

Invest in Canada

2013-14

# Aerospace industries

Canada's competitive advantages

Canada 

## UNLIMITED HORIZON

Canada's aerospace industry is ranked 5<sup>th</sup> amongst OECD (Organisation for Economic Co-operation and Development) countries in terms of revenues and contribution to GDP. With some 700 companies, it generates direct annual revenues of \$22.1 billion and \$41.2 billion across multiple supply chains in Canada. Direct industry employment is nearly 70,000 and the aerospace industry is responsible for more than 160,000 jobs in the Canadian economy. (Source: Industry Canada, Economic modelling based on data from Statistics Canada, Business Registry, Census and CANSIM, OECD and firm level observation, 2012). Highly integrated into global value chains, the industry exports 80% of its production globally. Although highly focused on civil aviation, it is remarkably diverse in the market subsectors it serves:

- Canadian aerospace firms are **suppliers of choice** in the global supply chains of aircraft Original Equipment Manufacturers (OEMs) including Boeing, Airbus, Bombardier and Embraer.
- The Canadian aerospace sector is a **leader in terms of export intensity** and trade diversity, with partners in the US, Europe, Asia and South America.
- As a member of the **North American Free Trade Agreement (NAFTA)**, Canada is well integrated into the North American market via a multi-modal transportation system, one of the world's best.
- The Canadian aerospace manufacturing sector is one of the most research and development (R & D) intensive in the Canadian economy. More than 20% of its activity is dedicated to R & D.
- There are 177 **flight schools** with operating certificates in Canada. They issued approximately 1,248 commercial pilot licenses in 2011. Canadian flight training is world recognized. It provides training in diverse climates and geography which contribute to develop superior professional pilot skills.
- Canada's **Maintenance, Repair and Overhaul (MRO)** sector generates more than \$6.5 billion in annual revenues and employs nearly 27,000 highly skilled workers. (Source: Industry Canada. Economic modelling based on data from Statistics Canada (Business Registry, Census and CANSIM), OECD and firm level observation, 2012) Its strengths include:
  - Full 'nose-to-tail' services for single and twin-aisle commercial transports, regional jets and turboprops, business aircraft, military aircraft, and helicopters.
  - Engine and accessory repair and overhaul for gas turbine and piston engines.

### Canada's key strengths

- Commercial and business aircraft
- Helicopters
- Utility and general aviation aircraft
- Aircraft engines
- Avionics
- Aerostructures
- Flight simulation
- Landing gear systems
- Advanced composites manufacturing
- Airframe, engine and component MRO
- Satellites, robotics and space-based services

## **AEROSPACE CLUSTERS**

Canada's aerospace industry is comprised of regional capability clusters that provide opportunities throughout the value chain.

### **WESTERN PROVINCES**

Asco Aerospace – aerostructures  
Avcorp – aerostructures  
Boeing Canada – composites  
IMP Group / Cascade Aerospace – airframe MRO  
EADS / Vector Aerospace – helicopter MRO  
General Dynamics Canada – defence electronics  
Magellan Aerospace – aerostructures, space systems  
MDA – Earth observation  
P&WC – engines  
StandardAero – engine MRO

### **ONTARIO**

Bombardier – commercial and business aircraft  
COM DEV – satellite payload subsystems  
United Technologies Aerospace Systems - landing gear  
Honeywell Canada – ECS, electrical power  
Magellan Aerospace – engine parts and MRO  
MDA – space robotics  
Messier-Bugatti-Dowty - landing gear  
L-3 Electronic Systems – MRO, Display Systems  
MHICA – aerostructures  
Northstar Aerospace – gears and gear assemblies  
P&WC – engines

### **QUEBEC**

Aerolia – aerostructures  
Bell Helicopter – civil helicopters  
Bombardier – commercial and business aircraft  
CAE – training and simulation  
CMC Electronics – avionics  
GE Canada – engine components  
Héroux-Devtek – landing gear  
Mechtronix - training and simulation  
P&WC – engines  
Rolls-Royce Canada – engine MRO  
Thales – avionics

Turbomeca Canada – engine MRO

## **EASTERN PROVINCES**

APEX Industries – precision machining and complex assemblies

EADS SOGERMA / Composites Atlantic – composites

EADS Vector Aerospace – gas turbine MRO

IMP Group – MRO, design and manufacturing

P&WC – engines

Slemon Park – MRO cluster

### **Recent investments:**

<b>Company</b>	<b>Business Activity</b>
Aerolia (France)	Aerostructures
DEMA Aeronautics (Italy)	Aerostructures
GE Aviation (U.S.)	Engine manufacturing, robotics centre
GE Aviation & DAE (U.S./U.A.E.)	Engine testing
Latécoère/LATecis (France)	Engineering services
Liebherr Group (Germany)	Landing gear
Mitsubishi Heavy Industries (Japan)	Aerostructures
Rolls-Royce & P&W (U.K/U.S.)	Icing testing (GLACIER)
Safran Group (France)	Landing gear manufacture, electronics, composites R&D
Sumitomo Precision Products (Japan)	Aircraft systems
Thales Canada (France)	Aircraft digital control systems
UTC/Pratt & Whitney (P&W) (U.S.)	Engine, flight test and assembly

## **CANADA'S ADVANTAGES**

### **High Productivity**

With productivity growth of 53% between 2002 and 2009, the Canadian aerospace manufacturing sector is a leader in terms of productivity growth and value added per employee. (Source: Industry Canada, Economic modelling based on data from Statistics Canada, Business Registry, Census and CANSIM, OECD and firm level observation, 2012).

### **Research & Development (R & D)**

With annual R & D and capital investment of more than \$1.7 billion, Canada is an industry leader in aircraft technology development and applications. Canadian aerospace manufacturing R & D intensity ranks 3<sup>rd</sup> among OECD countries. (Source: Industry Canada, Economic modelling based on data from Statistics Canada, Business Registry, Census and CANSIM, OECD and firm level observation, 2012).

### **Export competitiveness**

Export Development Canada (EDC) provides commercial solutions ranging from commercial financing support for inbound foreign investment to export market financing of aircraft sales. Also, the Canadian Commercial Corporation (CCC) is the Government of Canada's defence and security export sales organization, connecting Government buyers in other nations to Canadian technology and expertise through Government-to-Government contracts.

### **Logistics and market access**

Canada has a highly developed transport infrastructure and duty-free access to the U.S., Mexico and many other global markets. Automated permit ports, transponder identification systems, and joint processing centres are being tested and deployed for efficient movement of goods. Many Canadian production hubs are actually closer to U.S. markets than American production sites.

### **Duty-free manufacturing tariff regime**

Canada is the first country in the G-20 to offer a tariff-free zone for industrial manufacturers. Canada has implemented a major new initiative that will see tariffs on all machinery, equipment and industrial manufacturing inputs reduced to zero by 2015.

### **Skills and Research**

The Canadian aerospace industry has a deep talent pool employing nearly 70,000 workers. This includes production staff (43%) as well as engineering, scientific staff and technicians (30%).

Canada has a world-class higher education system with 22 Canadian universities appearing in the top 500 universities of the world. (Source: Shanghai Jiao Tong University, Academic Ranking of World Universities (2012). Over 11,450 undergraduate degrees in engineering were awarded in 2010, more than the U.S. on a per capita basis and approximately 3,000 students graduate from aerospace related courses each year. (Sources: Engineers Canada, Canadian Engineers for Tomorrow (2010), U.S. Department of Education, National Centre for Education Statistics (2010)).

## **Testimonials**

“This new Canadian operation puts us in an excellent position for future development in North America.”  
François Bertrand, President and CEO, Latécoère

"The announcement of the construction of an assembly plant in Quebec formalizes a major, ambitious and exciting step forward; [...] This new site will serve as a base to access both new markets and new customers."

Christian Cornille, CEO, Aerolia SAS

## INNOVATION

Canada offers resources and programs to stimulate innovation at substantially reduced costs, to all levels of the supply chain and across the technology readiness spectrum. They are complemented by provincial support programs customized to regional needs.

### Strategic Aerospace and Defence Initiative (SADI)

- Repayable contributions to Canadian aerospace and defence companies.
- Learn more at [www.ic.gc.ca/eic/site/ito-oti.nsf/eng/h\\_00022.html](http://www.ic.gc.ca/eic/site/ito-oti.nsf/eng/h_00022.html)

### National Research Council Canada (NRC) Industrial Research Assistance Program (IRAP)

- Innovation assistance to SMEs includes advisory services, funding for innovation, networking and youth employment.
- Learn more at [www.nrc-cnrc.gc.ca/irap](http://www.nrc-cnrc.gc.ca/irap)

### Scientific Research and Experimental Development (SR & ED)

- Income tax credits and refunds for expenditures on eligible R & D activity in Canada.
- Learn more at [www.cra-arc.gc.ca/txcrdt/sred-rsde/menu-eng.html](http://www.cra-arc.gc.ca/txcrdt/sred-rsde/menu-eng.html)

### Natural Sciences and Engineering Research Council (NSERC)

- Funding for university researchers.
- Learn more at [www.nserc-crsng.gc.ca/index\\_eng.asp](http://www.nserc-crsng.gc.ca/index_eng.asp)

Canada also facilitates collaborative R & D and initiatives supported by the federal and provincial governments:

### Green Aircraft Research and Development Network (GARDN)

- Business-led network of centres of excellence.
- Collaborative R & D projects focussed on environment.
- Recent MOU with Air Transport Action Group (ATAG).

### CRIAQ

- Based in Quebec, includes researchers from across Canada.
- Collaborative R & D with strong training component.
- International programs.

### Composites Innovation Centre (CIC)

- Based in Manitoba, collaborative R & D.
- Manages Canadian Composites Manufacturing R & D (CCMRD).

### Composites Research Network

- Based in British Columbia, collaborative R & D.

### CANNAPE

- Increase engagement between Canadian and EU aeronautics R & D communities.

### NRC Aerospace

- Based in Ontario, Quebec and Manitoba.
- Collaborative research and technology development opportunities focused on safety, weight, cost and the environment.

# **INVEST IN CANADA TO ACHIEVE GLOBAL EXCELLENCE**

## **FINANCIAL STABILITY**

For the fifth consecutive year, the World Economic Forum has declared Canada's banking system to be the soundest in the world.

Source: Global Competitiveness Report 2012-2013, World Economic Forum (WEF)

## **A STRONG GROWTH RECORD**

Canada led all G-7 countries in economic growth over the past decade (2002–2011).

Source: World Bank

## **A HIGHLY EDUCATED WORKFORCE**

Canada's workforce is the most highly educated among members of the Organisation for Economic Co-operation and Development (OECD), with half of its working-age population having a tertiary level education.

Source: Education at a Glance 2012, OECD

## **A WELCOMING BUSINESS ENVIRONMENT**

Canada rates as the best country for business in the G-20.

Source: Forbes Magazine, November 2012

## **LOW TAX RATES**

Canada's combined federal-provincial general corporate income tax rate of 26.1% in 2012 is below the level of most other G-7 countries, and about 13 percentage points lower than the U.S.

Source: Department of Finance Canada and the OECD Tax Database 2012

## **MARKET ACCESS**

Canada is the first among the G-20 members to eliminate tariffs on manufacturing inputs and machinery and equipment, hence offering access to a lucrative North American market of nearly 461 million consumers.

Source: World Bank, World Development Indicators Database, 2012, and Department of Finance Canada

## **A GREAT PLACE TO INVEST, WORK, AND LIVE**

Canada ranked second among G-7 countries, having one of the most multicultural populations in the world, a universal health care system, world-class universities and clean and friendly cities.

Source: United Nations Human Development Index, 2011

Unless otherwise noted, all values in this publication are in Canadian dollars.

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Invest in Canada

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111 Sussex Drive  
Ottawa, Ontario, K1N 1J1  
CANADA  
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