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Remotely Piloted Aircraft System Project (RPAS)/Projet  
de Système d'aéronef télépiloté (SATP)  
Cumberland House 6th Floor - B29  
Maison Cumberland 6e étage - B29  
400 Cumberland Street,  
400, rue Cumberland,  
Ottawa  
Ontario  
K1A 0S5

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**Remotely Piloted Aircraft System (RPAS) – Information for Canadian Industry**

This amendment provides the presentation by the Government of Canada representatives during the June 22, 2020 webinar.



Government  
of Canada

Gouvernement  
du Canada

# REMOTELY PILOTED AIRCRAFT SYSTEM PROJECT

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USC INFORMATION SESSION – JUNE 2020

Canada

# DISCLAIMER



The purpose of this presentation is to provide information about the Remotely Piloted Aircraft System (RPAS) project to Canadian stakeholders. The slides are provided for information purposes and are subject to change.

This presentation is part of a separate activity from the Remotely Piloted Aircraft System (RPAS) competition and will not result in a procurement process by the Government of Canada.



# PROJECT OBJECTIVE

The successful acquisition and entry into service of a medium altitude and armed Remotely Piloted Aircraft System (as highlighted in Strong, Secure, Engaged (SSE) initiatives 50 and 91) along with the associated equipment, weapons, infrastructure and in-service sustainment capability that will support up to three concurrent lines of operation, domestic or international.

# PROJECT SUMMARY



- **RPAS delivers on *Strong, Secure Engaged (SSE)* Defence Policy initiatives 50 and 91:**
  - Invest in medium altitude remotely piloted systems
  - Invest in a range of remotely piloted systems, including an armed aerial system capable of conducting surveillance and precision strikes
- **Equipment for 3 lines of operation**  
(Domestic and/or international)
- **Estimated Life expectancy:** 25 years



# RPAS HIGH LEVEL MANDATORY REQUIREMENTS



<b>Awareness:</b>	All weather, day/night ISR, targeting and SIGINT of land/sea targets
<b>Interoperability:</b>	Provide and accept services and data to/from joint and combined forces
<b>Reach:</b>	Reach the edge of Canada's domestic AOR from the MOB or a suitable FOL
<b>Persistence:</b>	Persistent prosecution of vessels at extreme edge of AOR for a minimum of six hours and facilitate a handover to an unmanned or manned aircraft
<b>Survivability:</b>	Operate in low-to-medium threat environments
<b>Flexibility:</b>	Flexibility, growth, and standard interfaces to integrate new payloads supporting overland capabilities and maritime domain awareness.
<b>Responsiveness:</b>	Three lines of operations, sustained operations worldwide in appropriate classes of airspace, under adverse weather; Provide expeditious kinetic effects; Control the RPA BLOS and respond to situational changes
<b>Lethality:</b>	Carry and employ PGMs. Enable target acquisition for third party targeting
<b>Flexibility / Growth Capacity</b>	Possess the flexibility, growth capacity, and standard interfaces required to integrate new systems



# SUSTAINMENT OUTCOMES

The proposed Sustainment Solution will be assessed in relation to how well it optimizes the four Sustainment Initiative principles:

- **Performance** - Maximizes operational readiness and mission capability
- **Value for Money** - Sustainment materiel and services are provided at a price commensurate with the market rate for comparable assets and services
- **Flexibility** - the sustainment solution can be adjusted to respond to financial, operational, industrial and technological changes throughout the life of the aircraft
- **Economic Benefits** - The sustainment solution leverages Canadian capabilities to create jobs and economic growth for companies in Canada.

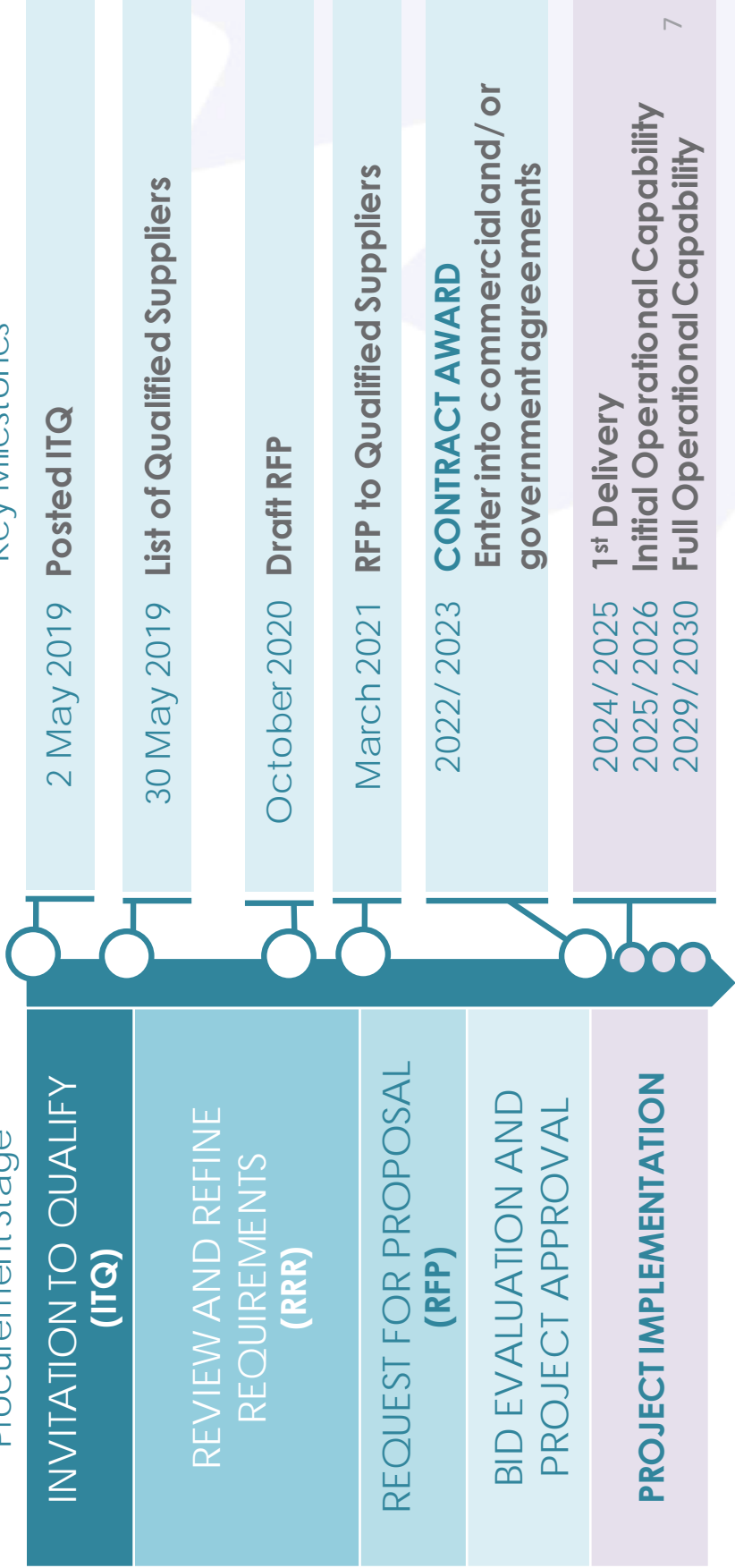


# RPAS PROCUREMENT PROCESS

Open and transparent competition among eligible suppliers

Procurement Stage

Key Milestones





# INVITATION TO QUALIFY (ITQ)

RPAS procurement process began with the release of the Invitation to Qualify documents asking interested suppliers to submit their responses in order to become Qualified Suppliers that move on to the next phase

**The responses were evaluated against a number of pre-determined qualification requirements**



## INVITATION TO QUALIFY (ITQ)

The responses to the ITQ platform qualification requirements were required to be based on an existing NATO Class III MALE RPAS that had:

- The endurance to fly a minimum of 28 hours in zero wind conditions in an Intelligence, Surveillance and Reconnaissance configuration
- Carried and employed a minimum of two precision-guided munitions on the same flight

# THE QUALIFIED SUPPLIERS



The list of Qualified Suppliers was published on [buyandsell.gc.ca](http://buyandsell.gc.ca) on 30 May 2019:

1. L3 Technologies MAS Inc.
2. The United States Government and General Atomics Aeronautical Systems, Inc.

# REVIEW AND REFINE REQUIREMENTS (RRR)



**RPAS procurement process is currently in the second phase of the procurement process. Overall objective of the RRR phase is to obtain feedback from Qualified Suppliers on Canada's preliminary requirements.**

During the RRR Phase, Qualified Suppliers may be requested to review preliminary documents and enter into discussions with Canada. Qualified Suppliers may be asked to share information, provide comments, suggestions and/or identify areas that would benefit from additional clarification by Canada.

Canada will review the feedback provided by the Qualified Suppliers when refining the requirements and preparing its procurement documents.

Canada anticipates to provide the draft Request for Proposal package to Qualified Suppliers in October 2020 for feedback.



# REQUEST FOR PROPOSAL (RFP)

Canada is working towards issuing a formal RFP in March 2021

## COMPETITION SCOPE

**The scope of contract(s) and/or bilateral government agreement(s) resulting from any subsequent solicitation may include:**

- i) the aircraft and associated equipment;
- ii) training;
- iii) maintenance and engineering;
- iv) materiel support;
- v) munitions;
- vi) sustainment set-up to enable achievement of full operational capability of the new fleet; and
- vii) a period of sustainment for the new fleet.

- Required infrastructure will be procured under a separate procurement process



# RFP: BIDDERS



The various parts of a proposal may be submitted by any entity of a Qualified Supplier.

It is anticipated that a bidder may have to submit a proposal resulting in:

1. One or more commercial contracts;
2. One or more Government-to-Government arrangements (where required by the government of the Manufacturer); or
3. A combination of 1 and 2.

# ECONOMIC BENEFITS



This part of the presentation will be used to **begin dialogue** on the economic benefits strategy:

- Draft **Value Proposition** Strategic Objective
- Value Proposition Pillars
- Key Industrial Capabilities

We will continue to refine our Value Proposition approach through engagement with qualified suppliers and Canadian industry in the coming months

# DEFENCE PROCUREMENT IN CANADA



## CAPABILITY



### Department of National Defence

Determines Canada's technical requirements and specifications for the platform or service being procured

## ECONOMIC BENEFITS



### Innovation, Science and Economic Development (ISED)

Determines Canada's requirements for economic benefits to create jobs and economic growth in Canada, through the **Industrial and Technological Benefits Policy**

## COST



### Public Services and Procurement Canada

Acts as the contracting authority and handles the costing, development, and payment of contracts and agreements

# THE INDUSTRIAL AND TECHNOLOGICAL BENEFITS POLICY



**Requires companies awarded defence procurement contracts to undertake business activity in Canada equal to the value of the contract**

## General Aspects of the Policy

- **Market driven**
- Work in **target industrial areas** identified through analysis and industry engagement
- Includes plans for regional distribution of **work across Canada**
- Investments in **small and medium-sized businesses** from across Canada
- Recognizes **incremental** business activity

## When Does it Apply?

- All eligible defence and Canadian Coast Guard procurements **over \$100 million**
- All eligible defence procurements with contract values between **\$20-100 million** will be reviewed for the application of the ITB Policy

# THE VALUE PROPOSITION



## WHAT IS THE VP?

## OBJECTIVES OF THE VALUE PROPOSITION

- A bidder's **economic proposal to Canada**
- The **weighted and rated element** of contractor selection along with technical and cost elements
- Designed through internal **market analysis, industry engagement and third party defence analytics**

- 1** Support long-term sustainability of Canada's aerospace and defence sectors
- 2** Support the growth of prime contractors and suppliers in Canada
- 3** Enhance innovation
- 4** Increase export potential
- 5** Leverage opportunities in skills development and training

# BID PROPOSAL



The Value Proposition bid proposal is prepared by the contractor, and typically consists of:

## MANDATORY REQUIREMENTS

- Commitment to achieve the **total contract value** in ITB activities
- A commitment of **15% of bid price to work with Small and Medium Businesses (SMBs)**
- Commitment to achieve transactions **according to the performance schedule**
- Acceptance of the ITB Terms and Conditions
- Signed Mandatory Requirements Certificate
- Detailed ITB Plans, e.g. SMB plan, Regional plan, Gender & Diversity Plan
- Could include other requirements

## RATED CRITERIA

### Commitments under Value Proposition Pillars

(note: pillars may change based on project):



**Commitments become part of the contract** signed with the winning bidder

## IDENTIFIED TRANSACTIONS

- Transactions equal to no less than 30% of bid price
- Each transaction corresponds to a targeted Value Proposition Pillar



# KEY INDUSTRIAL CAPABILITIES (KICs)



## WHAT ARE KICs?

April 2018, Government of Canada announced 16 Key Industrial Capabilities

Developed through consultation with over 300 industry and academic stakeholders

Introduction of KICs will ensure that defence procurements can better drive **innovation, exports and the growth** of firms through the ITB Policy

## EMERGING TECHNOLOGIES

- Advanced Materials
- Artificial Intelligence
- Cyber Resilience
- Space Systems
- Remotely-piloted Systems and Autonomous Technologies

## LEADING COMPETENCIES & CRITICAL INDUSTRIAL SERVICES

- Aerospace Systems & Components
- Electro Optical / Infrared Systems
- Defence Systems Integration
- Ground Vehicle Solutions
- Armour
- In-Service Support
- Marine Ship-Borne Mission and Platform Systems
- Munitions
- Training & Simulation
- Sonar & Acoustic Systems
- Shipbuilding, Design and Engineering Services

# THE ITB POLICY IS WORKING



## ○ **Creating jobs and growth across Canada**

The ITB Policy is contributing to an economic impact of close to **46,000 jobs** and more than **\$4.7B to GDP annually**

## ○ **Promoting SMB partnerships**

The ITB Policy is supporting the scaling up of close to **450 Small and Medium Businesses** across Canada.

## ○ **Supporting Canadian Export Opportunities**

Since the launch of the ITB Policy, the VP has **resulted in over \$2B of export opportunities**



# SUMMARY

1

## **ITB Policy is Market Driven**

Value Proposition is designed through rigorous analysis and engagement. Business activities should make business sense to both the prime contractor and the Canadian company

2

## **Sustainable Business Outcomes**

Aims to build sustainable, competitive business partnerships in global supply chains that last well beyond completion of the contract

3

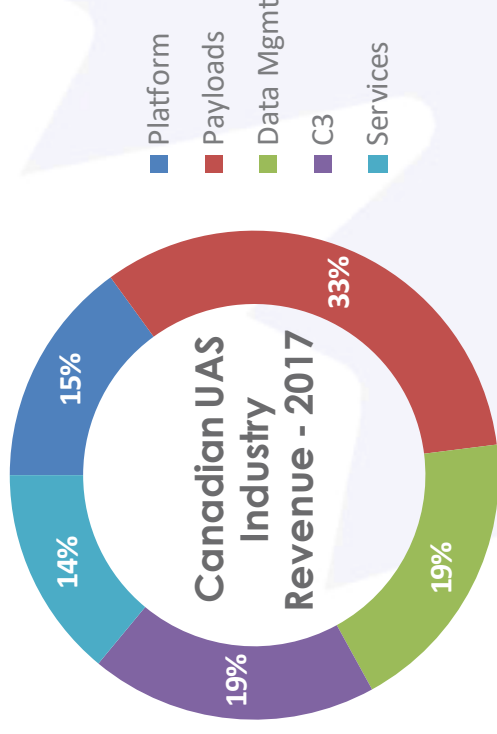
## **Flexibility within the Policy**

Potential bidders (prime contractors) have numerous different business activities that can be used to meet ITB requirements



## Canada's defence industry contributed \$6.2 billion to GDP, and 60,000 jobs across Canada\*

- Canada accounts for 5-8% global UAS market share, \$400-700M annual revenue
- Leader in sophisticated payload and niche sensor manufacturing, with high levels of innovation and export potential
- Globally recognized design/ manufacturing companies, focussed on aircraft/ ground-based C3 systems, with strong export success and consistent R&D investments

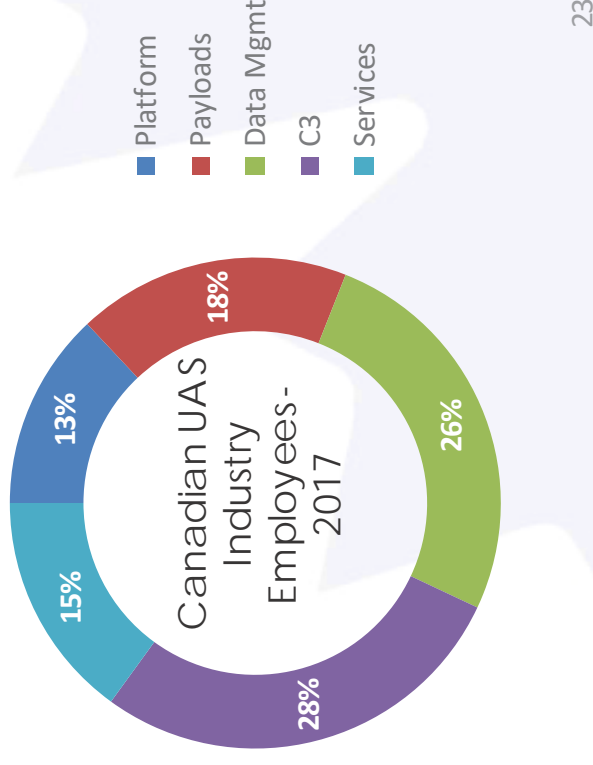


\* Source: "State of Canada's Defence Industry, 2018", Innovation, Science and Economic Development

# RPAS: MARKET ANALYSIS

**Canada's UAS industry is relatively small compared to other leading nations, but is expected to grow**

- 100+ Canadian companies serve value chain, 2000-2500 employees, 90% SMEs
- Support complementary segments of use; military, law enforcement and public safety
- Projected spending primarily to support military ISR employment, with surging demand in commercial uses; surveillance, mapping and inspection



# RPAS: MARKET TRENDS



**Global landscape** of RPAS technologies is **evolving** and Canada is well equipped to **respond** to demands in **emerging technology** areas

Canada will leverage the  
RPAS procurement to  
**build on existing strengths**  
in specialized  
technologies and target  
**new niche capabilities**

Systems Integration

Specialized Payloads and Sensors

Data Management

Command, Control and  
Communications



# DRAFT VALUE PROPOSITION STRATEGIC OBJECTIVE



**Position Canadian industry to grow its domestic capabilities and become  
a globally-recognized leader of RPSAT technology and services**

## Draft Value Proposition Pillars

Direct Acquisition

Direct Sustainment

Supplier Development

Exports

Skills Development & Training

Research & Development - Innovation

25

# RPAS: DRAFT APPROACH



- Ensure and incentivize **maximum Canadian participation** for acquisition activities and an **in-country solution** for sustainment
- **Grow Canada's remotely piloted technologies and autonomous systems industry** by motivating activities in emerging technology KIC's
- **Stimulate innovation and research and development** in areas such as RPSAT, Artificial Intelligence, Cyber Resilience and other KIC's
- **Encourage supplier development** by seeking commitments with Canadian suppliers and a mandatory level of work with small and medium sized business (SMB), while **generating export opportunities**
- **Motivate development of a skilled workforce** critical to meeting the needs of related KIC industries in Canada



# DIRECT ACQUISITION

## OBJECTIVE

Maximize Canada's industrial participation for Direct work on the RPAS fleet in Canada

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## DESIRED OUTCOMES

Manufacturing, production and assembly of RPAS platform, components and systems in Canada

## KEY INDUSTRIAL CAPABILITIES

- Remotely-piloted Systems and Autonomous Technologies
- Aerospace Systems and Components
- Defence Systems Integration
- Artificial Intelligence
- Advanced Materials
- Electro-Optical and Infrared Sensors
- Cyber Resilience
- Training and Simulation



# DIRECT SUSTAINMENT

## OBJECTIVE

Ensure a sustainment solution in Canada that leverages an opportunity for Canadian industry over the life of Canadian fleet

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## DESIRED OUTCOMES

In-country sustainment solution that ensures strong involvement of Canadian industry over the life of the fleet

## KEY INDUSTRIAL CAPABILITIES

- |                         |                           |                                    |
|-------------------------|---------------------------|------------------------------------|
| • In-Service Support    | • Cyber Resilience        | • Defence Systems Integration      |
| • Training & Simulation | • Artificial Intelligence | • Aerospace Systems and Components |



# SUPPLIER DEVELOPMENT

## OBJECTIVE

Seek work packages for Canadian industry on RPAS (Direct work) and investments in other collaborative activities related to RPSAT (non-Direct)

## DESIRED OUTCOMES

Strategic work packages that grow Canada's Remotely-piloted Systems and Autonomous Technologies industry and broader defence industry

## KEY INDUSTRIAL CAPABILITIES

- Remotely-piloted Systems and Autonomous Technologies
- Artificial Intelligence
- Training & Simulation
- In-Service Support
- Cyber Resilience
- Aerospace Systems and Components

# EXPORTS

## OBJECTIVE

Position the Canadian industry to access international markets for export growth

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## DESIRED OUTCOMES

Globally competitive supply chains for components and systems on defence and aerospace platforms

## KEY INDUSTRIAL CAPABILITIES

- Remotely-piloted Systems and Autonomous Technologies
- Aerospace Systems and Components
- Advanced Materials
- Artificial Intelligence
- Cyber Resilience
- Training and Simulation
- In-Service Support





# SKILLS DEVELOPMENT & TRAINING

## OBJECTIVE

Create opportunities to target skills/ training development within the RPSAT ISS market segment, including KIC areas

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## DESIRED OUTCOMES

A capable work force with advanced skills and knowledge in the RPSAT area and the broader defence industry

## KEY INDUSTRIAL CAPABILITIES

- Remotely-piloted Systems and Autonomous Technologies
- Artificial Intelligence
- Cyber Resilience
- Defence Systems Integration
- Aerospace Systems and Components

# R&D - INNOVATION



## OBJECTIVE

Stimulate innovation through R&D commitments and develop opportunities for Canadian industry on RPAS platform and within broader RPSAT markets

## DESIRED OUTCOMES

High quality activities which will create and grow innovation in RPSAT capabilities and other KIC areas in Canada

## KEY INDUSTRIAL CAPABILITIES

- Remotely-piloted Systems and Autonomous Technologies
- Artificial Intelligence
- Advanced Materials
- Cyber Resilience
- Training & Simulation
- In-Service Support

# HOW TO GET INVOLVED

## ITB POLICY TIPS



**Be patient!** It can take time to build relationships



**Determine what area(s) you want to focus on**



**Know who the bidders are** and research their business lines and where you could fit in their supply chain, research areas, etc.



**Register your company** online with your target vendors for upcoming tenders



**Investigate** whether your company needs specific credentials or certifications (i.e. controlled goods)



**Determine the Canadian Content Value** of your product or service. This will be your competitive advantage!



**Know the VP and where you fit**

This is the road-map for potential opportunities for Canadian industry and stakeholders. **Go to the ITB Website to understand the policy and process**



**Talk to your Regional Development Agency (RDA) representative** and engage with **Global Affairs Canada's Trade Commissioner Service**



# RDA CONTACT INFORMATION

## For more information on the Regional Development Agencies, visit or contact:

***Atlantic Canada Opportunities Agency (ACOA)*** - <http://www.acoa-apeca.gc.ca>

Alan MacDonald - [alan.macdonald@acoa-apeca.gc.ca](mailto:alan.macdonald@acoa-apeca.gc.ca)

***Canada Economic Development for the Quebec Region (CED-Q)*** - <http://www.dec-ced.gc.ca>

Mathieu Trudelle - [mathieu.trudelle2@canada.ca](mailto:mathieu.trudelle2@canada.ca)

***Federal Economic Development Agency for Southern Ontario (FedDev)*** - <http://www.feddevontario.gc.ca>

Ken McConnell – [ken.mcconnell@canada.ca](mailto:ken.mcconnell@canada.ca)

***Federal Economic Development Agency for Northern Ontario (FedNor)*** - <http://fednor.gc.ca>

Natalie Brabant - [natalie.brabant@canada.ca](mailto:natalie.brabant@canada.ca)

***Western Economic Diversification Canada (WD)*** - <http://www.wd-deo.gc.ca>

Stewart Campbell - [stewart.campbell@canada.ca](mailto:stewart.campbell@canada.ca)



# CANADA CONTACT INFORMATION

**PSPC Website for RPAS** - <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/air/snac-nfps/sdat-rpac-eng.html>

## PSPC

- This Website will be update for key milestones in the competition.

**For general questions related to the RPAS procurement, please contact: [TPSGC.PASATP-APRPAS.PWGSC@tpsgc-pwgsc.gc.ca](mailto:TPSGC.PASATP-APRPAS.PWGSC@tpsgc-pwgsc.gc.ca)**

## DND

**DND Website for RPAS** - <https://www.canada.ca/en/department-national-defence/services/procurement/remotely-piloted-aircraft-system.html>

## ISED

For questions related to the ITB Policy/ Value Proposition and RPAS procurement, please contact:

Timothy Desson, ITB Project Manager: [timothy.desson2@canada.ca](mailto:timothy.desson2@canada.ca)  
Industrial and Technological Benefits Branch - <http://www.Canada.ca/ITB>

# NEXT STEPS



Canada will **refine our Value Proposition approach** through further analysis and **industry engagement**

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- Your feedback matters: Canada is interested in your input on the potential Value Proposition Approach.
- Canada will continue to engage with Canadian industry, and other stakeholders in the coming months. We are open to one on one virtual meetings to obtain feedback on the VP for the RPAS project.
- There could be opportunities for virtual B2B meetings with Qualified Suppliers over the summer with further details to come.



# QUESTIONS FOR FEEDBACK



In your view, what skills gaps exist that are limiting the growth of Canada's RPSAT sector into a globally competitive industry?

- *What skills does your workforce need to support your company's growth in this area?*

Are there any barriers that exist for you which prevent opportunities to scale up and become more competitive?

What technologies do you envision as being a driving factor in developing and growing Canada's RPSAT industry?

- *Are you experiencing limited access to these technologies?*
- *What innovative research efforts are required?*

In terms of the RPAS VP Pillars, do you have any input on which should be higher priority and which should be lower?

Do you have any further feedback as we refine our ITB/VP approach?

# Canada