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33 City Centre Drive  
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Ontario  
L5B 2N5  
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**SOLICITATION AMENDMENT**  
**MODIFICATION DE L'INVITATION**

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

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

Comments - Commentaires

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

Issuing Office - Bureau de distribution  
Public Works and Government Services Canada  
Ontario Region  
33 City Centre Drive  
Suite 480  
Mississauga  
Ontario  
L5B 2N5

Title - Sujet Weather Radar NetworkModernization	
Solicitation No. - N° de l'invitation K3D33-141144/A	Amendment No. - N° modif. 002
Client Reference No. - N° de référence du client K3D33-141144	Date 2014-09-26
GETS Reference No. - N° de référence de SEAG PW-\$TOR-018-6639	
File No. - N° de dossier TOR-4-37044 (018)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-11-17	
Time Zone Fuseau horaire Eastern Daylight Saving Time EDT	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Pan, Long	
Buyer Id - Id de l'acheteur tor018	
Telephone No. - N° de téléphone (905) 615-2076 ( )	FAX No. - N° de FAX (905) 615-2060
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	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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## **Amendment No.02 to Letter of Intent**

### **Amendment No.02 is raised to include the following:**

1. Industry Day Presentation Summary including Questions and Answers, Participating Suppliers and Industry Day Presentation Decks;
2. Extension of the Letter of Intent to November 17, 2014;
3. Extension of the One-on-one meetings to October 24, 2014.

### **Notes to the Suppliers:**

The One-on-One meeting will be extended to October 24, 2014. To better serve the suppliers' needs and accommodate the different time schedules, the end date of One-on-One meeting schedule might be extended further. The suppliers that have not registered the Engagement Process yet are still encouraged and welcomed to register.

The Contracting Authority Long Pan will contact each supplier to arrange the one-on-one meeting with detail information.

**INDUSTRY DAY**

**PRESENTATION SUMMARY**

**FOR**

**CANADIAN WEATHER RADAR  
NETWORK MODERNIZATION PROJECT  
(CWRNMP)**

## **Welcome**

Canadian Weather Radar Network Modernization Project  
Industry Day WebEx Presentation  
September 18, 2014

## **Industry Day Objective**

Inform and seek feedback from industry on the Canadian Weather Radar Network Modernization Project (CWRNMP), including:

- Providing an overview on the National Radar Program and the procurement process;
- Assessing the level of interest from industry in providing a solution to the Government of Canada; and
- Gathering input from Industry.

## **Public Works and Government Services Canada**

### ***Dominique Labrecque***

Regional Director, Acquisitions and Compensation  
Ontario Region

## **Environment Canada**

### ***Christine Best***

Senior Director  
Meteorological Service of Canada

## **Questions and Answers**

### **Q1. Will the contact information of the participating companies be issued?**

A1. Yes. The contact information of the Industry Day participating companies with their consents will be posted on [www.buyandsell.gc.ca](http://www.buyandsell.gc.ca).

### **Q2. Will the participating suppliers be provided with a budget?**

A2. Government of Canada (GC) will not provide the estimated budget.

### **Q3. What are the timelines associated with this procurement process?**

A3. The estimated timeline is to have all radar systems in place and operational by 2023. Canada is expecting to post the RFP by winter 2014/2015 and to award the Contract no later than 2016.

**Q4. To provide a better proposal to the Environment Canada Weather Radar System requirements, would companies be allowed to visit some Radar sites, to assess civil work requirements and necessary site access requirements?**

A4. The answer to this question is deferred until Canada finalizes the discussion/analysis after the one-on-one meetings. Canada has not ruled out the site visits or other means of providing the required information.

**Q5. Can individual Radar sites be visited by company Civil Engineers to assess the feasibility of infrastructure and tower foundation reuse, to reduce modernization costs, prior to proposal submission?**

A5. The answer to this question is deferred until Canada finalizes the discussion/analysis after the one-on-one meetings. Canada has not ruled out site visits.

**Q6. Would the bidders have an opportunity to perform site surveys on all or several "representative" sites prior to proposal submission? Or, will EC provide site surveys reports to prospective bidders?**

A6. The answer to this question is deferred until Canada finalizes the discussion/analysis after the one-on-one meetings. Canada has not ruled out site visits.

**Q7. In addition to new towers, radomes etc, for the new radar site in Northern Alberta, would the prospective contractor be required to construct civil (roads, power, communications)?**

A7. That is not Canada's intent at this time. Currently our radar sites are leased by the Government of Canada. For the new site, Canada will be responsible for the civil, up to a demarcation point (roads, power, and telecommunications).

**Q8. Since the Weather radar modernization project is spread over several years, and assuming two sites upgrade each year, the cost maybe high for small to medium size companies, can payments be arranged on project progress reports rather than final system delivery?**

A8. Canada has not finalized a payment schedule for this requirement.

**Q9. Will this be multiple contracts? Can you advise whether your intension is to select one prime contractor that will be awarded for the entire project?**

A9. Canada's intent is to have one primary contractor responsible for the contract.

**Q10. Has EC considered outsourcing the Maintenance and Operation of the Weather Radar Network?**

A10. Canada has considered it and has no intent at this moment to outsource the maintenance and support in the near future. However, the maintenance and support during the phases for radar installation, delivery including training etc will be required.

**Q11. What's your expectation for rate of delivery (systems per year) and when do you anticipate delivery to start?**

A11. Work is expected to start in the spring/summer 2016 with all 20 systems installed and operational by April 2023.

**Q12. EC mentions the harmonization of operations across the entire network to the replacement standard. Please elaborate. One may interpret "harmonization" to mean "standardized platforms". If this is the case, might EC "pre-purchase" core subassemblies (e.g. antenna) and provide these as government furnished equipment (GFE) to be integrated into the final deliveries?**

A12. Canada is not looking for harmonization. Harmonization would be for ease and to reduce costs. For example, if output data was sufficiently different between the old and new systems that substantial incremental processing would be needed to produce the required products within our network, Canada would want to make changes to eliminate that need. Or, if the training and deployment of technicians become problematic due to system diversity, Canada would want to minimize that diversity. Canada is not looking to necessarily harmonize our network.

**Q13. If EC chooses to go with a blended S- and C-band network, would these be pursued as two independent procurements?**

A13. Canada is looking for a solution to meet our radar data/coverage requirements, which may or may not mean a blended network. It will be done through one procurement process.

**Q14. What is the Department of National Defense (DND's) involvement in this procurement?**

A14. DND is not directly involved in this procurement. Two of the radars in our network are currently owned and operated by DND. EC gets the data. We will be negotiating with DND to obtain control and these radars will be integrated into our network. These are included in this procurement.

**Q15. In section 3 of Annex A to the Letter of Intent, EC specifies several system details (top of page 13), but does not explicitly mention a Radar Product Generator (RPG). In the subsequent parts of this Annex A, in particular in sections 4 to 7, requirements are expressed for advanced radar data processing methods such as attenuation correction or severe weather warning algorithms. We would like to know if the systems to be delivered thus should include an RPG or if, given EC's large experience in advanced radar data processing, EC intends to use their RPGs and/or data processing algorithms.**

A15. Canada will not answer this question until obtaining additional information from the one-on-one meetings. Canada does indeed have its own systems. Canada would like to obtain additional information before making a decision.

**Q16. Will Environment Canada (EC) maintain the access to the radar locations? Will EC continue to maintain the fences and generators?**

A16. One of the objectives of this project is to reduce maintenance costs and the number of visits per year to a radar location. As a consequence, Canada may have to investigate whether we want our technicians to perform non-radar maintenance.

**Q17. How will this procurement be impacted by Canadian content rules?**

A17. The answer to this question has not been established yet.

**Q18. Do you have expenditure and contracting authority? Is this project considered a Major Crown Project?**

A18. The project approval has been obtained. Contracting authority will be sought after identifying the winning bidder.

The term "Major Crown Project" is no longer used; however, given the size and complexity of this initiative it would most likely be considered a Major Crown Project.

**Q19. If a primary contractor is being sought, will this rule out joint ventures?**

A19. The intent of this procurement is to award only one contract. Joint ventures and consortia will be accepted as long as it meets the appropriate legal requirements.

**Q20. When should responses the Letter of Intent (LOI) questions be submitted to Canada?**

A20. It would be helpful to submit responses prior to the one-on-one meetings. The questions and answers will be discussed during the one-on-one meetings.

**Q21. There is another procurement for C-Band testing radar. How does this test radar relate to this procurement?**

A21. This is the separate procurement from the C-Band testing radar.

**Q22. With respect to training, what will be required?**

A22. Currently, EC has an in-house development program that includes certification. Canada would be looking at something similar to the program, which includes training on maintenance. The training will depend on the complexity of the system. Training does not have to be at the EC location. Presently, some of our training is provided by suppliers at their location or our location, or is provided in-house.

**Q23. With respect to radar coverage, does it include blue water? Please comment on the areas of Canada that the radars will cover.**

A23. There is no specific requirement for blue water. There is no network expansion. This procurement is to replace our obsolete radars in existence plus one new installation.

**Q24. A number of nations are being pressured regarding radiofrequency spectrum. Do you have concerns?**

A24. Canada is equally concerned regarding wireless telecommunications and C-band radars. Canada is paying attention on this issue.

**Q25. Question from Government of Canada to participants: How long would companies need to prepare a bid?**

A25. 1) It is challenging to provide a number, 3 to 5 months depending on what is requested and the level of detail.

2) We usually have 60-90 days from other countries, depending on the complexity of the RFP.

3) We often do a significant amount of work before the RFP is released, depending on how much information is available beforehand.



**Q26. Will you have another Industry Day after the draft RFP is issued?**

A26. Canada will consider another Industry Day if it is the most effective communication method. Canada understands that communication is a key to a successful outcome.

**Q27. What does your \$5 Million budget include in the presentation?**

A27. This includes current salary, O&M and base operating capital. It does not include capital for major projects. Also it does not include the costs for the two DND radars and the radar at McGill University.

**Q28. Why the radar at McGill University is not considered part of this RFP?**

A28. EC investigated the issue to determine requirements and ascertained that there is still a research need for the McGill site; therefore, we are continuing with S-band at the location. Canada would consider all S-band, all C-band or a combination of both for this procurement.

**Q29. In addition to basic radar data, are there any specific radar algorithms for weather detection required for the system?**

A29. Canada cannot answer this question at this time. It depends on the offerings.

**Q30. Detailed information for each radar site would be helpful. There is no need for all of us to visit each site to gather the same information. Will detailed site information be made available?**

A30. Canada is currently looking into providing detailed site information for each radar site. Extensive work was done from 2003 to 2005 and Canada is currently reviewing this information.

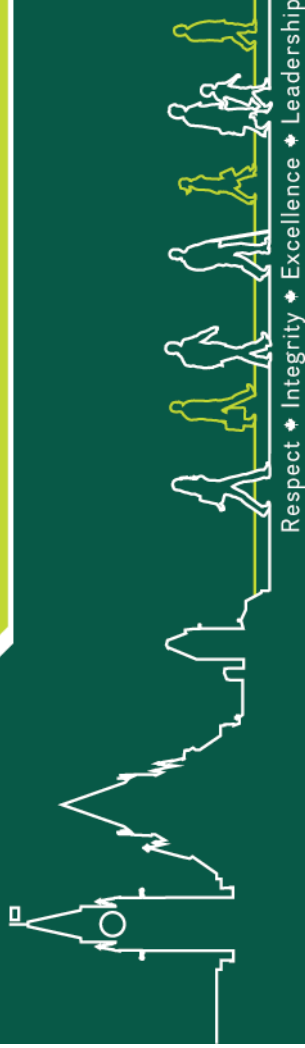
**Q31. Is the one-on-one meeting face-to-face, WebEx, or videoconference?**

A31. The one-on-one meeting will be arranged through different methods at supplier's choice. However, there will be no reimbursement for travel. The In-person meeting would be arranged in Toronto.

## **Participating Suppliers**

<b>Company Name</b>	<b>Main Contact</b>	<b>Telephone Work(W), Cell(C)</b>	<b>E-mail</b>
Advanced Radar Corporation	Jacob Bruintjes, Controller	(W) 720-327-6886  (C) 720-327-6886	Jacob@advancedradarcorp.com
ASC Signal Corporation	Iain Kent, Radar Sales Manager	(W) +1(905) 665-4343	<a href="mailto:iain.kent@ascsignal.com">iain.kent@ascsignal.com</a>
ATCO Structures & Logistics	Clifford C. Speer Director, Business Development	(W) +1(202) 638-6995 (C) +1(202) 997-9393	Clifford.Speer@atcosl.com
ATS Services Ltd.	N/A	N/A	N/A
Axsera Inc.	Eric Bourbonnais	(W) 514-337-0667	ebourbonais@axsera.com
Baron Services, Inc.	Rick Braswell	(W) +1(256) 881-8811	<a href="mailto:Rick.braswell@baronservices.com">Rick.braswell@baronservices.com</a>
Canadian Space Services Ltd.	Allan Duncan, President	(W) +1(613) 482-7979 Ext. 2 (C) +1(613) 229-5696	<a href="mailto:allan@canspace.com">allan@canspace.com</a>
Enterprise Electronics Corporation (EEC)	Keith Vickers – Proposal Manager	(W) +1(334) 347-3478	<a href="mailto:keith.vickers@eecradar.com">keith.vickers@eecradar.com</a>
Info-Electronics HP Systems Inc.	Wendy Borsuk	(W) +1(514) 421-0767 EXT. 223	<a href="mailto:contact@info-electronics.com">contact@info-electronics.com</a>
MDA Systems Ltd	Scott Hendry	(W) +1(613) 736-9716 (C) +1 (613) 220-5948	<a href="mailto:shendry@mdacorporation.com">shendry@mdacorporation.com</a>
Mtechnologywave Services Inc.	Philip Mambo	(W) +1(514) 538-6505	<a href="mailto:pmambo@trackcomwave.com">pmambo@trackcomwave.com</a>
ORBIT Communication Systems Inc.	Gadi Avishai, Canadian Representative	(W) +1(613) 234-8255 (C) +1(613) 293-3205	<a href="mailto:Gadia@kgcanada.com">Gadia@kgcanada.com</a>

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Selex ES GmbH	James Gray	(W) +49(2137) 782-295	<a href="mailto:j.gray@gematronik.com">j.gray@gematronik.com</a>
Toshiba Corporation	Naoki Anraku	(W) +8(144) 331-1770	<a href="mailto:naoki.anraku@toshiba.co.jp">naoki.anraku@toshiba.co.jp</a>
Vaisala Incorporated	Herb Winston	(W) +1(303) 402-4705 (C) +1(303) 881-8412	<a href="mailto:herb.winston@vaisala.com">herb.winston@vaisala.com</a>



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# Industry Day

## Canadian Weather Radar Network Modernization Project (CWRNMP)

**September 18, 2014**



Public Works and  
Government Services  
Canada

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Services gouvernementaux  
Canada

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# Opening Remarks

- Please mute your phone to avoid background noise
- To ensure that we have a complete list of participants, please provide the names, titles and contact information of participants at your location to Long Pan at [long.pan@pwgsc.gc.ca](mailto:long.pan@pwgsc.gc.ca)


# Industry Day Agenda

Time (EDT)	Topic	Lead
07:30 – 8:00 am	WebEx/Teleconference log-in and registration	
08:00 – 8:15 am	Opening Remarks	Dominique Labrecque, Public Works and Government Services Canada (PWGSC)
8:15 – 9:15 am	Strategic Overview of the National Radar Program	Christine Best, Environment Canada (EC)
9:15 – 10:00	<b>Canada's Procurement Process</b> <ul style="list-style-type: none"> <li>• Introduction of PWGSC Acquisition Program</li> <li>• Canada's Procurement Process</li> <li>• Smart Procurement: Engagement approach</li> </ul>	Dominique Labrecque, PWGSC
10:00 - 10:15	Break	
10:15 – 11:50 am	<b>Questions and Answers</b> <ul style="list-style-type: none"> <li>• Responses to frequently submitted questions</li> <li>• Responses to questions online</li> </ul>	Dominique Labrecque, PWGSC Christine Best, EC
11:50 – 12:00 pm	Recap and Closing Remarks	Dominique Labrecque, PWGSC

# Industry Day Objective

Inform and seek feedback from industry on the Canadian Weather Radar Network Modernization Project (CWRNMP), including:

- Providing an overview on the National Radar Program and the procurement process;
- Assessing the level of interest from industry in providing a solution to the Government of Canada; and
- Gathering input from Industry.



# Overview of the National Radar Program

Presented by

**Christine Best**

Senior Director  
Meteorological Service of Canada  
Environment Canada

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# The Meteorological Service of Canada

- The MSC is the Branch within Environment Canada responsible for Canada's weather service.
- The provision of weather information, forecasts and warnings is identified as a Government-Wide Mission Critical Service
- The weather radars are an important source of information for meteorologists, emergency personnel, and the general public.
- We are not responsible for specialized weather radar service for aviation, military or off-shore.

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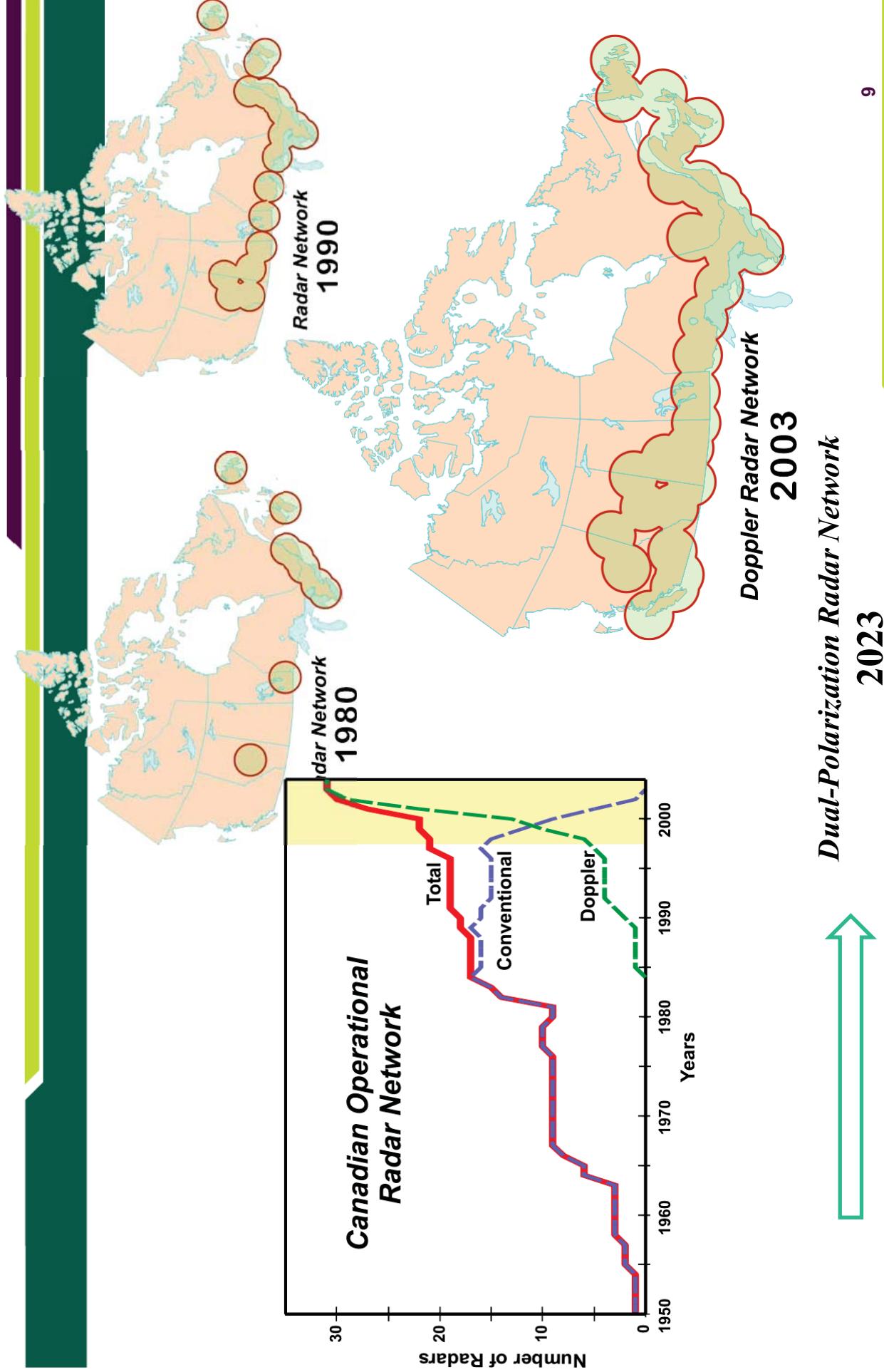
Canada

# Priority Weather for consideration

Area / Region	Main Weather Characteristics
Southern Ontario	Tornado alley, severe thunderstorm, squall lines, heavy rainfall
Southern Prairies	Hail alley, tornado, severe thunderstorms, heavy rainfall
Atlantic Region	Land falling Hurricanes
Montreal and - Saint Lawrence river valley	Nor'easters, severe thunderstorm, squall lines, heavy rainfall
The Great Lakes and other large lakes	Low level snow squalls

# The Radar Network

- The radar network has grown and evolved over 5 decades
- The last major project took place from 1997-2003 – network expansion and upgrade to Doppler.
  - Funded and implemented internally with mostly refurbished radars



# The Radar Network

Currently:

11 radars of mid-1990's design, which are being upgraded to new technology under a separate initiative

The McGill University radar (S-Band), which is being replaced under a separate project.

19 radars of late 1970's to mid 1980's vintage, which are obsolete and no longer supportable. These were refurbished and upgraded in 1997-2003.

The annual direct budget for the Program is ~\$5M (salary, capital and operating costs)

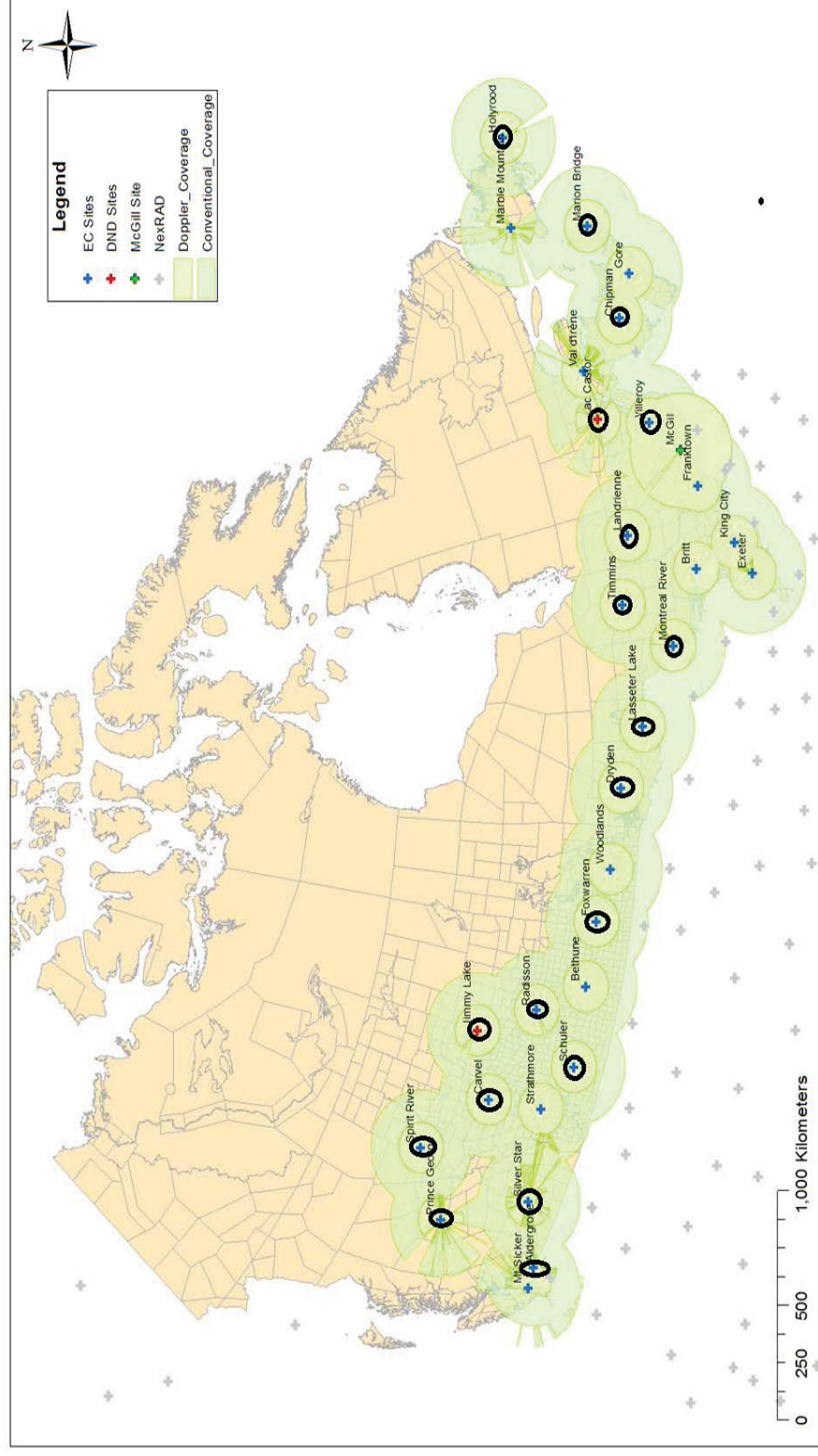
10



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# Current Canadian Weather Radar Network



# Obsolete Radar to be replaced



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# Obsolete radar with reused tower



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# Business Outcomes

- Replacement of 19 obsolete radars (map)
- Addition of one new radar in northern Alberta

## End Goals:

- Fully modernized, supportable, and Life-Cycle Managed radars
- Post-modernization operating costs to be approximately the same or less than current
- Improvements in data type, quality and coverage to enhance forecast and warning capabilities

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# Current Operations

- All C-band systems operating between 5600-5650 MHz
- Beamwidths 0.65° and 1.0° (to be replaced)
- Average distance between sites ~300 km
- 5 min conventional scan (24 levels from -0.6° to 25°)
- 5 min Doppler scan (4 levels from -0.6° to 3.5°)
- Effective Doppler range 115 km
- Conventional range 240 km
- Image updates every 10 minutes

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# Performance Goals for this Project

- Improvement over existing coverage (geographic, data quality, data utility)
- Extension of Doppler Range to  $\geq 160$  km
- Addition of dual-polarization and particle classification
- Full image updates approximately every 5 minutes

# This Procurement

- Purchase and installation of 20 radars:
  - The hardware and processing and control systems (pedestal, dish, control, data management)
  - The transmitter, receiver, and monitoring system
  - The tower and any shelters for equipment
  - Installation, set up, acceptance testing
  - Integrated Logistics Support, documentation and technical training
- These 20 radars will set the new standard for the network and the remaining radars (12) will have to be harmonized sufficiently to perform as part of the network in all senses (data, maintenance, etc)

# Desired Industry Input

- See Amendment 1 for K3D33-141144/A (2014-09-08)
- For our planning purposes we are particularly interested in question 11 from the amendment – how long do you think it may take to prepare a bid response after the final RFP has been posted?



# Canada's Procurement Process

Presented by

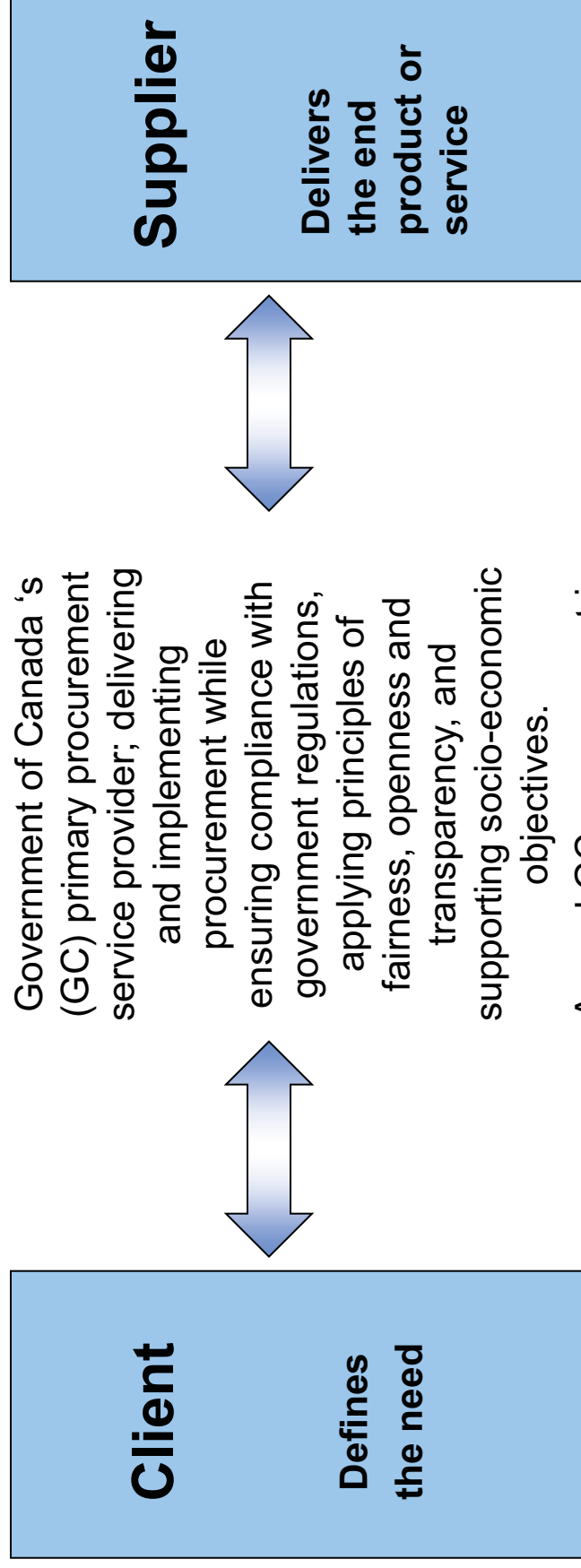
**Dominique Labrecque**

Regional Director, Acquisitions and Compensation

Ontario Region

Public Works and Government Services Canada

# PWGSC Acquisitions Program



# Procurement Values

## Integrity

- PWGSC procurement processes will be open, fair and honest.

## Guiding Principles

- Client Service
- National Objectives
- Competition
- Equal Treatment
- Accountability



# Public Works and Government Services

## Canada's Integrity Framework

- PWGSC is committed to doing business with suppliers that respect the law and act with integrity. All respondents will be required to comply with the Integrity Provisions (<http://www.tpsgc-pwgsc.gc.ca/apropos-about/ci-if-eng.html>)
- A respondent is required to certify that neither they, nor any members of their board of directors or affiliates, have been convicted or conditionally or absolutely discharged, of any of the following offences, in the last 10 years, in Canada or in a foreign jurisdiction:
  - Frauds against the government under the *Criminal Code of Canada* and frauds under the *Financial Administration Act*
  - Payment of a contingency fee to a person to whom the *Lobbying Act* applies
  - Corruption, collusion, bid-rigging or any other anti-competitive activity under the *Competition Act*
  - Money laundering, participation in activities of criminal organizations or offences in relation to drug trafficking
  - Income and excise tax evasion or bribing a foreign public official
  - Extortion, bribery of judicial officers, bribery of officers, secret commissions, criminal breach of contract, fraudulent manipulation of stock exchange transactions, prohibited insider trading, forgery and other offences resembling forgery, and falsification of books and documents

# Integrity and Oversight

## Independent Fairness Monitor

- An independent Fairness Monitor will observe every step in the procurement process
- He will provide formal oversight of the process, ensure an independent validation and attest to the fairness of the process
- A report will be made public at the end of the procurement process

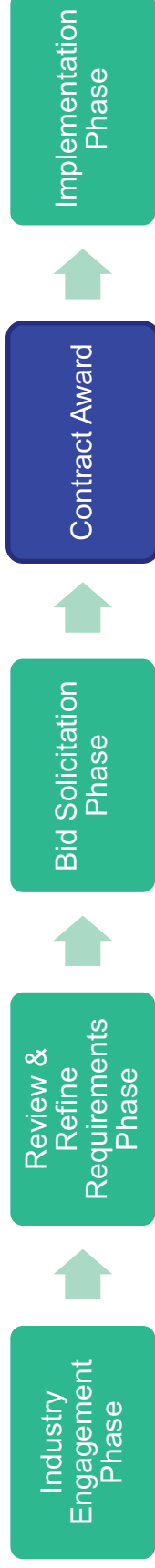
# Procurement Strategy for CWRNMP

- Engagement of Fairness Monitor
- Competitive procurement with combined goods, services and infrastructure deliverables
- Smart Procurement Initiative: Industry engagement
- Performance-based service management solution



# Procurement Approach

## Canadian Weather Radar Network Modernization Project



# Draft Procurement Schedule





## **Smart Procurement Initiative**

- **Early engagement**
- **Effective Governance**
- **Use of Third Parties**
- **Leveraging the spend**

## **Engagement Activities for CWRNMP**

- Letter of Intent – Posted on Aug 7, 2014
- Amendment to LOI – Amendment No.01 posted on Sept 8, 2014
- Industry Day – September 18, 2014
- One-on-One Meetings – Sept 23 to Oct 10, 2014
- Draft Request for Proposal - TBD



# Questions and Answers?



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