

QUÉBEC'S AEROSPACE SECTOR



ALL ABOARD!

To remain a strong contender, Québec's aerospace industry has decided to tackle challenges specifically related to the supply chain, a vital component of our companies' competitiveness.

In this 2nd issue of the Québec Aerospace Sector Journal, we take a look at subcontracting and the changes that are needed, as well as the steps we should take to adapt ourselves to today's market environment.

Our industry is experiencing major economic shocks. We are also facing challenges such as competition from emerging countries, the availability and development of manpower, and a supply chain that is changing to adapt to the needs of OEMs.

To maintain its leadership position, our sector must continuously develop new products, new technologies and new processes that perform better, cost less and are safer. We need to be able to count on a skilled labour force and a flexible, integrated and innovative supply chain.

Québec's supply chain has exceptional strengths such as excellent manufacturing methods and world-class products. But it must continue to innovate.

To facilitate this, the aerospace industry has chosen consultation and collaboration. Through Aéro Montréal's Supply Chain Development Working Group, players in the sector have recognized the need for our suppliers of products and services to continuously focus on cost control, quality management and innovation.

Together, they have also developed concrete measures to improve production processes and to support the design activities of OEMs.

The results so far confirm that Aéro Montréal is a powerful strategic think tank for effectively tackling our challenges.

This development tool, made possible by the support of all players in our sector, is allowing us to work together for the benefit of the entire industry.

Marc Parent
Chairman of the Board of Aéro Montréal and CEO of CAE Inc.

Towards an integrated and more competitive supply chain



Globalization and rapid changes in the marketplace are prompting aerospace companies to constantly seek new ways to reduce costs and lead times for design and manufacturing to enhance their competitiveness. This is resulting in a major transformation in the global aerospace supply chain.

In view of these changes, Aéro Montréal, the aerospace cluster of Metropolitan Montréal, has created a working group to tackle these challenges: The Supply Chain Development Working Group.

This working group is responsible for planning, coordinating and implementing a concerted action plan to respond to major challenges related to subcontracting. The ultimate goal is to enhance the competitiveness of Québec aerospace subcontractors.

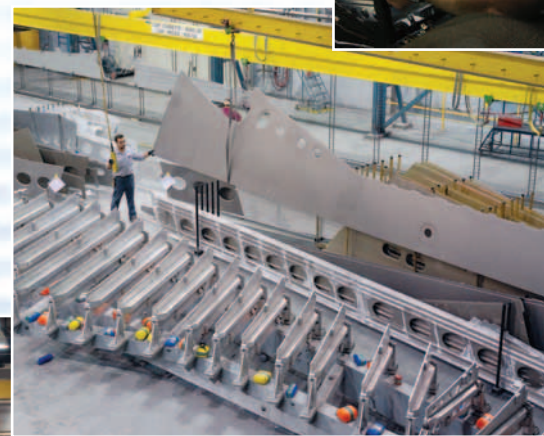
By launching the working group, Aéro Montréal is directly mobilizing its industrial and institutional members to benefit from their expertise in subcontracting.

Other Aéro Montréal working groups are studying specific themes that are also critical for the industry:

- Branding and Promotion,
- Human Capital and Workforce Renewal,
- Innovation,
- National Security and Defence.

The Working Groups' mission is to identify strategies and concrete actions to optimize the interventions of various organizations that make up the aerospace cluster. They achieve this mission by developing and implementing structural projects for the sector. Aéro Montréal has many projects underway that are generating added value to all members of the cluster, both corporate and institutional.

Greater Montréal accounts for 98% of Québec's aerospace activity with 235 companies employing some 42,000 workers and generating global sales of \$12 billion. With Seattle and Toulouse, it ranks among the top three aerospace centres in the world.



This document has been prepared by

Working together for the supply chain



The global aerospace supply chain is undergoing a major transformation and this is posing significant challenges. Aéro Montréal represents an ideal forum for allowing our industry to tackle these.

In a context of market globalization, OEMs want to reduce their number of subcontractors moving forward. They prefer to work with a few intermediary companies who are able to propose integrated solutions and manage many subcontractors.

The trend is towards integrators who are responsible for the design, manufacture and assembly of complete systems.

This trend is reducing the number of prime contractor suppliers and resulting in partnerships between them and their equipment manufacturers, ranging from co-design to supply chain management.

This trend is also leading to partnerships among suppliers who are joining forces to offer global solutions to the industry.

To adapt, suppliers need to improve their operating practices and align them with the industry's expectations. The OEMs have changed their supply methods to meet international competition. SMEs need to follow suit and adapt themselves or pool their efforts to have more clout. The AQA, who represents Québec aerospace SMEs, is playing a key role in raising awareness about this new reality among its members.

Aéro Montréal's Supply Chain Development Working Group enables players in Québec's aerospace sector to reflect on subcontracting challenges and work together to find structural solutions.

To date, the group has developed valuable action plans that will benefit the entire industry. And we intend to continue our efforts to ensure our sector remains competitive.



Philippe Hoste, CEO of Sonaca Montréal
Champion of the Supply Chain Development Working Group

Integrator and equipment manufacturer, a definition

An integrator is a manufacturing company that offers integrated solutions rather than just build-to-print services or the outsourcing of a specific task. To do so, it must have sufficient critical mass to perform the following tasks: program management; design, manufacturing and non-conformance analysis engineering; management of its own supply chain (planning, purchasing, quality and logistics system); systems and subsystems assembly; and after sales service.

It must also have sufficient financing to support risks associated with development activities, ranging from the learning curve to inventories and insurance.

The equipment manufacturer, for its part, performs all the tasks of an integrator but owns its products for which it holds intellectual property rights.

Collabora



In 2008, members of Aéro Montréal pooled their knowledge and experience to tackle challenges related to the aerospace sector's supply chain. Effective management is critical to enhancing the competitiveness of companies operating in this sector.

From now on, it will be critical to have a global vision of the Québec aerospace supply chain. It must be viewed as a whole rather than just as a collection of individual subcontractors who are being increasingly threatened by the migration of the supply chain towards global OEMs and equipment manufacturers.

Companies have spontaneously mobilized within the Supply Chain Development Working Group to examine the various issues related to subcontracting. These include the need for OEMs, prime contractors and SMEs to constantly focus on controlling costs, managing quality and innovation to strengthen the Québec aerospace supply chain against international competition.

To develop a coherent strategy and a meaningful action plan, three subcommittees were formed:

1. Competitiveness	Strengthen Québec's supply chain by adopting best practices to make it more competitive against international competition.
2. Role of the integrator	Increase the critical mass of integrators and equipment manufacturers within Québec's supply chain.
3. Long-term vision	Develop a long-term vision and mission to maintain focus and ensure the sustainability of initiatives designed to strengthen Québec's supply chain.

The projects

Recommendations made by these three subcommittees resulted in 7 priority projects involving nearly 100 people in the aerospace sector over the past year. The working committees responsible for implementing these projects have developed tools and strategies designed to respond to the most pressing challenges.

1. Competitiveness

Project 1.A – Help subcontractors define their key skills, aligned with the needs of primary contractors, equipment manufacturers and integrators.

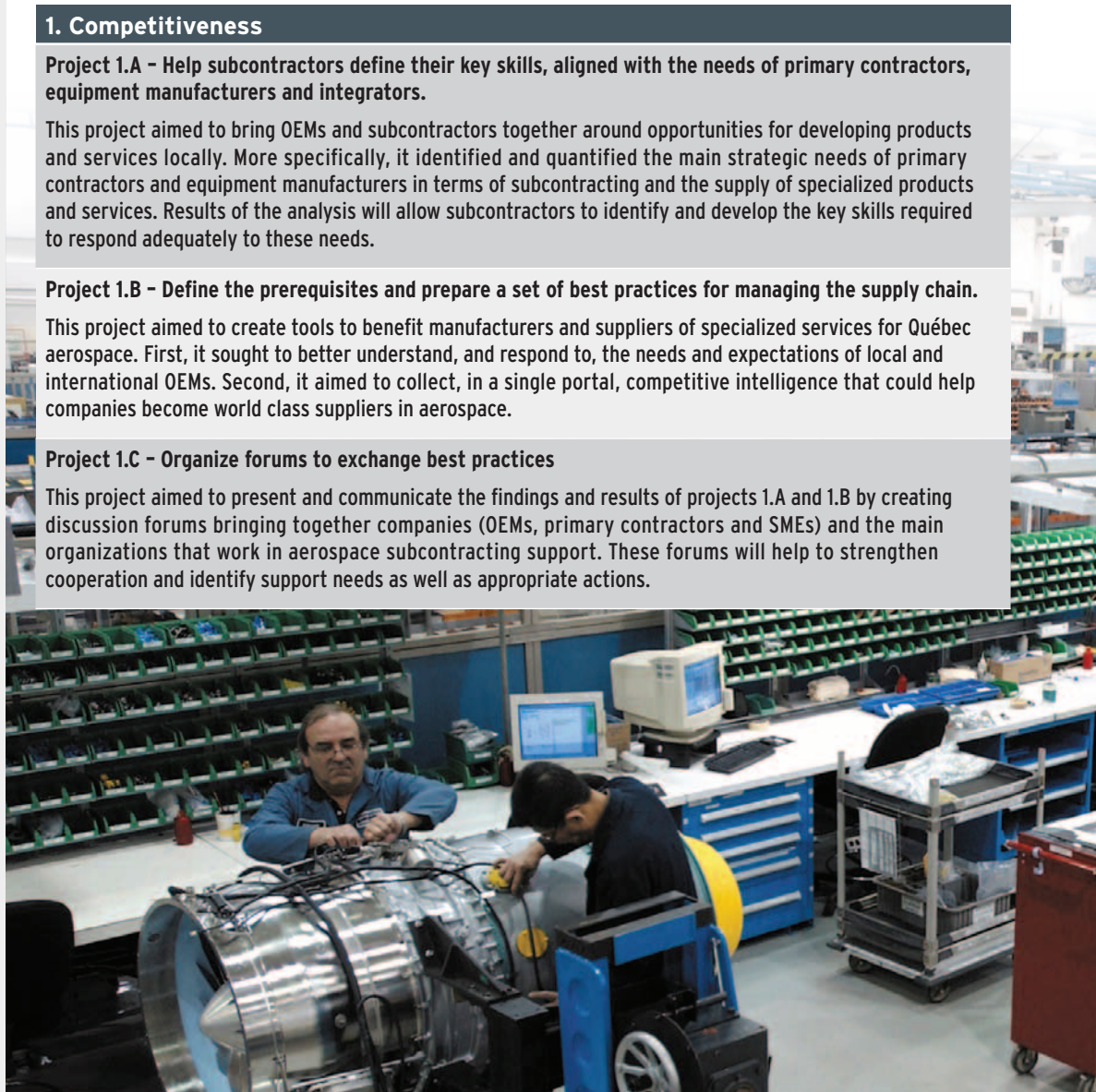
This project aimed to bring OEMs and subcontractors together around opportunities for developing products and services locally. More specifically, it identified and quantified the main strategic needs of primary contractors and equipment manufacturers in terms of subcontracting and the supply of specialized products and services. Results of the analysis will allow subcontractors to identify and develop the key skills required to respond adequately to these needs.

Project 1.B – Define the prerequisites and prepare a set of best practices for managing the supply chain.

This project aimed to create tools to benefit manufacturers and suppliers of specialized services for Québec aerospace. First, it sought to better understand, and respond to, the needs and expectations of local and international OEMs. Second, it aimed to collect, in a single portal, competitive intelligence that could help companies become world class suppliers in aerospace.

Project 1.C – Organize forums to exchange best practices

This project aimed to present and communicate the findings and results of projects 1.A and 1.B by creating discussion forums bringing together companies (OEMs, primary contractors and SMEs) and the main organizations that work in aerospace subcontracting support. These forums will help to strengthen cooperation and identify support needs as well as appropriate actions.



Working together to strengthen the supply chain

I have actively participated in the Supply Chain Development Working Group as representative of Québec's SMEs since January 2008. It has been very stimulating to collaborate with people in our industry and to hold strategic discussions. As a manager of an SME in the aerospace sector where decisions are often tactical, this collaboration allows me to look at global trends in our industry and to talk directly to the main players.

My participation has allowed me to get close to OEMs/integrators and major manufacturers, which I greatly value.

To be successful, the smallest subcontractors in the aerospace industry must be able to align their offer and their ways of working with the current expectations of the industry. Generally speaking, these are determined by the largest companies. Aéro Montréal's Supply Chain Development Working Group makes this direct and open dialog possible.

MarieChantal Chassé, eng.
President, CEO
JMJ Aéronautique
Working Group Member



Sam Abdelmalek
Vice President, Supply Management
Pratt & Whitney Canada
Member of the Working Group



With globalization and the constantly growing requirements of our customers, our local suppliers have a major challenge to meet in order to maintain and improve their competitiveness. Being able to act very quickly is critical.

For many years, Pratt & Whitney Canada has worked with its suppliers to help them improve their competitiveness. There has been much progress and even some remarkable successes, but we have to move even faster and look to the entire Québec supply chain if we want to maintain our global position. That's why we are very involved in the cluster's Supply Chain Development Working Group.

Aéro Montréal is the only organization that brings together prime contractors, OEMs, SMEs, educational institutions and various government organizations. It's an example of how cooperation can eliminate silos and establish better alignment across Québec's aerospace industry. Many similar initiatives in China, the UK, Turkey and India, to name a few, are working to position local suppliers so that they can join the world leaders. It is therefore urgent to act now.

The aerospace industry has been undergoing a transformation for several years. Risk sharing, globalization and industry consolidation have had a major impact on the supply chain. Québec's aerospace industry includes many small and medium size companies that are threatened by these changes in the business environment. The Supply Chain Development Working Group is responsible for establishing a much needed communication strategy and to propose initiatives that will help our SMEs adapt to this new business reality.

Participating in this group has allowed Marquez Transtech to confirm our business strategy, namely our investment in a research team, in employee training and in implementing an integrated management system. We now recognize more than ever the importance of developing our key competencies and investing to be able to offer an integrated product to our partners.

The success of this work depends on the collaboration and focus of the entire industry: prime contractors, OEMs, SMEs, educational institutions and government organizations. Their common goal is to develop a world class supply chain to support the growth of Québec's aerospace sector.

Eric Faucher
President, CEO
Marquez Transtech Ltd.
Member of the Working Group



2. Role of the integrator

Project 2.A - Identify gaps in Québec industry regarding integrators/equipment manufacturers

This project aimed to draw conclusions from various mapping exercises and analyses performed by local OEMs regarding the current and future needs of the industry in terms of integrators and equipment manufacturers. It also aimed to identify local leaders (integrators and equipment manufacturers) who have the greatest growth potential and companies that could set up shop in Québec to respond to issues related to the competitiveness of Québec's supply chain.

Project 2.B - Standardization of international strategies for integration

This project consisted of compiling and analyzing the various financial support programs available to companies operating in the aerospace sectors of developed and emerging countries. This analysis compared the incentives with those available in Québec, measured our service offering against that of the international market, and made recommendations.

Project 2.C - Propose specific strategies for filling the identified gaps to the industry and government

By analyzing the results of projects 2.A and 2.B, this project aimed to define approaches that are novel, competitive and aligned with the needs of local and global OEMs to create an environment fostering the establishment of integrators in Québec's aerospace supply chain.

3. Long-term vision

Project 3.A - Establish a vision, a mission and a unifying process for Québec's aerospace supply chain

Sustainability is at the heart of this project, which aims to define a vision and mission for Québec's aerospace supply chain. It is based around a unifying process that will ensure the sustainability of cooperation efforts made by actors in the sector. It also champions continuous improvement of the supply chain through an optimized business model and a support structure leveraging the appropriate resources.

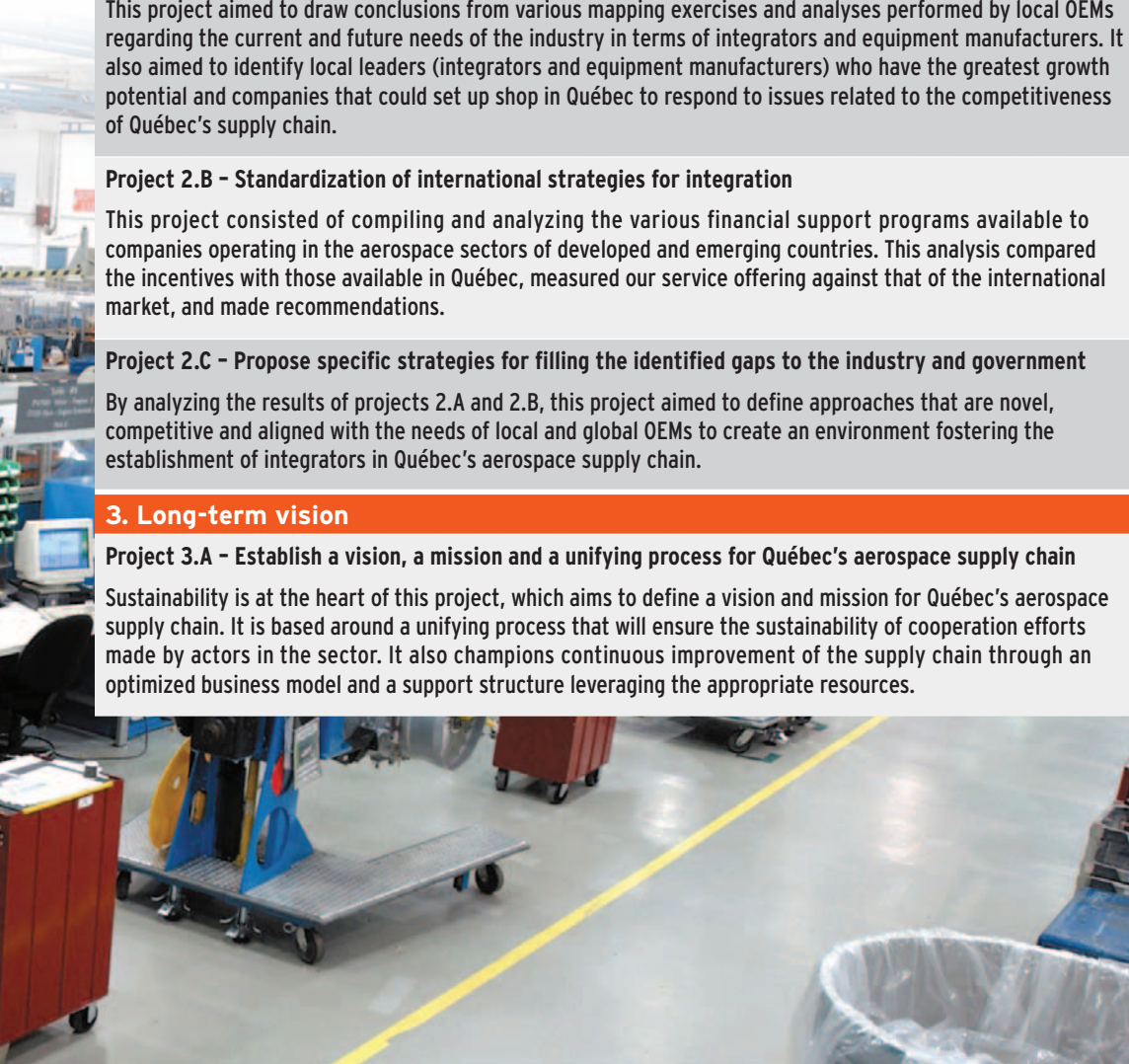
Corinne Rodriguez
TSS Manager Procurement
Bell Helicopter Textron Canada Ltd.
Member of the Working Group



The aerospace industry is a stimulating and expert field where profitability is closely linked to "knowledge," high value-added business processes and cost control. Québec is a contender because of the companies, skilled workers and institutions at the heart of our industry. Moving forward, we will face significant challenges resulting from globalization, the rise of emerging markets, customer demands and fluctuations in financial markets.

Aéro Montréal's Supply Chain Development Working Group is a major engine for change that brings together various OEMs, prime contractors and SMEs to identify critical improvement opportunities and ensure the competitiveness of our Québec industry.

For Bell Helicopter Textron Canada, participating in the group has allowed us to discuss our needs and business goals with OEMs, prime contractors and SMEs in our industry and to advance improvement opportunities in the supply chain that will contribute to the success of all involved.



Aerospace Days

Aéro Montréal has organized 3 aerospace days in the Greater Montréal region.

MONTRÉAL

This Aerospace Day, held on March 20, was attended by municipal politicians, the business community and representatives from the Montréal school community. It aimed to raise awareness among politicians and Montréal leaders about the importance of Greater Montréal's aerospace sector.

As part of the event, a mini-exhibition on the aerospace sector was organized to give companies and other aerospace players a chance to highlight their know-how.

Aéro Montréal also made public its support for encouraging young people to stay in school by signing a collaboration agreement with Montreal Hooked On School, a regional organization dedicated to this cause.

More than 125 people participated in the event at École Polytechnique, including several municipal politicians who later toured CAE Inc. and Bombardier Aerospace facilities.

Raymond Bachand, former Minister of Economic Development, Innovation and Export and Minister Responsible for Montréal, as well as Luis Miranda, Mayor of the borough of Anjou and member of City of Montréal Executive Committee responsible for economic and social development, spoke at the event and reiterated the importance of the sector for the Greater Montréal economy.

Several other Montréal municipal politicians also took part in this activity and the guided company tours.

NORTH SHORE

Aéro Montréal also organized an Aerospace Day in Mirabel on March 31. A private meeting was first held in the morning between a delegation of senior Laurentians aerospace executives and members of the Laurentians *Conférence régionale des élus* (CRÉ). They discussed the challenges and local issues related to the sector with a view to supporting the industry in the Laurentians region.

The Mirabel Chamber of Commerce and Industry hosted a luncheon featuring Sylvain Bédard, Vice President of Aéro Montréal and President of L-3 MAS as guest speaker. Mr. Bédard told more than 100 Chamber members and local politicians attending the event about the strengths of Québec's aerospace industry and its importance to the region's economy.

Aéro Montréal also took advantage of this forum to sign a collaboration agreement with *Partenaires pour la réussite éducative des jeunes des Laurentides* (PREL), a regional organization dedicated to encouraging young people to stay in school.

Several politicians attended the event, including Hubert Meilleur, Mayor of Mirabel; François Cantin, Mayor of Blainville; Roger Lapointe, Mayor of Mont Saint-Michel and head of the Antoine Labelle MRC; and Michel Adrien, Mayor of Mont-Laurier.

SOUTH SHORE

Finally, a third Aerospace Day was held on May 20, at École nationale d'aérotechnique (ÉNA) in St. Hubert.

Following a private meeting between senior executives of aerospace companies on the South Shore and politicians from the Longueuil Agglomeration, Gilles Labbé, member of the executive committee of Aéro Montréal and president and CEO of Héroux-Devtek, told guests about the importance of the industry for the region. He also signed a collaboration agreement with Réussite Montérégie on behalf of the region's aerospace sector.

The Hon. Denis Lebel, Minister of State for Economic Development Canada, took advantage of this forum to announce the renewal of financing for Aéro Montréal for the next two years.

More than 100 people attended Mr. Labbé's speech, including municipal politicians such as Claude Gladu, Mayor of Longueuil, and Nicole Lafontaine, President of Longueuil's *Conférence régionale des élus* (CRÉ). Among the other partners present were l'AQA pme, Emploi Québec Montérégie and Développement économique Longueuil (DEL).



Future priorities of the cluster: Aéro Montréal updates its strategic plan and creates a new working group

In keeping with principles of good governance, Metropolitan Montréal's aerospace cluster last spring renewed its intervention priorities for the next three years and updated its 2009-2011 strategic plan.

All board members of Aero Montréal participated in this exercise establishing the cluster's action plan priorities for the short and long term. It identified the strengths, weaknesses, opportunities and anticipated threats facing the aerospace sector.

Several issues and challenges that could have a negative impact on the industry were raised. These include, among others, the global recession and financial crisis; increased international competition; globalization and supply chain optimization; the relocation of production to low-cost countries; and increased environmental regulations.

In its analysis, the cluster also looked at opportunities and other positive trends that could positively affect the activities of the industry. These include the development of high growth markets (China, India, etc.); company R&D; Canadian military contract spin-offs; and business opportunities related to national defence.

In view of these influences, 7 strategic initiatives were identified as priorities for the cluster: visibility and influence of the industry; the competitiveness of the aerospace sector; attracting young people to our industry; investments in green technologies; federal government support;

adapting provincial government support programs; and positioning the cluster in the national defence sector.

Visibility and influence of the industry

- The cluster recognizes that it is critical to increase efforts and budgets to meet the goals of raising its profile and visibility nationally and among the general public.

Competitiveness of the aerospace sector

- It is critical to continue efforts being made to enhance the industry's competitiveness (increasing productivity; boosting R&D investments; lowering costs; optimizing the supply chain; sharing best practices, etc.)

Attracting youth

- Aéro Montréal believes it is necessary to develop and implement strategies to attract young men and women towards trades in the aerospace sector (communications campaigns, training and tools for teachers, etc.).

Investments in green technologies

- It is important to continue work in line with recommendations made in the White Paper on the 2007 Aerospace Innovation Forum.

Federal government support

- The cluster maintains that we must harmonize the efforts of various aerospace business groupings in order to develop and consolidate the Canadian industry partnership.

Adaptation of provincial government programs

- Aéro Montréal believes it is critical to work with provincial government agencies to ensure that their programs respond well to the needs of companies in a context of global competition for retaining and attracting investments.

Positioning in National Defence

- It is necessary to expand the Defence strategy to encompass all areas of national defence and to step up the industry's efforts to better position itself in this sector. Aéro Montréal has established a new working group, the National Security and Defence Working Group, which began work this fall.

Don't miss the 2009 Aerospace Innovation Forum!



The Aero Montréal Innovation Working Group, in collaboration with CRIAQ, will hold a 2nd Forum dedicated to aerospace innovation in Montréal, the 2009 Aerospace Innovation Forum.

Under the theme "Aerospace clusters: a world of innovation," the 2009 edition of the Forum will be held December 7 and 8, 2009 at the Delta Centre-ville Hotel at 777 University St. in Montréal.

Conferences and workshops on best practices in aerospace innovation and on the current and future strategic challenges faced by existing and emerging clusters around the world are on the agenda. An exhibition of technologies and technological B2B sessions will be held at the same time to give participants a comprehensive overview of technology developments and business opportunities.



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