



WORKFORCE AND THE NEXT GENERATION OF TALENTS KEY GROWTH DRIVERS OF THE AEROSPACE INDUSTRY

Activity Report 2017



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RANK 1ST

QUÉBEC'S EXPORTS

\$14.4B

IN SALES

196

COMPANIES

4 OEMs
17 TIER 1 PARTNERS, EQUIPMENT
MANUFACTURERS AND MAINTENANCE,
REPAIR AND OVERHAUL
(MRO) COMPANIES
175 SPECIALIZED SUPPLIERS

40,700

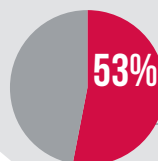
HIGHLY-SKILLED WORKERS

QUÉBEC, A GLOBAL AEROSPACE HUB



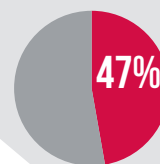
80%

OF QUÉBEC'S AEROSPACE
PRODUCTION IS EXPORTED



53%

OF TOTAL CANADIAN
AEROSPACE SECTOR SALES



47%

OF CANADIAN AEROSPACE
SECTOR JOBS

**MORE THAN
70%**

OF CANADIAN R&D IS
PERFORMED IN THE
GREATER MONTRÉAL REGION



MESSAGE FROM THE CHAIR

Hélène V. Gagnon
Vice President, Public Affairs
and Global Communications
CAE

Aerospace is a cyclical industry that is facing turbulence with strength and optimism. The year 2017 was highly eventful for Québec aerospace and Aéro Montréal acted on many fronts **to ensure that the industry's voice was heard while supporting companies in the transformations that are sweeping through the sector.**

According to the International Civil Aviation Organization (ICAO), 4.1 billion passengers traveled by air in 2017, up more than 7% from 2016. The International Air Transport Association (IATA) estimates that this number will increase to 4.3 billion in 2018, nearly 6% higher than 2017. **This strong demand will generate growth in sales of aircraft of all sizes and will therefore be very beneficial for all players in the supply chain.**

Major aircraft manufacturers expect airlines' global fleet to double in the next 20 years with a demand for more than 40,000 new aircraft. These optimistic forecasts point to considerable long-term growth in our industry.

This increase in production levels will result in new workforce requirements. According to the Comité sectoriel de main-d'œuvre en aérospatiale du Québec (CAMAQ), nearly 32,000 positions will need to be filled within 10 years. **Skilled labour requirements were an important consideration in the development of our action plans and our discussions with the government in 2017.** They will remain our main focus in 2018. With virtually full employment in Québec, we need to review our strategy and encourage the next generation to consider certain career paths.

The Aéro Montréal team was very proactive in 2017 in this regard. Québec government members were made aware of this important issue for our industry during meetings held as part of an Aerospace Day at the National Assembly in Québec City. Mrs. Dominique Anglade, Deputy Premier and Minister of the Economy, Science and Innovation (MESI), tabled a special motion

in the National Assembly that **recognizes Québec aerospace as a true engine of growth and wealth creation for all of Québec.** The motion also emphasized the need to invest in human capital development and succession training. **The exceptional innovation capacity of the aerospace sector in Québec, a source of great pride for all Quebecers, has also been emphasized by the government.**

The protectionist measures of several governments led our companies to rethink their business strategies and to turn to new markets, including in Asia-Pacific. This region of the world will experience phenomenal air traffic growth in the coming years. Aéro Montréal has implemented several measures **to support companies looking to export and diversify their customer base**, including partnerships with foreign clusters and specialized training sessions encouraging internationalization.

SKILLED LABOUR REQUIREMENTS WERE AN IMPORTANT CONSIDERATION IN THE DEVELOPMENT OF OUR ACTION PLANS AND OUR DISCUSSIONS WITH THE GOVERNMENT IN 2017.

Our supply chain pursued its transformation in 2017, especially with regard to the 4.0 Industry and the digital shift. Aéro Montréal has made every effort to support SMEs in this transformation by offering new programs to companies and by organizing international events related to this issue. **The digital transformation is challenging all players in the aerospace industry, especially our SMEs, since it is key to improving their positioning in global value chains.**

When the Québec government tabled its budget it emphasized the importance of the aerospace sector in boosting Québec's economy. Many of the measures announced take into consideration the challenges faced by Québec aerospace companies. They focus on innovation, knowledge economy, and creativity to accelerate the companies' productivity and promote their competitiveness locally and internationally.

Finally, Aéro Montréal's Governance Committee was very active in 2017. Its members developed a new integrated governance plan with all the tools necessary for the sound governance of the cluster secretariat. The Human Resources Committee mandate was reviewed, and a new organizational structure put in place to facilitate the communication and optimization of projects carried out by the working groups. Lastly, the Finance and Audit Committee assisted the Board of Directors in its oversight functions with respect to the reporting of Aéro Montréal's financial information, external audit activities, and risk management and internal controls.

I'd like to conclude by recognizing the excellent work of the entire Aéro Montréal team and its President, Mrs. Suzanne Benoit, who are putting in place strategies, programs and events geared to the issues and needs of our industry to support and propel the growth of our ecosystem.





MESSAGE FROM THE PRESIDENT

Suzanne M. Benoit
President

The year 2017 was marked by exceptional results. This report provides an overview of the main achievements of each of our six working groups.

In May 2016, the Québec government launched the 2016-2026 Québec Aerospace Strategy in connection with the tabling of the Québec Digital Strategy and of the Québec Export Strategy. The aim, among other things, is to enable our SMEs to improve their competitiveness and explore new markets. Aéro Montréal implemented several actions to meet the government's objectives and support the development of companies in the cluster.

For example, we deployed the **MACH FAB 4.0 initiative in 2017 as part of the Supply Chain Working Group**. Two calls for projects were issued in June and October and 27 companies were selected. This program has a total budget of \$19 million – a 50% public contribution and 50% private contribution – half of which was included in the Québec government's budget to help SMEs. This new initiative aims **to support the transition of aerospace SMEs to Industry 4.0**, a challenge already central to the development and growth of our SMEs.

We also continued our MACH initiative activities as part of the Québec Aerospace Strategy. To date, 710 improvement projects have been completed and more than \$8.7 million in private and public funds have been invested in these projects.

In October 2017, during the Symposium on the Canadian Defence and Security Market, organized by the Defence and National Security Working Group, we launched the **Security Defence Québec portal (SDQuébec)**. This project was implemented as part of the Québec Aerospace Strategy and Canada's Defence Policy. SDQuébec's goal is to optimize the efficiency of Québec aerospace companies and enhance the results of their business development efforts, as well as those of local and foreign prime

contractors. It offers users concrete and up-to-date information on opportunities related to Industrial and Technological Benefits (ITBs). We also established last June a first cohort of 15 companies, to train and assist them in developing their businesses in security and defence. In collaboration with experts in the field, **companies in the cohort can better understand the defence ecosystem and the processes involved.**

In 2017, the Branding and Promotion Working Group sought to **increase the presence and visibility of our ecosystem on the world stage**. We signed numerous partnership agreements with foreign clusters, including at the International Paris Air Show – Le Bourget in June. During this event, we concluded three agreements with the following clusters: SAFE Cluster (the competitiveness cluster of the Provence-Alpes-Côte d'Azur region for security and aerospace players); Gyeongnam Technopark (the industrial cluster located in South Korea); and a tripartite collaboration agreement between the Portugal cluster, Ontario Aerospace Council and Aéro Montréal. We also took advantage of International Aerospace Week – Montréal 2017 to sign an agreement with the North Country Chamber of Commerce to promote aerospace cooperation between Québec and New York State. Finally, we developed an agreement with the European Aerospace Cluster Partnership (EACP). This agreement, signed with all the European aerospace clusters, will enable Québec companies to establish closer ties with companies across the Atlantic. **These agreements foster networking among our companies and those of foreign ecosystems and allow us to share best practices and encourage our SMEs to go global.**

In addition to developing these various partnerships, Aéro Montréal organized two economic missions, one in New Hampshire and the other in Vermont, to allow our companies to present their know-how and boost their business in these neighbouring American regions.

During 2017, we redoubled our efforts to bolster the image of aerospace and encourage young people to move towards careers in this field. To that end, our AeroPortal community reached nearly 20,000 members on Facebook thanks, among other things, to the many webinars we organized (CAE, ICAO/IATA/IFALPA/ACI, Montréal Aviation Museum). We also set up a job section and a centralized recruitment management tool, with an employer space and a candidate space, to meet the labour needs of our companies.

Workforce-related challenges were significant in 2017. We therefore decided to launch a media relations campaign focused on these issues to alert public opinion and raise awareness among the government. The goal was **to give aerospace a positive image among young people, as well as their parents, so that they consider careers in aerospace.**

Spurring young people's interest in science, technology, engineering and mathematics is one of our priorities. As part of the Human Resources Working Group, and thanks to the support of the Arconic Foundation and the Ministry of Economy, Science and Innovation's NovaScience program, government assistance was granted in May to implement Passion from Within and Passion for Flight on the North Shore and the Island of Montréal. Moreover, in October, Aéro Montréal signed a collaboration agreement with the Laval Cosmodome to deploy these two programs among the 70,000 or so young people who visit this scientific museum each year.

The Market Development – SME Working Group, for its part, was revamped to better respond to the challenges facing the industry. It is now called the Growth Working Group. We want to give it a **more inclusive mandate that better meets the current challenges of growth, consolidation, competitiveness and internationalization of the cluster.** The long-term vision is to increase the growth of Québec's aerospace cluster tenfold to maintain its position as a global player in an increasingly competitive market. This requires reinforcing synergies within the cluster and ensuring its expansion internationally.

From April 3-7, we organized International Aerospace Week – Montréal 2017. The Global Supply Chain Summit, held on April 4th, attracted nearly 500 participants to the Palais des congrès de Montréal. This record participation was made possible by the quality of the speakers and the relevance of its programming around the theme **“From Vision to Reality: Breaking Through the World of 4.0.”** Thanks to a 4.0 Demo Zone, companies saw examples of the digital technologies they can deploy in their respective businesses, as well as the skills and expertise required to make their transition to 4.0 easier. The week also provided an opportunity to hold a seminar on drones during which we signed a partnership with the Unmanned Aerial System Centre of Excellence (UAS CE) to support the emergence of this rapidly growing sector in Québec. In addition, the Seminar on Defence and Royal Canadian Air Force programs, held on April 3rd, was a great success with the participation of the **Honourable Navdeep Bains**, Minister of Innovation, Science and Economic Development

Canada, and **Mrs. Dominique Anglade**, Deputy Premier and Minister of the Economy, Science and Innovation of Québec, who delivered opening remarks. We concluded the week with an International Inter-Clusters Day to share cluster best practices on a global scale.

Finally, in response to a request from the Branding and Promotion Working Group, 2017 provided an opportunity to conduct a survey of cluster members and non-members. This survey was sent to 850 participants and allowed us to collect qualitative data (in focus groups and individual interviews) and quantitative data. As a result, we developed **a new global communication plan for the cluster and a specific communication plan that addresses the visibility of SMEs.** We began rolling out the latter in 2017 and have already increased the visibility of our member companies through new actions such as the “SME in the Spotlight” section of our newsletter and a targeted social media strategy.

Finally, I would like to thank the entire Aéro Montréal team and the many members of the industry who are working tirelessly to ensure the growth of our industry. Our collective efforts are enabling us to develop a powerful and cohesive ecosystem with a very important presence on the international scene.

I invite you to consult the many achievements of each of our working groups in the following pages.



BOARD OF DIRECTORS



CHAIR

Hélène V. Gagnon*
Vice President,
Public Affairs and
Global Communications
CAE



VICE CHAIR

Patrick Champagne*
Vice President,
Engineering and R&D
Esterline CMC Electronics



TREASURER

Jean Blondin* ⁽¹⁾
President
Abjpa Canada



Guillermo Alonso
President
Alta Precision



Jim Andrews
Vice President and
General Manager
Lockheed Martin Canada



Francis Archambault
Chief Executive Officer
and Head of Sales
NSE Automatech



Claude Baril* ⁽²⁾
President
Stelia
North America



Sylvain Bédard*
Chief Executive Officer
Sonaca Montréal



Sylvain Boisvert
General Manager, Canada
Safran Engineering



François Caza
Vice President,
Product Development, and
Chief Engineer, Aerospace
Bombardier



David Chartrand
Grand Lodge
Representative
IAMAW



Jacques Comtois* ⁽³⁾
Vice President and
General Manager
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Maria Della Posta
Senior Vice President
Pratt & Whitney Canada



Marc Donato
Vice President,
Operations and
Institutional Relations,
Information System Group
MDA Satellite Systems



Pierre Dumouchel
General Manager
École de technologie supérieure



Jean-François Dupont
Chief Executive Officer
AV&R Aerospace



Denis Faubert
President and
Chief Executive Officer
Consortium for Research
and Innovation in Aerospace
in Québec (CRIAQ)



Cynthia Garneau
President
Bell Helicopter Textron Canada



Denis Giangi
President
Rolls-Royce Canada



Michel Grenier
Vice President and
General Manager
Thales Canada, Avionics



Mario Héroux
Director
École des métiers de
l'aérospatiale de Montréal
(ÉMAM)



Jerzy Komorowski
General Manager,
Aerospace
National Research Council
(NRC)



Gilles Labbé
President and
Chief Executive Officer
Héroux-Devtek



Sylvain Lambert
Director
École nationale
d'aérotechnique (ÉNA)



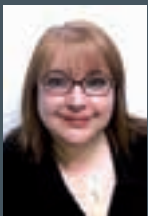
Éric Ledoux
President and
Chief Executive Officer
DCM Group



Hugue Meloche*
President and
Chief Executive Officer
Groupe Meloche



Alain Ouellette
Executive Director, R&D Centre,
Automation and Manufacturing,
HP Compressor
GE Aviation



Nathalie Paré
Executive Director,
Comité sectoriel de
main-d'œuvre en aérospatiale
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Thomas Scarinci
Senior Vice President
PG Division
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Observer
Mario Bouchard
Assistant Deputy Minister,
Strategic Industries &
Major Economic Projects
Ministère de l'Économie,
de la Science et de l'Innovation



Observer
Julie Insley
Executive Director,
Québec Region,
Strategic Policy Sector
Innovation, Science &
Economic Development
Canada

* MEMBERS OF THE EXECUTIVE COMMITTEE

⁽¹⁾ Chair of the Finance and Audit Committee

⁽²⁾ Chair of the Governance Committee

⁽³⁾ Chair of the Human Resources Committee



BRANDING AND PROMOTION WORKING GROUP

President, Branding and Promotion
Working Group

Pascale Alpha
Director,
Global Communications
CAE

MESSAGE FROM THE PRESIDENT

The Branding and Promotion Working Group achieved major objectives in 2017. The survey of members and non-members, which began at the end of 2016, concluded in August with a final report that enabled us to draw up an action plan based on four strategic areas of intervention.

We established a committee to develop a promotional campaign to reposition the attractiveness of aerospace as a career choice, especially for the next generation.

We delivered clear, consistent and strong messages to mainstream and social media as well as during events. We highlighted growth and job prospects for the next 10 years. We supported our members with specific labour needs by promoting the jobs that are most in demand. We responded to the call of educational institutions experiencing a decline in enrolment in certain programs. We targeted young people, the next generation and the current workforce, women and immigrants. Our efforts are aimed at strengthening the image and awareness of Québec's aerospace cluster, a driver of economic growth, technological innovation and international expansion.

Our team also held visibility activities to mark the 375th anniversary of the City of Montréal and the 150th anniversary of Canada.

I am especially proud of the mobilization and coordination that the working group was able to deliver among our members regarding these major challenges. I warmly thank the working group team for these achievements that will serve as a foundation for the coming years.



WORKING GROUP MEMBERS

- **Pascale Alpha**
Director, Global Communications
CAE
- **Sylvie Bourassa**
Executive Director,
Government Relations
Concordia University
- **Fannie Couture**
Communications and
Marketing Supervisor
AV&R Aerospace
- **Marc Duchesne**
Director, Communications
Pratt & Whitney Canada
- **Eric Edström**
Project Manager
CAMAQ
- **Josée Gaulin**
Marketing and
Communications
Senior Specialist,
Human Resources
L-3 MAS
- **Sylvie Gauthier**
Director, Communications,
Product Development
Engineering, Aerospace
Bombardier
- **Caroline Joubert**
Manager,
Communications Strategies
Ministère de l'Économie, de la
Science et de l'Innovation
- **Marlène Joubert**
Senior Advisor,
Communications and
Public Affairs
Bombardier
- **Alain Legault**
Director, Communications,
Public Affairs and
Governmental Relations
ÉNA
- **Olivier Marcil**
Vice President,
External Relations
Bombardier
- **Michael Muldoon**
Director,
Aerospace Operations
Radix
- **Christoph Schewe**
Managing Director
IFALPA
- **Lucie Tessier**
Communications
Site Manager (Mirabel)
Bell Helicopter
Textron Canada



ACHIEVEMENTS

A BETTER UNDERSTANDING OF OUR MEMBERS AND THEIR NEEDS

Aéro Montréal's major survey, conducted from December 2016 to March 2017, collected qualitative data (in focus groups and one-to-one interviews) and quantitative data (through a web survey sent to more than 850 member and non-member respondents). About 20% of respondents completed the web questionnaire. This pool of respondents is representative of industry profiles – OEMs, integrators, Tier 1 to 4 companies, government representatives, research centres, organizations and experts.

From the final report submitted in August, we identified four strategic areas of intervention:

- 1 The promotion and visibility of Québec's aerospace industry, both locally and internationally, is clearly the main value proposition of Aéro Montréal;
- 2 Aéro Montréal's communication activities, the frequency with which communications are disseminated, and the favourable impact of these communications on industry and public opinion, were among the most positive results identified in the survey;
- 3 Areas for improvement identified are: knowledge of the working groups, their role and their achievements (projects), as well as the impact of their work on members;
- 4 To increase membership and build loyalty, key pull factors need to be tailored to different segments of members and non-members.

In response to these findings, we have put in place an action plan that will be rolled out mainly in 2018.

PROMOTE OUR KEY PROJECTS AND ACTIVITIES

With the launch of the MACH FAB 4.0 initiative and the creation of a fifth cohort for the MACH initiative, we developed action plans that included a series of tools to promote these activities to the public. SMEs involved in the initiatives were highlighted.



We supported the Defence and National Security Working Group in developing the SDQuébec platform, specifically by contributing to its branding and positioning.



For International Aerospace Week – Montréal 2017, we focused our efforts on building an integrated brand for the Week. This approach has the advantage of increasing awareness about, and importance of, the major activities that take place during a week entirely dedicated to aerospace.



Opening of International Aerospace Week – Montréal 2017.



Thilo Schoenfeld, Aerospace Valley, and David Praet, Skywin, during International Inter-Clusters Day.

MEDIA RELATIONS + SOCIAL MEDIA = A POWERFUL LEVER TO COMMUNICATE!

We are particularly proud of the deployment of our social media strategy. In just a few months, the results speak for themselves!

On Twitter, we created and distributed the #AeroMTL, specific to our sector. We launched the Twitter account of our President, Suzanne M. Benoît. We better categorized our “followers” to generate more exchanges with them. We produced a content calendar with daily or weekly “tweets,” based on current events and Aéro Montréal’s projects and activities to be promoted.

For our LinkedIn account, we created synergies with the AeroPortal, among other things by publicizing job opportunities posted on it and sharing job offers sent by our members. We increased the frequency and enhanced coordination of our postings on LinkedIn to announce company news and promote our events.



We also increased our use of YouTube to broadcast and reference our videos, including the SDQuébec portal.

The combined actions generated increased traffic on our website.



ACHIEVEMENTS

The working group enjoyed a significant increase in the number of its subscribers on LinkedIn and Twitter

LinkedIn



Twitter



Media Relations and Impacts for 2017:

30 | PRESS RELEASES ISSUED

72 | INTERVIEWS CONDUCTED

120 | ARTICLES IN THE MEDIA WITH A REFERENCE TO AÉRO MONTRÉAL

420 | ARTICLES ON THE AEROSPACE INDUSTRY THAT MAY INCLUDE A QUOTE FROM AÉRO MONTRÉAL



A COMMON FRONT AROUND SUCCESSION CHALLENGES AND 4.0

In consultation with members and partners of Greater Montréal's economy, our working group carried out projects whose main objective is to raise awareness about common issues among governments and the public.

In collaboration with the 10 clusters of Greater Montréal, and at the urging of the Communauté métropolitaine de Montréal (CMM), Aéro Montréal contributed to the development of a communications program to be rolled out in 2018. The scarcity of labour and the impact of disruptive technologies are the focus of this initiative, around which major efforts in terms of media relations were made this year.

Together with the Human Resources Working Group, we created a committee of the working group to lay the groundwork for a promotional campaign aimed at enhancing the attractiveness of aerospace, especially for young people. Educational institutions, member companies, CAMAQ and other organizations agree on the urgency of acting and joining forces to find agile and concrete solutions to meet the critical needs of aerospace.

Aerospace Day in Québec City in November helped to publicly underscore the importance of our industry for the Québec economy. A special motion was tabled in the Québec National Assembly by Deputy Premier Dominique Anglade. In parallel, we organized an event with Québec International entitled "Decision makers and aerospace succession: how to move forward in 4.0" More than 110 participants attended two panels and conferences.



Aerospace Day in Québec City Motion tabled in the Québec National Assembly

"That the National Assembly recognizes the holding today of Aerospace Day, organized in Québec City by Aéro Montréal;

That it reiterates that the aerospace industry is a real engine of growth and wealth creation for all of Québec, with 40,000 well-paying jobs in more than 200 companies, annual sales of \$14.4 billion, and exports representing up to 80% of its production;

That it notes that the aeronautical industry in Québec can count on a qualified workforce and that, to support the growth of the industry, it is imperative to invest in the development of human capital and training of the next generation;

That it recognizes the exceptional innovation capacity of the aerospace sector in Québec, whose dynamism and influence are a source of great pride for all Quebecers."



GROWTH WORKING GROUP

President, Growth Working Group

Hugue Meloche
President and Chief Executive Officer
Groupe Meloche

MESSAGE FROM THE PRESIDENT

Growth. That's the new name given to our working group in 2017. We could not have chosen better. The economy is doing well, our industry is beginning to take advantage of the 4.0 revolution in its processes and plants, and we have adopted a concerted approach to attract and train the best talent. Growth is also about reaching for new heights for our Québec aerospace companies.

The Growth Working Group's main objective is to strengthen synergies within the aerospace cluster so that it maintains its leadership position and grows on a global scale. Three specific actions have been identified to guide our work:

- 1 Strengthen the strategic positioning of Québec companies;
- 2 Promote the consolidation and rise of Québec companies within the ranks of Tier 1-4 integrators;
- 3 Increase the presence of Québec companies abroad.

We set up the first Best business practices in aerospace sharing circle. Eleven companies participated in this initiative. We are very pleased to see how successful the meetings have been! The companies reported a high degree of satisfaction. Some even established connections conducive to new business activities.

Another important project for our group: the SME Mapping project. Nearly 80 SMEs have been met since the beginning of the project in 2015 to better understand their reality, their needs and their individual challenges. The findings we draw from these meetings help us to identify the best solutions to offer our members to meet their needs.

In 2017, we also laid the foundation for helping the industry seize business opportunities in promising new niches. The signing of a collaboration agreement between the UAS Centre of Excellence and Aéro Montréal, in April, gave birth to the Drones Committee, a sector that is developing at a fast pace. This committee's mission is to position Québec as a key player in the drones industry in Canada and around the world.

The Growth Working Group epitomizes our members' goal of changing the way they do things and tackling the future with creativity and dynamism. Each and every member of the team has these great qualities and is demonstrating them on a daily basis. I thank them for their excellent work.

WORKING GROUP MEMBERS

- **Guillermo Alonso**
President
Alta Precision
- **Éric Beauregard**
Executive Vice President
AV&R Aerospace
- **Anne-Marie Bertrand**
General Manager, Laval Plant
Héroux-Devtek
- **Jean Blondin**
President
Abipa Canada
- **Jacques Bonaventure**
Vice President, Global Sales
Lisi Aerospace
- **Marie-Christine Cloutier**
Program Director,
Aerostructure and
Engineering Services
Bombardier
- **Christian Delisle**
President
Electro-Kut
- **Sébastien Farkas**
President
Techniprodec
- **Guillaume Gasparri**
Executive Vice President,
Business Development
DCM Group
- **Xavier Kauza**
Director, Sales
Thermetco
- **Joseph Laflamme**
President
Vestshell
- **Hugue Meloche**
President and
Chief Executive Officer
Groupe Meloche
- **Jean-Charles Raillat**
President and
Chief Executive Officer
Mecachrome Canada
- **Eduardo Ruiz**
President
Ruiz Aerospace Manufacturing
- **Stéphane Turcotte**
Vice President and Co-Owner
Nétur
- **Nancy Venneman**
President
Altitude Aerospace

Observers

- **Étienne Lapalme**
Trade Commissioner,
Aerospace, Defence & Security
Canadian Trade Commissioner
Service
- **Salvador Paniagua**
International Trade Advisor,
North America,
Aerospace
Ministère de l'Économie,
de la Science et de l'Innovation



ACHIEVEMENTS

BEST BUSINESS PRACTICES IN AEROSPACE SHARING CIRCLE

Successful launch of this project in 2017! Eleven companies meet eight times a year on eight different topics - Operations, Innovation, Human Resources, Market Development, etc.

LAUNCH OF THE “5 À 7 DÉCOUVERTE PME”

We combined a company visit with the presentation of a topic important to it. As a result, several companies in the aerospace cluster had the opportunity to discover an SME and learn more about it in a friendly atmosphere.

SECOND YEAR OF SME MAPPING

Launched in November 2015 by Aéro Montréal, this initiative consists of visiting Québec SMEs in the aerospace sector, whether they are members or not, to learn more about them and to identify their challenges and needs. Some 80 companies have been visited over the past two years.

This project has four main objectives:

- 1 increase knowledge of Québec aerospace SMEs (members and non-members) through field visits by an Aéro Montréal employee.
- 2 To give SMEs the necessary tools and contacts related to the needs identified during the meeting.
- 3 To draft and distribute reports of the meetings with the Aéro Montréal team. These provide a clearer overview of the market and enable us to better understand and represent our industry and adapt projects to needs.
- 4 To share the identified trends and needs with the working groups' members so that they can take them into account when deploying new projects.

A FIRST DRONES SEMINAR

As part of International Aerospace Week – Montréal 2017, 120 participants attended a first-ever drones seminar. Ten conferences were presented. As part of this event, Aéro Montréal, in the presence of Mrs. Dominique Anglade, Québec Deputy Premier and Minister of the Economy, Science and Innovation, officially signed an agreement with the UAS Centre of Excellence which led to the creation of a drones committee, among other things.

The main objective of the Drones Committee is to create synergies within the drones community in Québec to represent and defend with one voice the interests of its stakeholders while contributing to the development of the sector.

INTERNATIONAL PARIS AIR SHOW – LE BOURGET

About 50 Québec companies took part in this important international show from June 19-25. Aéro Montréal's presence was beneficial in several respects.

- Three collaboration agreements were signed. The first was with the SAFE Cluster (the competitiveness cluster of the Provence-Alpes-Côte-d'Azur region for security and aerospace players) in the presence of the Honourable François-Philippe Champagne, Canadian Minister of International Trade. The second was with Gyeongnam Technopark (the industrial cluster located in South Korea) in the presence of the Honourable Navdeep Bains, Minister of Innovation, Science and Economic Development Canada and Dominique Anglade, Québec Deputy Premier and Minister of the Economy, Science and Innovation. The third was a tripartite collaboration agreement between the Portugal cluster, the Ontario Aerospace Council and Aéro Montréal.
- Multi-million-dollar investments were announced to support Québec's aerospace industry in the presence of the Québec government, including Dominique Anglade, Deputy Premier and Minister of the Economy, Science and Innovation.
- The federal government was also present, including the Honourable Navdeep Bains, ISED. He announced \$2.2 million of investments in the form of repayable contributions for aerospace companies in Québec.
- Meetings were organized with Canadian and international clusters: Hamburg Aviation, Security and Aerospace actors for the Future of Earth (SAFE), Ontario Aerospace Council (OAC) and European Aerospace Cluster (EACP).
- In partnership with the BDC, Fonds de solidarité FTQ, Norton Rose Fulbright and PwC, Aéro Montréal once again hosted a launch cocktail for the week.
- Our now traditional international networking dinner, organized for several years with our major partner Aéroports de Montréal, also took place in the presence of 150 guests. This event was held with the support of Canada Economic Development for Québec Regions, Fonds de Solidarité FTQ, and the Canadian Commercial Corporation (CCC).
- We also participated in the Global Aerospace Manager Meeting of the European Aerospace Cluster Partnership (EACP).



Signing of a partnership agreement between Aéro Montréal and Gyeongnam Technopark, an industrial cluster in South Korea.



Signing of a partnership agreement between Aéro Montréal and SAFE, the competitiveness cluster in the Provence-Alpes-Côte d'Azur.



Signing of a tripartite partnership agreement among Aéro Montréal and the Portuguese and Ontario clusters

ACHIEVEMENTS

QUÉBEC — NEW ENGLAND BUSINESS DEVELOPMENT

In September, seven companies took part in a trade mission to Vermont at the Manufactured in Vermont trade show. This activity was followed at the end of November by another trade mission to New Hampshire. Company visits were held at BAE Electronic Systems and Elbit Systems of America, as well as networking meetings with US aerospace and defence companies.

INTERNATIONAL MARKET DEVELOPMENT

Seven Québec SMEs were put in touch with Figeac Aero and four of them received a request for proposals. This working group initiative enabled them to concretely support their international market development.

AÉRO MONTRÉAL GOLF CLASSIC: ALWAYS A GREAT SUCCESS!

More than 300 golfers and nearly 400 dinner cocktail attendees: this was an excellent result for our Golf Classic held on August 29th at the prestigious Elm Ridge Country Club. Year after year, the success of this must-attend event stems from our efforts to create a friendly atmosphere where members and industry partners come to cross paths and discuss business. Every year, the Aéro Montréal Golf Classic donates a portion of the proceeds to the Air Cadets to support school perseverance.



Air Canada's Robert Trudeau presents the Air Canada grand prize during the Aéro Montréal Golf Classic.

FINANCING SEMINAR AND HOLIDAY NETWORKING DINNER

Nearly 200 people participated in our last activity of the year at Aéro Montréal before leaving for the holiday break. A big thank you to our partners for the day and the evening events – the Fonds de solidarité FTQ, the Natural Sciences and Engineering Research Council of Canada, Export Development Canada, Aéroports de Montréal, Finance Montréal, and JPMorgan Chase Foundation. They offered two workshops and a major conference given by Mr. Gaétan Morin, President and Chief Executive Officer, Fonds de solidarité FTQ. More than a dozen SMEs participating in the MACH initiative also received new performance labels during the event.



Gaétan Morin, President and CEO of the Fonds de solidarité FTQ, major partner of the end-of-year Networking dinner.



Panelists of the Financing Seminar in December 2017.



Signing of a partnership between Aéro Montréal and the Centre de transfert d'entreprise du Québec.

INTERNATIONAL AEROSPACE WEEK



APRIL 3 – 7, 2017

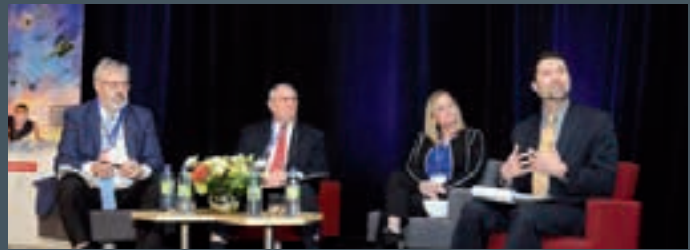
● PALAIS DES CONGRÈS DE MONTRÉAL

Aéro Montréal launched International Aerospace Week in the presence of the Honourable Navdeep Bains, Minister of Innovation, Science and Economic Development Canada, and Mrs. Dominique Anglade, Québec Deputy Premier and Minister of the Economy, Science and Innovation.

Organized in partnership with the Business Development Bank of Canada and Norton Rose Fulbright, the week demonstrates the cluster's efforts to strengthen Montréal's position as an international aerospace capital and ensure the global expansion of Québec aerospace companies. The event enjoyed a record attendance, with more than 2,250 participants over five days.



Suzanne M. Benoît, Aéro Montréal, the Hon. Navdeep Bains, ISED, Dominique Anglade, MESI, and Hélène V. Gagnon, CAE.



Graham Warwick, *Aviation Week*, Anthony L. Velocci, *Aviation Week*, Jill Christenson, The Boeing Company, Tim Beatty, Bullen Ultrasonics, speak at a panel discussion on "Concrete example of a supply chain in transformation."

● SEMINAR ON DEFENCE AND ROYAL CANADIAN AIR FORCE PROGRAMS

A dozen conferences on various themes throughout the morning and lunchtime enabled participants to learn more about Department of National Defence acquisition projects and business opportunities related to the Industrial and Technological Benefits (ITB) policy.

● GLOBAL SUPPLY CHAIN SUMMIT



The new 4.0 Demo Zone.



Opening remarks by Christine Saint-Pierre, Québec Minister of International Relations and La Francophonie.

The fourth edition of the Summit, entitled “From Vision to Reality: Breaking Through the World of 4.0,” aimed to demystify Industry 4.0. It was designed in such a way as to facilitate participants’ journey to Industry 4.0.

The day also featured the signing of an agreement between Aéro Montréal and the UAS Centre of Excellence of Alma aimed at supporting the further development of the drones’ sector in Québec.



Signing of an agreement between Aéro Montréal and the Unmanned Aerial System Centre of Excellence (UAS CE) in the presence of Marc Moffatt, UAS, Dominique Anglade, MESI, Cynthia Garneau, Bell Helicopter Textron Canada, and Suzanne M. Benoît, Aéro Montréal.

Signing of an agreement between Aéro Montréal and the North American Center of Excellence for Transportation Equipment. Suzanne M. Benoît, Aéro Montréal, Hélène V. Gagnon, CAE, Christopher Bohlmann, Norsk Titanium, and Garry F. Douglas, North American Centre of Excellence for Transportation Equipment.

INTERNATIONAL INTER-CLUSTERS DAY



Christopher Carrigan, Chamber of Commerce of Vermont, Ricardo Carrasco, FEMIA, Diane-Gabrielle Côté, TÉLUQ, Suzanne M. Benoît, Aéro Montréal, Yves Charette, Communauté métropolitaine de Montréal, Mélanie Lussier, Aéro Montréal, Thilo Schoenfeld, Aerospace Valley, and David Praet, Skywin.

This event enabled us to conclude International Aerospace Week with representatives from six international aerospace clusters (Germany, France, United States, Mexico, Belgium, and Canada) and general managers of the main clusters of Greater Montréal.

Québec Premier Philippe Couillard and Dominique Anglade, MESI, took advantage of their visit to the Palais des congrès to recognize students from various schools and universities in Québec specialized in aeronautics.



Students from the École nationale d’aérotechnique show their projects to Québec Premier Philippe Couillard and Dominique Anglade, MESI.



SUPPLY CHAIN WORKING GROUP

President, Supply Chain Working Group

Louis Marc Pinard
Deputy General Manager
and Director, Strategic
and Commercial Planning
Arconic

MESSAGE FROM THE PRESIDENT

Our vision:

to create an environment conducive to synergies and collaboration among all players in the Québec aerospace supply chain to strengthen it and ensure its positioning in global value chains.

Our mission:

- To identify changes and transformations in global supply chains and ensure an adequate positioning of the Québec aerospace industry;
- To deploy tools, mechanisms and resources in response to the changing realities of Québec aerospace, while considering its capabilities and the needs of markets and prime contractors;
- To ensure the planning and implementation of a concerted action plan aimed at increasing the competitiveness of Québec suppliers.

This year, our working group implemented one of the central measures of the 2016-2026 Québec Aerospace Strategy: the MACH FAB 4.0 initiative. Supported by Aéro Montréal, in partnership with STIQ, CEFRIO and AÉROÉTS, the MACH FAB 4.0 initiative aims to encourage our aerospace SMEs to innovate, modernize and improve their competitiveness by leveraging the potential offered by technologies associated with Industry 4.0. With a total value of \$19 million over five years, the initiative will support 50 small and medium-sized companies in their transition to the digital enterprise of the future.

The MACH FAB 4.0 initiative started its activities in 2017 with two calls for projects launched in June and October, respectively. These calls for projects made it possible to recruit 27 companies with proposals worth a total of \$16 million in investments.

Our working group also set up a support tool to help our SMEs better understand how supply chains are organized according to the needs and objectives of the various OEMs. We published a comprehensive map of global supply chain strategies, produced by Dr. Kevin Michaels, an internationally renowned expert. The document illustrates the origins of these strategies, what is behind the decisions of OEMs, and the implications for various product families, from aerostructures to avionics, engines to systems. This tool will help to give our Québec SMEs all the information they need to establish their own business strategies and ensure their sustainability.

Our working group organized this year the Global Supply Chain Summit, which saw record participation. The event's program focused on the theme "From Vision to Reality: Breaking Through the World of 4.0."

Although the digital shift in the aerospace industry is advancing at a rapid pace, our working group has also made quick progress in deploying the tools and support our companies need to maintain their leadership in Québec and abroad. I have the privilege of working with a team that is well versed in the latest developments of Industry 4.0 and which is providing concrete solutions to the challenges of the industry. Thank you, dear colleagues, for a year of vision and ambition.

WORKING GROUP MEMBERS

- **Timothy Ayoub**
Senior Manager, Supply Chain and Planning, Operations L-3 MAS
- **Sylvain Bédard**
Chief Executive Officer Sonaca Montréal
- **Marc Bigras**
Vice President and Chief Operating Officer Groupe Meloche
- **Louis Bouchard**
Director, Procurement Bombardier
- **MarieChantal Chassé**
President and Chief Executive Officer JMJ Aerospace
- **François Cyr**
Business Development Director, USA and International PCM Innovation
- **Jacques Dodier**
Quality Account Manager Pratt & Whitney Canada
- **Éric Faucher**
President and Chief Executive Officer Hutchinson Aerospace & Industry
- **Gilles Isabel**
Mirabel Site Leader, Quality Assurance Bell Helicopter Textron Canada
- **Jean-Louis Moreau**
Vice President, Global Strategic Sourcing CAE
- **Louis Marc Pinard**
Deputy General Manager and Director, Strategic and Commercial Planning Arconic
- **Jean Proteau**
Co-President APN
- **Martin Richard**
Director, Procurement Strategy and Inventory Management, Eastern Region Héroux-Devtek



ACHIEVEMENTS

THE FIRST 14 SMEs OF THE MACH FAB 4.0 INITIATIVE!



After two calls for projects, Aéro Montréal unveiled the names of the first 14 companies in the MACH FAB 4.0 initiative. They were selected based on their projects and confirmation of financing for the execution phase. The 14 projects being launched represent a total investment of \$10.5 million, of which \$2.9 million is being financed by the MESI. The companies will utilize information technologies to leverage and exploit data, digitize and automate key processes, and modernize their manufacturing processes.

The first companies to be part of the initiative are:

- Alpha Casting
- Alta Precision
- APN
- Arconic
- DCM Group
- Groupe Meloche
- Hemmingford Aerospace
- MF2 AERO
- Promark
- SF Tech
- S.O.M.R.
- Tecnickrome Aéronautique
- Tekalia
- Vestshell

With the collaboration of the Branding and Promotion Working Group, we developed a communication plan that will raise awareness of the MACH FAB 4.0 initiative and its concrete benefits for our members. Actions were already deployed at the end of 2017 and will continue next year in the form of webinars, mentions on social networks, and other visibility actions. These efforts are in close synergy with the MESI.

In 2018, the remaining 13 projects will have their action plans and funding confirmed to move into the execution phase, bringing the number of active projects to 27. In addition, we will launch the concept of calls for collaborative projects. This concept aims to encourage collaboration among companies in implementing common solutions. This approach will raise the level of digital maturity of the entire cluster while achieving economies of scale in the development of solutions.

MAPPING OF SUPPLY STRATEGIES

A valuable tool for aerospace companies, Dr. Kevin Michaels' mapping of global supply chains produced a comprehensive report. The information it contains will be used to guide Aéro Montréal's 2019-2021 strategic planning exercise.

AÉROMART MONTRÉAL – APRIL 5TH AND 6TH

Held during International Aerospace Week – Montréal 2017, the AéroMart Montréal business event attracted more than 1,000 participants and featured 11,000 B2B meetings! Several visitors stopped at the Aéro Montréal booth where 35 business meetings were generated.

THE GLOBAL SUPPLY CHAIN SUMMIT – INDUSTRY 4.0: FROM VISION TO REALITY

Aéro Montréal held the fourth edition of the Global Supply Chain Summit on April 4th during International Aerospace Week – Montréal 2017. We had an unprecedented success with nearly 500 participants, an exceptional attendance which exceeded the planned objectives by 25%.

The Summit was comprised of conferences and case studies featuring key global aerospace decision-makers who traveled to Montréal to address the challenges and changes currently

faced by the global aerospace supply chain. The Summit brought together 23 world-class speakers in 12 conferences and case presentations.

The event was designed strategically to guide visitors throughout the day from the concept of 4.0 to the concrete implementation of this transition – a critical step that must be taken by any company wishing to remain competitive and a leader on global supply chains.



Panel discussion on "The evolution and impact of 4.0", moderated by H el ene V. Gagnon of CAE, featuring  ric Leduc, Microsoft, and Naomi Goldapple, Element AI.



The Global Supply Chain Summit.

ACHIEVEMENTS

4.0 DEMO ZONE: EXCLUSIVE TO AÉRO MONTRÉAL

DEMO ZONE 4.0 | AÉRO
MONTREAL

A major new addition was on the program of the 2017 edition of the Global Supply Chain Summit. A 4.0 Demo Zone allowed visitors to find solution providers and resources to implement, in their organization, elements that were presented during conferences and panels. Designed a few weeks before the launch of the MACH FAB 4.0 initiative, this Demo Zone gave participants a taste of the digital technologies they can deploy in their respective companies, as well as the skills and expertise required to facilitate their shift to 4.0.

The 4.0 Demo Zone in numbers:

- 23 exhibitors of 4.0 technology solutions
- 4 thematic areas:
 - Support – Financing – Training
 - Big Data – Interconnection
 - Automation – Robotics
 - New technologies



THE MACH INITIATIVE RECRUITS A 5th COHORT



Our working group recruited a fifth cohort, bringing the number of active SMEs to 59, and the number of local and international sponsors to 31, within the MACH initiative.

We held four MACH Evolution seminars to upgrade the skills of companies participating in the MACH initiative. Here are the topics addressed during these seminars:

- “Meet the requirements of the new revision of the AS9100 standard by setting up an effective and efficient management system.”
- “How to implement a LEAN daily management system: Nétur’s experience.”
- “Stop managing your projects on the fly! The tools needed and tailored to your requirements to achieve the right projects, in the times and budgets established.
- “Industry 4.0: how do you go about identifying your roadmap to the factory of the future?”

We are continuing our efforts to ensure the sustainability of the MACH initiative. Also, with the collaboration of the Branding and Promotion Working Group, we deployed communication measures to underscore the importance of the program and its benefits for our member companies.

710 improvement projects completed or in progress to date:

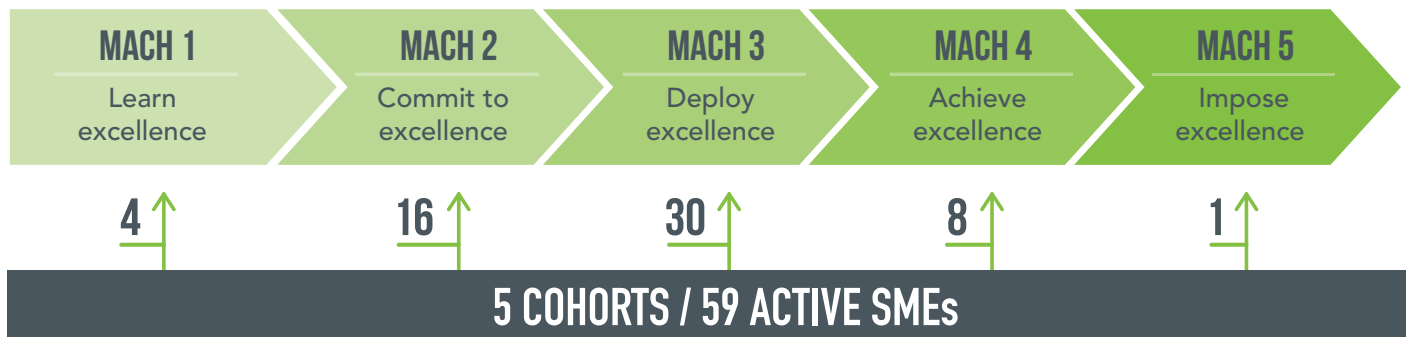
- 261 skills development projects
- 265 projects requiring specific expertise
- 184 projects completed with internal resources and mentor support

More than \$8.7 million invested in projects (private and public funds)

- \$1.9M + in-kind contributions by mentors
- \$6.6M + investments by SMEs in their projects



Award of MACH plaques to the 5th cohort.





HUMAN RESOURCES WORKING GROUP

President, Human Resources Working Group

Kevin P. Smith
Vice President, Human Resources
and Communications
Pratt & Whitney Canada

MESSAGE FROM THE PRESIDENT

This year, the priorities being tackled by the Human Resources Working Group took centre stage in terms of public opinion and the industry. The era of Industry 4.0 is already creating an acute need to recruit and train a workforce with skills that meet the evolving requirements of companies. Add to that an economy marked by full employment, a socio-demographic transformation with the retirement of baby boomers, and the arrival in Québec of Airbus as the fifth OEM, and you see the context for our three top priorities:

- Promoting fields of study related to Science, Technology, Engineering and Mathematics (STEM) and aerospace careers to the next generation;
- Knowledge transfer;
- Aligning training-employment with the requirements of the digital shift.

The attraction and retention of the next generation, as well as Industry 4.0, were the main themes of Aerospace Day, held in Québec City in November. According to the CAMAQ, by 2026 close to 32,000 jobs will be available in the industry, whereas to date the current pool of enrolments and graduates in our training programs is insufficient to meet the demand. We have stepped up our awareness efforts to improve the agility, flexibility and speed with which training programs can be changed to meet the needs of the aerospace industry.

The working group carried out various activities to promote training in fields of study related to STEM and, more specifically, aerospace trades and professions. Aéro Montréal signed a partnership agreement with the Laval Cosmodome to roll out the Passion from Within and Passion for Flight programs. We are targeting guidance counselors to introduce future students to the positive career opportunities in our industry. The AeroPortal had an exceptional year by significantly increasing the number of its subscribers thanks to the relevance of its webinars and its new features.

Knowledge transfer is another critical issue. More than 70% of vacancies over the next 10 years (23,000) will be due to retirements. The working group has continued the work of the Héritage 3 platform, designed to address this issue, and which should be launched next year.

Finally, the working group tackled “training-skills-employment” alignment in the era of Industry 4.0. It collaborated in publishing the “Metropolitan action plan on skills of the future” and in developing a “4.0 skills in aerospace guide” – as recommended by the White Paper we issued in 2016.

I would like to thank the members of our working group and its committees for their indispensable contribution to the activities carried out in 2017. Their dedication to promoting the attractiveness and the favourable growth prospects of our industry is central of our mission.

WORKING GROUP MEMBERS

- **Marie-Pier Allard**
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Competency Development
Bell Helicopter Textron Canada
- **Sylvie Bourassa**
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- **Jacques Cabana**
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FDC Composites
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- **Réjean Charbonneau**
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- **Donald H. Violette**
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Direction régionale adjointe
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aux clientèles
Direction régionale de Services
Québec de l'Île-de-Montréal
- **Mohamed Herda**
Industrial Development
Advisor, Transportation
and Logistics Division
Ministère de l'Économie, de la
Science et de l'Innovation



ACHIEVEMENTS

SUCCESSION PLANNING

THE AEROPORTAL (AEROPORTAIL.CA): NEARLY 20,000 FANS!

As a reference tool for aerospace and the next generation, the AeroPortal really took off in 2017 with the launch of the Careers section, which shows internship and job opportunities. New sections are available:

- A Jobs section and a centralized recruitment management tool, with an employer area and a candidate area;
- The availability of a “Virtual Advisor” to guide career choices in aerospace;
- An online Webinars and Conferences section offering a range of information on a variety of topics of general interest;
- Virtual tours.

“PROFESSIONAL SPEED DATING” FOR INTERNATIONAL STUDENTS AND LOCAL COMPANIES

In March, our working group organized an activity with Montréal International aimed at connecting foreign students with aerospace companies. Aéro Montréal took the opportunity to launch the Careers section of the AeroPortal which includes a section to post resumes and job offers. The event was attended by 180 participants, 18 exhibitors and over 120 resumes were submitted to the AeroPortal.

REGROUPEMENT RELÈVE D’AÉRO MONTRÉAL (RRAM): OUR YOUNG AMBASSADORS ARE MOBILIZING

During the summer, Aéro Montréal launched an initiative to bring together students from several universities and colleges in Québec whose fields of study are directly or indirectly related to aerospace. This is how the Regroupement Relève d’Aéro Montréal (RRAM) was born. The purpose of this group is to promote Québec’s succession through targeted and strategic projects. The group’s 2018 mandate and an action plan are being developed.



Nathalie Paré (CAMAQ) during the Aerospace Day in Québec City.

PASSION FROM WITHIN AND PASSION FOR FLIGHT: AÉRO MONTRÉAL REACHES MORE YOUNG PEOPLE!

In May, thanks to the support of the Arconic Foundation and the MESI's NovaScience program, government assistance was granted to deploy Passion from Within and Passion for Flight on the North Shore and the Island of Montréal. The official announcement took place during a half-day of activities held at the Orée-des-Bois elementary school of the Commission scolaire de Laval, in the presence of Québec government officials and several dignitaries.

In October, Aéro Montréal signed a collaboration agreement with the Laval Cosmodome to deploy these two programs among the 70,000 or so young people who attend this scientific museum each year.

Both initiatives were developed with the support of Bombardier in 2014 and powered forward by Aéro Montréal.



"Passion from Within" activity at École Charles-Lemoyne.

AEROSPACE DAY IN QUÉBEC CITY: TWO PANELS BRING TOGETHER COMPANY EXECUTIVES AND THE NEXT GENERATION

As part of Aerospace Day in Québec City in November, Aéro Montréal organized, jointly with Québec International, an event entitled "Decision-makers and aerospace succession: how to move forward in 4.0." More than 100 participants attended two panels to discuss best practices for recruiting and attracting

talent in the aerospace industry. They also discussed the impact of the digital shift on the evolution of company culture, ways of working and management, both from the point of view of the next generation and current decision-makers.



Event on succession during Aerospace Day in Québec City organized in collaboration with Québec International.

ACHIEVEMENTS

SUCCESSION PLANNING

AEROSPACE DISCOVERY PATH

Aéro Montréal partnered with CAMAQ to offer a day of awareness raising for the aerospace professions to about 30 guidance counselors and school and professional information counselors. We set up an aerospace discovery path in companies in April. Counselors had the opportunity to visit the facilities and hangars of Safran Landing Systems and L-3 MAS in Mirabel.

CAREER EXPLORATION INTERNSHIPS FOR HIGH SCHOOL YOUTH

In partnership with Montréal Relève, through the Classes Affaires program, Aéro Montréal gave 30 young people from Grades 9 and 10 at Greater Montréal schools the opportunity to participate in two weeks of career exploration internships during the summer. The internships took place in July and August in the following organizations and companies: EMAM, ÉNA, CTA, AÉROÉTS and Pratt & Whitney Canada.

11th EDITION OF THE EUREKA! FESTIVAL

Aéro Montréal participated in this public festival held in June on the quays of the Old Port of Montréal. Its involvement aims to spark young peoples' interest in the aerospace field. By building their own glider, they are introduced to the concepts of gravity and the forces acting on an aircraft in flight. The Aéro Montréal booth was a great success with the children and their parents with 2,600 gliders assembled!

AEROSPACE MARKS CANADA'S 150th ANNIVERSARY

As part of Canada's 150th anniversary celebrations on July 1st, Aéro Montréal was present at two sites (at the Old Port of Montréal and the Laval Nature Centre) to promote the aerospace sector through the assembly of gliders by young people. More than 1,300 gliders were assembled!

TRIOOMPH MAKES PROGRESS AGAINST THE SCHOOL DROPOUT RATE

Aéro Montréal teamed up with the TRIOOMPH Foundation to offer an activity aimed at promoting school perseverance by providing a dream day for young people aged 13 to 18 from high schools in disadvantaged areas. Bombardier, CAE and Pratt & Whitney Canada are involved in mentoring or offering visits to their facilities.

The event took place in June and the deserving youth had the chance to try a flight simulator, to fly in a plane and helicopter, and to visit state-of-the-art plants.

TRIOOMPH by the numbers

- "Adrenaline – Fly A Plane" Day with a CAE flight simulator
- "Adrenaline Airplane Flight" Day at Pratt & Whitney Canada: 500 youth participants, 50 deserving youth, 12 companions and 6 schools
- "Adrenaline – Helicopter Flight" Day: more than 100 young participants, 21 deserving students for a 40-kilometre helicopter flight to Mont des Éboulements with Hélicoptères Charlevoix.



"International Leaders" conference of the Chamber of Commerce of Metropolitan Montréal with Alain Bellemare, Bombardier, and Tom Enders, Airbus, and Québec Premier Philippe Couillard.



Bombardier press conference on the hiring of 1,000 workers.

HUMAN RESOURCES

TWO COMMITTEES LOOK AT INTERNSHIPS AND 4.0 SKILLS

The working group set up two committees as part of its action plan:

- The Internships Committee aims to understand how the German DUAL model works and to optimize existing work-study (ATE) internship models at the professional, college and university levels to meet the needs of our Québec companies. This committee produced a document outlining recommendations for existing internship models and will be taking steps to secure the necessary funding and prepare a communications plan.
- The 4.0 Skills Committee initiated the development of the “4.0 Skills in Aerospace Guide” to equip educational institutions at all levels and companies to move towards 4.0 in the next few years. This guide, funded by the Conseil emploi métropole (CEM), is based on findings from interviews with some 15 companies. It is scheduled to be published in 2018.

HÉRITAGE 3: KNOWLEDGE TRANSFER PLATFORM

The working group continued its work to finalize the Héritage 3 knowledge transfer platform. This platform is funded by Services Québec and is expected to be launched in the first quarter of 2018.

MAPPING AEROSPACE TRAINING AND SUPPORT ORGANIZATIONS: A CAMAQ – AÉRO MONTRÉAL COLLABORATION

Stemming from the work of the group, this detailed mapping project was mandated to CAMAQ and launched in June. It encompasses aerospace education institutions for further education and professional development, as well as organizations which support the funding of training, R&D and succession development.

PLAN D’ACTION MÉTROPOLITAIN SUR LES COMPÉTENCES DU FUTUR (PAMCF)

In collaboration with the Conseil emploi métropole (CEM), we produced the “Metropolitan Action Plan on Skills of the Future.” The report has been delivered and the next step will be to implement the action plan.

RECRUITMENT MISSION IN TOULOUSE

In October, Aéro Montréal partnered with Montréal International (MI) to organize a recruitment mission dedicated to aerospace in Toulouse. Seven companies took part: Sonaca Montréal, MTL Aerostructures, Groupe Meloche, P3, Altitude Aerospace, Latécoère Services Canada, and AAA Canada. Recruitment days were held during three trade shows: the Pôle de formation des industries technologiques de Toulouse; the Association pour l’emploi des cadres; and the Institut universitaire de technologie de Blagnac.

AÉRO MONTRÉAL PARTICIPATES IN THE CANADIAN COUNCIL FOR AVIATION AND AEROSPACE (CCAA)

We are actively involved in the work of the CCAA, which wants to establish a federal aerospace workforce strategy. Aéro Montréal presented its initiatives to promote the sector and careers among young people during a panel discussion at the National Labour Market Strategy Day in November. More than 100 participants from Canadian provinces and territories attended. Talks have subsequently been started to deploy the Passion from Within and Passion for Flight programs across Canada.

AÉRO MONTRÉAL COLLABORATES IN THE IMPLEMENTATION OF THE QUÉBEC NATIONAL WORKFORCE STRATEGY

Aéro Montréal participated in the Québec government’s Rendez-vous national sur la main-d’œuvre as well as in consultations headed by François Blais, Minister of Employment and Social Solidarity. It proposed solutions that will be included in the next Stratégie nationale sur la main-d’œuvre (national workforce strategy) to be unveiled in the spring of 2018.



INNOVATION WORKING GROUP

President, Innovation Working Group

Fassi Kafyeke
Senior Director,
Strategic Technology
and Innovation
Bombardier

MESSAGE FROM THE PRESIDENT

The Innovation Working Group's goal is to ensure the relevance of our members' innovation initiatives and help them optimize ways to carry them out. It fosters a constructive dialogue among Aéro Montréal's members and promotes strategic relations for the cluster, here and abroad.

The Innovation Working Group focused on a highly strategic issue in 2017: innovation superclusters assembled under a federal government initiative. We studied the possibility of joining several interesting proposals and then actively campaigned for the "MOST 21" supercluster. This was related to 21st century mobility and led by our member, CAE, in collaboration with CARIC.

We were delighted by the industry's response! In the first phase, the MOST 21 supercluster collected several letters of support from companies, organizations, educational institutions and research centres in the Canadian mobility, advanced manufacturing and technology, and information and telecommunications sectors. We were even more pleased to see that our project earned a place among the nine finalist innovation superclusters for the second phase, as announced in October by the Federal Ministry of Innovation, Science and Economic Development. The proposal developed for this second phase was submitted in November, with 250 signatory organizations.

Reflecting our consistent approach, the MOST 21 technological niches of excellence are the focus of the 2018 Aerospace Innovation Forum, for which our team has already begun to prepare. The Forum, whose general theme will be "Aerospace in the era of disruptive technologies," will allow us to see how our industry can respond to the many challenges of this nature that are on the horizon.

Phase 2 of the SA²GE greener aircraft project took shape this year with two outreach and presentation events for researchers and SMEs. We also continued our collaboration with the Hamburg Aerospace Cluster for the 4.0 maturity scale development project.

Our working group started the year by conducting a strategic survey among its members to help it improve and better position itself against major innovation-related challenges in aerospace. By year's end, much had been accomplished in this regard. Our team is working towards a common goal: to move our industry forward by integrating significant transformations that will enhance the excellence and performance of our companies. I salute each of its members for their collaborative spirit and vision.

WORKING GROUP MEMBERS

- **Houssam Alaouie**
Director, Research & Development Programs and University Relations
CAE
 - **François Arrien**
Vice President,
New Market Development
AV&R Aerospace
 - **Alain Aubertin**
Vice President, Business Development and International
CRIAQ and CARIC
 - **Stéphane Blais**
Project Director,
Flight Operations
Marinvent
 - **Sylvain Boisvert**
General Manager, Canada
Safran Engineering
 - **Patrick Champagne**
Vice President,
Engineering and R&D
Esterline CMC Electronics
 - **Cyrille Chanal**
Chief Executive Officer
Fusia
 - **MarieChantal Chassé**
President and
Chief Executive Officer
JMJ Aerospace
 - **Jean Colpin**
Industrial Advisor, MIAE
McGill University
 - **Mélissa Côté**
Manufacturing Engineering
Manager, Metrology and
Repair Technology
Rolls-Royce Canada
 - **Pascal Désilets**
General Manager
CTA
 - **Michel Dion**
Innovation Lead
Bell Helicopter Textron Canada
 - **Fassi Kafyeke**
Senior Director, Strategic
Technology and Innovation
Bombardier
 - **Bob Katz**
President
Katz Design
 - **Denis Lacroix**
Industrial Technology Advisor
NRC-IRAP
 - **Anne-Marie Lan Phan**
Head, IP Management and
Technology Transfer
CSA
 - **Sylvain Laroche**
Technology Collaboration
Office Manager
Pratt & Whitney Canada
 - **Éric Laurendeau**
Assistant Professor,
Mechanical Engineering
École Polytechnique de
Montréal
 - **Enguerran Michel**
Section Chief,
Strategic Technology
Bombardier
 - **Christian Moreau**
Professor, Mechanical
and Industrial Engineering,
Director of CIADI
Concordia University
 - **Hany Moustapha**
Professor and Director,
AÉROÉTS
École de technologie
supérieure
 - **Dany Paraschivoiu**
Program Leader,
Aircraft Product
Development Technologies,
Aerospace
NRC
 - **Donald Prévost**
Business Development and
Commercialization Manager
National Optics Institute
 - **Éric Roberge**
Chief Financial Officer
and Owner
Luxia
 - **Peter Rosenthal**
Industrial Technology Advisor
NRC-IRAP
 - **Jean Roussel**
Strategic Specialist,
Engineering Solutions
L-3 MAS
 - **Dominique Sauvé**
Director
SA²GE
 - **Marc-André Talbot**
Director, Research &
Development
Thales Canada
- Observers
- **Dominique Leroy**
Senior Officer, Aerospace
and Defence,
Strategic Policy Sector
Innovation, Science and
Economic Development
Canada
 - **Stephan Fogaing**
Aerospace Advisor,
Transportation
and Logistics Division
Ministère de l'Économie,
de la Science et de
l'Innovation
 - **Philippe Sabat**
Innovation Advisor,
Transportation and Sustainable
Mobility Division
Ministère de l'Économie,
de la Science et de
l'Innovation



ACHIEVEMENTS

MOST 21 INNOVATION SUPERCLUSTER

The Innovation Working Group set up a coordinating committee composed of the President of the working group, the President of Aéro Montréal, the President and Chief Executive Officer of CRIAQ/CARIC, the representatives of the three aerospace company members of IVADO (CAE, Pratt & Whitney Canada and Thales Canada), and other representatives to:

- Coordinate and provide support to CARIC and CAE and liaise with other groups interested in forming superclusters;
- Monitor developments related to the national initiative;
- Mobilize Québec aerospace companies and make the required government representations.

During meetings held from March to July, the committee decided that the most promising theme would be mobility and all its facets. Six niches of excellence were identified: advanced manufacturing; vehicles produced through additive manufacturing; clean technologies; big data for mobility, aviation and space; autonomy and mobility on demand; and virtual design and testing.

The letter of interest that we submitted for Phase 1 was accompanied by some 200 letters of support from a hundred companies, representing a value of \$810 million over five years of benefits and contributions. For the second phase, the Aéro Montréal letter of commitment proposed several projects, including: deploying a MACH initiative across Canada; the AeroPortal in the service of mobility; the Passion from Within and Passion for Flight programs, and finally, the Accelerator 360° program to spur SME marketing efforts. For this second phase, Aéro Montréal's contribution was joined by over 250 other signatories.

The MOST 21 coordinating committee has also been mandated to develop a series of promotional activities that will culminate with the 2018 Aerospace Innovation Forum in April.

SIX STRATEGIC TECHNOLOGIES TO SUPPORT THE AEROSPACE SECTOR'S FUTURE:



Virtual design and testing



Autonomous and on-demand systems



Additive manufacturing



Advanced manufacturing



Big data for mobility



Green technologies

SA²GE MOBILIZATION — PHASE 2

We organized two activities at Norton Rose Fulbright (NRF), a partner of Aéro Montréal. Here are the details and benefits:

Researchers' mobilization day

- A collaboration agreement signed with SA²GE and CRIAQ
- 27 B2B meetings conducted
- 3 industrial partners (CAE, Thales Canada, Esterline CMC Electronics) with 17 representatives
- 25 researchers from 8 institutions in Québec
- 7 representatives of research institutions
- About 50 participants

Invitation to Québec SMEs – Cross collaboration

- A SA²GE, CRIAQ, TechnoMontréal, Québec Association of Technologies and Québec International collaboration
- Presentations on SA²GE and intersectoral collaboration
- Presentation of SMEs in the form of a “pitch”
- 53 participants, including 38 representatives of SMEs

4.0 INDICATORS' SCALE FOR AEROSPACE SMEs WITH HAMBURG AVIATION

Aéro Montréal has partnered with the aerospace cluster of Hamburg, Germany, to develop an indicator grid to identify the level of maturity in the use of processes and digital technologies within aerospace SMEs from Québec and Germany. CRIAQ and ZAL (Zentrum für Angewandte Luftfahrtforschung) are partners in this project. A benchmarking will be performed to compare the digital maturity of SMEs in both countries and to perform diagnostics to strengthen our SMEs. This year, the working group selected the collaboration and R&D projects that will be part of this initiative, which is scheduled to launch in 2018.

LAUNCH OF PREPARATIONS FOR THE 2018 AEROSPACE INNOVATION FORUM

With the growing importance of disruptive technologies in aerospace, we have been preparing for several months for the Aerospace Innovation Forum. The kick-off event for International Aerospace Week – Montréal 2018, the Forum is a major two-day conference that brings together more than 1,200 participants and 80 speakers from around the world. The theme, “Aerospace in the era of disruptive technologies,” will provide a practical exploration of solutions and applications for Québec companies in our industry. The Forum's conferences, workshops and other activities will also be heavily influenced by the six leading themes included in the MOST 21 innovation supercluster.



Meeting of the Innovation Working Group at the Canadian Space Agency.



DEFENCE AND NATIONAL SECURITY WORKING GROUP

President, Defence and National Security Working Group

Sylvain Lefrançois
Director, Business Development,
Electronics and Defence,
Optronics Division
Safran Canada

MESSAGE FROM THE PRESIDENT

A strong signal was sent by the Government of Canada during the June unveiling of Canada's new Defence Policy: it stated its commitment to reinvest heavily in the defence sector by increasing the Department of National Defence (DND) budget by 70% over 10 years. DND's annual budget will increase significantly, from \$18.9 billion to \$32.7 billion, by 2026-2027. Several of the measures unveiled by the Minister of National Defence, the Honourable Harjit S. Sajjan, will boost the business prospects of Québec aerospace companies and are in line with the priorities of Aéro Montréal.

Significant investments have been announced in the aerospace sector with major acquisition programs such as fixed-wing search and rescue aircraft, the purchase of 88 new fighter jets, and the upgrade of the Griffon and Cormorant helicopter fleet, as well as the replacement of maritime patrol aircraft. The interim fighter aircraft acquisition project was also the subject of a committee created by members of our working group.

For our working group, 2017 proved to be a pivotal year for promoting and strengthening the position of our defence industry in Québec so that it can take on a larger market share through these major projects. In this regard, the launch of the SDQuébec.ca portal is timely because it will enable Québec companies to better collaborate.

A big thank you to the entire Defence and National Security team for these efforts, which will benefit our sector in the years to come!

WORKING GROUP MEMBERS

- **Marc Bigaouette**
Director, Optimized Weapon System Support CH-146
Bell Helicopter Textron Canada
- **Jacques Bonaventure**
Vice President, Global Sales
Lisi Aerospace
- **Nick Chalkiadakis**
Product Manager,
Flight Management and Navigation Systems
Esterline CMC Electronics
- **Richard Crépault Jr**
Account Manager,
Business Development,
Landing Gear division
Héroux-Devtek
- **Sue Dabrowski**
Director,
Offsets and Communications
Mannarino Systems & Software
- **Luc DeBargis**
Director,
CSC-Industrial Strategy,
Planning and Operations
Lockheed Martin Canada
- **Denis Faubert**
President and
Chief Executive Officer
CRIAQ
- **Guillaume Gasparri**
Executive Vice President,
Business Development
DCM Group
- **François Guilbault**
President
Solaxis
- **Benjamin Hamel**
Director,
Business Development
MDA Satellite Systems
- **Jean Hurtubise**
Director,
Sales and Business
Development
CAE
- **Ngoc Huynh**
Chief Analyst
Investissement Québec
- **Xavier Kauza**
Director, Sales
Thermetco
- **Jarred Knecht**
Vice President
Promark Electronics
- **Sylvain Lefrançois**
Director,
Business Development,
Electronics and Defence,
Optronics Division
Safran Canada
- **Lorenzo Marandola**
President
M1 Composites Technology
- **Paul Mercier**
Vice President,
Engineering and Technology
L-3 MAS
- **Keith Meredith**
President
AeroInsight
- **Marc Moffatt**
Managing Director
UAS Centre of Excellence
- **Patrick Pharand**
Director,
Business Development
Rockwell Collins
- **Laurent Pieraut**
President
CS Canada
- **Stéphane Roy**
Development Agent
CSDA
- **Puthy Soupin**
Systems Engineer
Marinvent
- **Alain Thilloy**
Director, Systems
MTLS Aerostructure
- **Nicolas Todd**
Associate Vice President,
Policy, Communications
and Government Relations
CADSI
- **Éric Tremblay**
Senior Product Manager
Pratt & Whitney Canada

Observers

- **Patrick Bouchard**
Advisor, Industrial
Development, Transport
Equipement Division,
Aerospace Group
Ministère de l'Économie,
de la Science et de
l'Innovation
- **Stephan Fogaing**
Advisor, Industrial
Development, Transportation
and Logistics Division,
Aerospace Group
Ministère de l'Économie,
de la Science et de
l'Innovation



ACHIEVEMENTS

EVENTS LAYING THE GROUNDWORK FOR THE FUTURE IN DEFENCE

The working group held two major events in defence and national security in 2017.

First, the Seminar on Defence and Royal Canadian Air Force programs and Major Royal Canadian Air Force Acquisition projects kicked off International Aerospace Week – Montréal 2017 in April. The event allowed us to connect our Québec aerospace industry with key DND stakeholders, other federal departments involved, OEMs and their Tier 1 integrators.



Colonel Steve Chouinard, Director of Air Requirements, Canadian Armed Forces.



Steven MacKinnon, Parliamentary Secretary to the Minister of Public Services and Procurement.



B2B meetings during the Seminar on Defence and Royal Canadian Air Force programs.

In October, we held the 2017 Symposium on the Canadian Defence and Security Market, organized in collaboration with Canada Economic Development for Québec Regions and the STIQ. More than 200 participants gained a detailed overview of acquisition projects in the four major sectors: Aerospace, Land, Naval and C4ISR/Cybersecurity.

We also took part in Outlook Missions and CANSEC, in addition to organizing the “Closing the Gaps” event.



Presentation of acquisition projects during the Symposium on the Canadian Defence and Security Market.



Simon Jacques, President, Airbus Defence and Space Canada.

SDQUÉBEC.CA

SDQuébec
SECURITY DEFENCE PORTAL

The big deliverable of the Defence and National Security Working Group was, without a doubt, the launch of the SDQuébec.ca portal. This portal is a one-stop shop that will allow Québec defence companies to raise their profile among OEMs and Tier 1 integrators. It also enables them to establish collaborations to position themselves in procurement markets related to the Industrial Technology Benefits (ITBs) policy and offers a wide range of tools and resources to facilitate business development.

TRAINING AND SUPPORT

Even with a well-established defence industrial base, we believe we can do more in Québec in aerospace. Québec's aerospace defence industry has a 21% share of the market in Canada, while its share of Canada's overall aerospace market is in the order of 50%. The defence market is a sector that presents distinctive elements and complexities. This represents a major challenge for our SMEs who will have to work in a targeted and effective way to develop their business.

To this end, a training and coaching program was completed in 2017 to enhance business development skills in our sector. A first cohort of 15 companies was established in 2017. This program was extremely successful, and a second cohort was set up. In addition, the training and support program will be offered to 15 other SMEs in the first quarter of 2018.

CANADA-UKRAINE AEROSPACE BUSINESS FORUM

Our working group concluded the year with an exceptional visit: the Prime Minister of Ukraine, Volodymyr Groysman, accompanied by the Ambassador of Ukraine to Canada, Andriy Shevchenko, and the Canadian Ambassador to Ukraine, Mr. Roman Waschuk. Their presence marked the signing of a memorandum of understanding between the Canadian Space Agency, represented by its president, Sylvain Laporte, and the Ukrainian Space Agency, represented by Sergey Kutovoy. Several Canadian aerospace companies attended this event.

GOVERNANCE

In 2017, Aéro Montréal entered the second year of its 2016-2018 Strategic Plan. One of the priorities of the Board of Directors (BoD) was to implement an integrated governance policy. This includes various tools necessary for the sound governance of Aéro Montréal's bodies.

Our cluster must demonstrate exemplary management if it wants to continue to position itself among the most successful in the world and to be cited as an example. Our directors and employees play a decisive role in ensuring its proper operation. That is why, under the chairmanship of Mr. Claude Baril, President of Stelia North America, Aéro Montréal's Governance Committee developed a grid of competencies for directors. This lists their respective expertise in various areas related to the organization, such as networking, financial literacy, talent, technologies, social networks, etc. In addition, the committee drew up a portrait of the skills and the history of the boards of directors on which members of Aéro Montréal's BoD currently serve or have served over the past 10 years. In 2017, a new code of ethics for directors, employees, consultants and volunteers was developed by the Governance Committee and approved by the BoD.

The three committees of Aéro Montréal's BoD were very active in 2017.

The Human Resources Committee's mandate was reviewed this year. It recommends policies and practices related to human resources management and succession planning, in compliance with the guidelines of Aéro Montréal's delegation of authority chart, which was updated and approved in 2017. In addition, as recommended by the Executive Committee, the Human Resources Committee approved the new organizational structure of Aéro Montréal, as well as defined a new organization chart. This more optimal structure groups most of the working groups' activities under the vice presidency of operations.

This concentration of the working groups' activities facilitates communication about their projects, as well as their optimization, and also fosters inter-working group collaboration while breaking down silos.

The mandate of the Finance and Audit Committee was also reviewed and approved. This committee reports to Aéro Montréal's BoD with a mandate to support it in fulfilling its oversight functions with respect to financial information reporting, external audit activities, risk management, and internal controls for Aéro Montréal.

The Human Resources Committee met four times, the Finance and Audit Committee four times and the Governance Committee five times. Aéro Montréal's Annual General Meeting was held on May 8, 2017 at the Laval Cosmodome. The members of the BoD were elected at the meeting; their mandate is renewed every two years in accordance with the general regulations of Aéro Montréal.



Hélène V. Gagnon, CAE, Manon Brassard, Deputy Minister and President of Canada Economic Development for Québec regions, Jacques Comtois, L-3 MAS, and Suzanne M. Benoît, Aéro Montréal, during the Annual General Meeting.



Aéro Montréal's Annual General Meeting at the Laval Cosmodome.

AÉRO MONTRÉAL TEAM



Suzanne M. Benoit*
President



Mélanie Lussier*
Vice President,
Operations



Marie-Josée Kasparian*
Director,
Strategy and
Corporate Affairs



Gary Bergès-Clermont
Senior Project Manager,
Communications,
Web-Marketing and
Social Medias



Martin-Charles Boucher
Project Manager,
Supply Chain and
MACH FAB 4.0



Gwenaël Brisé
Manager,
Communications and
Media Relations



Sharon Core
Project Manager,
Events and Special Projects



Pierrette Daigle
Executive Assistant



Charbel Khoury
Project Manager,
Defence and
National Security



Martin Lafleur
Senior Director,
Innovation



Cédrick Lalaizon
Deputy Director,
Next Generation
and Workforce



Charlotte Laramée
Growth, SME and
New Market Development



Sylvain Lefrançois
Director,
Defence and
National Security

* MEMBERS OF THE MANAGEMENT COMMITTEE

MOBILIZATION AND CONTRIBUTIONS

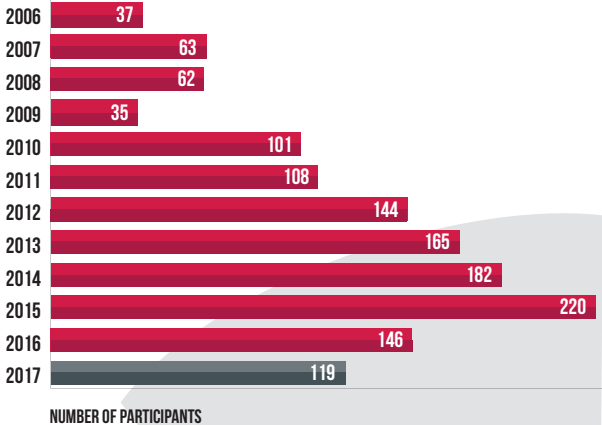
MOBILIZATION

The effectiveness of Aéro Montréal's actions and interventions relies on the mobilization of an impressive number of players in the industry. In 2017, Aéro Montréal benefited from the involvement of hundreds of industry leaders and specialists from Québec's aerospace sector in its various working groups and in the numerous events organized during the year. Their strategic contribution and their invaluable collaboration unquestionably contribute to the success and dynamism of the cluster.

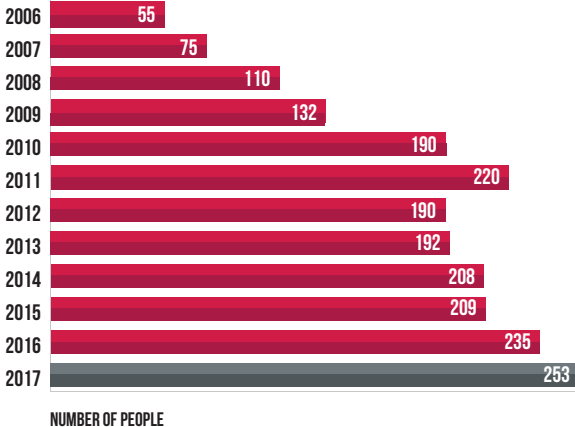
PARTICIPATION

For the past 11 years, Aéro Montréal has earned a stellar reputation with SMEs by offering activities that are aligned with their needs and the challenges they face on a daily basis. This satisfaction is reflected in the marked growth in the number of participants in its activities.

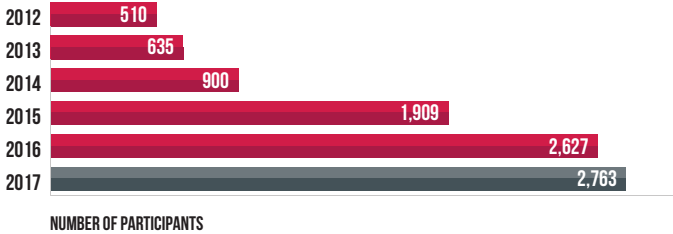
Annual General Meeting Participation



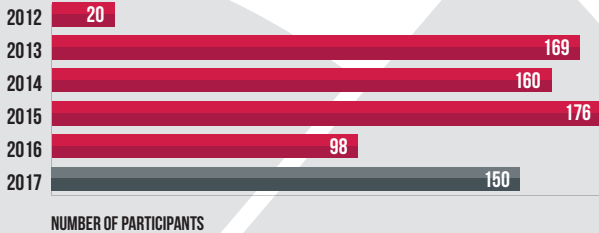
Industry Mobilization



SMEs Participation in Events



MACH evolution events participation



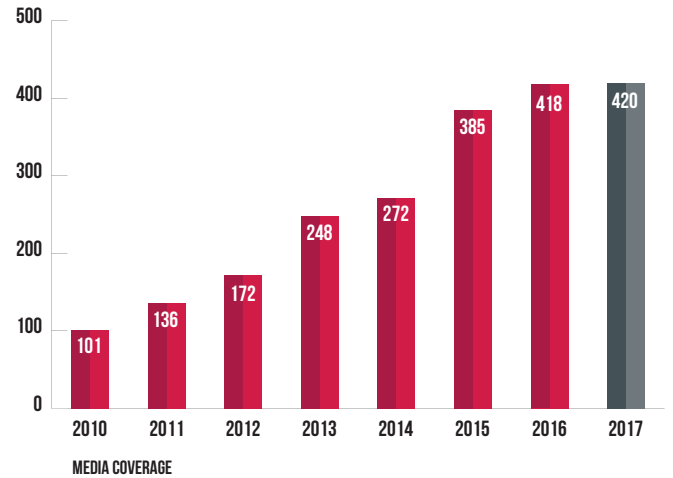
VISIBILITY

Aéro Montréal is constantly increasing its communication and public relations efforts to support the visibility of the entire Québec aerospace cluster, both locally and internationally.

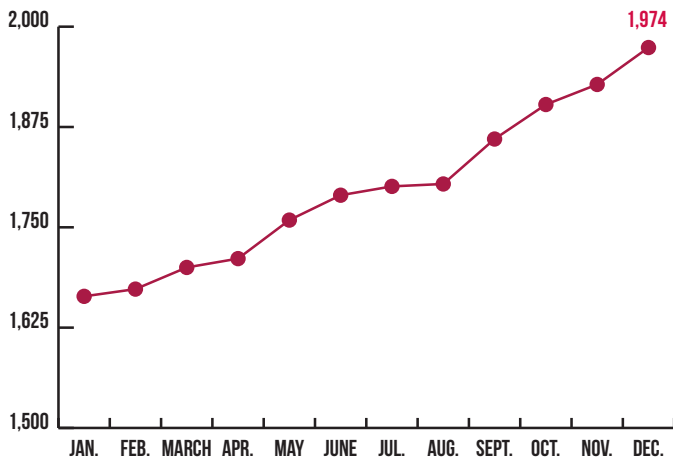
In 2017, Aéro Montréal multiplied its actions with the media in Québec and Canada, and also internationally, with business and specialized publications. These actions are essential to promote our sector but also to raise public awareness of the importance of the Québec aerospace ecosystem to Québec's economic growth.

Also, in 2017, thanks to a communication plan specifically dedicated to social networks, Aéro Montréal's presence on these networks increased significantly. This visibility directly benefits the companies that make up the cluster because it allows us to share our members' news to an ever-wider audience.

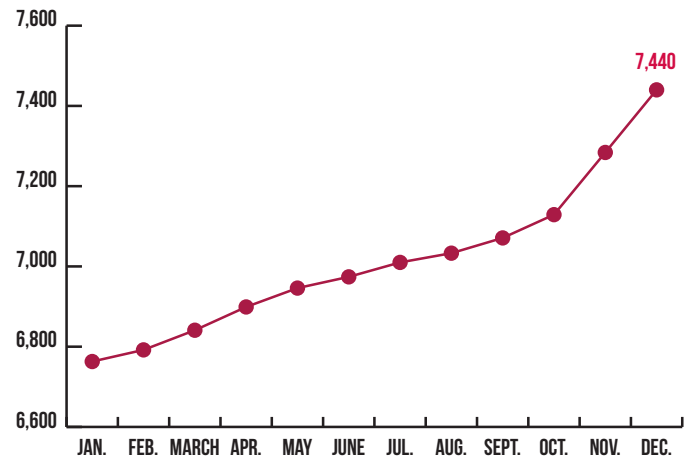
Media Coverage Growth



Twitter Community Growth



LinkedIn Community Growth



PROJECTS GENERATED BY THE MACH INITIATIVE

710 Projects Completed or in Progress:

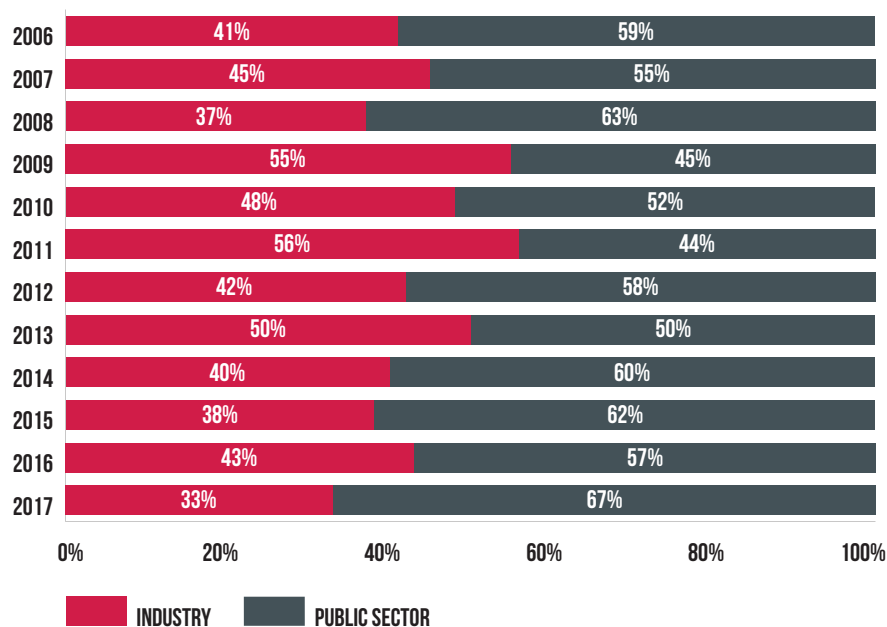
184 PROJECTS carried out internally or with the support of a sponsor

265 PROJECTS focused on expertise

261 PROJECTS focused on skills development

MOBILIZATION AND CONTRIBUTIONS (CONTINUED)

Distribution of Total Contributions from the Public Sector and the Industry (2006-2017)

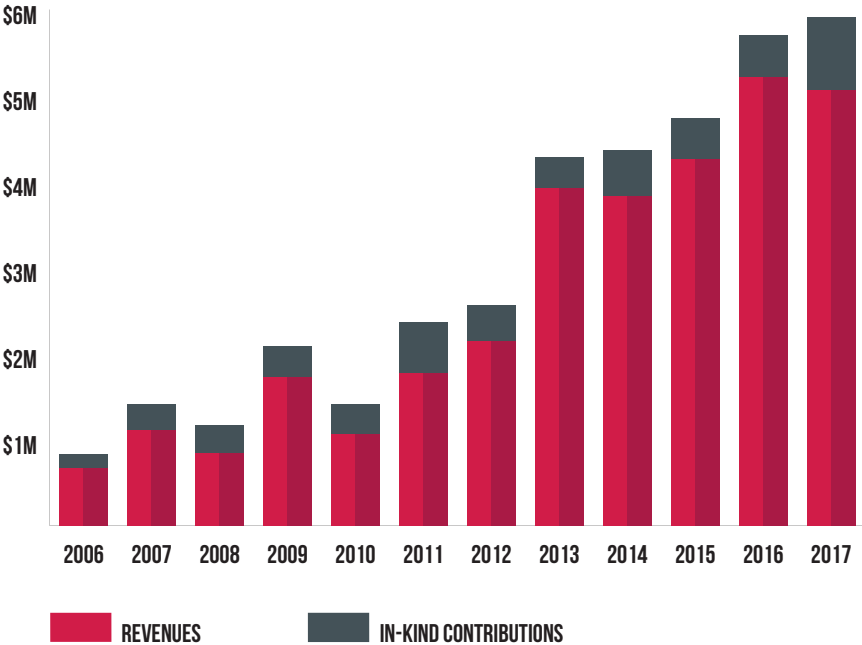


In 2017, the private sector's share of total contributions to the cluster was 33%. Excluding MACH projects, the private sector accounted for 35% of Aéro Montréal's total support.

Distribution of Contributions from the Public Sector and the Industry in 2017

Contribution from the public sector in cash	\$3,828,470	64.7%
Contribution from the public sector in kind	\$149,700	2.5%
Contribution from the industry in cash	\$1,238,081	20.9%
Contribution from the industry in kind	\$698,116	11.8%
TOTAL	\$5,914,366	100%

Evolution of Revenues and In-Kind Contributions (2006-2017)



Combined revenues and in-kind contributions to the cluster totalled \$5.91 million in 2017, up 3.7% compared to 2016. Contributions in 2017 were 7 times higher than in 2006 (\$837.8k). In 2017, in-kind contributions from the public and private sectors of the cluster were \$847.8k.



SECTOR IN-KIND CONTRIBUTIONS 2017

COMMITTEES AND MEETINGS DATES	Duration (in hours)	Total number of participants	Number of private participants	Rates (\$/hour/participant)	Subtotal (industry)	Total (industry and public)
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BOARD OF DIRECTORS

April 5, 2017	2	25	19	\$400	\$15,200	\$20,000
May 24, 2017	2	21	17	\$400	\$13,600	\$16,800
September 8, 2017	1	23	18	\$400	\$7,200	\$9,200
October 4, 2017	2	24	16	\$400	\$12,800	\$19,200
December 13, 2017	2	28	20	\$400	\$16,000	\$22,400
					\$64,800	\$87,600

EXECUTIVE COMMITTEE

February 9, 2017	0.5	7	7	\$400	\$1,400	\$1,400
February 10, 2017	0.5	6	6	\$400	\$1,200	\$1,200
March 27, 2017	0.5	7	7	\$400	\$1,400	\$1,400
April 5, 2017	2	7	7	\$400	\$5,600	\$5,600
April 19, 2017	0.5	6	6	\$400	\$1,200	\$1,200
May 3, 2017	0.5	6	6	\$400	\$1,200	\$1,200
May 24, 2017	2	5	5	\$400	\$4,000	\$4,000
September 13, 2017	0.5	8	8	\$400	\$1,600	\$1,600
October 4, 2017	2	6	6	\$400	\$4,800	\$4,800
October 12, 2017	0.5	8	8	\$400	\$1,600	\$1,600
October 27, 2017	0.5	8	8	\$400	\$1,600	\$1,600
December 13, 2017	2	8	8	\$400	\$6,400	\$6,400
					\$32,000	\$32,000

FINANCE AND AUDIT COMMITTEE

March 7, 2017	2	4	4	\$400	\$3,200	\$3,200
May 8, 2017	2	4	4	\$400	\$3,200	\$3,200
September 22, 2017	2	5	5	\$400	\$4,000	\$4,000
December 12, 2017	2	5	5	\$400	\$4,000	\$4,000
					\$14,400	\$14,400

COMMITTEES AND MEETINGS DATES	Duration (in hours)	Total number of participants	Number of private participants	Rates (\$/hour/participant)	Subtotal (industry)	Total (industry and public)
GOVERNANCE COMMITTEE						
February 10, 2017	2	5	5	\$400	\$4,000	\$4,000
March 22, 2017	2	4	4	\$400	\$3,200	\$3,200
May 19, 2017	2	5	5	\$400	\$4,000	\$4,000
September 13, 2017	2	4	4	\$400	\$3,200	\$3,200
December 6, 2017	2	4	4	\$400	\$3,200	\$3,200
					\$17,600	\$17,600
HUMAN RESOURCES COMMITTEE						
January 30, 2017	1	4	4	\$400	\$1,600	\$1,600
June 8, 2017	1	4	4	\$400	\$1,600	\$1,600
September 19, 2017	1	5	5	\$400	\$2,000	\$2,000
December 7, 2017	1	4	4	\$400	\$1,600	\$1,600
					\$6,800	\$6,800
COMMITTEE OF WORKING GROUPS PRESIDENTS						
June 6, 2017	2	7	7	\$400	\$5,600	\$5,600
					\$5,600	\$5,600
ANNUAL GENERAL MEETING						
May 8, 2017	2	119	93	\$200	\$37,200	\$47,600
					\$37,200	\$47,600
INNOVATION WORKING GROUP						
March 16, 2017	3	19	8	\$200	\$4,800	\$11,400
June 14, 2017	3	22	9	\$200	\$5,400	\$13,200
September 6, 2017	3	23	9	\$200	\$5,400	\$13,800
November 15, 2017	3	16	7	\$200	\$4,200	\$9,600
					\$19,800	\$48,000
ARTIFICIAL INTELLIGENCE (AI) PILOT COMMITTEE						
April 14, 2017	2	7	6	\$200	\$2,400	\$2,800
May 31, 2017	2.5	10	7	\$200	\$3,500	\$5,000
July 6, 2017	2.5	9	7	\$200	\$3,500	\$4,500
July 18, 2017	2	8	5	\$200	\$2,000	\$3,200
					\$11,400	\$15,500

SECTOR IN-KIND CONTRIBUTIONS 2017 (CONTINUED)

COMMITTEES AND MEETINGS DATES	Duration (in hours)	Total number of participants	Number of private participants	Rates (\$/hour/participant)	Subtotal (industry)	Total (industry and public)
TIGER TEAM SUPERCLUSTER COMMITTEE						
May 3, 2017	1	6	5	\$200	\$1,000	\$1,200
May 9, 2017	3	6	4	\$200	\$2,400	\$3,600
May 16, 2017	3	6	5	\$200	\$3,000	\$3,600
June 2, 2017	3	6	6	\$200	\$3,600	\$3,600
June 12, 2017	8	13	10	\$200	\$16,000	\$20,800
June 13, 2017	8	14	10	\$200	\$16,000	\$22,400
					\$42,000	\$55,200
INNOVATION FORUM COMMITTEE						
September 1 st , 2017	2	11	5	\$200	\$2,000	\$4,400
December 21, 2017	3	8	5	\$200	\$3,000	\$4,800
					\$5,000	\$9,200
DEFENCE AND NATIONAL SECURITY WORKING GROUP						
March 1 st , 2017	3	14	11	\$200	\$6,600	\$8,400
May 10, 2017	3	14	11	\$200	\$6,600	\$8,400
September 20, 2017	3	13	9	\$200	\$5,400	\$7,800
December 6, 2017	3	19	16	\$200	\$9,600	\$11,400
					\$28,200	\$36,000
MARKET DEVELOPMENT – SME WORKING GROUP						
February 10, 2017	2	12	10	\$200	\$4,000	\$4,800
April 10, 2017	2	15	13	\$200	\$5,200	\$6,000
					\$9,200	\$10,800
GROWTH WORKING GROUP						
October 11, 2017	2	6	6	\$200	\$2,400	\$2,400
November 23, 2017	2.5	9	9	\$200	\$4,500	\$4,500
					\$6,900	\$6,900

COMMITTEES AND MEETINGS DATES	Duration (in hours)	Total number of participants	Number of private participants	Rates (\$/hour/participant)	Subtotal (industry)	Total (industry and public)
SME MAPPING COMMITTEE						
February 10, 2017	1	4	4	\$200	\$800	\$800
April 20, 2017	1	3	3	\$200	\$600	\$600
October 11, 2017	1	3	3	\$200	\$600	\$600
					\$2,000	\$2,000
DRONES COMMITTEE						
October 30, 2017	3	26	12	\$200	\$7,200	\$15,600
					\$7,200	\$15,600
SUPPLY CHAIN WORKING GROUP						
February 28, 2017	3	10	10	\$200	\$6,000	\$6,000
May 10, 2017	2	10	10	\$200	\$4,000	\$4,000
September 29, 2017	2.5	9	9	\$200	\$4,500	\$4,500
November 13, 2017	3	2	2	\$200	\$1,200	\$1,200
December 8, 2017	3	8	8	\$200	\$4,800	\$4,800
					\$20,500	\$20,500
GLOBAL SUPPLY CHAIN SUMMIT COMMITTEE						
January 11, 2017	1.5	8	7	\$200	\$2,100	\$2,400
					\$2,100	\$2,400
MACH INITIATIVE – IN-KIND ENGAGEMENT OF ACTIVE SPONSORS*						
Cohort 1	75	15	15	\$125	\$140,625	\$140,625
Cohort 2	50	3	3	\$125	\$18,750	\$18,750
Cohort 3	40	1	1	\$125	\$5,000	\$5,000
Cohort 4	81	6	6	\$125	\$60,750	\$60,750
Cohort 5	65	9	9	\$125	\$73,125	\$73,125
					\$298,250	\$298,250
HUMAN RESOURCES WORKING GROUP						
February 20, 2017	2	15	9	\$200	\$3,600	\$6,000
April 10, 2017	2	12	7	\$200	\$2,800	\$4,800
September 18, 2017	2	17	12	\$200	\$4,800	\$6,800
November 20, 2017	2	16	10	\$200	\$4,000	\$6,400
					\$15,200	\$24,000

SECTOR IN-KIND CONTRIBUTIONS 2017 (CONTINUED)

COMMITTEES AND MEETINGS DATES	Duration (in hours)	Total number of participants	Number of private participants	Rates (\$/hour/participant)	Subtotal (industry)	Total (industry and public)
HUMAN RESOURCES ACTION PLAN COMMITTEE						
March 21, 2017	2.5	7	2	\$200	\$1,000	\$3,500
					\$1,000	\$3,500
INTERNSHIPS COMMITTEE						
April 5, 2017	1	5	1	\$200	\$200	\$1,000
May 3, 2017	3	10	6	\$200	\$3,600	\$6,000
July 14, 2017	3	12	7	\$200	\$4,200	\$7,200
October 13, 2017	3	10	5	\$200	\$3,000	\$6,000
December 4, 2017	0.5	12	4	\$200	\$400	\$1,200
					\$11,400	\$21,400
4.0 SKILLS COMMITTEE						
May 31, 2017	4	11	5	\$200	\$4,000	\$8,800
July 14, 2017	1.5	8	3	\$200	\$900	\$2,400
August 24, 2017	2	10	4	\$200	\$1,600	\$4,000
September 28, 2017	0.5	4	1	\$200	\$100	\$400
October 30, 2017	2	11	8	\$200	\$3,200	\$4,400
					\$9,800	\$20,000
HERITAGE 3 COMMITTEE						
February 2, 2017	2	2	0	\$200	\$-	\$800
May 24, 2017	1	5	2	\$200	\$400	\$1,000
June 21, 2017	2	4	2	\$200	\$800	\$1,600
August 31, 2017	2	6	3	\$200	\$1,200	\$2,400
					\$2,400	\$5,800

COMMITTEES AND MEETINGS DATES	Duration (in hours)	Total number of participants	Number of private participants	Rates (\$/hour/participant)	Subtotal (industry)	Total (industry and public)
BRANDING AND PROMOTION WORKING GROUP						
March 14, 2017	3	10	6	\$200	\$3,600	\$6,000
September 15, 2017	2.5	9	6	\$200	\$3,000	\$4,500
December 1, 2017	2.5	6	3	\$200	\$1,500	\$3,000
					\$8,100	\$13,500
375TH SPECIAL PROJECT COMMITTEE						
May 5, 2017	2	8	6	\$200	\$2,400	\$3,200
					\$2,400	\$3,200
PROMOTIONAL CAMPAIGN COMMITTEE						
October 6, 2017	3	8	4	\$200	\$2,400	\$4,800
					\$2,400	\$4,800
FINANCE ROUND TABLE						
June 7, 2017	2	11	7	\$200	\$2,800	\$4,400
					\$2,800	\$4,400
GRAND TOTAL		1,010	733		\$698,116	\$847,816

- * Notes for MACH initiative – In-kind engagement of active sponsors.
- The total number of participants equals the total number of active sponsors.
 - The duration (in hours) equals an estimation of the total hours of in-kind contributions made by sponsors. The number of hours varies depending on the cohorts.
 - The rate (\$/hour/participant) equals the sponsor's hourly rate.
 - The total (industry and public) equals an estimate of the value of in-kind contributions from the sponsors.

CALENDAR OF EVENTS 2017

DATE	EVENT
JANUARY	
12	2 nd workshop – Skills enhancement in market development program
27	Best business practices in aerospace sharing circle (1/8)
30	SA ² GE Phase 2 Networking Day with researchers
FEBRUARY	
7	MACH Evolution Seminar: “Meeting the requirements of the newly-revised AS9100 standard by implementing an effective and efficient management system”
17	1 st AeroPortal webinar at CAE
22	3 rd workshop – Skills enhancement in market development program
28	Innovation Working Group Workshop – Technologies of the future for the aerospace manufacturing sector
MARCH	
6	Best business practices in aerospace sharing circle (2/8)
15	Closing the Gaps Day by the Defence and National Security Working Group
24	2 nd AeroPortal webinar with international aviation organizations (ICAO, IATA, IFALPA, Airport Council International - ACI)
28	4 th workshop – Skills enhancement in market development program
29	SME SA ² GE Phase 2 Networking Day
30	Launch of the AeroPortal Careers section during “JeChoisisMTL”
APRIL	
3-7	International Aerospace Week – Montréal 2017
3	Seminar and mission of local and international companies of the drones’ sector
3	Seminar on Defence and Royal Canadian Air Force programs
3	Seminar with young aerospace enthusiasts
4	Global Supply Chain Summit
5-6	Aéromart Montréal
7	International Inter-Clusters Day
11	Defence and National Security mission at the Air Force Outlook event, in Ottawa
14	Best business practices in aerospace sharing circle (3/8)
19	Intersectoral meetings seminar with partners: SA ² GE, CRIAQ, AQT, Techno Montréal and Investissement Québec
21	3 rd AeroPortal webinar – Montréal Aviation Museum
25	5 th workshop – Skills enhancement in market development program
26	Aerospace Discovery Path for guidance, school and professional information counselors
MAY	
10	Best business practices in aerospace sharing circle (4/8)
12	4 th AeroPortal webinar on human resources management with Groupe Meloche and Pratt & Whitney Canada at ÉMAM
31-June 1 st	SME mission to CANSEC
26	Deployment of Passion for Flight and Passion from Within programs with Commission scolaire de Laval

DATE	EVENT
JUNE	
5	Best business practices in aerospace sharing circle (5/8)
8	AluQuébec AGM: presentation on the strategic role played by the Aéro Montréal cluster
9	Training: Canadian government and DND procurement process
9-11	Festival Eurêka!
14	MACH Evolution Seminar: “How to implement a LEAN daily management system – Nétur's experience”
15	Training: How to identify and assess defence and security opportunities
17-23	Mission to the International Paris Air Show – Le Bourget
17	Networking cocktail at the International Paris Air Show – Le Bourget
21	Aéro Montréal networking dinner during the International Paris Air Show – Le Bourget
AUGUST	
6	Family Day – Montréal Aviation Museum
29	Aéro Montréal Golf Classic event
SEPTEMBER	
15	Best business practices in aerospace sharing circle (6/8)
18	Defence and National Security training: Sales pitch to the Government of Canada and OEMs
26	Women In Aerospace Québec networking activity
27	SME mission to the Vermont Supply Chain Conference
OCTOBER	
2	Defence and National Security training: Analysis of the competition and winning strategy
5	SME networking activity: plant tour and presentation of AV&R Aerospace's international experience
12	Best business practices in aerospace sharing circle (7/8)
16	Defence and National Security training: Developing winning bids
18	MACH Evolution Seminar: “Stop managing your projects without instruments! The needed and appropriate tools to implement the right projects, within established deadlines and budgets”
23	Symposium on the Canadian Defence and Security Market and launch of the Security Defence Québec portal
NOVEMBER	
1 st	The aerospace industry's transition to 4.0: “What role do managers and employee representatives play?”
1 st	Canadian and Ukrainian Aerospace Business Forum with the participation of Ukrainian Prime Minister Mr. Volodymyr Groysman
8-10	Visit of the European Aerospace Cluster Partnership delegation
9	Participation to a panel on succession planning at the National Labour Market Strategy Day organized by the CCAA
10	Best business practices in aerospace sharing circle (8/8)
21-22	Aerospace Day in Québec City and colloquium with Québec Intl on “Decision-makers and aerospace succession: how to move forward in 4.0.”
27-Dec. 1 st	SME trade mission to Aéromart Milan and industrial visits in Turin and Rome
29	SME trade mission to New Hampshire and industrial visits at BAE and Elbit
DECEMBER	
5	MACH Evolution Seminar: “Industry 4.0: how do you go about identifying your roadmap towards the factory of the future?”
11	Major seminar on financing and Holiday networking event

LEXICON

- **ACI**
Airport Council International
- **ADM**
Aéroports de Montréal
- **AGM**
Annual General Meeting
- **AIAC**
Aerospace Industries Association of Canada
- **B2B**
Business-to-Business
- **BDC**
Business Development Bank of Canada
- **BoD**
Board of Directors
- **CAMAQ**
Comité sectoriel de main-d'œuvre en aérospatiale
- **CARIC**
Consortium for Aerospace Research and Innovation in Canada
- **CCAA**
Canadian Council for Aviation & Aerospace
- **CEFRIO**
Centre facilitant la recherche et l'innovation dans les organisations
- **CEM**
Conseil emploi métropole
- **CMM**
Communauté métropolitaine de Montréal
- **CRIAQ**
Consortium for Research and Innovation in Aerospace in Québec
- **CRIQ**
Centre de recherche industrielle du Québec
- **CSA**
Canadian Space Agency
- **CSC**
Canadian Surface Combattant
- **EACP**
European Aerospace Cluster Partnership
- **EC**
Executive Committee
- **ÉMAM**
École des métiers de l'aérospatiale de Montréal
- **ÉNA**
École nationale d'aérotechnique
- **ÉTS**
École de technologie supérieure
- **GARDN**
Green Aviation Research and Development Network
- **IQ**
Investissement Québec
- **IAMAW**
International Association of Machinists and Aerospace Workers
- **IATA**
International Air Transport Association
- **ICAO**
International Civil Aviation Organization
- **IFALPA**
International Federation of Air Line Pilots Associations
- **ITB**
Industrial and Technological Benefit
- **MESI**
Ministère de l'Économie, de la Science et de l'Innovation
- **MI**
Montréal International
- **MOST 21**
Mobility Systems and Technologies for the 21st Century (innovation supercluster)
- **NASA**
National Aeronautics and Space Administration
- **NHADEC**
New Hampshire Aerospace and Defense Export Consortium
- **NRC**
National Research Council Canada
- **NRC - IRAP**
National Research Council Canada – Industrial Research Assistance Program
- **OAC**
Ontario Aerospace Council
- **PAMCF**
Plan d'action métropolitain sur les compétences du futur
- **QI**
Québec International
- **QTA**
Québec Technology Association
- **R&D**
Research and Development
- **SAFE**
Security and Aerospace actors for the Future of Earth
- **SA²GE**
Smart Affordable Green Efficient project
- **SME**
Small and medium size enterprise
- **SQRI**
Stratégie québécoise de recherche et d'innovation
- **STEM**
Science, technology, engineering, mathematics
- **STIQ**
Sous-Traitance Industrielle Québec
- **UAS CE**
Unmanned Aerial System Centre of Excellence
- **WIA**
Women in Aerospace

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- Arconic Foundation
- Business Development Bank of Canada
- Canadian Commercial Corporation
- CEFRIO
- Centre de transfert d'entreprise du Québec
- Export Development Canada
- Fonds de solidarité FTQ
- JPMorgan Chase Foundation
- Norton Rose Fulbright
- Québec International
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