



Government
of Canada

Gouvernement
du Canada



Future Fighter Capability Project

Industrial and Technological Benefits Policy

OUTLINE



1. Industrial and Technological Benefits Policy
2. Future Fleet: The Opportunity
3. Market Analysis
4. Draft Value Proposition Approach
 - Strategic Objective
 - Pillars
5. Get Involved: Key Resources and Advice
6. Next Steps
7. Contact Information

DISCLAIMER



The information provided today is subject to change and is intended for discussion purposes only. Due to the interactive nature of the Future Fighter Industry Day, any verbal statements made by Canada's representatives will not be binding for purposes of the Suppliers List Invitation or the procurement process. Only the information released by Canada in the Suppliers List Invitation or in other procurement documents should be followed when preparing a response. Any verbal comments by Canada must not be construed as a preference, rejection or assessment of any solution. Canada reserves the right to consider comments and suggestions received during the Future Fighter Industry Day.

PURPOSE



Canada's **Industrial and Technological Benefits Policy** will apply to the **acquisition** and **sustainment** of the future fighter fleet

- This presentation aims to **begin dialogue** on our economic benefit objectives as well as validate our analysis. This includes our:
 - Draft **Value Proposition** Strategic Objective
 - Value Proposition Pillars
 - Areas of interest
- We will continue to refine our Value Proposition through engagement with suppliers and Canadian industry in the coming months

THE INDUSTRIAL AND TECHNOLOGICAL BENEFITS POLICY



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

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** and for which the National Security Exception applies
- 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?

A bidder's **economic proposal to Canada**

The **rated and weighted element** of contractor selection along with technical and cost elements

Designed through **market analysis, industry engagement and third party consultation**

OBJECTIVES OF THE VP

1. Support the **long-term sustainability and growth of Canada's aerospace and defence sectors**
2. Support the **growth of prime contractors and suppliers in Canada**, including small and medium-sized enterprises in all regions of the country
3. **Enhance innovation** through R&D in Canada
4. **Increase the export potential** of Canadian-based firms

HOW DOES THE ITB POLICY BENEFIT CANADA?

Leverages High Value Investments

- Criteria tailored to each project
- Weighted factor in evaluation
- Streamlined policy features and processes
- Supports leading Canadian industrial capabilities, and emerging technology areas

Reinforces Government Policies

- Reinforces government policies such as *Canada's Innovation and Skills Plan*, and *Strong, Secure, Engaged: Canada's Defence Policy*

Results have included **aerospace** and **defence sector growth** and **major spill-over benefits** to the broader economy

ITB PORTFOLIO
at a glance
1986 – 2016

137
Contracts

\$41 B
in Obligations

\$9.3 B
Activities in
Progress

\$3.8 B
Future work
opportunities

FUTURE FIGHTER THE OPPORTUNITY



Position Canada's aerospace and defence sectors for *success over the next several decades*

88 Advanced Fighter Aircraft

Largest RCAF procurement in over thirty years

Jobs, Innovation, and Exports

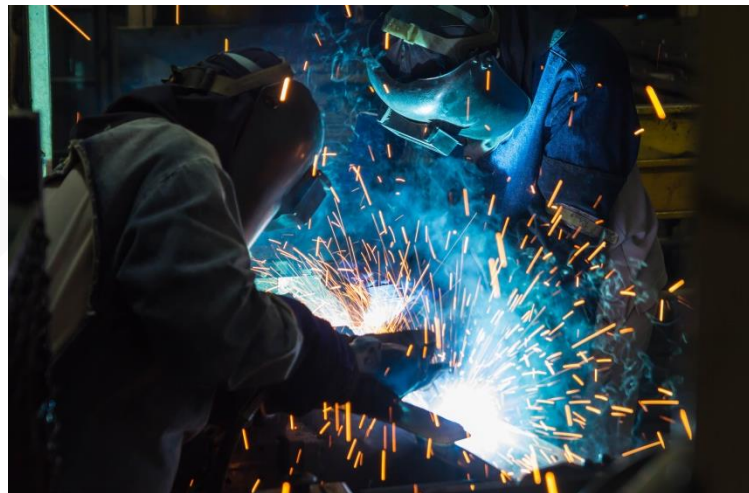
Opportunity to create high-quality jobs in aerospace and defence, generate innovative technology, and grow exports

30+ Year Service-Life

Fleet service life over next several decades and potentially beyond requires a long-term strategy for sustainment

Canadian Capability for Sustainment

Canadian aerospace and defence industries have developed leading capabilities, and are well positioned for in-service support and training & simulation



MARKET ANALYSIS AEROSPACE INDUSTRY



Canada's aerospace industry is a global leader, and contributes nearly \$27.7 billion to GDP, and 208,000 jobs across Canada

- **Ranked among top 3** in terms of civil aircraft, small engines, and helicopter production
- **Small and medium enterprises (SMEs)** are key supply chain partners, and employ 17% of the industry's workforce
- **Women capture close to 20%** of the total aerospace manufacturing workforce, including 10% of STEM jobs, **but more can be done**

**AEROSPACE
INDUSTRY**
87,200 jobs



Source: ISED economic model based on data from Statistics Canada, the Canada Revenue Agency and enterprise-level observations, national input-output multipliers (2011) adjusted to 2016 GDP (in 2007 chained dollars), 2017

**SUPPLIERS TO THE
AEROSPACE
INDUSTRY**
70,600 jobs

**CONSUMER SPENDING
BY ASSOCIATED
EMPLOYEES**
49,900 jobs

**COMMERCIAL
AEROSPACE**
80%



**AEROSPACE
DEFENCE**
17%

SPACE SYSTEMS
3%

Source: Statistics Canada
Canadian Defence, Aerospace
and Commercial and Civil Marine
Sectors Survey (2014), 2016

MARKET ANALYSIS EXPORTS & SUPPLY CHAIN

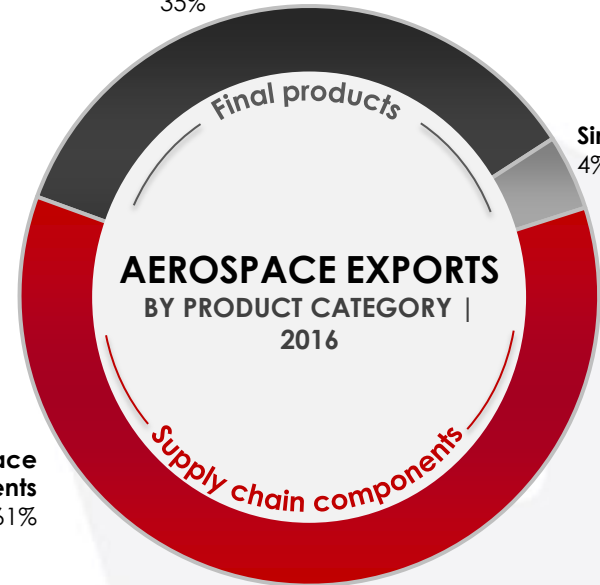


Canada's aerospace industry is **export-intensive**, with **strong participation** in **global supply chains**

- **Close to 80%** of Canadian aerospace manufacturing is exported
- **More than 60%** of Canadian aerospace exports are components in global supply chains
- **Strong capability in engines**, accounting for over 50% of exported aerospace components

Airplanes, Rotorcraft, and
Spacecraft
35%

Simulators
4%



Aerospace
Components
61%

Source: Statistics Canada, CANSIM, Trade Data Online and Global Trade Atlas (2016), 2017

MARKET ANALYSIS RESEARCH & DEVELOPMENT



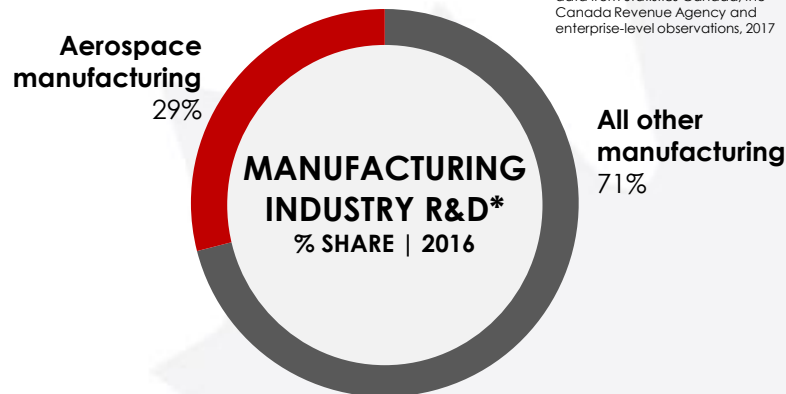
Aerospace is the **#1 R&D player** across all Canadian manufacturing industries

- Aerospace manufacturing is **6x more R&D intensive** than other manufacturing industries
- Aerospace accounted for close to **30% of total manufacturing sector R&D** investments in 2016
- R&D performed by aerospace manufacturing totalled **\$1.6 billion** in 2016

MANUFACTURING INDUSTRY
R&D INTENSITY 2016



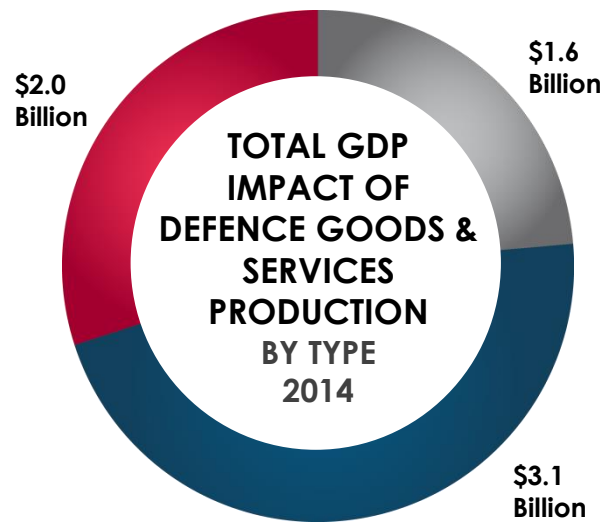
Source: ISED economic model based on data from Statistics Canada, the Canada Revenue Agency and enterprise-level observations, 2017



MARKET ANALYSIS DEFENCE INDUSTRY

**Canada's defence industry
contributes \$6.7 billion to GDP, and
63,000 jobs across Canada**

- Strong connections with aerospace, with **47% of total defence sales** related to air and space platforms
- **STEM-related** positions account **for over 30%** of the defence industry's **direct employment**
- **Close to 60%** of defence sales were exports, accounting for **\$6 billion** in sales in 2014
- **Small and medium enterprises (SMES)** are key supply chain partners, and employ 24% of the industry's workforce



- Defence Industry Production Goods & Services
- Non-Defence Suppliers Production for the Defence Industry
- Consumer Spending by Associated Employees

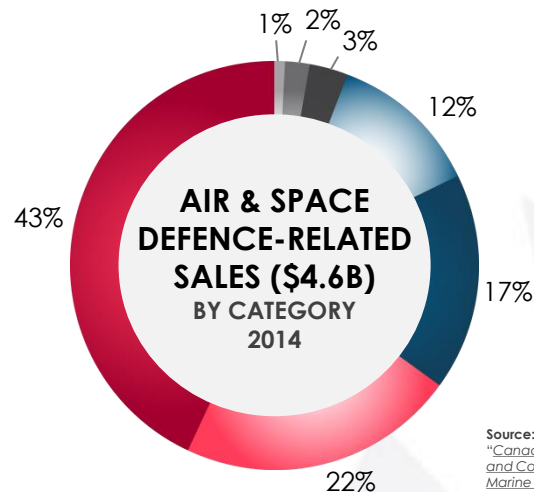
Based on results the Statistics Canada "Canadian Defence, Aerospace and Commercial and Civil Marine Sectors Survey, 2014" (Released 2016), Statistics Canada Input-Output multipliers and ISED modelling.

MARKET ANALYSIS SUSTAINMENT



Strong capacity for sustainment across Canada, such as industry expertise on military air platforms, including fighter aircraft

- **Aerospace MRO** contributes **\$9.3 billion** to GDP in the Canadian economy
- **Military aircraft MRO** accounts for **43%** of air and space defence sales
- **Strong exports, with over 40%** of defence-related sustainment activity exported



Source: Statistics Canada
"Canadian Defence, Aerospace
and Commercial and Civil
Marine Sectors Survey, 2014"
(Released 2016).

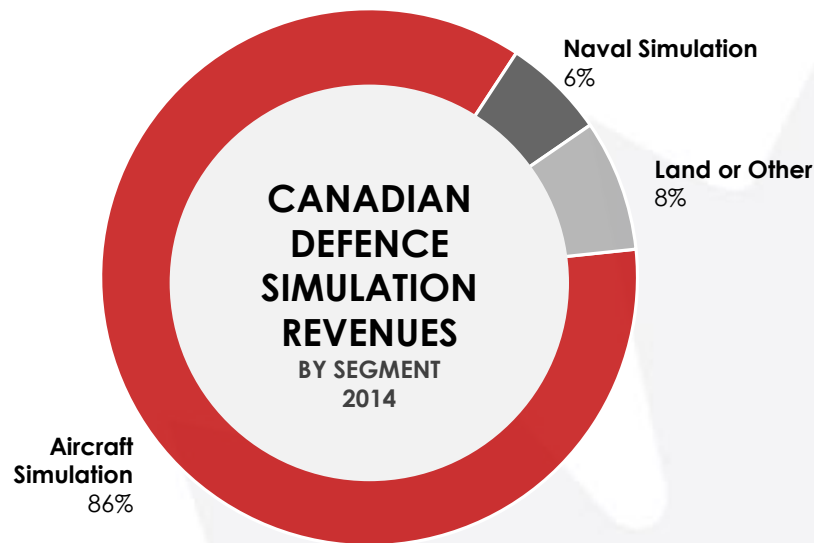
- Military Aircraft Maintenance, Repair and Overhaul
- Aircraft Fabrication, Structures and Components
- Airborne Communications, Navigation, and Systems
- Airborne Sensors/Information Collection; Fire Control, Warning, and Countermeasures
- Simulation Systems
- Military Space Systems
- Unmanned Aerial Systems/Vehicles and Components

MARKET ANALYSIS TRAINING & SIMULATION



Canada is ranked #1 in terms of commercial flight simulation, and home to multiple industry leaders

- Aircraft simulation accounts for the **86%** of Canadian defence simulation **revenues**
- **More than 21 Canadian firms** active in the sector
- **Strong exports, with 70% of** aerospace defence simulation activities **exported**



Source: Statistics Canada Canadian Defence, Aerospace and Commercial and Civil Marine Sectors Survey (2014), 2016

DRAFT VALUE PROPOSITION STRATEGIC OBJECTIVE



Leverage Canada's significant **aerospace and defence** capabilities to **maximize Canadian industry's involvement in global supply chains** and the **sustainment of the future fleet**; support **supplier & skills development**, build **export capacity**, and **invest in innovation**.

Draft Value Proposition Pillars



Fighter Platform



Supplier Development & Exports



Innovation



Capacity & Skills Development



Impact Pillar



FIGHTER PLATFORM



DRAFT OBJECTIVE

- **In-country, Canadian sustainment solution** that leverages our leading industrial capabilities, and ensures a **strong role for Canadian industry**
 - Potential **production opportunities** related to the aircraft
-

DESIRED OUTCOMES

- Maximize world-class Canadian capability for fighter sustainment
- Production of some fighter platform components & systems

SOME POTENTIAL FOCUS AREAS

- **In-Service Support** (e.g. Airframe, engine, mission systems, avionics, fleet management)
- **Training & Simulation**
- **Aerospace Systems & Components**

SUPPLIER DEVELOPMENT & EXPORTS



DRAFT OBJECTIVE

Strategic work packages for Canadian industry in other areas of **global aerospace** and **defence**, including **world product mandates for export**

DESIRED OUTCOMES

- Continuous, high-value work for Canadian industry over the long-term
- More globally competitive, efficient, and innovative Canadian supply chain participants, including potential minimum investments of 15% into SMEs
- High-quality exports, including world product mandates for components and systems on commercial and defence platforms, as well as participation in developmental projects

SOME POTENTIAL FOCUS AREAS

- **Aerospace Systems & Components**
- **Space Systems**
- **Training & Simulation**
- **Electro-Optical / Infrared (EO/IR) Systems**
- **Other areas**



INNOVATION

DRAFT OBJECTIVE

Drive leading-edge, **collaborative R&D** with Canadian industry, research organizations and academic institutions, and **commercialization** of innovative technology

DESIRED OUTCOMES

- Long-term research partnerships with Canadian industry, research organizations, and academia
- R&D investments that align with key Government policy initiatives, such as Innovation & Skills Plan, Innovation for Defence Excellence and Security (IDEaS), and others

SOME POTENTIAL FOCUS AREAS

- **Space Systems**
- **Cyber Resilience**
- **Other Areas**
- **Advanced Materials**
- **Remotely Piloted and Autonomous Systems**

CAPACITY & SKILLS DEVELOPMENT



DRAFT OBJECTIVE

Build capacity and **develop the talent base** of Canadian suppliers through in-house training, scholarship programs, internships, and technology transfer

DESIRED OUTCOMES

- Advanced skills and knowledge development in Canadian aerospace workforce
- Increase efficiency and capacity (e.g. advanced manufacturing) through technology adoption
- Increased participation of women and other under-represented groups in the Canadian aerospace workforce, and related STEM study areas

SOME POTENTIAL FOCUS AREAS

- **Advanced Manufacturing**
- **Aerospace Engineering & Science**
- **Other areas**
- **Industrial Internet of Things (IIoT)**
- **Aerospace Maintenance, Machining, and Other Skilled Labour**

IMPACT PILLAR



DRAFT OBJECTIVE

Once-in-a-generation investment, project, or program that leaves a **lasting, positive impact** on Canada

DESIRED OUTCOMES

- Lasting, large-scale activity that expands upon, or builds a new capability in Canada that continues to have a positive impact beyond the completion of the program

POTENTIAL APPROACH

- 'Best-shot' proposal in an area aligned with Government of Canada priorities, and bidders' business lines
- Engagement will focus on specifying priority areas and developing the evaluation approach in order to ensure fairness and flexibility

KEY RESOURCES & ADVICE



1

Understand the ITB Policy and Value Proposition

More information on the ITB Policy is available on Innovation, Science and Economic Development Canada's website

→ www.canada.ca/itb

2

Connect with the Regional Development Agencies (RDAs)

RDAs have key knowledge of their respective regions, and can assist in making connections between Canadian industry and suppliers

3

Connect with Potential Suppliers & Research Organizations

Gather additional intelligence and make contacts through trade associations, industry days, conferences and trade shows, including through CADSI and AIAC

→ <https://www.defenceandsecurity.ca/>

→ <http://aiac.ca/>



NEXT STEPS

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

- We will continue to **collect information and feedback** on our Value Proposition Strategic Objective, Pillars, and potential focus areas for activities
- We will engage with **suppliers, Canadian industry**, and other stakeholders in the coming months. This could include **networking and B2B opportunities** with fighter aircraft manufacturers and tier 1 suppliers
- As part of our mandate, and working with the Regional Development Agencies, we can support **fighter aircraft manufacturers and foreign governments** with information on the capabilities of **Canadian industry**



CONTACT INFORMATION



For more information on economic benefits, and the FFCP Value Proposition, contact:

Clem Srour, Deputy Director, Future Fighter Capability Project
Innovation, Science and Economic Development
Clem.Srour@canada.ca

For more information on the Regional Development Agencies, visit:

Atlantic Canada Opportunities Agency (ACOA) - <http://www.acoa-apec.gc.ca>
Alan MacDonald - alan.macdonald@acoa-apec.gc.ca

Canada Economic Development for the Quebec Region (CED-Q) - <http://www.dec-ced.gc.ca>
Mathieu Trudelle - mathieu.trudelle2@canada.ca

Federal Economic Development Agency for Southern Ontario (FedDev) - <http://www.feddevontario.gc.ca>
Harold Deck - harold.deck@canada.ca

Federal Economic Development Agency for Northern Ontario (FedNor) - <http://fednor.gc.ca>
Natalie Brabant - natalie.brabant@canada.ca

Western Economic Diversification Canada (WD)- <http://www.wd-deo.gc.ca>
Stewart Campbell - stewart.campbell@canada.ca

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