Contractor must deliver the following to the Testing Department following completion of the initial Test:

Qty	Description
1	SR-BioSpectra, consisting of: <ul style="list-style-type: none"> <li>• optical emitter</li> <li>• optical receiver</li> <li>• spectrograph</li> <li>• detector</li> <li>• control electronics</li> </ul>
1	Control laptop computer comprising the user-interface software
1	User Manual

*\* Note to Contracting – the contractor may purchase additional items (aerosol cans) for testing, which will be a pass through cost under materials and supplies.*

**7. Travel**

The Contractor will be required to travel to the Testing site in prior approval of the Client Authority, in writing.

All travel must have the

**8. Transportation and Shipping**

The Contractor must make all arrangements to transport all its equipment to the test site in

**9. Language**

All deliverables and support provided by the Contractor to Canada will be in the English language.