

# Greater Montréal: A Global Aerospace Hub





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# 01 Greater Mer

# **Greater Montréal:** A Global Leader in Aerospace





#### A priority sector for Québec and Greater Montréal



Four priorities

- Strengthen and diversify the industry structure
- **Bolster** industry **growth**: support projects and invest in the workforce
- Assist SMEs in their development
- Promote innovation



#### **Major financial** support

For the period of 2016–2021:

- An estimated \$2.8 G in investments
- **\$510 M** in government contributions
- A **\$250** M financial framework





2016-2026

4

#### Québec's aerospace ecosystem, a great asset for your project

	42,100	jobs including <b>13,000</b> engineering professionals and scientists		Aerospace workers			
	205	companies		Employment growth of <b>3.4%</b> from 2017 to 2018			
Canadian key player							
	53%	of the activity of the aerospace industry		1 in 52	4 500		
-	70%	of R&D		people <b>works in the</b> aerospace sector in Greater Montréal	new graduates every year		
	80%	of all Québec aerospace production is exported outside Canada					

Source: Ministry of Economy and Innovation, 2018; Ministère de l'Éducation et de l'Enseignement supérieur, 2018; compiled by Montréal International.

#### Aéro Montréal: a strong cluster to support the industry



Québec's aerospace cluster grouping all the major decision makers in Québec's aerospace sector, including companies, education and research institutions

#### Mission

Aéro Montréal's mission is to mobilize stakeholders in Québec's aerospace ecosystem to support its global reach, innovation capacity and growth.

#### Strategic working groups

Aéro Montréal has created seven working groups and many committees: Growth, Green and Intelligent Supply Chain Development Innovation, Monitoring and Innovative Strategy, Human Resources Growth, Defence and Security, MRO, Remotely Piloted Aircraft System, and about 10 committee focusing on more specific issues.



80 specialized events organized by Aéro Montréal and its partners every year from networking events, to training and trade missions.

#### A hub of global leaders established in Greater Montréal







# 5 OEMs



# **AIRBUS**

### A diversified aerospace cluster with leading companies



#### **Outstanding investments in aerospace since 2012**



### A cutting-edge research hub

# 

Unique model of collaborative industry-led research involving universities and research centres increasing the competitiveness of the aerospace industry.



Canadian Space Agency (CSA) responsible for advancing the knowledge of space through science.

College centre specializing in applied research

and technology transfer, affiliated with Cégep

Édouard-Montpetit.



Government of Canada's largest research organization supporting industrial innovation, the advancement of knowledge and technology development, and fulfilling government mandates.



Helping businesses involved in the composite sector by providing technical assistance in the area of applied research.



Studies management practices that foster innovation and technological progress in aeronautics sector companies.

Concordia UNIVERSITÉ Coordinated umbrella platform that promotes and supports aerospace research and education at Concordia.

INCERP INSTITUT D'INNOVATION ET DE CONCEPTION EN AÉROSPATIALE DE POLYTECHNIQUE Contributing to the development and competitiveness of the aerospace industry in Québec by supplying companies with qualified engineers capable of responding to their needs in innovation and conception.



Expose the aerospace industry to the full possibilities of the research expertise at McGill.



Polytechnique Montréal Research Lab in aerospace, electrical, industrial, computer engineering, software and mechanical.

# 02 A Strategically Located Hub





#### **Direct access to 83% of the global aerospace market**



Direct access to the **US\$178 B** European market representing 24% of the global market thanks to CETA

25 of the world's **100 largest** aerospace companies are established in Greater Montréal

# High quality multimodal transportation infrastructures

#### Efficient flow of goods across borders

- Canada is ranked 1<sup>st</sup> out of all G7 countries for the ease of flow of goods across the border. Only Canada has free trade agreements with all G7 countries.
- Accessible, efficient, easy and affordable intermodal transportation (air, sea, land and rail).



#### Air

Two international airports (Montréal-Trudeau and Montréal-Mirabel) and one general aviation airport (Saint-Hubert) with ample space to build.



#### Sea

One of North America's busiest ports, connected to over 100 countries.

Land and rail Intermodal hub with 32,000 km of railways and located one hour from the U.S. border.



# 03 A Deep and Growing Pool of Highly Qualified Talent





### State-of-the-art university programs in aerospace



#### Undergraduate programs

- Aerospace Engineering
- Electrical Engineering: Embedded Systems
- Mechanical Engineering: Aviation Concentration / Space Technologies



- Automated Production Engineering: Aeronautical Production Profile
- Electrical Engineering: Embedded Systems in aerospace concentration
- Mechanical Engineering: aerospace concentration



Aerospace Engineering



Mechanical Engineering: Aviation Concentration



- Mechanical Engineering Aeronautical Concentration
- Physical Engineering: Concentration Aeronautical and Aerospace



Graduate programs

Master of Engineering (MEng) offered in cooperation with all 6 universities





#### A major professional and technical aerospace training hub



# Largest aeronautical technology school in North America

- Up to 900 students in one of the following programs:
  - Aircraft maintenance
  - Avionics
  - Aerospace engineering

École des métiers de l'**aérospatiale** de Montréal

#### First school/plant in Canada

- Up to 1,300 students in the following programs:
  - Cable and circuit assembly
  - · Aircraft structural assembly
  - Mechanical assembly
  - Toolmaking
  - Aircraft upholstery
  - Machining technique
  - Precision sheet metal work
    Surface treatment
  - Numerical control machine tool operation



#### Thanks to its big four university institutions with renown engineering programs, Montréal boasts a large pool of university students and future engineers

University programs related to aerospace	Enrolment in 2016-2017	Graduates 2016		
Aerospace Engineering	564	141		
Mechanical Engineering	5,062	1,139		
Electrical and Electronics Engineering	3,299	882		
Industrial Engineering	2,299	590		
Computer Engineering	1,866	314		
Physical Science	829	143		
Engineering Physics	353	57		
Mathematics	134	276		
Total	14,406	3,542		



**14,000+ university students** are enrolled in aerospace related programs

3,500+ graduate every year

# Thanks to cutting-edge college programs, Greater Montréal boasts a large pool of students

College programs related to aerospace	Enrolment 2016-2017	Graduates 2015	
Mecanical Engineering	1,001	427	
Aircraft Maintenance	800	95	
Industrial Electronics	607	290	
Aerospace Engineering	605	46	
Avionics	294	19	
Total	3,307	877	



**3,000+ college students** are enrolled in aerospace related programs

Nearly 1,000 graduate every year

Source: Ministère de l'Éducation et de l'Enseignement supérieur, 2018; compiled by Montréal International.

### A pool of high-qualified employees

Selection of professions related to aerospace in Greater Montréal	Number of experts
2146 – Aerospace Engineers	2,500
2232 – Mechanical Engineering Technologists and Technicians	2,700
2133 – Electrical and Electronics Engineers	3,200
0211 – Engineering Managers	3,400
2233 – Industrial Engineering and Manufacturing Technologists and Technicians	4,100
2173 – Software Engineer and Designers	5,900
2147 – Computer Engineers (except Software Engineers and Designers)	6,100
2241 – Electrical and Electronics Engineering Technologists and Technicians	7,500
Total – Greater Montréal	35,400



**45% of Canada workforce** in aerospace is established in Greater Montréal

#### The metropolitan area with the most bilingual and trilingual population in Canada

**2.5 million residents speak English**, that's 9% more than in Vancouver

#### 55% of the population is bilingual

(English and French), compared to 8% in Toronto and 7% in Vancouver

Almost 20% of the population is fluent in three or more languages compared to 4% in Toronto and 3% in Vancouver



# 04

# Attractive Operating Costs and Incentives





# Greater Montréal has the most attractive operating costs in aerospace in Canada and the U.S.

Running a business costs less in Greater Montréal than in any other major metropolitan area in Canada and the U.S.

1st

rank

The most competitive operating costs compared to any other major metropolitan area in Canada and the U.S.

23% compared to the study average advantage



#### The most competitive salaries in the aerospace industry

#### Median annual salaries\* for 8 typical professions in CA\$

Selection of 8 large metropolitan areas in North America, 2019

	Montréal	Toronto	Chicago	San Diego	Seattle	Boston	San Francisco	New York- Manhattan
R&D Manager (Technical)	\$118,330	\$126,599	\$177,194	\$184,597	\$185,056	\$195,468	\$212,355	\$217,178
Manager (Manufacturing)	\$91,104	\$97,592	\$132,151	\$134,849	\$140,292	\$145,727	\$159,790	\$162,794
Aerodynamics Engineer	\$83,618	\$89,076	\$117,006	122,232	\$123,444	\$125,848	\$134,849	\$126,105
Aircraft Equipment & Parts Sales Representative	\$58,533	\$63,327	\$78,776	\$75,303	\$81,296	\$86,505	\$91,460	\$87,038
Industrial Engineer	\$81,819	\$87,686	\$116,623	\$121,813	\$123,039	\$125,430	\$134,392	\$125,657
Aerodynamicist	\$83,616	\$89,076	\$117,006	\$122,232	\$123,444	\$125,848	\$134,848	\$126,105
Aeronautical Drafter	\$59,880	\$61,375	\$83,213	\$84,619	\$89,342	\$88,330	\$92,219	\$88,024
Aeronautical Sales Engineer	\$90,586	\$97,415	\$108,382	\$135,635	\$139,684	\$155,588	\$167,512	\$167,592

Note: Salaries based on 5 years of experience. Industry category : Aerospace and Defence (NAICS 3364). Currency exchange based on the monthly average of February 2019: US\$1.00 = CA\$1.32. Source: Economic Research Institute Inc., March, 2019.

#### Advantageous tailor-made incitatives



Major and Innovative Projects

#### **ESSOR Program**

Support to major projects with refundable (interest-free & low interest loans) and nonrefundable contributions. Investment projects with eligible expenditures of **\$250,000** or more to start a new business or expand (including modernizing) an existing business.

#### **Strategic Innovation Fund**

Repayable and non-repayable contributions of **up to 50%** of eligible costs for a project of at **least \$10 M.** 

#### Canada Economic Program (CED)

Refundable and non-refundable contributions of **up to 50%** of direct project costs up to \$2 M.



Research and Development tax credit

Québec's tax credit for Scientific Research and Experimental Development (R&D)

**14% tax credit on salaries and subcontractor fees** paid in Québec. It is fully refundable, whether or not the business makes a profit.

#### Canada's Scientific Research and Experimental Development (SR&ED) tax incentive

15% federal tax credit on eligible activities and expenditures.



Talent development & attraction

Financial Assistance for Job Creation and Training

**25% of eligible costs** for the implementation of a training program and **50% of costs** incurred for the creation of a human resources department with the creation of 50 jobs or more over two years.

### Tax Holiday for Foreign Researchers and Experts

Five-year Québec income tax exemption at the personal level: **100% of salary** for the 1<sup>st</sup> and 2<sup>nd</sup> year; **75%** for the 3<sup>rd</sup> year; **50%** for the 4<sup>th</sup> year; **25%** for the 5<sup>th</sup> year.

# R&D tax credits: 15% non-refundable from the government of Canada and 14% refundable from Québec

#### **SCENARIO (\$)**

- Canada: Scientific Research and Experimental Development (SR&ED) tax incentive program
- Québec: Tax credit for Scientific Research and Experimental Development (R&D)

#### **ASSUMPTIONS**

- Private, foreign-controlled company, more than \$75M assets
- 15 eligible employees @ \$100,000/year
- 100% of their work is related to eligible activities
- Subcontractor: \$200,000

	Canada (Federal)	Québec
Qualifying salaries and wages	\$1,500,000 (A)	\$1,500,000 (D)
Other eligible expenses @ 55%	\$825,000 (B)	-
Subcontractor	\$160,000 (C)	\$100,000 (E)
Exclusion on the first \$225,000 of R&D expenditures	-	\$(225,000) (F)
Total qualifying expenditures	\$2,485,000 (A) + (B) + (C)	\$1,375,000 (D) + (E) - (F)
Refundable Québec credit @ 14%	-	\$192,500 (G)
Non-refundable federal credit @ 15%	\$372,750 (H)	-
Total tax credit	\$556,250 (G) + (H)	

#### Note:

- 1. This model takes into consideration recent changes made to certain tax credits (2012, 2014 and 2015) and is thus valid as of fiscal 2019.
- 2. Up to 55% of qualifying salaries and wages, federal only: expenditures should be related to R&D activities.
- 3. Only 80% of the amount paid to a subcontractor is eligible for a federal tax credit and 50% for Québec tax credit.
- 4. Québec only: For SMEs (less than \$50M assets) there is an SR&ED tax credit exclusion on the first \$50K of R&D spending. For large companies (more than \$75M assets) and companies under foreign control, the exclusion applies on the first \$225K of R&D spending. This amount is deducted of the qualifying salaries and wages.

Source: Ministry of Finance of Québec, 2019; PWC, 2019. Compilation: Montréal International, 2019.

"We will leverage Montréal's unique ecosystem of world class talent and creativity to advance the applications of ethical artificial intelligence world-wide."

 Patrice Caine, Chairman and Chief Executive Officer, Thales "Beyond the sectoral appeal of Greater Montréal, the great plus of the region was the welcome we received. Wanting to set up a French start-up and a new technology in Canada was a double challenge. But from the beginning, we felt supported, accompanied, even pampered. For an SME, this support is huge. "

 Cyrille Chanal, President, FusiA

"The decision to move to Laval (Greater Montréal) and make it our strategic **location in North America** is based on the excellent infrastructure in place, a business-friendly public administration and the availability of highly qualified and experienced aerospace professionals. Québec provides the ideal environment for F / LIST CANADA to thrive. support its clients effectively and expand its operations across Canada and the United States "

 Michael Groiss, President and CEO of F / LIST

F/LIST

"In the Montréal area, we found the ideal industrial ecosystem for our future growth and development. The emergence of new technologies and the race to innovate are challenges that force companies to constantly review their priorities and investments. In the aerospace industry, for example, the complexity and ongoing development of embedded systems require businesses to be able to turn on a dime."

Jean-Paul Chevée,
 Director of International
 Development, SII Group



#### THALES

# 05

# Montréal International's Personalized, Free and Confidential Services





# Montréal International, a single point of access to a multitude of personalized, free and confidential services





## **Contact us**



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