



THE QUEBEC AEROSPACE CLUSTER

Canada-Turkey Business Conference

June 4, 2014





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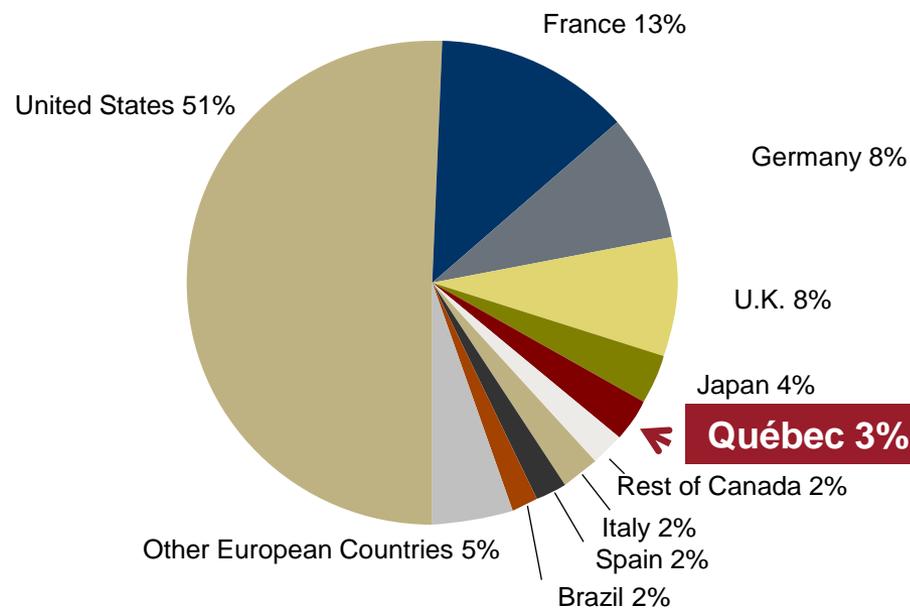
Québec - One of the top 3 aerospace centres in the world

- Revenues of \$12.05 billions in 2013
- Ranked #6 in the world for sales (while Canada ranks #5 in the world as a whole)

Aerospace centres in the world



Aerospace industry revenue share

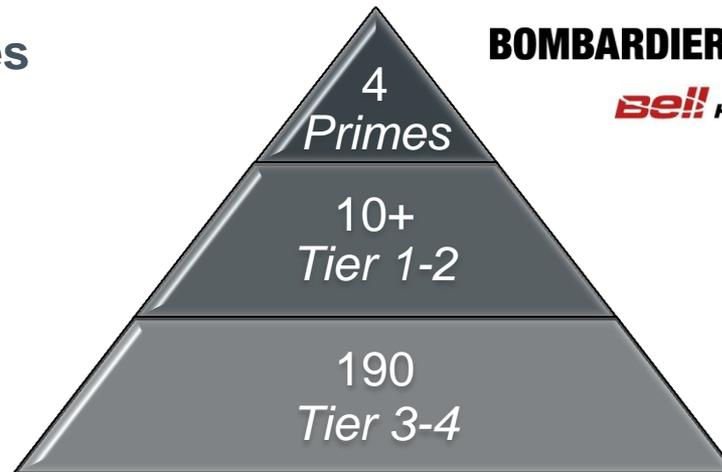


Source: MFEQ 2013



The heart of the Canadian aerospace industry

- 204 companies



BOMBARDIER

 **Pratt & Whitney Canada**
Une société de United Technologies

 **Bell Helicopter**
A Textron Company

 **CAE**

- **Aerospace is the 3rd largest manufacturing industry in Québec**
 - It Accounts for 8% of the manufacturing sector sales
- **Over 80% of Quebec aerospace products are exported**
 - The aerospace sector is the number one exporter in Quebec accounting for 10,3 % of all manufactured products exports;
 - The sector number one export destination is the United States with 65% of all sales, a value of \$ 5.3 billion.

Source: MFEQ 2013



The heart of the Canadian aerospace industry

- 43,500 **jobs**, with 10,000 **engineers**
 - One of the highest employment densities in the world as
 - 1 person out of 190 in Quebec (4x more than USA and France)
 - 1 person out of 93 in the Greater Montreal area
- + 55 % of total Canadian **aerospace revenues**
- 60 % of total Canadian **aerospace exports**
- 50 % of the Canadian **workforce**
- 70 % of Canadian aerospace **R&D spending**



Aerospace capability of Québec industry



LIGHTWEIGHT AIRCRAFT

COMMERCIAL HELICOPTERS



BUSINESS AND REGIONAL JETS

SMALL TURBINE ENGINES



SIMULATING AND MODELING
TECHNOLOGIES



AEROSPACE
TELECOMMUNICATIONS

MILITARY AND COMMERCIAL LANDING
GEAR SYSTEMS



MAINTENANCE AND REPAIR OF
COMMERCIAL AND MILITARY AIRCRAFT

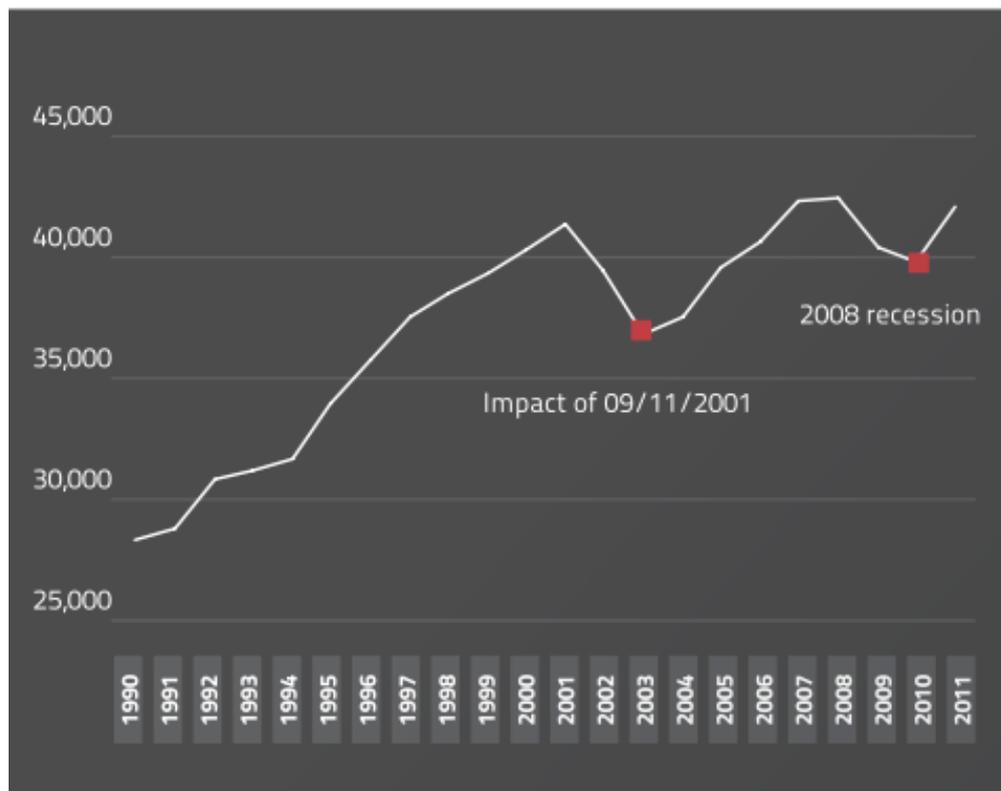




Employment Growth

AEROSPACE JOBS

PROVINCE OF QUÉBEC, 1990-2011





Greater Montreal Area Concentration of the aerospace industry



98% of Quebec's aerospace industry
is concentrated in the Greater Montreal Area

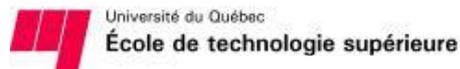


Collaborative Organizations - Human Resources Development

HR Sectoral Committee



Universities Aerospace Engineering Institutes



Continuous Education

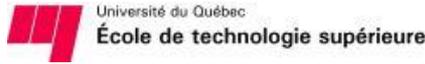


Trade School and Aerotechnical College





Collaborative Organizations - Innovation

TRL 1 to 7	<p><i>Pre-competitive R&D</i></p> 	<p><i>Technology Demonstration</i></p> 	<p><i>Green Aviation R&D</i></p> 
	<p>Universities</p>           		
	<p>Public Research Centres</p>        		



Strengths of Greater Montréal in Aerospace



OEM PRESENCE

- Head offices of world leaders located in the region
- Complementarity
- Involvement in a variety of local programs



QUALIFIED WORKFORCE

- Qualifications and diversity of profiles
- Availability



HIGHER EDUCATION AND TRAINING

- Quality, flexibility and diversity: Polytechnique, ETS, McGill, Concordia, ENA, EMAM, IFA.



INTENSITY AND QUALITY OF RESEARCH AND DEVELOPMENT

- Collaborative research (CRIAQ) and well-established research institutes (IRA-CNRC and universities)
- Government support specifically directed to aerospace (ISAD, Avion écologique)



AEROSPACE CULTURE

- Cohesion and corporatism of the industry representatives
- Network-promoting organizations



Canada-Turkey Aerospace Collaborations

A growth market for Canada



- Bombardier has presently 19 business jets in operation in Turkey
- Atlasjet of Turkey signed a letter of intent to acquire 10 C Series (CS300) with an option for 5 additional planes
- Newmericals Technologies active in Turkey
- LISI Aerospace plants in Dorval and Turkey

BOMBARDIER
AEROSPACE



 **atlasjet**

newmerical
TECHNOLOGIES INT.

lisi AEROSPACE



Canada-Turkey Aerospace Collaborations

A strategic partner for Turkey

- Canada and Turkey, two funding partners of the JSF Program
- TAI is a preferred supplier on Bombardier's C Series Fixed Trailing Edge (FTE) Assembly Program (over 800 wing systems until the project is planned to end in 2029).



TAI



Aéro Montréal



May 15, 2006



Aéro Montréal, the aerospace cluster

- Founded in 2006, Aéro Montréal is a strategic think-tank that groups all the major decision makers in Québec's aerospace sector including:
 - companies;
 - educational institutions;
 - research institutions;
 - associations;
 - unions.
- Its **MISSION**: to mobilize industry players around common goals and concerted actions to increase the competitiveness, growth and expansion of the cluster.



Board of Directors

Tier 2-3 & MROs

OEMs





Strategic Committees

1 Branding and promotion

2 Innovation

3 Supply Chain

4 Human Resources Development

5 Markets Development - SME

+ Defense Strategic Committee



Projects of Interest





Photographs : courtesy of Bombardier Inc. and Pratt & Whitney Canada

THANK YOU!

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