

# Innovation, Transformation and Growth

Activity  
report  
2018



Globalisation  
Exports  
Cybersecurity  
Gilles-Demers  
Defence  
Growth  
Innovation  
Partnership

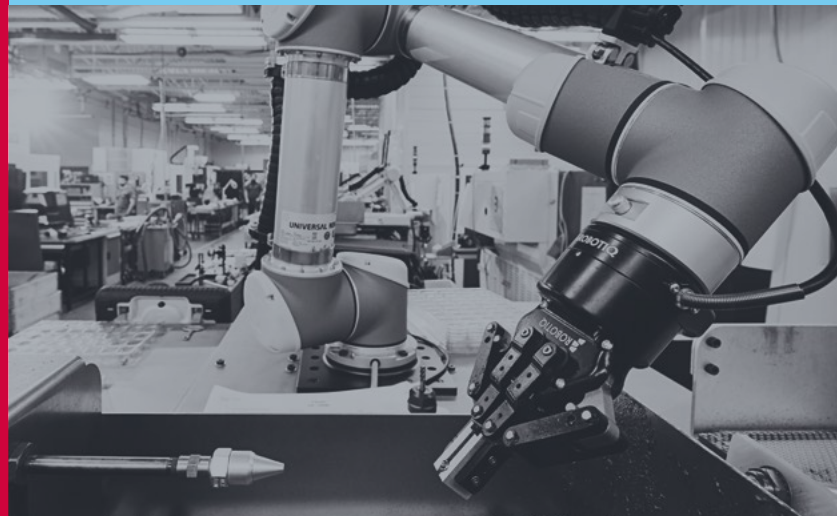
Talents  
Business  
Opportunities  
SD Québec  
AéroPortail  
Training  
SAGE  
PRAM  
Passion

Accélérateur 360°  
Artificial intelligence  
Supply chain  
StartAéro 360°

Forum  
MACH Fab 4.0  
4.0

## Consolidation

Technologies  
Workforce  
Disruptive  
technologies



**AÉRO**   
MONTREAL

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## Québec, a global aerospace hub

**1<sup>st</sup>** ranked  
Québec exports

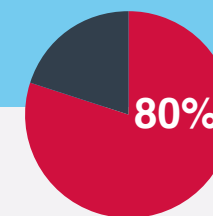
More than **70%**  
of Canadian R&D in aerospace is conducted in the Greater Montréal region

**205**  
Companies

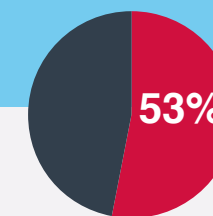
5 – OEMs  
15 – Tier 1 partners, equipment manufacturers, and maintenance, repair and overhaul (MRO) companies  
185 – Specialized suppliers

**\$15.3B** In revenues  
(+6,3% compared with 2017)

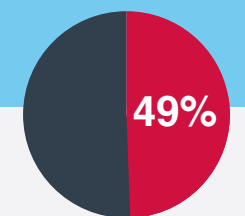
**42,100** Highly-skilled workers  
(+3,4% compared with 2017)



of Québec aerospace production is **exported**



of Canadian aerospace sector's **sales**



of Canadian aerospace sector **jobs**



## Message from the Chair

The aerospace industry is one of the major pillars of our economy and has been one of the main drivers of our growth for over a century.

With mobility being one of our top priorities, the aerospace industry is set to witness unprecedented expansion in the next 20 years. A staggering 43,000 new aircraft will need to be built to meet demand. The International Civil Aviation Organization (ICAO) estimates that 4.3 billion passengers travelled by plane in 2018 alone, an increase of 6.1% over 2017.

Faced with this remarkable growth, we must innovate as never before, continue to improve our way of doing things, and work more closely to develop new technologies in collaboration with the major players in the sectors related to aerospace, especially artificial intelligence (AI) researchers and developers.

The strength of AI as a driving force in industry 4.0 depends on data enhancement and our ability to analyze that data so that we can benefit fully from productivity and efficiency gains. The introduction of these new technologies also fosters better quality control and real-time adjustments to the assembly line, resulting in faster market entry – a real competitive advantage for our industry.

According to a recent study by Accenture, companies that integrate AI into their economic model could see their profits increase 38% by 2035.

The success of this transformation requires the commitment of prime contractors, SMEs, governments, research centres and other stakeholders working in our industry. I am convinced that, together, we will succeed in implementing this approach which is so crucial to our future.

### Vision 2019–2022

As part of our 2019–2022 strategic planning process, we were privileged to welcome the participation of representatives from key sectors of our economy who, because of their proximity, are invaluable allies we can count on to ensure progress on strategic issues. The artificial intelligence players were, of course, first among these.

Our vision is an ambitious one. Our objective is to be recognized as the world's most innovative cluster by 2022. To achieve this, we have a solid strategic plan in place and can count on the support of all the members of the aerospace industry to build a culture of innovation within our ecosystem.

“

**Our objective is to be recognized as the world's most innovative cluster by 2022.**

### A team effort, above all!

Each year, a tremendous passion for our industry motivates the hundreds of people who give of their time to advance the many projects led by working groups and committees established by the Aéro Montréal team. In 2018, nearly 500 volunteer hours were invested!

I would also like to acknowledge the outstanding work of the members of the Board of Directors and, in particular, its Chair, Hélène V. Gagnon, Vice-President, Public Affairs and Global Communications at CAE, whom I had the honour of succeeding in May 2018. I would like to thank her for her leadership and commitment over her three years as Chair.

Finally, I commend the dynamism and professionalism of the entire Aéro Montréal team and its President, Suzanne M. Benoit, who ensure that our industry's promising strategies and programs are successfully implemented.

### Sylvain Bédard

Chief Executive Officer,  
Sonaca Montréal.



## Message from the President

The Québec aerospace industry continued to grow in 2018. Sales reached a new high of \$15.3 billion, an increase of 6.3% over 2017. Prime contractors and SMEs stayed the course, continuing to invest in research and development and in modernizing their manufacturing operations. They also launched new aircraft and innovative services to break into new markets. However, they also faced major challenges.

Our environment is constantly transforming and evolving. The shift to artificial intelligence (AI) is creating profound transformations that we must tackle with caution to benefit fully from efficiency and productivity gains generated by the introduction of these new technologies. Many changes are also occurring within our value chain. Mergers and acquisitions in the sector represent a strong trend that should continue, and even accelerate.

In recent years, the Aéro Montréal team, in collaboration with industry members and partners active in many working groups and committees, has implemented innovative initiatives to help companies meet these challenges, which are both complex and exciting.

### Propelling our SMEs towards new markets

In 2018, Aéro Montréal launched two major initiatives: Accelerator 360° and StartAero 360°. An \$11 million fund, which included \$8 million from the governments of Québec and Canada, was made available to SMEs.

The deployment of the MACH and MACH FAB 4.0 initiatives is progressing well. A fifth cohort with 17 new companies has joined the ranks of the MACH project. Two calls for MACH FAB 4.0 projects were launched and 15 additional companies were recruited.

“

**In 2018, Aéro Montréal launched two major initiatives: Accelerator 360° and StartAero 360°**

### Talent in demand

Filling jobs can be a demanding task. The Human Resources Working Group developed several initiatives to meet workforce needs and to attract the next generation of talented employees. The speed at which laid-off employees have found work this year confirms that we are on the right track. Aéro Montréal also helped advance recruitment and training projects, in particular through the publication of a 4.0 Skills Guide on integrating new knowledge into the training process.

The Regroupement Relève d'Aéro Montréal (RRAM) was also very active in organizing a large number of awareness-building activities for young people. The flagship events, the Grande fête de l'aviation and the Snowbirds display in the Vieux Port de Montréal in June, attracted more than 2,500 people.

### Innovating to secure the future

Members of the Innovation Working Group continued preparing for the future! The 6th edition of the Aerospace Innovation Forum was a great success, bringing together more than 1,200 participants and 90 speakers from around the world. The central theme of the event dealt with breakthrough technologies.

In addition, our participation in the SA<sup>2</sup>GE program continued to attest to our firm resolve to support the sector in its search for ecological solutions and new technologies to create cleaner, quieter aircraft.

### The Québec aerospace industry shines

The sector enjoyed remarkable visibility throughout the year in all forms of media. The number of our subscribers on social media increased substantially. We updated several of our communication tools, including our bimonthly newsletter.

Aéro Montréal also actively participated in implementing and coordinating the Aero Future campaign aimed at stimulating interest in aerospace among young people.

Aéro Montréal fulfilled its mission of providing companies in the cluster with an “international window,” thereby strengthening our leadership position in the world. This year, among other things, we signed four new collaboration agreements and took part in several international events, including the Farnborough International Airshow in the United Kingdom.

### Many business opportunities in defence and security

The Defence and Security Working Group spearheaded several projects to help our members acquire in-depth knowledge of the most up-to-date information and requirements specific to our industry. The SDQuébec portal, which now has more than 460 companies registered, presented 1,300 business opportunities in 2018. The annual Symposium on the Canadian Defence and Security Market was a great success again this year.

### A promising future

The growth of our companies relies on the expansion of their activities on an international scale. Aéro Montréal intends to do everything possible to support company leaders in their business development activities by supplying the tools and levers they need to achieve their business goals.

The year 2019 promises to be just as successful! We are proud of this year's outstanding results and are enthusiastically embarking on 2019 with a renewed mission, vision and action plan.

**Suzanne M. Benoit**



# Board of directors



## Chair

**Sylvain Bédard** <sup>(1)</sup>  
Chief Executive Officer,  
Sonaca Montreal



**Francis Archambault**  
Chief Executive Officer  
and Head of Sales,  
NSE Automatech



**David Chartrand**  
Grand Lodge  
Representative,  
IAMAW



## Vice-chair

**Patrick Champagne** <sup>(1)(3)</sup>  
Vice-President,  
Engineering and R&D,  
Esterline CMC Electronique



**Philippe Balducchi**  
Chief Executive Officer,  
C Series Aircraft  
Limited Partnership



**Jacques Comtois** <sup>(2)</sup>  
President,  
L3 Technologies MAS



## Treasurer

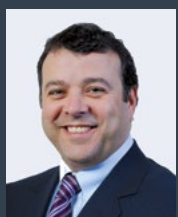
**Jean Blondin** <sup>(1)(4)</sup>  
President,  
Abipa Canada



**Claude Baril** <sup>(1)(6)</sup>  
President,  
Stelia,  
North America



**François Cordeau**  
Vice-President,  
Transportation and  
Manufacturing Division,  
National Research  
Council (NRC)



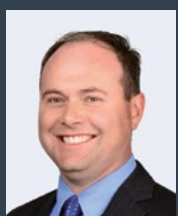
**Guillermo Alonso** <sup>(3)</sup>  
President,  
Alta Précision



**Sylvain Boisvert**  
General Manager,  
Safran Canada



**Maria Della Posta**  
Senior Vice-President,  
Pratt & Whitney Canada



**Jim Andrews**  
Vice-President and  
General Manager,  
Lockheed Martin  
Canada



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



**Marc Donato** <sup>(5)</sup>  
Vice-President,  
Operations and Institutional  
Relations, Information  
System Group,  
MDA Satellite Systems



**Pierre Dumouchel**  
General Manager,  
École de technologie  
supérieure



**Denis Giangi**  
President,  
Rolls-Royce Canada



**Hugue Meloche** <sup>(1)</sup>  
President and  
Chief Executive  
Officer,  
Groupe Meloche



**Jean-François Dupont**  
Chief Executive Officer,  
AV&R Aerospace



**Michel Grenier** <sup>(7)</sup>  
Vice-President and  
General Manager,  
Thales Canada  
Avionics



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



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



**Mario Héroux**  
Director,  
École des métiers  
de l'aérospatiale de  
Montréal (EMAM)



**Nathalie Paré**  
Executive Director,  
Comité sectoriel de  
la main-d'oeuvre en  
aérospatiale (CAMAQ)



**Hélène V. Gagnon** <sup>(3)</sup>  
Vice-President,  
Public Affairs and Global  
Communications,  
CAE



**Gilles Labbé**  
President and  
Chief Executive  
Officer,  
Héroux-Devtek

## Observers



**Mario Bouchard**  
Assistant Deputy Minister,  
Strategic Industries & Major  
Economic Projects,  
Ministère de l'Économie  
et de l'innovation



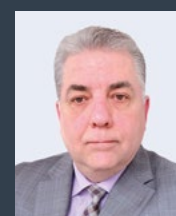
**Cynthia Garneau** <sup>(7)</sup>  
President,  
Bell Helicopter  
Textron Canada



**Sylvain Lambert**  
Director,  
École nationale  
d'aérotechnique  
(ÉNA)



**Julie Insley**  
Executive Director,  
Quebec Region,  
Strategic Policy Sector,  
Innovation, Science &  
Economic Development  
Canada



**Zafirios Gazidis**  
Director,  
Business Development,  
Siemens Canada



**Éric Ledoux** <sup>(5)</sup>  
President and Chief  
Executive Officer,  
DMC Group

- <sup>(1)</sup> Members of the Executive Committee  
<sup>(2)</sup> Chair of the Human Resources Committee  
<sup>(3)</sup> Member of the Human Resources Committee  
<sup>(4)</sup> Chair of the Finance and Audit Committee  
<sup>(5)</sup> Member of the Finance and Audit Committee  
<sup>(6)</sup> Chair of the Governance Committee  
<sup>(7)</sup> Member of the Governance Committee



## Branding and Promotion Working Group

President of the Branding and Promotion Working Group

**Pascale Alpha**  
Director,  
Public Affairs and Global Communications,  
CAE

### Message from the President

"I am leaving as the president of the working group – which is now becoming a committee – after three years. It has been an incredible opportunity to meet colleagues who work in the same industry and who are experiencing the same challenges. By putting our ideas and our passion together, we can make the aerospace cluster shine.

We have helped to raise the profile of aerospace during my tenure, and I hope this will continue. We have a desperate need for manpower, and a positive perception of the industry contributes significantly to recruitment. We have also wanted to constantly highlight the extraordinary work of our SME members.

The new communication committee, with its leaner and more agile structure, will, I am sure, continue to showcase our important industry to the entire world."

**What would you say to a young person who asks: why should I choose aerospace as a career?**

You will not be bored! On the contrary, it's full of people who are passionate about innovation!

### Working group objectives

- Develop communication strategies and tactics focused on leveraging the reputation of companies in Québec's aerospace sector (Aéro Montréal's main value proposition).
- Make recommendations on an ad hoc basis to Aéro Montréal entities on issues related to challenges, the image of the sector, and its members.
- Develop strategies and tactics to position Aéro Montréal as the voice of the industry and take a position in public debates for the benefit of members.
- Identify potential issues that may affect the industry so that messages can be developed and disseminated (as much as possible upstream) to members.



### Working group members

— **Pascale Alpha**  
Director,  
Public Affairs and Global Communications,  
CAE  
Working group President

— **Ani Armenian**  
Communications Manager,  
Thales Canada

— **Patricia Bergeron**  
Communications Manager,  
Bell Helicopter Textron Canada

— **Sylvie Bourassa**  
Executive Director,  
Government Relations Department,  
Concordia University

— **Josée Gaulin**  
Marketing and Communications Senior Specialist,  
Human Resources,  
L3 Technologies MAS

— **Mylène Godin**  
Interim Director,  
Communications, Public Affairs and Government Relations,  
Cégep Édouard-Montpetit

— **Véronique Lamarre**  
Communication Advisor,  
Ministère de l'Économie et de l'Innovation

— **Olivier Marcil**  
Vice-President,  
External Relations,  
Bombardier

— **Michael Muldoon**  
Product Development Manager,  
AV&R

— **Nathalie Paré**  
Executive Director,  
CAMAQ

— **Christoph Schewe**  
Managing Director,  
IFALPA



*To fly is THE dream of every man; I decided to devote my life to achieving it.*



— Thomas Ernst  
École nationale d'aérotechnique



# Achievements

## RISE TO THE FUTURE

RISE TO THE FUTURE (also called Aero Future) is an advertising campaign launched in May 2018. It targets young people in school, but also people looking to change careers. RISE TO THE FUTURE aims to promote the industry and generate interest by giving a positive and inviting image of the jobs available in aerospace. It also seeks to increase enrolment in Québec's aeronautical schools.

Thanks to a proactive strategy across several media (Web, social media, radio, billboards, posters, bus shelters, etc.), the campaign highlighted an industry in high demand for skilled labour, its career profiles, and available jobs. It also underscored the many existing training programs, as well as the technological innovations that represent an important attraction for future workers.

The campaign had three phases, the last of which took place in the spring of 2019.

To learn more about the "Rise to the Future" campaign, visit [www.oselaero.ca](http://www.oselaero.ca) or follow activities on the Facebook page of [www.aeroportail.ca](http://www.aeroportail.ca).

### Partners in the RISE TO THE FUTURE campaign

- École nationale d'aérotechnique (ÉNA)
- École des métiers de l'aérospatiale de Montréal (EMAM)
- Comité sectoriel de main-d'œuvre en aérospatiale (CAMAQ)
- Aéro Montréal and many industry partners: Bombardier, Bell Helicopter Textron Canada, CAE, Airbus, Pratt & Whitney Canada, IAMAW (union)



Suzanne M. Benoît and Hélène V. Gagnon, CAE, and Sylvain Lambert, ÉNA, at the Aéro Montréal Annual General Meeting and the launch of the RISE TO THE FUTURE aerospace career promotion campaign.



RISE TO THE FUTURE offered 50 students at HEC a case study dealing with aerospace for a university competition (pitch). They had to imagine and present to a jury of industry representatives a campaign to convince young people to choose aerospace. This is another way to get young people interested in aerospace.



*To give wings to those who cannot fly alone.*

— Stéphanie Fiore  
Concordia University

## Customs tariffs and countermeasures

On May 31, 2018, the U.S. government imposed significant tariffs on steel and aluminum imports from Canada, opening the way for a trade war between our two countries. In response to this trade offensive, the Canadian government announced countermeasures which in turn taxed steel and aluminum imports from the United States.

These measures are having a significant negative impact on the industry. Aéro Montréal has intervened several times with the Canadian government to make the industry's concerns known.

As a result, the Government of Canada has implemented a series of measures to mitigate the impacts of its countermeasures. Aéro Montréal is continuing to work on the issue, to make representations to the government, and to inform its members of developments.

## New communication strategy

Aéro Montréal this year adopted a new global communication strategy. This follows the major survey conducted in 2017 that focused on the needs and expectations of our members. As a result, the newsletter has been significantly modified, and Aéro Montréal's SME members are being better showcased in our communications.

This new strategy also aims to better segment our target clientele to ensure our communications are always relevant.

- January – Groupe Meloche
- February – Groupe DCM
- March – ADDEV
- May – S.O.M.R.
- June – Fusia
- September – Pole Air Aviation
- November – APN
- December – L3 Technologies MAS

## Aéro Montréal communications in 2018

- 25 press releases
- 2,339 Twitter subscribers, up 18% from 2017
- 9,246 LinkedIn subscribers, up 24% from 2017
- 18,481 Facebook friends, up 3% from 2017
- 73 interviews conducted
- More than a thousand publications on social media
- Three special sections in the media
- One mission of international journalists
- 151 articles in the media that included a reference to Aéro Montréal



Press conference in the presence of the Minister of Economy and Innovation, Mr. Pierre Fitzgibbon and industry members.

## Support for the working groups

During the year, the communications team worked closely with all Aéro Montréal's working groups to help publicize their events, provide effective communication tools, and proactively manage press relations. "Communications" contributed in a major way, for example, to the Gilles-Demers 2018 Awards Gala, the Canadian Defence and Security Market Symposium, the Financing Seminar: 2019 Trends, and Vision 2025, the industry consultation day held in Montréal, organized by the AIAC.



## Québec's presence at Farnborough



A delegation of some 30 SMEs and Québec organizations attended this year's Farnborough International Airshow. This mission aimed to promote our companies' industrial aerospace capabilities on the international stage. Our SMEs participated in multiple meetings with potential partners. Farnborough is one of the world's largest aerospace shows, with more than 1,500 exhibitors from 52 different countries.



Media scrum after conference given by the Hon. Navdeep Bains, Minister of Innovation, Science and Economic Development Canada

## Meetings with political parties

In preparation for the Québec election last October, Aéro Montréal met with political parties likely to elect MNAs to inform them about aerospace challenges. As a result of these meetings, all the parties we met committed to maintaining the Québec Aerospace Strategy (2016–2026), a plus for our industry.

## International media at the Innovation Forum

A media mission composed of seven major international magazines specializing in aerospace was organized during the Forum. This mission helped ensure the visibility of several SMEs in the international press and promote our industrial capabilities. A series of company visits was also organized for the journalists present.

In addition, an internet radio broadcast was created for the first time during the Forum in partnership with web magazine Les Ailes du Québec and Radio Plus. Several aerospace stakeholders from Québec were interviewed for the event.



## Four international agreements signed in 2018

The development of agreements with foreign partners is a priority for Aéro Montréal, which has so far signed 27 partnerships with clusters located in Asia, America and Europe. This type of agreement is a win-win partnership between two clusters. It's a way to find out what's happening in our respective markets, and to actively monitor business opportunities.



**La Presse+ and Les Affaires Special Sections**  
This year, La Presse+, in collaboration with Aéro Montréal, published two special sections on our industry: one in February on the manpower shortage, and the other in October on the future challenges of SMEs in aerospace and highlighting the winners of the Gilles-Demers Awards. Another special section was published in Les Affaires in June, focusing on labour challenges and disruptive technologies.



**375 attend Aéro Montréal's Golf Classic**  
Our annual golf classic was a great success again this year, with all the golfers networking in a relaxed setting. A cycling race was offered for the first time this year. Numerous prizes were handed out, including two Business Class tickets, given by Air Canada, good for any destination it serves.





# Growth Working Group

President of the Growth Working Group

Jean-Charles Raillat  
CEO Americas Division & Motorsport Division, Mecachrome

Unmanned aerial vehicles

SME

Accélérateur 360°  
2019 Trends  
Sharing circle  
StartAéro 360°  
MRO Committee  
Gilles-Demers Awards

RPAS

## Message from the President

“Just imagine! Every day we are working to bring people closer together. Each of us is helping families to travel and business people to grow the economy. Every time we deliver a part, we are contributing to this great adventure that has been going on for over 100 years!

I accepted the presidency of the working group because, driven by a strong entrepreneurial spirit, I see an opportunity, with the entire aeronautics industry in Québec, to promote and leverage our technological and economic advantages. I sincerely believe that our sector and our companies will grow by taking advantage of synergies and forging closer links among various members. This is what I will champion during my term in office, by connecting actors who did not know each other, or who did not realize their combined potential.

I am taking over from Hugue Meloche who presided over the working group the last six years. He has done a tremendous job! I thank him for his tireless efforts to promote our industry, our province and our growth.”

**What would you say to a young person who asks: why should I choose aerospace as a career?**

I would say that there are few sectors that offer the benefit of being able to work with so many specialties and trades, and joining it will allow you to thrive and discover something new every day.

## Working group objectives

- Increase the growth of Québec’s aerospace cluster in order to maintain its position as a global player in an increasingly competitive market.
- Strengthen synergies within the cluster and ensure its global growth.
- Bolster the strategic positioning of Québec companies.
- Foster the consolidation and growth of Québec companies.
- Increase the global presence of Québec companies.

## Working group members

— **Guillermo Alonso**  
President,  
Alta Precision

— **Eric Beauregard**  
Executive Vice-President,  
AV&R

— **Jean Blondin**  
President,  
Abipa Canada

— **Jacques Cabana**  
President & CEO,  
FDC Composites

— **Christian Delisle**  
President,  
Electro Kut

— **Sébastien Farkas**  
President,  
Techniprodec

— **Guillaume Gasparri**  
Executive Vice-President,  
Business Development,  
Groupe DCM

— **Xavier Kauza**  
Sales Director,  
Thermetco

— **Joseph Laflamme**  
President,  
Vestshell

— **Stephanie Lemieux**  
President,  
Libellule Monde

— **Alain Madore**  
President,  
Dart Aero

— **Hugue Meloche**  
President and CEO,  
Groupe Meloche  
(Working group President  
until November 2018)

— **Patrick Phillips**  
Vice-President,  
Business Development,  
Tulmar

— **Jean-Charles Raillat**  
CEO Americas Division  
& Motorsport Division,  
Mecachrome  
Working group President

— **Eduardo Ruiz**  
President,  
Ruiz Aerospace

— **Stéphane Turcotte**  
President Operations  
and co-owner,  
Nétur Inc.



*I would say that what attracts me to aerospace is its power to “stop time” for the length of a flight and physically bring women and men closer together around the globe.*



— Jérémie Viret  
ESG UQAM

# Achievements

## Two new programs for SMEs

Expertise and subsidies for aerospace SMEs



### Accelerator 360°

Launched in September, this one-of-a-kind initiative is designed to support growth and foster collaboration among SMEs in international markets. It also aims to help marketing within global supply chains.

With the changes in supply chains, SMEs have had to rethink their business strategies and, in particular, develop their international client base. For SMEs, reaching a critical mass is essential to provide a more comprehensive value proposition to foreign customers and thus win important contracts on international aircraft programs.

Accelerator 360° in four steps:

- 1. Recruitment:** companies are targeted and grouped according to their different strengths and synergy potential.
- 2. Preparation:** experts in financial market development and partnership culture support the companies in their strategic planning and train them in the various market requirements.
- 3. Propulsion:** this involves assessing a chosen market and tackling it as a project team (two or more companies).
- 4. Consolidation:** this optional step will involve the development of joint ventures and potential mergers and acquisitions.

This new program, deployed by Aéro Montréal, received \$5 million in funding from the Québec government and has a total budget of \$7.2 million. It will support around 35 SMEs over five years. In 2018, 15 companies joined the first cohort of the initiative.



### StartAéro 360°

#### Support for companies

This initiative, with a total budget of \$4.3 million, is designed to support Québec aerospace technology companies (emerging companies and SMEs) in the pre-marketing phase of their innovative products, as well as assist their integration into the supply chain.

To remain competitive, the supply chain needs to embrace disruptive technologies such as digital technologies, big data, artificial intelligence, additive manufacturing, etc. Our role is to help shift the supply chain towards the adoption of these technologies by promoting the integration of technologies developed by emerging companies and innovative SMEs.

The companies in the program will receive support through a structured process. The goal is to respond in a collaborative way to a business opportunity that requires the development of an operational demonstrator.

This initiative will:

- Propel and accelerate the adoption of disruptive technologies on the market;
- Support entrepreneurship through the development of operational demonstrators and the marketing of new products;
- Foster networking between future technology providers and supply chain players.

StartAéro 360° is made possible thanks to \$3 million in funding from Canada Economic Development for the Québec Regions and \$1.3 million from the private sector.

“

The work of our committees and interactions helped to identify the needs of companies and the challenges they face, leading to the creation of the Accelerator 360° and StartAéro 360° initiatives.”  
— Suzanne M. Benoît



Suzanne M. Benoît, Dominique Anglade, Minister, MESI, and Hélène V. Gagnon, CAE, at the launch of Accelerator 360°, May 7, 2018, at the Aéro Montréal General Annual Meeting



Québec announces \$270,000 for the creation of the Cluster of Excellence for drones, in the presence of MP Alexandre Cloutier, Minister Stéphane Billette, MP Serge Simard, Aéro Montréal Vice-President of Operations, Mélanie Lussier, and Mayor of Alma, Marc Asselin, March 8, 2018.

## MRO and Unmanned Aerial Vehicles: Two committees step up!

The Growth Working Group is devoting time and energy to several new challenges that have emerged in recent years.

Created in September 2018, the MRO Committee deals with issues common to all manufacturing industries, namely maintaining operational capacity. The committee aims to foster innovation and promote the MRO sector. In 2018, the committee held two meetings.

Promising courses of action have been established for 2019, as the committee reaches its cruising speed:

- Make the next generation aware of this exciting and sometimes little known sector
- Establish mechanisms for predicting MRO requirements
- Map the capabilities of MROs in Québec
- Encourage partnerships and the sharing of values
- Position Québec's MRO sector on the world stage

The rapid development of the unmanned aerial vehicle (UAV) industry has also captured the interest of Aéro Montréal members, and a working group has been created to reflect on the present and the future of this new vehicle.

Launched in mid-2017 in collaboration with the Unmanned Aerial System Centre of Excellence (UAS CE), the **Remotely Piloted Aircraft System (RPAS) committee** is mandated to position Québec as a vital and recognized player in the RPAS sector in Canada and internationally. It is pursuing three objectives:

- Support the international development of Québec's RPAS sector
- Work on the strategic positioning and representation of the Québec RPAS sector
- Promote the commercialization of RPAS

The group met four times in 2018. Among other things, it organized a major seminar during International Aerospace Week and accompanied an SME delegation to Xponential (Denver, May 2018) and Tech Demo (Alma, September 2018).



## SME mapping continues its journey

Set up in 2016, this project involves visiting Québec SMEs in the sector, whether or not they are members of Aéro Montréal, to get to know them better and to identify their challenges and needs. In 2018, 15 SMEs were met, as well as five aircraft and equipment manufacturers.

In three years, we have listened to the needs, challenges and ideas of more than 100 SMEs. The data collected shows that our SMEs still need help with strategic planning and internationalization, in addition to increasing their critical mass.

These findings led to the launch of the Accelerator 360° and StartAéro 360° programs.

## Trends 2019: the tradition continues



Once again, Aéro Montréal held its 2019 Trends Seminar at the end of the year. The 130 participants listened attentively to our experts talking about what is in store for 2019. Speakers included Benoit Daignault, President and Chief Executive Officer of EDC, and Pierre Cléroux, Vice-President, Research and Chief Economist, BDC.

Subsequently, a round table on tariff barriers, led by Mario Longpré, Partner, Certification at PricewaterhouseCoopers, accompanied by Guy Boutin, Senior Investment Advisor to the President, Major Accounts, Investment and Financing, at Investissement Québec, enabled participants to better understand the impact of these new measures on their activities.

This annual event is also an opportunity to celebrate the holiday season before welcoming in the new year.



Suzanne M. Benoît and Benoit Daignault, President and CEO, EDC, with other members of the head table during the 2019 Trends Seminar



Benoit Daignault, President and CEO, EDC



Mario Longpré, PricewaterhouseCoopers; Guy Boutin, Fonds de solidarité FTQ; Mélanie Lussier, Aéro Montréal; Pierre Cléroux, BDC; and André St-Pierre, Investissement Québec, during the Trends 2019 Seminar.

## Agreement with Wales

Aéro Montréal signed a collaboration agreement with Aerospace Wales, the aerospace cluster of Wales, on July 17 as part of the Québec trade mission to the Farnborough International Airshow. This agreement aims to help give our respective companies better access to prime contractors and their supply chains.

Wales is a very important aerospace ecosystem on the international stage. With 160 aerospace companies and 23,000 skilled workers, Aerospace Wales has naturally emerged as a partner of choice for the Québec aerospace cluster to develop the necessary synergies among our companies and thereby facilitate market access.

Aerospace Wales and Aéro Montréal will work together to find business opportunities in their respective ecosystems that could be of interest to companies in Wales or Québec. This collaboration will result in the organization of trade missions and joint events to support our SMEs in building lasting relationships with Aerospace Wales companies. The goal is also to facilitate access to prime contractors who are present in our respective supply chains and to better understand their needs.



### Four breakfasts to discover the industry

Aéro Montréal this year successfully resumed its company breakfast formula. The principle is simple: a company hosts a group of 25 people to introduce their facilities and discuss an important challenge over coffee and pastries. ABIPA, Mecachrome and MDA were our hosts. A fourth breakfast was held at Aéro Montréal, under the theme "Let's Talk Asia."



In 2017, Aéro Montréal set up a sharing circle on best business practices. Its members met and talked about company management on eight occasions in 2018. Beyond the sharing of expertise, the circle offers an opportunity to network and form partnerships. The group is made up of 8 SMEs and is run in collaboration with the STIQ. This year, among other things, we discussed the management of supply chains, human resources and operations, as well as the culture of innovation.



Signing of the agreement between Aéro Montréal and Aerospace Wales, in the presence of John Coleman, Québec Delegate General in London, Suzanne M. Benoît, Dominique Anglade, Minister, MESI, Sylvain Bédard, Sonaca Montréal, and John Whalley, Chief Executive Officer, Aerospace Wales.



### Ensure the future

A company wishing to recruit and retain its workforce in times of labour scarcity has to offer working conditions that will make people want to join it. Group insurance programs provide an edge. Offering group insurance enables a company to stand out as an employer of choice. That's why Aéro Montréal, in collaboration with AGA Insurance Group, has set up a group insurance program to consolidate our purchasing power to generate savings and improve employee benefits. The program is now in place, and all our SME members can join.



# Gilles-Demers Awards 2018

Every two years, the Gilles-Demers Awards recognize aerospace SMEs that have distinguished themselves in various categories. It is also an opportunity to celebrate our industry, its dynamism and its talent. The Growth Working Group ensures the integrity of the contest, the overall coordination of the project, and the gala evening.

More than 300 people representing the Québec aerospace industry attended the announcement of the winners on Friday, October 26, at the Fairmont Queen Elizabeth Hotel.

## The Winners



**SME of the Year: APN**  
Yves Proteau, Co-chair, and Antoine Proteau, Director of Scientific Data, APN, in the presence of Pierre Fitzgibbon, Minister, Mario Longpré, Chair of the jury, Suzanne M. Benoît and Sylvain Bédard.



**Commitment to Innovation: AP&C**  
Alain Dupont, President & CEO AP&C, in the presence of Bruny Surin, Pierre Fitzgibbon, Minister, Suzanne M. Benoît and Sylvain Bédard.



**Wealth Creation and Outreach: Pole Air Aviation**  
Michel Gagnon, Senior Vice-President, and Jean Genest, President, Pole Air Aviation, in the presence of Bruny Surin, Pierre Fitzgibbon, Minister, Suzanne M. Benoît and Sylvain Bédard.



**Business Development and Internationalization: Optimum Canada**  
Érick Peloquin, President, and Vincent Lemoine, Executive Director, Optimum Canada, in the presence of Pierre Fitzgibbon, Minister, Julie Perreault, EDC, Suzanne M. Benoît and Sylvain Bédard.

# THE FUTURE, RESOLUTELY!



The finalists and the jury, accompanied by Pierre Fitzgibbon, Minister, Mario Longpré, Jury Chair, Suzanne M. Benoît and Sylvain Bédard.

*"My finish line is my next starting point"*

— Bruny Surin



Sylvain Bédard and Suzanne M. Benoît welcome guests at the gala evening.



The grand winners of the Gilles-Demers Awards 2018 with the chair of the jury, Mario Longpré, PwC Canada.



Bruny Surin, sprinter, Olympic champion and speaker, during the gala evening.



The gala evening ended in style with a musical performance by Paul Chacra's "1945" band.





# Supply Chain Working Group

President of the Supply Chain Working Group

Louis Marc Pinard  
General Manager,  
Arconic



MACH FAB 4.0 MACH 1 à 5  
21 Projects underway  
Collaborative projects  
Digital maturity  
Initiative  
MACH  
Three steps  
Competitiveness

## Message from the President

"I am working with this group to contribute to the advancement of Québec's aerospace industry.

It's exciting to know that we are helping to create the conditions required to develop future technologies that will significantly transform the industry for decades to come. The challenges that this sector faces and its international scope are also motivating factors.

My mandate is aligned with the implementation of the next three-year cycle of Aéro Montréal's strategic plan. As so many major initiatives have emerged from previous cycles, I would like our group to keep up the momentum, and to put in place the next projects for the future."

**What would you say to a young person who asks: why should I choose aerospace as a career?**

Because you can make a good living from it and because the sector offers not only many entry points but also several opportunities to shift gears during a career.

## Working group objectives

- Identify, analyze and communicate changes and transformations in global supply chains
- Deploy tools, mechanisms and resources in response to the realities and changing needs of the industry
- Ensure the planning and implementation of a concerted action plan to increase competitiveness of Québec suppliers

## Working group members

— **Timothy Ayoub**  
Senior Manager,  
Supply Chain and Planning, Operations,  
L3 Technologies MAS

— **Marc Bigras**  
Vice-President and  
Chief Operating Officer,  
Groupe Meloche

— **Francis Cloutier**  
Director,  
Procurement,  
Bombardier Aerostructures &  
Engineering Services

— **François Cyr**  
Business Development Director,  
USA and International,  
PCM Innovation

— **Jacques Dodier**  
Advanced Sourcing Senior Manager,  
Pratt & Whitney Canada

— **Éric Faucher**  
President and Chief Executive Officer,  
Hutchinson Aerospace & Industry

— **Hélène Houde**  
Director,  
Global Strategic Sourcing,  
CAE

— **Josée Laroche**  
General Manager,  
JMJ Aerospace

— **Louis Marc Pinard**  
General Manager,  
Arconic  
Working group President

— **Jean Proteau**  
Co-President,  
APN

— **Corinne Rodriguez**  
Senior Manager Production Control  
& Logistics,  
Bell Helicopter Textron Canada



*Aeronautics is at the heart of all international exchanges and allows us to deepen our knowledge.*

— Cédric Canuel  
Cégep of Saint-Jérôme



# Achievements

The Supply Chain Working Group is responsible for two major support programs: MACH Initiative and MACH FAB 4.0



## MACH Initiative

If you want to enhance your capabilities and improve your business processes to access the global supply chain, the MACH Initiative is for you! Launched seven years ago, this program is still pertinent and has enabled dozens of companies to become world-class companies and strengthen their position on the international scene.

MACH offers a methodological approach that allows companies to achieve excellence in leadership, operations and workforce planning and development. It is divided into three stages lasting 18 months.

1. A baseline audit, gap assessment and action plan
2. The implementation of the action plan, supported by an experienced sponsor
3. A new audit and classification on the MACH scale, which ranges from 1 to 5

The MACH Initiative in 2018 is:

- A 5th cohort
- 17 new companies supported by the program
- 3 seminars and training



## Going even further: MACH FAB 4.0

The global economy provides a strong incentive for our companies to innovate and modernize, with a focus on leveraging the full potential of Industry 4.0-related technologies.

The MACH FAB 4.0 initiative enables small and medium-sized companies to succeed in the digital transformation in aerospace and thus become more competitive in Québec, Canada and internationally.

It aims to support 50 SMEs in the aerospace sector over a period of five years. MACH FAB 4.0 offers tailor-made support, specially designed to meet the needs of our companies. As a result, they will benefit from information technology to leverage and exploit data, digitize and automate key processes, and modernize their manufacturing processes.

MACH FAB 4.0 is a \$19 million program funded equally by the Government of Québec and industry.

MACH FAB 4.0 in 2018 is:

- 2 calls for projects launched
- 21 projects in progress
- 6 completed projects
- 2 initiatives to pool startup projects

The companies that took part in the initiative in 2018:

- |                                |                                      |
|--------------------------------|--------------------------------------|
| ■ Praxair Surface Technologies | ■ Solaxis Ingéniosité Manufacturière |
| ■ Abipa Canada                 | ■ Techniprodec                       |
| ■ CPS Industries               | ■ Thermetco                          |
| ■ Electro-Kut                  | ■ Tekalia Aeronautik                 |
| ■ Hutchinson                   | ■ Avior                              |
| ■ Nétur                        | ■ Précision J.L.M.                   |
| ■ Optimum-Canada               | ■ MF2 AERO                           |
|                                | ■ Société d'Outillage M.R            |

## Aerospace Valley (France)

On March 6, 2018, Aéro Montréal signed an agreement with Aerospace Valley, the competitiveness cluster for the aerospace, space and embedded systems sectors in New Aquitaine and Occitanie/Pyrénées-Méditerranée, France. The purpose of this agreement is to foster exchanges between the two clusters, particularly for the development of projects related to the defence industry and unmanned aerial vehicles.

This agreement is part of an ongoing cooperation between Aerospace Valley and Aéro Montréal that began in 2007. Since then, numerous exchanges at the industrial and research levels have strengthened our ties. This agreement, the second signed between the two organizations, will enable Aéro Montréal to promote its Sécurité Défense Québec platform. Similarly, Aerospace Valley will share with Aéro Montréal privileged information on the RPAS market, a rapidly expanding sector in Québec that is already well established in France.



## Aerospace cooperation between Morocco and Québec

On October 5, 2018, Aéro Montréal signed a partnership agreement with the Government of Morocco and the Group of Moroccan Aeronautical and Space Industries (GIMAS).

The Government of the Kingdom of Morocco, GIMAS and Aéro Montréal will work together to promote the mobility of professors and students and will establish research projects linking Moroccan and Québec researchers. The agreement will also allow companies in Québec and Moroccan incubators to share their expertise.



“

“Morocco is a world-class aerospace hub that is home to major OEMs in the sector. It is a key player for Québec.”

— Suzanne M. Benoît



## Groupement des industries françaises aéronautiques et spatiales (GIFAS)

Aéro Montréal signed an agreement with GIFAS, the French aerospace industries group, on March 7, 2018. This agreement aims to support the consolidation of Québec and French aerospace supply chains, in particular by actively monitoring opportunities to foster business development between the two clusters. It is essential for our industry to maintain close links with various foreign aerospace ecosystems. The internationalization of our companies is crucial to the development of the entire ecosystem.

Some 25 subsidiaries of French companies in the aerospace sector are already established in Québec. GIFAS chose Montréal for its North American representative office in 2016, in collaboration with Business France.



*I am fascinated by everything related to aerospace because it is an incredibly powerful industry that can connect the four corners of the world – families, friends – faster than ever before.*

— Soufiane Boukhabrine  
McGill University

## Welcome to Montréal, Airbus!

Airbus held an international conference of its suppliers in Montréal on October 24 and 25.

This event takes place annually at different locations in the world. Among those in attendance were about 20 Canadian companies that could potentially join the European company's global supply chain. Aéro Montréal took the opportunity to officially welcome its new partner.



Sylvain Bédard, Sonaca Montréal, and Chair of Aéro Montréal; Nathalie Béchamp, Chief, Investor Services, Invest in Canada; Gilles Labbé, Héroux-Devtek; Suzanne M. Benoît; and Pierre Fitzgibbon, Minister.



Klaus Richter, Chief Procurement Officer, Airbus



Klaus Richter, Airbus, and Suzanne M. Benoît, during the networking luncheon at the Airbus International Supplier Conference, Montréal, October 25.







# Human Resources Working Group

President of the Human Resources Working Group

**Kevin P. Smith**  
Vice-President,  
Human Resources,  
Pratt & Whitney Canada

## Message from the President

"Our sector of activity and our missions are exciting because they bring people together and stimulate exchanges. Thanks to our experts, we are developing complex systems that have a real impact on economic growth, health and humanity in general.

My priorities are training the next generation and facilitating knowledge transfer in the industry. I also want to promote the integration of minorities and women in companies and work on the development of 4.0 skills.

The issue I'm most passionate about is school perseverance. Highly-qualified careers in science, innovation and technology open up a world of opportunities to young people in the aerospace sector. It is the next generation that will enable the Greater Montréal area to maintain its leading position on a global scale."

**What would you say to a young person who asks: why should I choose aerospace as a career?**

In both life and aerospace, you have to love to surpass yourself and follow your passion. Our innovative industry offers many career opportunities within a very challenging international ecosystem. I would simply say, "Join our big family!"

## Working group objectives

- Attract young people to the aerospace industry
- Implement the recommendations of the various white papers produced by the working group over time, for example: the Skills 4.0 White Paper
- Promote intergenerational knowledge transfer
- Ensure greater harmonization and complementarity among industry partner organizations

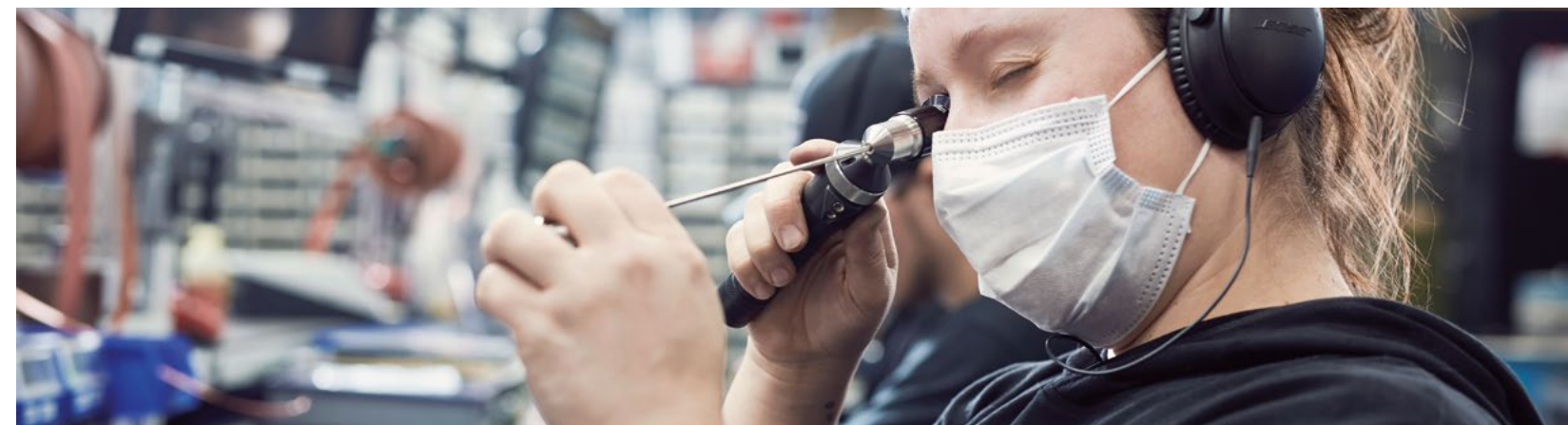
Passion for aviation Internships  
 Diversity  
 Next Generation  
**Talents**  
 Vitrine 2018 – 1,200 Participants  
 1,350 Job offers  
 Snowbirds

## Working group members

- **Ariane Blanchette**  
Vice-President,  
Human Resources,  
DCM Group
- **Isabelle Carle**  
Director,  
Human Resources,  
Expertise Centre,  
Sonaca Montréal
- **Josianne Caron**  
Director,  
Human Ressources,  
Airbus
- **Geneviève Dalcourt**  
Director,  
Formation continue et Services  
aux entreprises,  
École nationale d'aérotechnique
- **Isabelle De Bellefeuille**  
Talent Acquisition Advisor,  
Human Resources,  
L3 Technologies MAS
- **Jocelyne Dujmovic**  
Director,  
Human Resources,  
Hutchinson
- **Louis-Marie Dussault**  
Associate Director,  
Studies,  
École nationale d'aérotechnique
- **Mélissa Fafard**  
Administrative Assistant,  
AÉROÉTS
- **Solange Fresneau**  
Director of Corporate Affairs  
and Administration,  
PCM TechFab
- **Dominique Gérin-Lajoie**  
Human Resources Site Leader,  
Bell Helicopter Textron Canada
- **Annie Girard**  
Production Manager,  
FDC Composites
- **Rita Haddad**  
People Partner,  
Rolls-Royce Canada Ltd
- **Mario Héroux**  
Director,  
École des métiers de l'aérospatiale  
de Montréal
- **Éric Jourdain-Cloutier**  
Human Ressources,  
Business Partner,  
Bell Helicopter Textron Canada
- **Tatiana Montes**  
Human Ressources Manager,  
Leesta
- **Geneviève Nantel**  
Director,  
Human Resources,  
Stelia North America
- **Sonia Pérusse**  
Director,  
Human Resources,  
Héroux-Devtek
- **Nathalie Paré**  
Executive Director,  
CAMAQ
- **Clothilde Petitjean**  
Director, Programs,  
Consortium for Research  
and Innovation in Aerospace  
in Québec (CRIAQ)
- **Claude Picard**  
Director,  
Work Organization and Training,  
Pratt & Whitney Canada
- **Marc Plamondon**  
Vice-President,  
Human Resources,  
Bombardier Business Aircraft
- **Véronique Roussy**  
Human Resources counsellor,  
Techniprodec
- **Kevin P. Smith**  
Vice-President,  
Human Resources,  
Pratt & Whitney Canada  
Working group President
- **Karolyn Tessier**  
Human Resources Coordinator,  
Atlas Aeronautik
- **Benoît Villien**  
Technology Manager,  
Siemens Canada limitée
- **Jennifer Vaughan**  
Leader,  
Talent Acquisition,  
CAE

*Observers:*

- **Réjean Charbonneau**  
Director,  
Direction régionale adjointe à la  
prestation de services aux clientèles,  
Emploi-Québec de l'Île-de-Montréal
- **Donald H. Violette**  
Regional Coordinator,  
Partenariats et stratégies,  
Mesures et services aux entreprises,  
Direction régionale de l'Île-de-Montréal,  
Emploi Québec
- **Guillaume Bégin**  
Direction des transports  
et de la mobilité durable,  
Ministère de l'Économie  
et de l'Innovation





# Achievements

## Lighting the spark

Passion from Within and Passion for Flight are free in-class activities that introduce students to the aerospace industry and professions specific to this sector. Over one to two class periods, students (primary and secondary) build a paper glider by following all the manufacturing steps and then test it. In addition to becoming familiar with the technological design process, students learn about related aerodynamic forces, movements and scientific inquiry.

Thanks to the Working Group's partnership with the Laval Cosmodôme, more than 70,000 young people participated in these two programs in 2018. As part of the program, the Cosmodôme introduced Aero Sundays in partnership with university teams from McGill and the ÉTS. In addition, 55 classes were visited during the year 2018 targeting strategic areas of the Montréal South and North shores and an Aboriginal school.



**Euréka!**  
From June 8 to 10, more than 2,800 youngsters made gliders bearing Aero Montréal's colours at the Euréka! Festival, a fun, educational public event held yearly in the Old Port of Montréal. This was the perfect opportunity to raise young people's awareness about science, new technologies and, of course, aerospace.

## Sharing the passion

### A first: The Snowbirds grace the skies of Montréal

On June 28, Aéro Montréal organized a major aerospace celebration at the Old Port of Montréal. The goal: to instill passion! The Snowbirds and all those involved achieved a tremendous success: 2,500 people participated in the indoor activities and an estimated 20,000 people witnessed the air show!

The event also enabled visitors to experience first-hand several aerospace-related activities. This included a total immersion in this industrial universe through a discovery tour of six "zones," including history, concept and design, manufacturing, flight and innovation. Snowbirds pilots also signed autographs for the youngest attendees.

A final zone, supported by Emploi-Québec in partnership with the Interconnexion talent lab, was used to address best practices for inclusion within the aerospace industry.



Pilots of the Royal Canadian Air Force Snowbirds met with the Royal Canadian Air Cadets at the June 28 public event. This meeting preceded the unique air show, a first in Montréal, over the Old Port.



## RRAM

### When youth speak to youth!

Powered by Aéro Montréal, young aerospace enthusiasts wanted to come together to make the sector known to their peers. This gave birth to the Regroupement relève d'Aéro Montréal (RRAM, Aéro Montréal Next Generation Group)!

This multidisciplinary group of students and recent graduates in the aerospace field is composed of ambassadors from all academic disciplines and young professionals. The group creates links with industry through a variety of activities, such as events, networking and consultation. The RRAM is also an advisory tool working towards one of the strategic objectives of Aéro Montréal's Human Resources Working Group, which is to meet the major challenges of the next generation and aerospace workforce.

In 2018, its first year, the RRAM organized eight major events, including seminars, immersion days and networking activities. Two "spokesperson" ambassadors attended working group meetings and are positioning themselves as the "voice" of the next generation.



The RRAM and panelists at the first International Women's Day organized by Aéro Montréal, March 8, 2018.



Meeting of RRAM ambassadors and Snowbird pilots on the 438 Tactical Helicopter Squadron base in Saint-Hubert, June 26, 2018.



The HERA project team with Professor David Rancourt of the Université de Sherbrooke and Suzanne M. Benoît, President of Aéro Montréal, on the occasion of the RRAM event entitled "The aircraft of the future, towards electric aviation," on May 24, 2018. Photo: Jacques Frénette (UdeS)



RRAM ambassadors pose in front of the Airbus H-120 helicopter of École nationale d'aérotechnique (ÉNA) during the CTA conference.



The RRAM was selected as an inspiring project during the 3rd edition of the CMM's Agora Inspiring Projects and congratulated by Valérie Plante, Mayor of Montréal, on September 15, 2018.



## Industry support

### 4.0 Skills Guide

Aéro Montréal produced this reference tool to help educational institutions and companies in their journey to 4.0. It contains information that schools can use to integrate 4.0 competencies and that companies can use to update their internal training programs to transfer and retain knowledge.

Since its publication, a committee has been established to promote and use this guide among the target clientele through the development of a self-diagnosis tool.

### Vitrine 2018: For the next generation of aerospace workers

On April 20, 2018, 1,500 candidates accepted Aéro Montréal's invitation to attend the third edition of its career event: AéroPortail – Vitrine 2018, at the Palais des congrès de Montréal.

This event was organized in partnership with the Ministry of Labour, Employment and Social Solidarity and Aéroports de Montréal as part of International Aerospace Week – Montréal 2018.

Professionals attending Vitrine 2018 were able to apply for more than 200 jobs. Twenty-five corporate and school kiosks were also set up to promote opportunities in our sector.

The Career Day also provided an opportunity to hold the 3rd edition of our Case Study, featuring nine teams from a dozen universities and specialized schools. The theme this year was: "The passenger experience of tomorrow – aircraft interiors of the future as seen by Québec's next generation." Very high-quality project proposals were submitted aimed at redefining the flying experience and interiors of aircraft of the future.

The 2 to 4 member groups had to come from post-secondary schools. An additional point was awarded to multidisciplinary teams. The jury was composed of people from Zodiac Aerospace, Bombardier, Hamburg Aviation and Air Canada. Nine projects were received and analyzed by the jury. The winners, the Mirador team, from Polytechnique Montréal, represented Québec during an observation and presentation mission to Hamburg, Germany, in 2019. Other prizes were awarded.



The finalists of the 3rd edition of the Case Study competition organized in partnership with Hamburg Aviation.



Presentation of a model of the Global 7500 at Louis-Riel High School, to mark Bombardier's participation in Passion for Flight. The model was donated by Marc Plamondon, Vice-President, Human Resources, Bombardier Business Aircraft, and Merling Sapene, Project Initiator at Bombardier.



Aerospace students and enthusiasts met with industry professionals who demonstrated their technologies during the Vitrine 2018 event. Aerospace training institutions also took advantage of this opportunity to present their programs. More than 1,500 participants and 30 exhibitors attended the event.

### AéroPortail: 1,300 candidates in the job bank!

To meet workforce challenges, Aéro Montréal developed the AéroPortail, a unique portal for presenting careers and trades in the aerospace industry. This tool brings training courses and job offers in the aerospace sector together on a centralized platform. More than 100 companies are members and its Facebook page, which has more than 20,000 subscribers, is positioned as the only official community of the Québec aerospace industry.

### High-level training!

Québec has seven universities that offer engineering programs. In addition, there are two internationally recognized and specialized schools, the École nationale d'aérotechnique (ÉNA) and the École des métiers de l'aérospatiale de Montréal (EMAM). Greater Montréal therefore has all the necessary assets to develop a talent pool that is unique in the world for the training of the next generation workforce in aerospace.

### Recruitment mission to Toulouse

An aerospace recruitment mission was made to Toulouse from October 15 to 17, organized in collaboration with Montréal International. There were 7 companies, 11 participants and 43 job profiles sought for 100 available positions. The program included visits to schools and attendance in the APEC job fair.



*I have always been passionate about the field of aeronautics because it redefines our ability to travel around the world. Moreover, it is an area in which human beings are constantly redefining their limits.*

— Jérémy Mignault  
École de technologie supérieure







# Innovation Working Group

President of the Innovation Working Group

**Fassi Kafyeke**  
Senior Director,  
Strategic Technology and Innovation,  
Bombardier



## Working group members

- **Houssam Alaouie**  
Director,  
Research & Development Programs  
and University Relations,  
CAE
- **François Arrien**  
Vice-President,  
Robotic Finishing & CTO,  
AV&R Aerospace
- **Alain Aubertin**  
Vice-President,  
Business Development  
and International,  
CRIAQ and CARIC
- **Sylvain Boisvert**  
General Manager,  
Safran Canada
- **Louis Brunet**  
Director of Business Development /  
Business Aviation,  
Rockwell Collins
- **Mikaël Cardinal**  
CEO,  
Zenith Altitude
- **Patrick Champagne**  
Vice-President,  
Engineering and R & D,  
Esterline CMC electronics inc.
- **Christine Chanal**  
General Manager / CFO,  
Fusia
- **Phil Cole**  
Vice-President,  
Business Development,  
Marinvent
- **Jean Colpin**  
Industrial Advisor,  
MIAE,  
McGill University
- **Mélissa Côté**  
Manufacturing Engineering Manager  
Metrology & Repair Technology,  
Rolls-Royce Canada
- **Sue Dabrowski**  
Offsets & Communications,  
Mannarino Systems and Software
- **Mathieu Demers**  
Vice-President & General Manager,  
Avianor
- **Pascal Désilets**  
General Manager,  
CTA
- **Michel Dion**  
Innovation Lead,  
Bell Helicopter Textron Canada
- **Denis Faubert**  
CEO,  
CRIAQ and CARIC
- **Fassi Kafyeke**  
Senior Director,  
Strategic Technology and Innovation,  
Bombardier Aerospace  
Working group President
- **Bob Katz**  
President,  
Katz Design
- **Denis Lacroix**  
Industrial Technology Advisor,  
NRC-IRAP
- **Anne-Marie Lan Phan**  
Head,  
Intellectual Property Management  
and technology Transfer (IPMTT),  
Canadian Space Agency
- **Sylvain Larochelle**  
Office Manager,  
Technology Collaboration,  
Pratt & Whitney Canada
- **Éric Laurendeau**  
Assistant Professor,  
Mechanical Engineering,  
Polytechnique Montréal
- **Mouhab Meshreki**  
Director,  
Research & Development,  
NRC
- **Christian Moreau**  
Professor,  
Mechanical and Industrial Engineering,  
Director of CIADI,  
Concordia University
- **Hany Moustapha**  
Fellow ASME, CAE, CASI & CSME,  
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,  
INO
- **Éric Roberge**  
CFO & Owner,  
Luxia Innovation
- **Peter Rosenthal**  
Industrial Technology Advisor,  
NRC-IRAP
- **Jean Roussel**  
Strategic Specialist,  
Engineering Solutions,  
L3 Technologies MAS Canada
- **Dominique Sauvé**  
Director,  
SA<sup>2</sup>GE
- **Marc-André Talbot**  
Director,  
Research & Development,  
Thales Canada

### Observers:

- **Dominique Leroy**  
Sector Officer,  
Aerospace and defence,  
Strategic Policy Sector Innovation,  
Science and Economic Development
- **Stephan Fogaing**  
Aerospace Advisor,  
Direction du transport et de la logistique,  
Ministère de l'Économie  
et de l'Innovation
- **Marco Blouin**  
Managing Director,  
Direction de la Science et de l'Innovation,  
Ministère de l'Économie  
et de l'Innovation

## Message from the President

"It's imperative that our industry succeed in shifting to emerging technologies, such as electrification, automation, artificial intelligence, virtual aviation and more. This is essential if we want to maintain our leading position in the world, and continue to enjoy the benefits generated by this major industry.

Aéro Montréal is an excellent vehicle for conveying this message. The work we do in the Innovation Working Group enables us to leverage all the cluster's synergies in innovation and technology and to advance the aerospace cause.

Through our meetings, our discussions and our projects, the working group gives us the opportunity to bring together high-calibre professionals. This is very stimulating. We quickly discover that we have many needs in common and that a large number of collaborations are possible."

**What would you say to a young person who asks: why should I choose aerospace as a career?**

The airplane is a most remarkable invention and offers special application opportunities for all the engineering sciences: structures, aerodynamics, electronics, computers, propulsion, chemistry, etc. You never run out of beautiful challenges!

## Working group objectives

- Establish an initiative to develop a strategy for aerospace innovation in Québec
- Identify and coordinate initiatives to structure projects in support of the innovation strategy
- Work together with other innovation organizations to ensure proper coordination and avoid duplication of efforts

**Aéro21**  
**Sa<sup>2</sup>ge**  
 Galilée 4.0  
**Innovation**  
 Maturity scale  
 R&D investment  
 Disruption  
**Hambourg Aviation**  
**New technologies**



# Achievements

## Aerospace Innovation Forum 2018 (6<sup>th</sup> edition)







Nearly 1,200 decision-makers and 90 Canadian and international aerospace speakers attended the 2018 Aerospace Innovation Forum (AIF) held April 16–17 in Montréal.

The AIF is one of the largest global aerospace industry events in North America. It provides a unique opportunity for attendees to discuss innovation best practices developed by the industry.

Organized in collaboration with the National Research Council of Canada (NRC), the theme was "Aerospace in the era of disruptive technologies."

Disruptive technologies are transforming our ways of working and producing. Their orderly deployment is the key to success. The AIF offers a powerful platform to explore the impact of these technologies on aerospace innovation and other sectors of the economy.

### Six key technologies were addressed

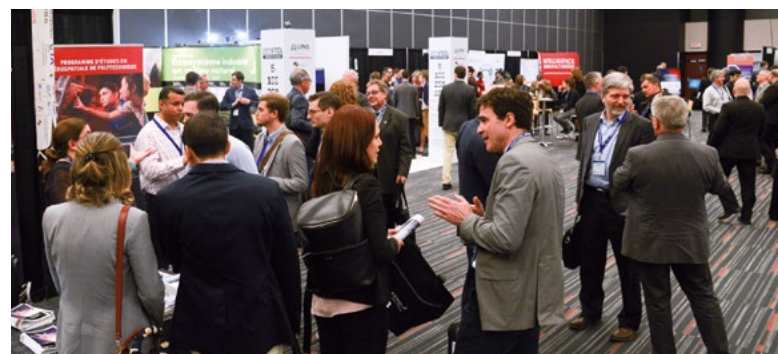
-  Advanced Manufacturing
-  Big Data for Mobility
-  Additive Manufacturing
-  On-Demand Autonomous Mobility
-  Eco-Technologies
-  Virtual Design and Testing



Dominique Anglade, Minister, MESI, with the members of the Aéro Montréal Board of Directors.



**Cooperation Agreement with the State of Kentucky**  
The Kentucky Aerospace Industry Consortium (KAIC) and Aéro Montréal signed a collaboration agreement on April 17. Because the two organizations share the same objectives, this agreement will benefit everyone. As with most agreements of this nature, the parties have agreed to exchange information, organize joint events, and seek opportunities for sharing and cooperation.



Networking session during the Aerospace Innovation Forum.

## Aéro21 strategic mobilizing project: More research, enhanced competitiveness

Launched in December 2018 by the Government of Québec, and created by industry, Aéro21 is a non-profit organization that will support projects related to advanced manufacturing (Factory 4.0, additive manufacturing) and digital technologies, including avionics and testing on a "virtual airplane."

This project will enable SMEs to work closely with OEMs. The Aéro21 project underscores our desire to support collaboration among companies that make up our cluster. Through this collaboration we will be able to develop more innovative products that better meet market expectations.

Aéro21 is funded by industry (including Bombardier, Pratt & Whitney and Esterline CMC Electronics) and the Ministry of Economics and Innovation (MEI). With a \$16.5 million contribution from the government, companies will add \$44 million. These large companies will bring along a sizable number of SMEs.



**A new maturity scale for digital technologies**  
In collaboration with Hamburg Aviation, Aéro Montréal is developing a scale of digital technology adoption maturity that will enhance our MACH FAB 4.0 program. More than 30 SMEs should benefit from this scale. Work is progressing well.



Roundtable on "Increasing aviation operations with new aerospace technologies" at AIF 2018, in the presence of Alain Bellemare, President and Chief Executive Officer of Bombardier, Calin Rovinescu, President and Chief Executive Officer of Air Canada, and Joe Anselmo, Editor of Aviation Week & Space Technology.



Roundtable on aerospace innovation at AIF 2018, featuring Hélène V. Gagnon, CAE, Cynthia Garneau, Bell Helicopter Textron Canada, the Honourable Navdeep Bains, Minister of Innovation, Science and Economic Development, and Suzanne M. Benoit.

The 2018 Aerospace Innovation Forum is:

1,200 participants

1,400 business meetings

90 speakers from around the world

30 plenary sessions and workshops

70 exhibitors





## Defence and Security Working Group

**President of the Defence and Security Working Group**

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

### Message from the President

"I have been a member of this working group since its creation in 2008. It is really a great opportunity and honour for me to preside over this group and to work as a team with the representatives of Québec organizations who excel in defence and aerospace.

Aerospace defence is a prime sector in which to innovate, both in terms of business practices and technology. The aerospace community is dedicated to rigour and the highest ethics. This enables everyone to surpass and distinguish themselves, above all, on the basis of merit.

Our main objective is clear: we want to prepare Québec defence companies so that they can be successful with the major acquisition programs of the Department of National Defence and also position themselves in export markets."

**What would you say to a young person who asks: why should I choose aerospace as a career?**

Aerospace is a field that will allow you to develop your skills and talents in a high-tech environment that is inclusive and stimulating, and that offers superb opportunities.

### Working group objectives

- Help Québec's aerospace industry compete better with Canadian and international players in the aerospace defence market
- Identify, coordinate, implement and monitor initiatives designed to structure projects in support of strategic recommendations
- Identify key performance indicators (KPIs) to measure the implementation of the strategy
- Work with other organizations in the field to ensure non-duplication of efforts



### Working group members

- **Marc Bigaouette**  
Director,  
Optimized Weapon  
System Support CH-146,  
Bell Helicopter Textron Canada
- **Luc Boucher**  
Vice-President Operations,  
North and South America,  
Ocean Software
- **Badr Boushel**  
Technical Sales Manager,  
Mannarino systems & Software
- **Nick Chalkiadakis**  
Product Manager,  
Flight Management and Navigation  
Systems,  
Esterline CMC Électronique
- **Phil Cole**  
Vice-President,  
Business Development,  
Marinvent
- **Richard Crépault Jr**  
Account Manager,  
Business Development,  
Landing Gear Division,  
Héroux-Devtek
- **François Cyr**  
Business Development Director USA /  
International,  
PCM Innovation
- **Sue Dabrowski**  
Strategy, Government Relations &  
Business Development,  
LibelluleMonde
- **Nancy D'Agostino**  
Director,  
Governmental Affairs,  
CEDQ
- **Luc DeBargis**  
Director,  
CSC-Industrial Strategy, Planning  
and Operations,  
Lockheed Martin Canada
- **Amélie DeCrouette**  
Corporate Business Development,  
Manager,  
Thales
- **Robin Demircioglu**  
Account Manager,  
BD and ITB,  
CRIAQ
- **Marie-Christine Flibotte**  
Specialist, Communications,  
Marketing and Sales,  
Solaxis
- **Joe Gazalé**  
Manager,  
Business Development  
and Industrial Participation,  
L3 Technologies MAS
- **André Gilbert**  
Vice-President,  
Sales & Marketing,  
CS Canada
- **Benjamin Hamel**  
Director,  
Business Development,  
MDA
- **Maxime Hince**  
Business Development Manager,  
INO
- **Jean Hurtubise**  
Director,  
Sales and Business Development,  
CAE
- **Xavier Kauza**  
Director,  
Sales,  
Thermetco
- **Jarred Knecht**  
President,  
Promark Electronics
- **Patrice Lavoie**  
Vice-President,  
Sales and Business Development,  
Varitron
- **Marc Leblanc**  
Senior Director,  
Business Development,  
L3 Technologies MAS
- **Sylvain Lefrançois**  
Director,  
Business Development,  
Electronics and Defence,  
Optronics Division,  
Safran Canada  
Working Group President
- **Lorenzo Marandola**  
President,  
M1 Composites Technology
- **Keith Meredith**  
President,  
Aerolnsight
- **Marc Moffat**  
Managing Director,  
UAS Centre of Excellence
- **Helio Pazinato**  
Analyst,  
Strategy and Corporate  
Development | Corporate Office,  
Bombardier
- **Patrick Pharand**  
Director,  
Business Development,  
Collins Aerospace
- **Alain Thillo**  
Director,  
Systems,  
MTLS Aerostructure
- **Éric Tremblay**  
Senior Product Manager,  
Pratt & Whitney Canada
- **Glen Walker**  
Director,  
Business Development Canada,  
Varitron
- **Erica Zoia**  
Director General,  
Conseil Économique et  
Tourisme Haut-Richelieu (CEHR)

*Observers:*

- **Patrick Bouchard**  
Advisor,  
Direction des équipements  
du transport, secteur aérospatial,  
Ministère de l'Économie et de  
l'Innovation
- **Stephan Fogaing**  
Advisor,  
Direction du transport et de la  
logistique, secteur aérospatial,  
Ministère de l'Économie et de  
l'Innovation



## Achievements

Thanks to Québec suppliers' innovation capabilities, flexibility and speed of adaptation, the defence and security sector is occupying an increasingly important place in the manufacturing industry. Aéro Montréal is working to support Québec companies in helping them penetrate this market and thereby increase Québec's share of defence and security spending in Canada.

Today, Québec holds about 20% of the Canadian aerospace defence market. In comparison, Québec's aerospace sector, in all segments, accounts for just over 50% of the Canadian market. With recent federal government investments in defence and support provided to SMEs, there are now significant opportunities for our companies.

### SDQuébec: A portal serving the industry

To facilitate these discussions and highlight the skills and know-how of Québec companies, Aéro Montréal, STIQ, Québec International and the Ministry of Economy, Science and Innovation (MESI) created SDQuébec, a collaborative, informative and proactive business platform for the business development of Québec companies in the defence and national security sector. An excellent reference tool, SDQuébec is above all a one-stop shop where key players from here, from Canada and from abroad can connect.

In concrete terms, the portal team monitors business opportunities in defence for the benefit of its members. It also organizes training and events for the industry.

In 2018, SDQuébec had more than 460 companies signed up and 1,300 business opportunities were posted. Other, more targeted, activities are also offered by SDQuébec.

### SDQuébec

PORTAIL SÉCURITÉ DÉFENSE  
SECURITY DEFENCE PORTAL

#### Learning webinars

Our team organized three webinars this year for SDQuébec members. They provided basic information about accessing the US market and identifying business opportunities.

From: André Gilbert

To: Aéro Montréal

*Hello Aéro Montréal,*

*I am sending you this letter to applaud the quality and relevance of SDQuébec since its launch last year. My sales team and I are using this service for the News, Events, and especially Opportunities sections. This information is being disseminated to everyone by many different organizations, and the synthesized and centralized report you provide enables us to accurately track, in real time, information and business opportunities of interest to our company. Thanks go to you and the Aéro Montréal team for this contribution to the defence and security industry in Québec as well as to our organization.*

*Looking forward to meeting you again soon,*

André Gilbert, MBA

Vice-President, Sales and Marketing  
CS Communication & Systems Canada



#### Talk about security and defence!

At the end of June, as the Snowbirds graced the skies of Montréal for the first time, Aéro Montréal organized a discussion group bringing together 200 people on the theme of pilot training systems. A representative from National Defence also gave a presentation on the department's major acquisition programs. In addition, we celebrated the 60th anniversary of the North American Aerospace Defense Command (NORAD).



#### When CAE invites an industry

At the invitation of CAE, about 50 industry members participated in a company tour on December 11. CAE provided attendees with an overview of the company's many current and future programs, projects and needs.

## 2018 Symposium on the Canadian Defence and Security Market

This annual event brought together nearly 250 participants in Boucherville on October 22. This year's theme was "Developing Your Export Markets."

The Symposium on the Canadian Defence and Security Market attracted OEMs, equipment manufacturers and SMEs. The event aimed to position Québec and its companies and research institutions at the centre of business opportunities in defence and security. In particular, it provided companies with information on developments in the Government of Canada's acquisition projects and enabled them to explore the diversification of markets in this sector.

Thematic workshops, plenary sessions and networking sessions were on the agenda.



Networking session at the Symposium on the Canadian Defence and Security Market, October 22.



Presentation on "Taking Advantage of Department of National Defence Acquisitions" in the presence of Brigadier-General M. Lalumière, CD, Director General, Air Force Development.

## Monitoring the IDEeS program

The IDEeS program, announced in Canada's defence policy, is investing \$1.6 billion over the next 20 years in defence and security innovation. IDEeS is seeking solutions to support the development of innovative defence and security capabilities. The IDEeS program supports the establishment of new innovation networks and supports existing networks to foster collaboration and the free flow of ideas essential to innovation. Aéro Montréal actively monitors all opportunities created by IDEeS and informs its members about them on a regular basis.

Aéro Montréal, in collaboration with CRIAQ, offered two workshops to inform its members of the modalities of the program and the business opportunities available to them. A first workshop took place during the 2018 Innovation Forum. A second, last August, dealt with autonomous systems. Some 40 projects have been awarded to Québec companies under this program.



#### Active committees

The Defence and Security Working Group has three working committees. The IDEeS group, the Acquisition of fighter jets and, finally, the Training program for the aircrew of the future. These committees met 11 times and participated in a wide range of activities, including workshops, surveys, awareness raising, representations and mapping.

#### When our companies conduct business

On May 1, 2018, about 170 people attended the Regional Forum on the Fighter Jet Project. This forum consisted of B2B meetings and aimed to bring manufacturers closer to prime contractors.

#### FWSAR: To help save lives

PAL Aerospace is an Airbus Defence and Space partner for the replacement of fixed-wing search and rescue aircraft from Canada (FWSAR). The Airbus C295W will replace Canada's former CC115 Buffalo and CC130 Hercules aircraft as search and rescue assets. This replacement program offers many business opportunities for our SMEs.

In February 2018, Aéro Montréal and PAL Aerospace organized a day of information, training and B2B meetings focused on this program. More than 75 people attended.



# Governance

## Aéro Montréal Governance

The Aéro Montréal Board of Directors and the Secretariat pay close attention to the governance of the organization. Sound governance management is essential to the sustainability of an organization. Risks of all kinds – financial, reputational and otherwise – need to be well defined and risk mitigation measures put in place.

The Board of Directors is composed of 30 members representing all sectors of our industry. As required, it met four times this year. Its discussions covered major industry challenges, and a consensus was sought from all the players in our ecosystem on how to tackle them.

Three Board committees ensure compliance with the legal and fiduciary requirements, namely Governance, Finance and Audit, and Human Resources. We do not talk much about their work, but it is essential. The functioning of the executive committee was modified during the year. It will now meet on an ad hoc basis, depending on operational needs. Some other minor changes were made to the bylaws and were approved by members at the annual meeting.

In addition, the Human Resources Committee coordinated the adoption of two internal policies. First, it updated Aéro Montréal's workplace harassment policy to bring it into line with the new legislation. It also proposed a policy on the use of cannabis and other substances as a result of the legalization of cannabis in Canada.

### Annual General Meeting and Journée des élus

Aéro Montréal's Annual General Meeting (AGM) was held at Montréal's Maison des régions on May 9, 2018. There were 129 members present, 8% more than the previous year. The meeting was held in the presence of Mayor Valérie Plante and Robert Beaudry, a member of the Montréal Executive Committee responsible for economic development. About 10 elected representatives from Greater Montréal were also in attendance.

Following the annual meeting, elected officials from Greater Montréal were invited to visit the Bombardier and CAE plants so that they could see our industry in concrete terms and meet the leaders of these two flagship companies.



Valérie Plante, Mayor of Montréal, addressing the 2018 Annual General Meeting.



Suzanne M. Benoît, Hélène V. Gagnon, Chair of the Board of Directors, and Nicolas Labrecque, NRF, Legal Counsel.

### Financial statements 2018

Financial statements prepared by management are in accordance with Canadian accounting standards for not-for-profit organizations. The audit was conducted in accordance with Canadian generally accepted auditing standards.

The controls in place and the audit results enabled auditing firm Deloitte, in December 2018, to produce its report without reservation.

### Members of board committees\*

#### Finance and Audit Committee

- Jean Blondin  
Chair
- Marc Donato  
Member
- Éric Ledoux  
Member

#### Human Resources Committee

- Jacques Comtois  
Chair
- Hélène V. Gagnon  
Member
- Guillermo Alonso  
Member
- Patrick Champagne  
Member

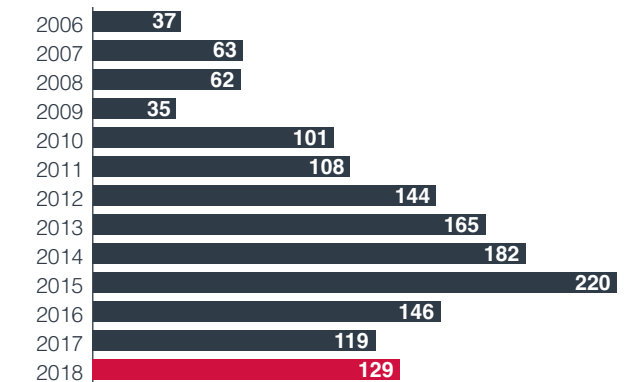
#### Governance Committee

- Claude Baril  
Chair
- Cynthia Garneau  
Member
- Michel Grenier  
Member
- M<sup>re</sup> Paul Raymond, NRF  
Legal advisor

\* The President and the Chair are ex-officio members of the three committees.



### Attendance at the annual general meeting of members



Number of participants

### Attendance at Board of Directors meetings and Board committees

Committees	Number of meetings	Total duration (in hours)	Number of participants (average)	Number of private participants (average)
Board of Directors	4	8.0	28	21
Executive Committee	7	3.5	7	7
Finance and Audit Committee	4	8.0	5	5
Governance Committee	4	8.0	5	5
Human Resources Committee	4	4.0	5	5
Annual General Meeting (AGM)	1	2.0	129	85

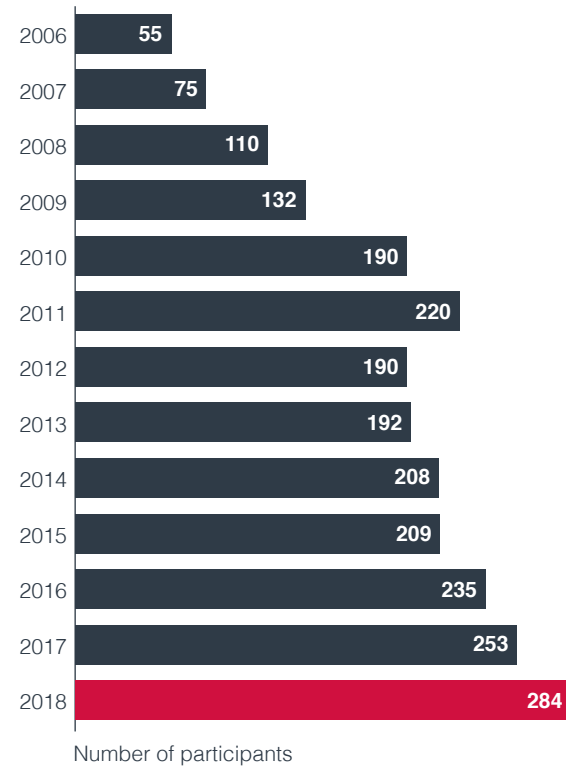
# Mobilization and Achievements



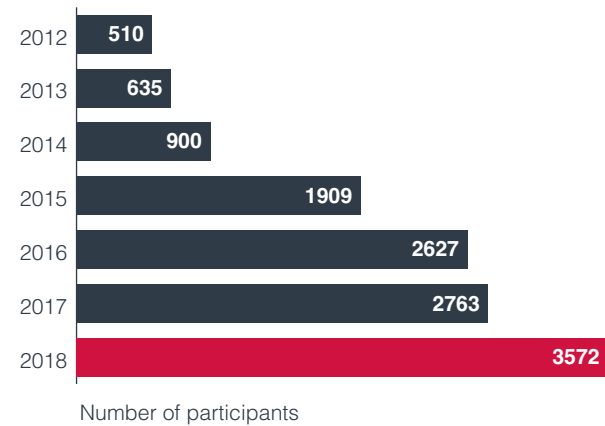
## Mobilization and Participation

The great strength of Aéro Montréal is the hundreds of women and men who, day after day, participate in our work and activities. This commitment is demonstrated by their involvement in our many entities – Board, working groups, committees, events, etc. Their strategic support and their invaluable collaboration unquestionably contribute to the success and dynamism of the cluster. The following tables provide a glimpse of the energy they devote to Aéro Montréal and the growth of our industry.

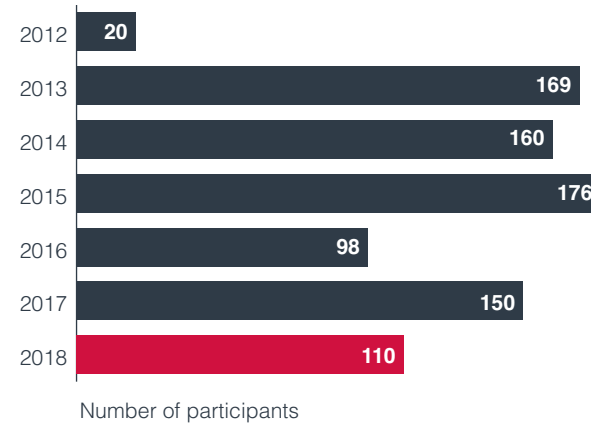
### Industry Mobilization



### Participation in SME Events



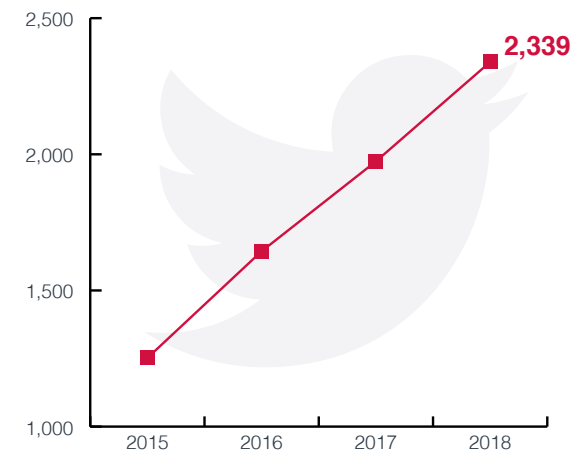
### Participation in MACH Evolution Events



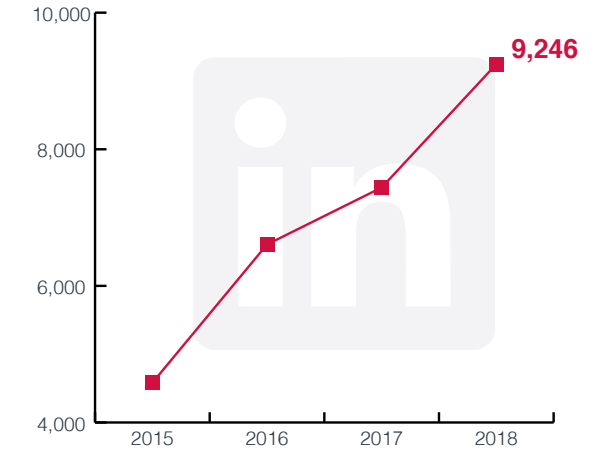
## Visibility

2018 was a banner year for Aéro Montréal's social media. Our Twitter community grew by 18.5%, and our subscribers to LinkedIn, the social business network, increased by 24.3%. With more than 73 interviews and more than 1,000 social media publications, we can say without a shadow of a doubt that Aéro Montréal was visible in 2018.

### Twitter Community Growth



### LinkedIn Community Growth



**Projects generated by the MACH initiative**  
**889 improvement projects completed or underway to date:**

**256** projects carried out internally with or without the support of a sponsor

**323** projects requiring special expertise

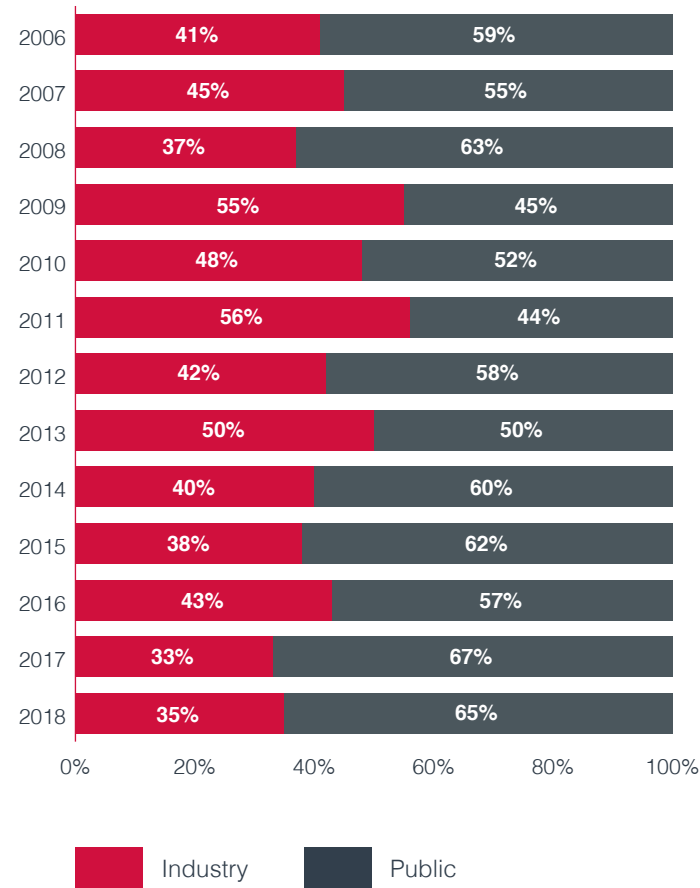
**310** skills development projects



# Mobilization and Achievements (cont'd)

## Distribution of Total Contributions from the Public Sector and Industry (2006–2018)

In 2018, the private sector's share of total contributions to the cluster was 35.5%. Excluding MACH projects and Accelerator 360°, the private sector accounted for 50.7% of Aéro Montréal's revenue.

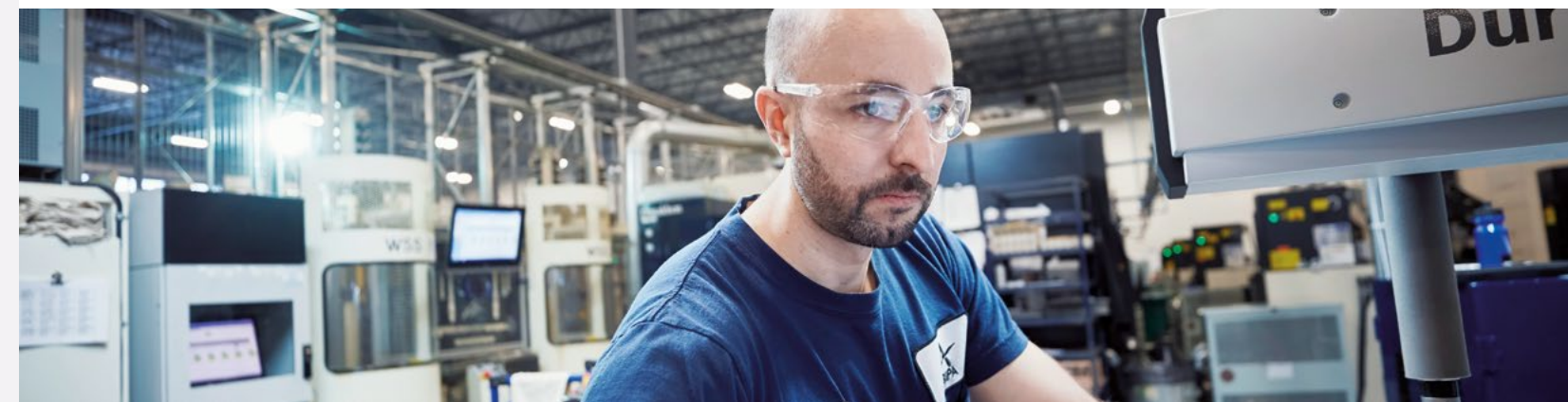
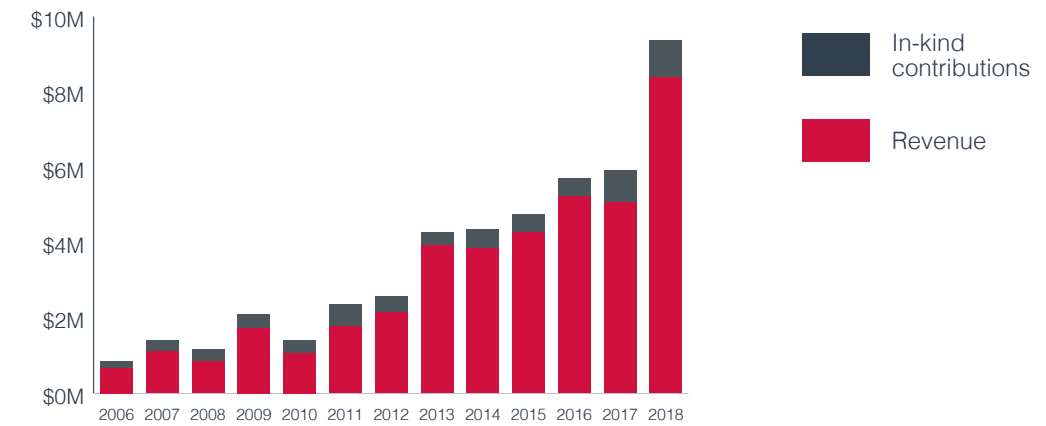


## Distribution of Contributions from the Public Sector and Industry in 2018

Contribution from the public sector in cash	\$5,901,082	62.91%
Contribution from the public sector in kind	\$154,200	1.64%
Contribution from industry in cash	\$2,480,011	26.44%
Contribution from industry in kind	\$845,500	9.01%
<b>TOTAL</b>	<b>\$9,380,793</b>	<b>100%</b>

## Evolution of Total Contributions (2006–2018)

By combining revenue and in-kind contributions, total support to the cluster grew by 58.6% compared with 2017, to \$9.38 million in 2018. Contributions in 2018 are 11 times more than in 2006. In 2018, public and private sector in-kind contributions to the cluster totalled \$1 million.



# In-kind contributions by sector – 2018

Committees	Number of meetings	Duration (in hours)	Number of participants (average)	Number of private-sector participants (average)	Rate (\$/hour/participant)	Subtotal (industry)	Total (industry and public)
<b>Board of Directors</b>	<b>4</b>	<b>8.0</b>	<b>28</b>	<b>21</b>	<b>\$400</b>	<b>\$68,000</b>	<b>\$90,400</b>
Special meeting – reclassification committee for Bombardier employees	1	2.0	23	19	\$400	\$15,200	\$ 8,400
<b>Executive Committee</b>	<b>7</b>	<b>3.5</b>	<b>7</b>	<b>7</b>	<b>\$400</b>	<b>\$9,200</b>	<b>\$9,200</b>
<b>Finance and Audit Committee</b>	<b>4</b>	<b>8.0</b>	<b>5</b>	<b>5</b>	<b>\$400</b>	<b>\$16,000</b>	<b>\$16,000</b>
<b>Governance Committee</b>	<b>4</b>	<b>8.0</b>	<b>5</b>	<b>5</b>	<b>\$400</b>	<b>\$15,200</b>	<b>\$15,200</b>
<b>Human Resources Committee</b>	<b>4</b>	<b>4.0</b>	<b>5</b>	<b>5</b>	<b>\$400</b>	<b>\$7,200</b>	<b>\$7,200</b>
<b>Strategic Planning Committee</b>	<b>3</b>	<b>7.5</b>	<b>12</b>	<b>11</b>	<b>\$400</b>	<b>\$28,800</b>	<b>\$32,200</b>
<b>Working Group Presidents Committee</b>	<b>1</b>	<b>2.5</b>	<b>6</b>	<b>6</b>	<b>\$400</b>	<b>\$6,000</b>	<b>\$6,000</b>
<b>Annual General Meeting (AGM)</b>	<b>1</b>	<b>2.0</b>	<b>129</b>	<b>85</b>	<b>\$200</b>	<b>\$34,000</b>	<b>\$51,600</b>
<b>Innovation Working Group</b>	<b>5</b>	<b>15.0</b>	<b>19</b>	<b>9</b>	<b>\$200</b>	<b>\$28,200</b>	<b>\$58,200</b>
Artificial Intelligence (AI) Pilot Committee	2	4.5	9	7	\$200	\$6,300	\$7,600

Committees	Number of meetings	Duration (in hours)	Number of participants (average)	Number of private-sector participants (average)	Rate (\$/hour/participant)	Subtotal (industry)	Total (industry and public)
<b>Defence and Security Working Group</b>	<b>4</b>	<b>19.0</b>	<b>21</b>	<b>17</b>	<b>\$200</b>	<b>\$65,000</b>	<b>\$81,400</b>
Future Fighter Capability Project (FCCP) Committee	3	6.0	6	5	\$200	\$6,400	\$7,600
Future Aircrew Training (FAcT) Committee	3	6.0	8	7	\$200	\$8,400	\$9,200
Innovation for Defence, Excellence and Security (IDEeS) Committee	2	4.0	9	7	\$200	\$5,200	\$7,200
<b>Growth Working Group</b>	<b>6</b>	<b>15.0</b>	<b>11</b>	<b>10</b>	<b>\$200</b>	<b>\$30,500</b>	<b>\$34,000</b>
Unmanned Aerial Vehicles Committee	4	11.5	18	11	\$200	\$25,800	\$41,900
MRO Committee	2	5.0	17	16	\$200	\$16,000	\$17,600
Accelerator 360° Pilot Committee	1	7.0	15	15	\$200	\$21,000	\$21,000
<b>Supply Chain Working Group</b>	<b>4</b>	<b>12.0</b>	<b>8</b>	<b>8</b>	<b>\$200</b>	<b>\$18,000</b>	<b>\$18,000</b>
Strategic Planning Committee	1	1.5	3	3	\$200	\$900	\$900
MACH-FAB 4.0 Pilot Committee	2	5.0	8	8	\$200	\$7,500	\$7,500
<b>MACH Initiative – In-kind engagement of active sponsors*</b>							
Cohort 1		65.7	14	14	\$125	\$115,000	\$15,000
Cohort 2		60.0	5	5	\$125	\$37,500	\$37,500
Cohort 3		68.6	7	7	\$125	\$60,000	\$60,000
Cohort 4		60.0	7	7	\$125	\$52,500	\$52,500
Cohort 5		45.9	17	17	\$125	\$97,500	\$97,500
	5	300.2	10	10	\$125	\$362,500	\$362,500

\* Notes for the MACH initiative – In-kind engagement of active sponsors:

The total number of participants equals the 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 cohort.

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.



# In-kind contributions by sector – 2018 (cont'd)

Committees	Number of meetings	Duration (in hours)	Number of participants (average)	Number of private-sector participants (average)	Rate (\$/hour/participant)	Subtotal (industry)	Total (industry and public)
<b>Human Resources Working Committee</b>	<b>5</b>	<b>10.0</b>	<b>17</b>	<b>11</b>	<b>\$200</b>	<b>\$21,600</b>	<b>\$34,400</b>
Interns Committee	1	3.0	10	5	\$200	\$3,000	\$6,000
Skills 4.0 Committee	1	4.0	11	6	\$200	\$4,800	\$8,800
<b>Branding and Promotions Committee</b>	<b>3</b>	<b>6.5</b>	<b>9</b>	<b>5</b>	<b>\$200</b>	<b>\$6,500</b>	<b>\$120,00</b>
RISE TO THE FUTURE Promotion Committee	3	8.0	7	2	\$200	\$3,900	\$12,100
<b>Finance Roundtable</b>	<b>1</b>	<b>2.0</b>	<b>14</b>	<b>11</b>	<b>\$200</b>	<b>\$4,400</b>	<b>\$5,600</b>
<b>GRAND TOTAL</b>		<b>490.7</b>				<b>\$845,500</b>	<b>\$999,700</b>



# Calendar of events 2018

Date	Event
<b>January</b>	
16	"Finance, Marketing and Sales Occupations in Aerospace" conference
22	FFCP Industry Day (defence)
<b>February</b>	
7	PAL Aerospace Industry Day
8	"Drones in Full Fight" conference
16	First meeting of the best business practices sharing circle
23	Hosting of the Arizona delegation
<b>March</b>	
4 to 8	Québec Economic Mission in France
8	Conferences for 2018 International Women's Day
23	Second meeting of the best business practices sharing circle
26 to 28	Aerospace & Defence Supplier Summit Seattle
28	SME discovery breakfast at Abipa
28	Hosting of Governor Holcomb's delegation – Indiana
<b>April</b>	
5	MACH Evolution Series: "HR Marketing: Stand out by developing a strategy to recruit and retain the best candidates"
10 to 12	Aircraft Interiors Expo 2018
10 to 12	Army, Navy, Air Force Outlooks 2018
16 to 20	International Aerospace Week – Montréal 2018
16 and 17	Aerospace Innovation Forum 2018
19	Inter-cluster meeting (Montréal and international)
20	AeroPortal Career Day
27	Strategic Forum of the Chamber of Commerce of Metropolitan Montreal
<b>May</b>	
1 to 3	Xponential
1	FFCP (Defence) Program – Regional Tour
2	FAcT Industry Day
4	Canada-Portugal Economic Relations: Maximizing the Benefits of CETA
7 to 9	Global Power and Propulsion for North America 2018
10 and 11	Global Aerospace Summit: Aerospace Technologies to Address Industry 4.0 Challenges
24	"The Aircraft of the Future: Towards Electric Aviation" Conference
30 and 31	CANSEC (defence)

<b>June</b>	
19	MACH Evolution Series: "When the plant hinders growth"
28	Snowbirds Event and Trades and Career Workshop
28	Defence and Security Day – Pilot Training
<b>July</b>	
16 to 22	Farnborough International Airshow
<b>August</b>	
27	Aéro Montréal Golf Classic and Cyclo Activity
<b>September</b>	
6	Third meeting of the best business practices sharing circle
12	Globe and Mail's Innovation Summit
25	Webinar on the US Defence Market
26 and 27	UAV event in Alma (CED)
27	Manufactured in Vermont
<b>October</b>	
11	Fourth meeting of the best business practices sharing circle
12	Webinar on the US Defence Market
19	Aerospace Trades Discovery Paths
22	Symposium on the Defence Market
25	Airbus Suppliers International Conference – networking event
26	Gilles-Demers Gala 2018
29	Doing MRO in Canada
<b>November</b>	
2	Webinar on the US Defence Market
6	MACH Evolution Series: "Has recruitment become a headache for you? International, a viable option at reasonable costs?"
5 to 7	Hamburg Aviation Forum
8	Fifth meeting of the best business practices sharing circle
12	Technological Innovation Forum for Aerospace – Entretiens Jacques-Cartier
13 and 14	Canadian Aerospace Summit (AIAC)
26	Trends 2019: Economic update and Holiday Dinner
<b>December</b>	
4 to 6	Aeromart Toulouse
6	MACH Evolution Series: "Industry 4.0: The Keys To A Successful Project"
11	CAE Visit Day (Defence)
13	Vision 2025: AIAC consultation with Québec's Aerospace Industry



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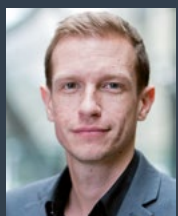
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