

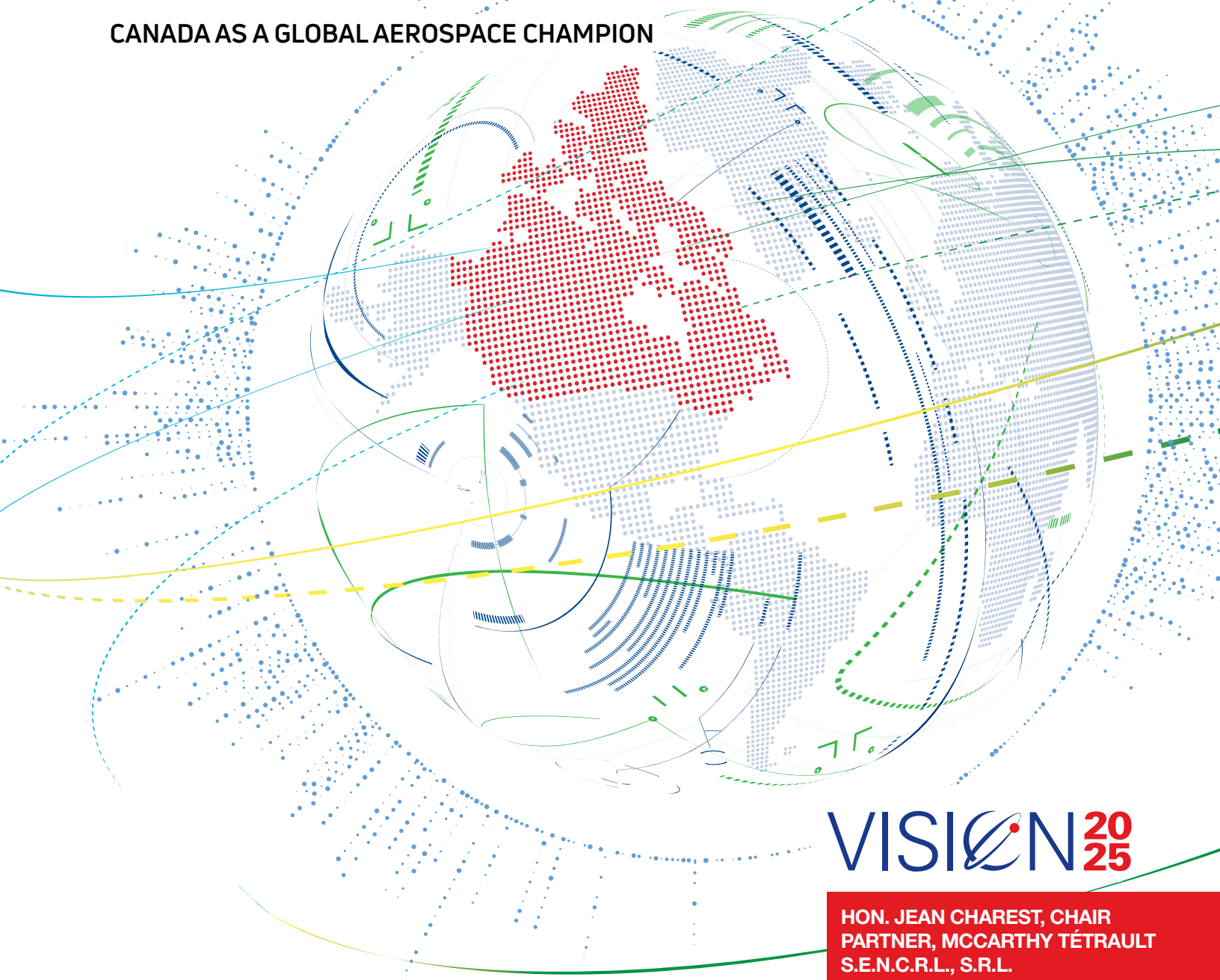


Aerospace Industries  
Association of Canada

L'Association des industries  
aérospatiales du Canada

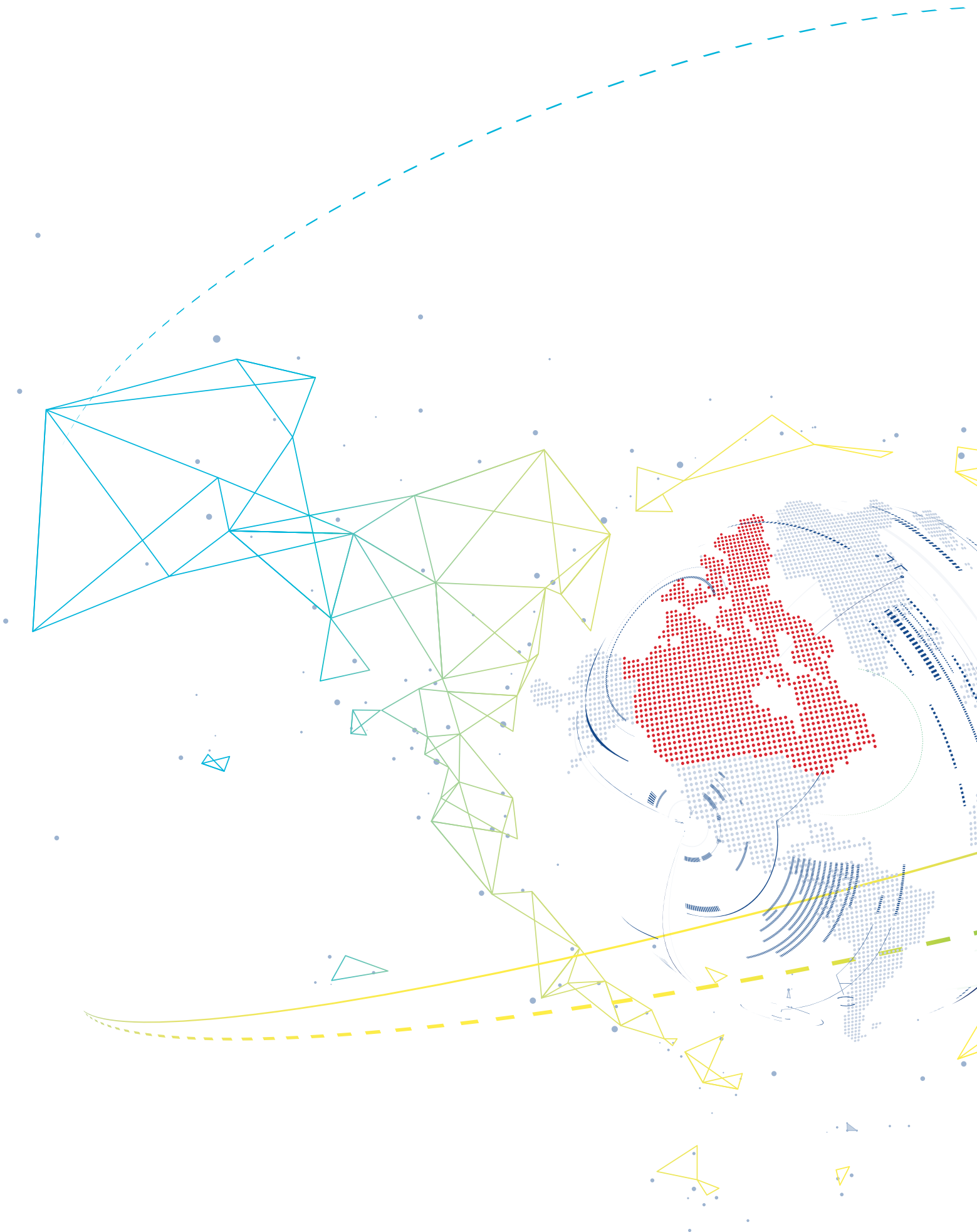
# CHARTING A NEW COURSE

CANADA AS A GLOBAL AEROSPACE CHAMPION



VISION **20**  
25

HON. JEAN CHAREST, CHAIR  
PARTNER, MCCARTHY TÉTRAULT  
S.E.N.C.R.L., S.R.L.





"Eighty years ago, Canada's decision-makers committed to making the country a global leader in aerospace. They were visionaries.

**THE TIME HAS COME  
FOR US TO RENEW  
THAT COMMITMENT."**

–Hon. Jean Charest, Chair  
Partner, McCarthy Tétrault S.E.N.C.R.L., s.r.l.

VISION  20  
25

From developing the cutting-edge AVRO Arrow to operating two Canadarms in orbit and building the fifth-largest aerospace industry on the planet, the Canadian aerospace sector is a true source of pride for the people of Canada.

Today the industry stands as one of our country's proudest achievements—and a driver of Canadian innovation. It contributes nearly 215,000 jobs and \$25.5 billion annually to the Canadian economy.

**None of this happened by accident—and it can be lost if we ignore it.**

It took vision, investment and partnership among government, research institutions, our armed forces, industry and Canadian workers.

Eighty years ago, Canada's political and industrial leaders understood and built on the country's competitive advantages. They knew there was a limited number of competing nations in aerospace. They knew Canadian companies were more technologically advanced. They knew our geographic proximity and geopolitical affinity with the United States gave us an edge.

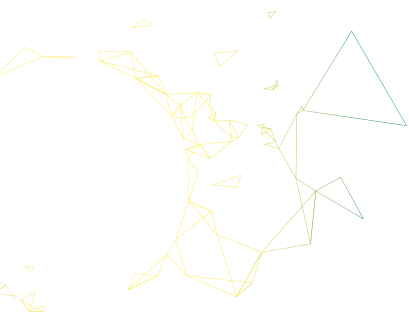
Times have changed—rapidly. Powerful new and competing economies have entered the market. Disruptive technologies are reshaping the industry at an accelerating pace.

What hasn't changed is the need for vision, investment and partnership.

**We are at a critical turning point.**

If Canada is to remain a global aerospace champion, we need a bold new vision for the industry—fully aware of the new realities and building on our strengths to keep us at the forefront of discovery and innovation.

**This is that vision and plan. We're charting a new course.**



In October 2018, the Aerospace Industries Association of Canada (AIAC) enlisted the Honourable Jean Charest to lead a consultation named **Vision 2025**: a pan-Canadian mission bringing industry and our partners together to reaffirm Canadian leadership in the global aerospace sector. This report reflects what we heard from Canadians, and what needs to be done if our country is to remain a global aerospace leader and champion.

# Canada's aerospace industry has the **opportunity** to soar

The aerospace industry has been a driving contributor to Canadian prosperity for decades. Canada ranks first globally in the manufacture of flight simulators and second worldwide in business aircraft production.

The recently released 2019 *State of Canada's Aviation Industry Report* notes that we are, right now, the only country with a top-five rank in all categories, including civil flight simulators, engine manufacturing and aircraft assembly.

Yet we know reputations and legacies don't maintain themselves. Our members at the Aerospace Industries Association of Canada (AIAC)—companies big and small, longstanding and fresh out of the gate—are keenly aware that the powerhouse industry Canada has built is at risk.



Despite the above scenarios, employment in Canada's aerospace manufacturing sector has decreased by 5% and aerospace contribution to GDP has decreased by 4% since 2012. Competitor countries have invested heavily in the aerospace sector. Since 1992, Canada has fallen from 8th to 18th place globally in spending on space as a percentage of GDP.

Around the world, nations are seeing the potential of aerospace to transform their economies and create new opportunities for their citizens. They have watched and learned from countries like Canada that have leveraged aerospace to attain a position of global leadership. They want what we have, and they are acting boldly and strategically to claim it. That's the reality our aerospace industry operates in. If we don't adapt our approach to reflect this reality, we will continue to lose the ground we have worked so hard for so long to gain.

While the global nature of aerospace means our competitors are other nations determined to win, it also means there are global companies out there that—if they know Canada remains serious about aerospace—will choose to do business here.

AIAC launched **Vision 2025** because we understood the urgency of the situation—and that the best way to begin building a new future for Canadian aerospace is to start with a new vision. One that recognizes an environment for investment and growth in aerospace has to look not only to the domestic horizon but also beyond—to the global ecosystem aerospace companies inhabit and compete in every day. One where all contributors to Canada's aerospace success—industry, governments, educational institutions and other stakeholders—are on the same side of the table, committed to working shoulder-to-shoulder to compete for Canada in the global marketplace.

**Vision 2025** will be the catalyst for this new approach to Canadian aerospace growth and leadership if government and industry work together and make this an urgent priority. The priorities and areas for increased collaboration identified in this report represent steps that must be taken if we are to seize the opportunities that lie ahead for our industry. I want to thank and express my appreciation to our AIAC members, stakeholders and provincial partners, all of whom have made an invaluable contribution to this visioning process over the past year.

With the rising global middle class, the demand for aircraft is going to double in the next 15 years. We are also going to see increased military spending and a greater worldwide commitment to space. By making the right decisions today, Canada will have a major share of this growth.

**Jim Quick**

*President and CEO, Aerospace Industries Association of Canada*

# The sky's the limit **if** Canada is ready to lead



If there was one thing I heard consistently in my cross-country discussions this winter as part of **Vision 2025**, it was that we have reached a pivotal moment in the life of the Canadian aerospace industry, one that will decide its ultimate fate.

It's not the first time we've faced such a choice. Aerospace is a vital legacy industry in Canada because we decided as a nation at the end of the Second World War to make it so. The political leaders of the day saw the potential for aerospace to shrink our vast

geography, facilitate global trade and commerce, help secure our borders and raise our quality of life.

As a country with a small population, we didn't have a natural domestic market for this. What we had instead was a long-term vision, deliberate public policy and sustained effort over the ensuing decades.

Today, Canada is a top performer across key segments. We have homegrown market leaders alongside emerging industry players. We have hundreds of dynamic smaller firms. We've attracted international companies

to do research and manufacturing here. As more than one industry member has said to me, we punch way above our weight.

In recent years, the global economy has changed profoundly. This is confirmed in the aerospace industry.

Internationally, growth is going to be exponential over the coming decades as the world's middle class swells—with millions in India and Asia in particular joining its ranks. People want to travel. Demand for air transportation will soar.



**“The political leaders of the day saw the potential for aerospace to shrink our vast geography, facilitate global trade and commerce, help secure our borders and raise our quality of life. We chose to be a leader. We need to choose again.”**

Advanced industrial economies everywhere want a share of that estimated \$10 trillion market. That includes Canada’s traditional aerospace competitors such as the U.S., France and the UK. But, for the first time, it also includes new entrants such as India, Vietnam, China, Russia, Singapore and others. They’re thinking long-term—as far as 50 years out—and they’re moving fast. This is happening while in Canada industry members are expressing concern about the loss of sector-specific programs for aerospace.

We need to rethink how we compete. Our competitors know that. As a recent PwC report put it: “Slow-walking research and development (R&D) efforts have never been a recipe for long-term success.”

Our competitors also know that successful national aerospace industries are built on strong, determined government–industry partnerships. The government of France is perhaps the most vocal champion of Airbus on the world stage. The UK government recently unveiled long-term strategies for aerospace and space to attract global operations to its shores. Europe has its own Flightpath 2050 strategy. Japan and China each have their own. And there are more.

Governments have good reasons for getting behind aerospace. In Canada, the industry has provided nearly 215,000 good jobs in every region of the country. It is active in every province. It contributes \$25.5 billion to our GDP every year.

#### **So what do we need to do to keep that going?**

We have all the elements for success. What’s essential is the commitment of industry and government to confront the new global realities and take hold of emerging opportunities together. At our stop in Montreal, Quebec’s Minister of Economy and Innovation, the Honourable Pierre Fitzgibbon, said: “It is important that the federal government take concrete action and re-establish a sector fund dedicated to innovation, more generous and more flexible for the aerospace industry. If a fund is created, I will make sure that the Government of Quebec follows suit.”

We heard similar things when we met with representatives of other provincial governments. With the industry’s labour unions. With industry leaders. They all indicated willingness to partner with the federal government to support this industry.

Every person I spoke with along the way was proud of Canada’s place in the global aerospace arena.

It’s been an honour and a privilege to Chair the Aerospace Industries Association of Canada’s **Vision 2025** consultations. Over the course of my political career—both federally and provincially—I’ve seen the powerful contribution aerospace makes to this country. That was confirmed in every city we visited: Toronto, Montreal, Ottawa, Winnipeg, Vancouver and Halifax. Each has its own distinct focus and specialization; each also sees itself as part of one of Canada’s truly national industries.

I promised the AIAC board and membership that this was not going to be another Royal Commission-type report. We want to define the priorities and areas for further action. More than anything, this report is about new partnerships in an aggressive pursuit of new jobs, new innovation and new growth. If government and industry commit to a new vision, goals and opportunities, Canada will be a global champion of the sector.

#### **We made the choice to be a leader. We have to make that choice again.**

Members of legislatures, government representatives at all levels, and the country’s policy-makers and influencers have the opportunity to leave a lasting mark on the prosperity of Canada for decades to come. This decision will impact the Canadian economy for several generations.

**Hon. Jean Charest, Chair**  
*Partner, McCarthy Tétrault*  
*S.E.N.C.R.L., s.r.l.*

# Winning in a fiercely competitive global economy

Canada's aerospace sector is the fifth-largest in the world. For decades, we have punched well above our weight in the global market. We have built world-class capability and capacity when it comes to high-value, innovative aerospace products and services. We are home to world-leading original equipment manufacturers (OEMs) and have fostered a highly innovative supplier base that is integrated with growing markets all over the globe.

## How can we seize the opportunities?

AIAC members have voiced great concern that our industry is losing ground to traditional competitors and faces significant challenges from emerging aerospace economies. We also have to take into account the renewed interest in lunar and Mars exploration, the dramatically changing global security landscape, and the explosive growth in commercial airline traffic and new technology.

Canada's aerospace industry is not an island unto itself. It is part of a deeply integrated global supply chain of manufactured goods, expertise and software. Within that supply chain, competition occurs between countries, between firms, and even between the different parts of individual companies that operate in multiple jurisdictions. The most successful aerospace sectors exist where industry, workers, academia and governments work hand-in-hand to achieve a common goal.

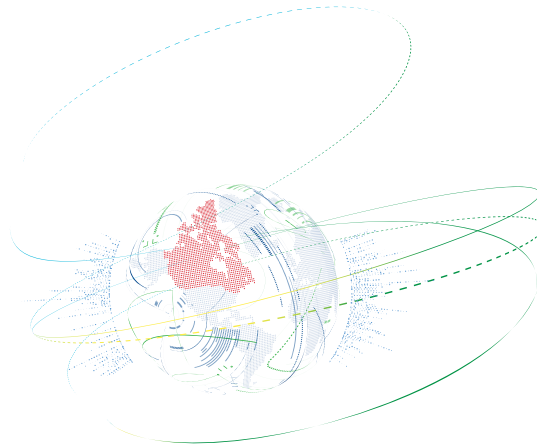
**If Canada is to compete globally, we must do the same.**

## Collaboration is critical

Industry and government have to work more closely together and leverage their respective competencies and expertise. Industry understands which programs work and which do not, and can give specific intelligence on effective policies in other jurisdictions. Government can utilize its macroeconomic power and expertise in program design to support initiatives that are both cost-effective and accountable.

In a collaborative arrangement, government and industry will work together to design new support programs.

Ultimately, success will be judged by how much of the growing global market is captured by Canadian firms to the benefit of all Canadians. It is a true competition. The prize: a robust national aerospace sector that produces hundreds of thousands of family-supporting jobs and profit and tax revenue that can be reinvested into programs both private and public that will continue to benefit our communities. Our history of past accomplishments gives us significant advantages, but does not guarantee success.



## Our vision

Canada will be a world-leading creator of future technologies through cutting-edge R&D and a new partnership between stakeholders and governments. We will generate more good jobs for Canadians and contribute to the prosperity of our country and our communities. For the Canadian people and for aerospace workers in particular, our industry will be a source of national pride.

## 2025 targets

By realizing our vision and truly charting a new course, AIAC is convinced Canada's aerospace sector can achieve the following—and earn our fair share of global aerospace growth:

+\$7

billion GDP contribution

+55,000

well-paying, family-supporting  
jobs for the Canadian economy

+\$4.5

billion in new exports

## Six priorities for prosperity

To make **Vision 2025** a reality, this report proposes six priorities:



Increase our support for the world's most skilled workforce



Ensure small and medium-sized aerospace businesses thrive and grow



Use innovation to capture new opportunities, including carbon-neutral flight and unmanned vehicles



Invest to maintain Transport Canada's internationally recognized status for aircraft certification and regulation



Maximize Canada's leadership at the forefront of space



Maximize defence procurement and government partnerships to drive new industrial growth



## From now to 2025: Next steps

**Vision 2025** represents an ongoing engagement between industry and government.

Our goal was to define a common vision and priorities for the industry and then identify opportunities for greater industry–government collaboration to achieve our targets. Those opportunities require the redoubling of our efforts to pursue success not only for the industry but for Canada as a whole.

In the coming months, AIAC's technical committees will engage with government partners to ensure the collaborative ideas set out in this report are acted upon. We are excited about the possibilities this new collaboration will produce. With industry and government working together to realize a shared vision, Canada's leadership in the global aerospace industry will be secured.



PRIORITY

## Increase our support for the world's most skilled workforce

**TARGETS**

By charting a new course, we will:

- Inspire, recruit, train and hire 50,000 students from Canadian universities, colleges and vocational schools into the country's aerospace sector.
- Generate an additional 55,000 highly skilled, well-paying jobs.

### Capitalizing on today's talent will unlock tomorrow's opportunities

The ongoing success of Canada's aerospace industry rests on the strength of its highly educated, well-trained workforce. Aerospace's share of science, technology, engineering and math (STEM) workers is two times the national manufacturing average. Women hold nearly a quarter of all STEM-related aerospace jobs in Canada.

With the average age of an aerospace manufacturing worker sitting at 54, the industry faces a massive labour crunch. The need for action is urgent: companies are already struggling to find qualified candidates for high-skilled, well-paying jobs. It is estimated that 50,000 new workers will be required to replace the those leaving the sector in the coming years—with new skills demands to meet.

#### Workers will have to adapt continuously

The emergence of artificial intelligence (AI), machine learning, big data analytics and other technologies is going to reinvent the world of work. Established companies will have to support their employees with retraining and upskilling programs. Individual workers will require—and expect—sustained, lifelong learning options. Training programs will need to be agile and responsive to the changing technological landscape. Filling 50,000 positions will require the industry to bring new workers into the fold, including those from traditionally underutilized pools, including women and Indigenous people, as well as those with the skills to work with digital technologies, AI and other innovations.

While Canada has one of the best education systems in the world, approaches to training and skills development are inconsistent across the country. Some provinces are looking to accelerate training through co-op placements, apprenticeships and combined bachelor's/master's programs. Others have built training partnerships between industry and academia that are the envy of the world.

### A comprehensive approach is needed

**Vision 2025** participants talked about the need for a national approach to co-op programs, and emphasized work-integrated learning and lifelong learning are the most effective approaches to train our workers. They also called for a national framework for training and skill development that would include accelerating and adapting immigration processes and attracting more women and Indigenous people to the industry. More broadly, to draw young people to aerospace at an earlier age, **Vision 2025**

participants repeatedly acknowledged the need to reach out to elementary and secondary students and generate interest in STEM studies and related careers.

Virtually all participants agreed that Canada is in a fierce global competition for talent. The jurisdictions that win that competition will dominate the industry. If we in Canada can figure out this piece of the puzzle, we will strengthen our position as a global aerospace leader and champion. If we cannot, we will continue to lose ground.

**“Could we have a clearinghouse to streamline the movement of talented students into internships?”**

**TORONTO SESSION**

## Opportunities for greater collaboration

Working together, industry and government can:

- **Create a national system to coordinate co-op placements and promote the industry to students as a place for growth and opportunity**

Engage government, academia and industry to develop a process and structure that will better facilitate co-op placements, work-integrated learning and training programs across the country based on industry requirements. Coordinate a large-scale recruiting campaign to attract students and new workers to aerospace.

- **Incentivize experienced workers to stay on the job**

Offer programs and incentives that allow experienced workers to choose to stay on the job and transition more slowly into retirement, bridging the skills gap and transferring knowledge to the next generation.

- **Fast-track and adapt immigration for skilled aerospace workers**

Governments need to accelerate, adapt and streamline immigration processes to help industry meet its need for skilled workers such as aircraft maintenance engineers.

- **Create national training facilities and invest in the adoption of digital training solutions**

Work with stakeholders to establish training centres of excellence equipped with the most current technologies. These centres would be open to both students in aerospace programs and current workers seeking lifelong learning, and would incorporate homegrown digital training solutions that can be exported to the world and deployed anywhere in Canada.

## PRIORITY

**Ensure small and medium-sized aerospace businesses thrive and grow****TARGETS**

By charting a new course, we will:

- Ensure a strong, competitive and growing Canadian aerospace sector that actively seeks new players and investment in small and medium-sized enterprises.
- Ensure the sector is diversified and includes all parts of the supply chain.
- Establish a balanced Canadian industrial policy that seeks to benefit small, medium-sized and large industrial players alike.

## Small and medium-sized aerospace businesses are the engines of job creation

Canada's aerospace industry is an ecosystem of large, national and global OEMs and more than 500 small businesses. We need to help our small firms grow more quickly, especially since these businesses are proven to be significant job creators for Canadians.

Recent tightening and a coming wave of consolidation will change the face of the global aerospace supply chain significantly. To survive, small aerospace companies need to find innovative ways to accelerate their growth—by consolidating, forming consortia and constantly reinventing themselves. Governments at all levels and OEMs can help accelerate small business growth by being strategic in their procurement strategies.

By working together to stay ahead of this curve, industry and government will create a unique opportunity for small Canadian companies to scale their organizations, boost their global competitiveness and grow new jobs in every region of the country. If our small and mid-sized companies are left at risk, the negative impacts will be felt across Canada's aerospace industry as a whole.

### Public procurement should include SMEs

Small and medium-sized firms struggle to win government and defence contracts. Government doesn't always understand their businesses and what makes them different; the system is complex and stacked against them. We need to reduce the complexity of contracts and contracting processes and unbundle contracts when Canadian capacity can be promoted.

Since nothing presents a greater challenge for small businesses than having to chase payment for services already rendered, ensuring contractors are paid in full, on time, every time, should be a priority for every procurement officer in the federal government.

Canadian small businesses want to be recognized in the public procurement system, and have developed a working relationship with the Office of Small and Medium Enterprises (OSME) in the past few years—working to educate OSME staff. Having OSME at the table as a contributor to the development of government procurement strategies and as a champion of small and medium-sized business interests will help ensure government policies and programs recognize the unique characteristics of small firms. Government must avoid a one-size-fits-all approach.



### The capacity to contribute

Building the capacity of smaller companies will create high-skill, well-paying jobs and allow bigger players to pursue ambitious agendas of R&D, manufacturing and global sales from within Canada. Other countries are taking steps to help small and medium-sized enterprises (SMEs) scale up in similar ways across all sectors—for example, through programs like Sweden’s Nordic Scaleups. An aerospace ecosystem that supports itself internally, in which smaller players can scale up and large OEMs can lead globally, will generate jobs, revenue and ongoing innovation.

We heard across Canada that today’s OEMs need small firms

to be more than just suppliers. They want supplier-partners who are sustainable over the long term, who can grow, share risk, take on larger work packages and move quickly. Yet Canadian aerospace suppliers sometimes struggle to set in place the processes and systems that will enhance their operations and make them more attractive to global customers.

In the past several years, industry and government have been working together to address this by creating a supplier development initiative: an industry-led program that would provide smaller firms with guidance and accreditation to strengthen the Canadian supplier base.

**“We have to think about our industry as an ecosystem.”**

**TORONTO SESSION**

## Opportunities for greater collaboration

Working together, industry and government can:

- **Establish a federal scale-up program for small aerospace businesses**

Provide advice, coaching, networking, value proposition development and consortium-building support to incentivize growth and build capacity—helping firms expand their global footprints and giving them the means and maturity to support OEMs effectively.

- **Provide funding to help aerospace SMEs pursue digital transformation**

Support SMEs’ digital advancement to boost their competitiveness and ability to scale, overcoming the financial and human resource challenges they face when adopting new technologies.

- **Make government procurement SME-friendly**

Value propositions should be used to build small businesses into large manufacturers’ procurement

negotiations and into joint bidding teams. This would support small business growth and develop a vendor-management system that rewards good performance with more business. It would also be advantageous for the federal government to work directly with SMEs by expanding Build in Canada Innovation Program (BCIP) and Innovation Solutions Canada.

- **Allow SMEs to compete for government procurement**

Where appropriate, have government unbundle procurement so SMEs can compete.

- **Utilize OSME as a representative throughout government**

Work with industry to ensure OSME is represented at all levels of the procurement process to champion the growth of small and medium-sized businesses.



## PRIORITY

## Use innovation to capture new opportunities, including carbon neutral flight and unmanned vehicles

## TARGETS

By charting a new course, we will:

- Put Canada's aerospace industry and Canadian researchers at the forefront of innovation—with Canada's industry leading globally in commercializing discoveries.
- Ensure our industry and workforce are ready to seize emerging opportunities for growth while continuing to meet existing market needs.
- Establish Canada as the world leader in carbon-neutral technology for aerospace.

### Investing more in research and innovation will strengthen Canada's competitive edge

The global aerospace market is going to grow at a rate of 4.7% a year for the next 20 years<sup>1</sup>—much faster than the Canadian economy and outpacing the overall global economy as well. Commercial aircraft production is expected to jump by 25% in the next 10 years. Worldwide defence spending could top US\$2 trillion by 2022.<sup>2</sup> At the same time, new modes of aerial transportation (including a wide range of unmanned aerial vehicles) are going to emerge.

Canada is already reaping the economic and ancillary benefits of a strong aerospace industry: in this global context of growth, we have the opportunity to leverage our position and increase those benefits. Put simply, Canada must signal in its words and actions that it will be a global aerospace champion.

#### Innovation is a Canadian differentiator

Canada's aerospace investments in R&D are substantial but declining. The industry leads the country's manufacturing sector in innovation-related investment at more than \$1.4 billion on average per year. That's six times more R&D intensity than the Canadian manufacturing average. The consensus among **Vision 2025** participants is that Canadian R&D investment needs to keep growing. Otherwise, the risk capital dedicated to innovation will quickly leave to be invested in other jurisdictions. In fact, the latest data shows R&D investments in Canada have declined by 23% since 2014.

The high complexity and risk involved in aerospace innovation require extensive collaboration among industry, academia, research centres and individual researchers. To ensure equitable federal support, the federal government should revisit its regional support programs—and should continue the work of the Consortium for Aerospace Research and Innovation in Canada (CARIC) and Green Aviation Research and Development Network (GARDN), as these programs are instrumental to the growth of the sector.

#### Canada is a market gateway for global players

An important point emphasized by industry leaders throughout the **Vision 2025** consultations is that foreign-owned firms contribute substantially to Canada's aerospace R&D investment and exports. These firms often compete for R&D dollars within their own companies—against other divisions operating abroad.

1 Boeing Current Market Outlook (2017–2028)

2 Deloitte

The businesses in question often choose Canada to gain access to customers in parts of the world where we have trade agreements. Participants suggested Canada needs to streamline its innovation policy tools to maintain and bolster its competitive position to continue to attract these global players. The impact of doing so would benefit not only the industry directly but also Canada's middle class by generating prosperity and jobs for future generations of Canadians.

### **Aerospace has a key role to play in addressing climate change**

Throughout the **Vision 2025** consultations, participants stressed the industry's contribution to safeguarding

Canadian sovereignty and addressing public challenges such as climate change. Even though it contributes a small proportion (2%) of global greenhouse gas (GHG) emissions, aerospace has the opportunity to contribute to GHG reductions.

Developments in robotics, digital technologies, simulation, artificial intelligence and advanced materials can all contribute to carbon-neutral flight and be spun off for use by other industries. Industry needs strong, clear direction from government to plan for the investments that will enable this kind of innovation, because innovation in the sector is complex and requires long timeframes.

**“Canada needs to streamline its innovation policy tools to maintain and bolster its competitive position to continue to attract these global players.”**

## Opportunities for greater collaboration

Working together, industry and government can:

- **Accelerate specific investments in carbon-neutral aerospace, advanced manufacturing and MRO development and commercialization**

Emulating the success of the Pan-Canadian Artificial Intelligence Strategy, the Government of Canada can support research institutions, entrepreneurs and large firms looking to develop fully electric and hydrogen-powered aircraft. By creating clusters of expertise ahead of the maturation of this technology, Canada can ensure it is a leader in the next great aerospace revolution.

- **Contribute to the development of autonomous or semi-autonomous personal vehicles/aircraft**

Self-driving cars seemed impossible 20 years ago: today they're in testing on roads around the world. Now governments need to start contemplating a future of autonomous or semi-autonomous personal vehicles/aircraft (flying cars). Canada can lead in their production and regulation: we need to start now to define that opportunity.

- **Create a Concierge-type service specifically for aerospace**

Develop a platform modelled on the National Research Council's Concierge service to connect

Canadian companies to innovation supports and services that will meet their specific needs.

- **Use Canadian IP to Canada's advantage**

Create policies and measures to protect Canadian intellectual property (IP)—nurturing it here at home and licensing it as an export to deliver value for Canadians.

- **Expand and enhance the Work of CARIC and GARDN**

Increase federal support for the creation of a new national network that will focus on decreasing the environmental impacts of the aviation industry; and enhance the development of new technologies, capabilities and processes all across the country.

- **Give companies access to the capital they need to modernize their operations and reskill their workforces**

Help all firms and especially SMEs access funding so they can be as technologically advanced and competitive as possible and attract investment from new players and from established players eager to develop disruptive technologies.

## PRIORITY

## Invest to maintain Transport Canada's internationally recognized status for aircraft certification and regulation

## TARGETS

By charting a new course, we will:

- Ensure our industrial and trade policies build on the recognized strength of Transport Canada's Civil Aviation Branch (TCCA)—securing new investment, particularly in emerging technologies and innovation.
- Provide sufficient funding to maintain a highly respected, responsive TCCA that directly enables the growth of the Canadian civil aviation manufacturing industry both nationally and internationally.

TCCA's reputation as a leading civil aviation regulator is an important competitive asset

TCCA is highly respected as a leading certification authority. Its regulatory approvals are recognized internationally as the gold standard for aircraft certification and airworthiness. Participants at all six regional **Vision 2025** engagements said this gives Canada's civil aviation industry a key advantage by facilitating Canadian trade and export opportunities. It would be a mistake for the Canadian government to take for granted this reputation built on decades of hard work.

### The Canadian standard must be protected

Participants said they believe TCCA's ability to maintain its standard of service is at risk, especially as the budget for its certification branch is not keeping pace with growth of the country's aerospace industry. TCCA's commitment to safety is commendable, but additional financial support is needed to keep approval timelines swift: any delay is a direct impediment to industry's ability to deliver.

**Vision 2025** participants also noted that TCCA regional certification and approval activity is not of the same quality as certification and approval activity conducted by TCCA headquarters. They felt that it is critical for government to recognize this discrepancy and design appropriate corrective measures. If not, industry participants overseen by the TCCA Regions will lose an important and (currently underestimated) competitive advantage.

As well, participants highlighted the increasing importance of bilateral airworthiness and maintenance agreements that allow trading partners to recognize Canadian certifications and approvals. These agreements are critical facilitators of civil aviation trade between states and ensure that Canadian manufacturers can secure and maintain leading positions in key foreign markets.

**“Transport Canada has been a strong partner in ensuring that our products are safe and meet or exceed international standards. Without a strong certification authority, we risk losing our aerospace industry in Canada.”**

HALIFAX SESSION

## Opportunities for greater collaboration

Working together, industry and government can:

- **Invest in TCCA certification and standards capabilities**

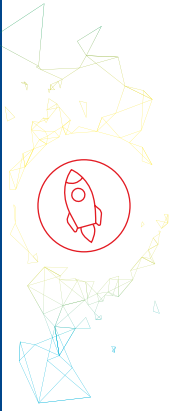
Ensure that TCCA has the resources it needs to modernize, build capacity and maintain a globally respected, high-quality certification and approval system.

- **Create a TCCA regulatory framework that supports innovation**

Collaborate to establish an innovation-friendly regulatory framework that ensures TCCA's capacity and capability to respond in a timely and effective way to new technology and innovation.

- **Make TCCA a regulatory innovator**

Enable TCCA to establish regulatory sandboxes (e.g., geographical areas with innovative regulations) where companies can test novel platforms and technologies such as new drone applications or pilotless aircraft.



PRIORITY

## Maximize Canada's leadership at the forefront of space

TARGETS

By charting a new course, we will:

- Realize the full economic, social, scientific and strategic benefits of Canada's place as a global leader in the exploration, research and commercialization of space.

All Canadians will benefit if we invest strategically—and attract investment—in space

After many years of advocacy by AIAC and its members, in March 2019 the federal government announced Canada's space strategy, outlining priorities including the Lunar Gateway mission, low-earth orbit (LEO) broadband satellites, and a focus on the growing commercial space sector. That announcement, and especially the Lunar Gateway project and LEO, was met with great excitement by **Vision 2025** participants, and all agreed the timely release of a fully costed and funded plan is a necessary next step.

### We need to take a balanced approach

The government's initiative is clear about the need for a balanced approach that supports both legacy programs and emerging innovative space initiatives in remote sensing, telecommunications, optics, science and exploration. Incremental investment should be focused on supporting and extending new missions with adequate funding to re-establish a balanced Canadian Space Program.

Space-based technologies are a fundamental pillar of Canada's economic, social and defence infrastructure. Many aspects of daily life depend on space-based technology and infrastructure, and Canada's unique geography makes our country even more dependent on satellite infrastructure than other nations. Continued space investment promises to have a positive impact on our northern sovereignty and to help improve life in Indigenous and rural communities.

### Competition in space is intensifying

Just as in aviation, global competition to attract and grow the space industry is intense. Canada has a real opportunity to lead. Our flag was displayed proudly on the Canadarm and the shoulders of the 10 Canadian astronauts to date who have bravely represented our country in space. That technology and those pioneers are proof we can compete with the best the world has to offer, and win.

Yet we also face significant challenges. **Vision 2025** participants contrasted Canada's competitive position in space with that of China—which recently completed its first successful unmanned landing on the far side of the moon—and Japan, whose resolution to develop a national space program has led it to leap ahead of Canada in space investment and exploration.

More significantly, space is no longer the exclusive domain of national governments. Private companies are increasingly leading the charge. Canada's capabilities and R&D climate can be powerful attractors for global firms. Building on our legacy as a leading space player, we should adopt a cluster approach to amplify our space technology development capabilities and strengthen our appeal to space startups and traditional players.

### Getting ready to reap the benefits of space exploration

"Heavy-lift" launches are becoming dramatically cheaper and more frequent, creating opportunities for large-scale industrial projects in space. U.S. firms have already been set up to start the race to explore for and retrieve rare minerals throughout our solar system. While these kinds of opportunities are still many years from being realized, now is the time to lay the foundations for Canada to have a role in them when they mature.

**"Space can do a lot for Canada given our country's size, geography and demographics. People don't tend to think of it as key to infrastructure, but it is."**

TORONTO SESSION

## Opportunities for greater collaboration

Working together, industry and government can:

- **Complete a National Strategy for Space**

Continue the collaboration among AIAC; the Canadian Space Agency; Innovation, Science and Economic Development Canada; and other stakeholders to establish a fully costed, balanced space strategy that will ensure Canada's place at the forefront of global space innovation, science and exploration.

- **Communicate the benefits of space**

Support any initiatives that highlight the economic, social, technological, defence and industrial benefits of space for Canada.

- **Take advantage of international programs to build the industry**

Use our leverage to open the door for Canadian companies in the next wave of space exploration.

- **Consider space from multiple perspectives: innovation, economics and sovereignty**

Use space to meet Canadians' needs for science and technology, economic development and national security to drive a thriving technology ecosystem in Canada.



**PRIORITY**

# Maximize defence procurement and government partnerships to drive new industrial growth

**TARGETS**

By charting a new course, we will:

- Ensure a workable Canadian procurement system focused on three objectives:
  - 1 Our men and women in uniform have access to the best available equipment
  - 2 Canadian taxpayers get value for their investments
  - 3 Procurement is used to promote industrial development—and for the benefit of Canada
- Ensure government is a partner that aggressively buys, sells and helps Canada’s aerospace industry grow at home and abroad.

## Canada should be its own best supporter of Canadian industry

Defence procurement was discussed at each **Vision 2025** engagement. While participants were concerned that Canada’s public procurement process is overly burdensome and unable to meet its own spending targets, they also had constructive advice on what could be done to streamline the system.

### Buy for the benefit of Canada

There is strong consensus within the industry that government procurement must be more accessible to all market participants, big and small.

Throughout the **Vision 2025** consultations, participants intensely discussed the pros and cons of implementing a “Buy America-type policy” that would give Canadian firms an advantage over others based on country of origin alone. While other nations have done this, participants are leery of such a strategy because of the importance exports play for our industry.

There was, however, a strong consensus on the value of a “Buy for Canada” approach—one that considers how procurement decisions can benefit Canadian firms whether the primary vendor is wholly domestic, the domestic subsidiary of a multinational company, or an international supplier. Opportunities for Canadian companies to contribute skills, technologies, systems or other components as part of a procurement will strengthen the industry and contribute to the economy even when government is not directly “Buying Canadian”.

### An improved ITB program

Much discussion centred on how existing procurement tools and programs should be leveraged to increase Canadian military capacity and capability. Participants suggested the Industrial Technical Benefit (ITB) program should be improved by reducing its transactional nature and adjusting “causality” and “incrementality” requirements to strengthen outcomes. Representatives from OEMs said that, with the right ITB program changes, they would be more willing to expand their manufacturing footprint in the country.

Existing efforts underway to modernize procurement will make a difference in streamlining the procurement process. The Vendor Performance Management (VPM) system was cited as a good example of industry and government coming together to overcome significant issues. Some participants held up VPM as a model for future program and policy development.



### Promoting Canada on the global stage

Efforts to market Canada's aerospace sector on trade missions and invest in greater visibility at global industry events could go a long way toward raising the sector's international profile. With a strong, aggressive and vigorous program of economic diplomacy, Canada can champion its domestic aerospace firms and demonstrate the national-level commitment to the industry that buyers and OEMs look for.

Participants also discussed the challenge of competition among regions to attract new investments. The establishment of a common framework for all Regional Development Agencies (RDAs) was suggested as a way to ensure competition among regions is fair, balanced and effective.

**“If the role of government is to support activities that generate long-term wealth, our industry has exceptional capacity to deliver that.”**

WINNIPEG SESSION

## Opportunities for greater collaboration

Working together, industry and government can:

- **Establish a National Defence Industrial Strategy**

Produce an active, modern and clearly defined defence industrial strategy as an integral part of Canada's overall national defence agenda. This strategy needs to include specific policy to spur and support Canadian innovation and investment with respect to in-service support (ISS) procurement activities.

- **Adopt a “Buy for Canada” procurement policy**

Use procurement decisions to showcase firms that operate in Canada and have global leading technology, services and aircraft (platforms). Use procurement to support the development of Canadian industrial capacity and capability.

- **Better structure government's promotion of Canadian aerospace on the international stage**

Recognize and accommodate the specific needs of aerospace businesses to sustain our industry's capacity

to attract and retain the sector's world leaders. The federal government can show the world Canada is committed to the industry by actively supporting Canadian firms' access to new opportunities in markets abroad.

- **Modernize aerospace and defence programs to spur investment**

Update key aerospace and defence programs such as the Industrial Technology Benefits (ITB) program to increase support for SMEs and the Canadian supply chain. Allow obligators to increase their Canadian footprints and develop new platforms and programs to grow Canadian capacity and capabilities.

- **Establish a new collaborative model for program and policy development**

Develop a program and policy approach in which industry and government have a common vision and sit on the same side of the table, working out ways to win together.

# Acknowledgements

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In October 2019, Canadians will elect a new federal government. To make **Vision 2025** a reality, we urge all Canadians to contact their local Member of Parliament and federal candidates and let them know aerospace matters—to our communities, our economy and Canada's global future. Every voice counts. Make yours heard.

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