



Working Group Report

Market Access and Market Development

September 17, 2012

This report reflects the views of one of the six industry-led working groups created to provide advice to the Aerospace Review Head and the members of the Advisory Council. The recommendations therein may not reflect the findings of the Aerospace Review.

For more information on the Review process visit www.aerospacereview.ca.

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Executive Summary

The global environment is changing. Free trade proliferation is flattening the world, while globalization is driving changes to manufacturing supply chains. While emerging economies were previously used as locations for low-cost labour, greater prosperity and higher wages are helping drive an increased ability to consume. For Canada's commercial aerospace industry, emerging economies present both opportunities and challenges. A 2009 Deloitte study on global aerospace and defence suggests that emerging markets will provide opportunities for Canada if the Canadian aerospace industry, which includes firms and governments, can reconfigure itself to capture this growth.¹

In 2009, Canada's civil aerospace sector (CAS) generated approximately C\$16 billion in revenue or approximately 76.7% of Canada's total aerospace revenues. Canada is also a major global player and was responsible for generating approximately 7% of global CAS manufacturing revenue in the same year. The Canadian CAS is primarily driven by exports to the US and Europe, each representing 57% and 27% of Canada's total aerospace exports.²

The global rebalancing currently taking place, characterized by the emergence of new global powers and an unprecedented rise in demand for travel, presents significant opportunities for Canadian original equipment manufacturers (OEMs)³ and Canadian suppliers and maintenance, repair and overhaul (MRO) companies to sell more planes, systems and components around the world. Despite these opportunities, ambitious new competitors based outside of Europe and North America are emerging. Given the significant market access and market development opportunities and challenges resulting from this global shift, the report focuses mainly on Canada's CAS sector.

While the CAS presents the greatest market development opportunities for Canadian companies, Canada's military aerospace sector (MAS) is also important. In 2009, Canada's MAS generated revenues of approximately C\$6 billion in 2009, compared to \$206 billion globally. The global MAS is dominated by large US-based companies, though CAE ranked 77th with military-related revenues of \$742 million in 2009.⁴ Though emerging markets are increasing their military defence spending, and while many traditional markets continue to reduce their defence spending in attempt to reduce deficits, Europe and the U.S. remain the primary markets for Canadian MAS exports.

Emerging economies, especially China and India, are expected to drive the majority of growth in the global CAS and MAS.⁵ With respect to regions, the fastest expected growth in revenue between 2009 and 2020 is seen in the two emerging markets, Asia-Pacific and Latin America at 6% and 5% respectively (see table below).

¹ Deloitte Phase 3 (96)

² Deloitte Phase 3 (13)

³ OEM refers to the company that both designs and produces the aeronautical product (aircraft or engine)

⁴ Deloitte Phase 3 (48)

⁵ Deloitte Phase 1 (28)

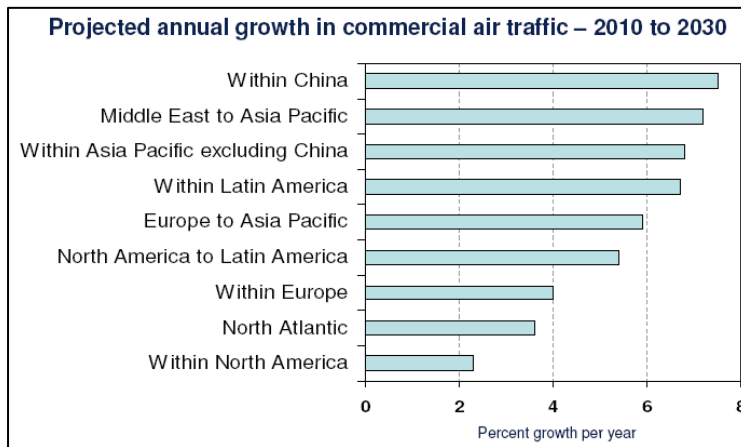
Table 24: CAS regional revenue growth

Region	2009	2020	CAGR (%)	Share of total 2020 revenue (%)
Asia-Pacific	17	33	6	13
Latin America	5	10	6	4
CIS	2	3	5	1
Middle East	4	7	5	2
Africa	1	2	4	1
North America	69	101	3	42
Europe	65	92	3	38

Bombardier determined that from 2008-2028, China’s economy will continue to lead growth in the Asia-Pacific markets and globally at a growth rate of 7.5%, while India is expected to be second in line at 6.3%.⁶ Further, Airbus expects China to become the world’s second biggest aviation market by 2025.⁷

While the access to lower cost inputs from developing nations is beneficial to Canadian aerospace companies, the growth of the aerospace industry within countries such as Mexico and the BRIC countries puts Canadian aerospace firms under increased pressure.⁸ At the same time, given that the aerospace industry is very capital intensive in nature, the ability of aerospace companies to access capital, through financial institutions or government funding, will be a major determinant of the level of industry activity in the coming years.⁹ In response to these global changes, it is anticipated that there will be a shift in supply chain distribution in the next decade as the established OEMs (e.g. Boeing, Airbus, Bombardier, Embraer) position themselves to capture new market share, while new market entrants (e.g. Commercial Aircraft Corporation of China, United Aircraft Corporation of Russia) attempt to establish themselves primarily in their domestic markets.¹⁰

Gaining access to these new markets, however, is complex and challenging. In particular, globalization, trade proliferation and global access to digital technologies have transformed local manufacturing supply chains into disaggregated globalized chains located in different countries.¹¹ The Boeing 787 Dreamliner, for example, is manufactured with components from 287 suppliers



across 22 countries, creating a complex global network that would not have been possible nor desirable several decades ago.¹² As manufacturing continues to move away from developed to

⁶ Deloitte Phase 1 (28)

⁷ Competitiveness of the EU Aerospace Industry (279)

⁸ Deloitte Phase 1 (42)

⁹ Ibid.

¹⁰ DFAIT 6

¹¹ WEF 30

¹² WEF 31

emerging nations, and as most nations seek to protect national industries and jobs, Canada's ability to leverage its key differentiators will be crucial to gaining access.

A recent World Economic Forum report on the future of manufacturing discusses the shift in manufacturing towards countries with relatively low labour costs and high government support, as well as the importance of the strategic use of public policy to stay ahead of competition. In an attempt to influence outcomes and accelerate manufacturing development, developed and emerging economies alike are increasingly using government intervention to spur domestic growth.¹³ These interventionist measures are contributing to the changing nature of manufacturing policies as countries use more sophisticated and assertive measures to gain a competitive advantage. To remain competitive, manufacturing companies and policy-makers will need to work together to pull the right levers and strike the right balance.

Now more than ever, developed and emerging countries are viewing aerospace development as both a strategic and national imperative. The Chinese government launched the Commercial Aircraft Corporation of China, Ltd. (COMAC) in May 2008 with the express purpose of establishing China as a global leader in the manufacturing of regional jets and airliners.¹⁴ The United Aircraft Corporation (UAC) of Russia has also stated that they want to achieve a 10% share of the world civil aviation market and more than a 50% share in the domestic Russian market by 2025.¹⁵ Meanwhile, heads of leading aerospace countries continue to contribute to the success of their OEM by promoting commercial agreements and announcing new partnerships in key emerging markets. In the past two years, for example, the Presidents from France, Brazil and the United States have each supported important deals with China.

Against the backdrop of the proliferation of new economic powers with growing appetites for goods, the disaggregation and globalization of value chains and the high levels of government support for national aerospace programs, the Market Access and Market Development Working Group (WG) looked to identify key market opportunities and challenges facing the Canadian industry over the next twenty years. The WG's overall mandate was to understand the changing nature of global supply chains, assess current Government of Canada policies and programs, and identify potential changes to these instruments to address future opportunities for the aerospace industry.

The WG was divided into four sub-groups. The Market Access sub-group reviewed existing international subsidy and export financing trade rules and how to overcome barriers to trade in strategic markets. The Market Development sub-group focused on increasing Canada's participation in key emerging markets, with a particular focus on China given its unique position in the global aviation market, and the importance of enhancing economic diplomacy. The Export Controls sub-group assessed export control challenges and the Transport Canada Civil Aviation (TCCA) sub-group reviewed the impact of Transport Canada (TC) on the competitiveness of Canada's aerospace industry.

Throughout the research and consultation process, the WG consulted with officials from relevant government departments and agencies including Department of Foreign Affairs and International Trade (DFAIT), Department of Finance (Finance), Department of Public Works and Government

¹³ Ibid. ___

¹⁴ Ready for Takeoff: China's Advancing Aerospace Industry, RAND (42)

¹⁵ Deloitte Phase 1 (30)

Services Canada (PWGSC), Industry Canada (IC), Department of National Defence (DND), TC, Export Development Canada (EDC), Canadian Commercial Corporation (CCC) and the Canadian Economic Development Agency for Quebec Regions. The group also looked at key government programs and associated legislation affecting the aerospace industry including DFAIT's 2012 – 2013 Global Aerospace Strategy, the Trade Commissioner Service (TCS), the Strategic Aerospace and Defence Initiative (SADI), EDC and CCC's mandates, TCCA's program and the Canadian export and domestic control regime legislation and regulations. Recommendations are supported by quantitative data and case studies and are structured around the following three themes: investing in Canada's assets and key differentiators; engaging in economic diplomacy; and leveling the playing field.

We believe that achieving these three overarching objectives is vital to the short and long-term prosperity of Canada's aerospace industry. The Canadian government can play a leadership role in bringing down trade barriers and establishing a policy and regulatory framework that does not put the Canadian industry at a competitive disadvantage internationally. This is critical to promote a level playing field and rules-based trade. In the highly contested global marketplace, however, assertive public policy is also a *sine qua non* to defend and enhance Canada's hitherto enviable position in aerospace. Without targeted and strategic economic diplomacy and a sharpened focus on Canada's existing assets and key differentiators, Canada's competitiveness risks considerable and irreversible erosion.

Investing in Canada's Key Assets and Key Differentiators

Canada's aerospace industry is characterized by limited alignment between relevant government departments, including DFAIT, IC, Finance, DND, PWGSC, TCCA, EDC, CCC and regional development agencies. Without a clear whole-of-government approach in support of a Canadian Aerospace Strategy, departmental aerospace strategies and programs have reduced effectiveness in the areas of certification, production, rulemaking and oversight for Canadian exports.

What is needed is a comprehensive Canadian Aerospace Strategy that includes a better integrated and coordinated approach between the relevant departments and agencies. The establishment of one clear federal voice for Canadian aerospace, led and championed by a specific Minister, would streamline departmental programs and promote Canada's aerospace industry domestically and abroad.

For example, under DFAIT programming, the TCS offers valuable services to Canadian industries looking to expand their commercial interests abroad. Under one Canadian Aerospace Strategy, the TCS would better align themselves with national aerospace programming and provide Canadian firms with more comprehensive government support services.

The Minister responsible for Canada's aerospace industry should also be supported by a Joint Aerospace Industry Coordination Board (JAICB) consisting of senior government representatives and industry officials. The JAICB would meet periodically to help improve the coordination of strategies, mandates and resources as it relates to the aerospace industry. DFAIT's Sector Strategy on Aerospace, an integrative global trade strategy for the aerospace sector, could be an effective model to duplicate at the higher cross-governmental level.

TC has been recognized as having one of the most successful and safest civil aviation programs in the world, and works with many domestic and global partners to ensure air safety and open market access. Due to Canada's strong civil aviation authority, foreign importers have accepted Canadian products with minimal intervention. To maintain this environment and ensure continued global credibility, TC will need to continue building relationships and investing in emerging countries. Building on Canada's success and reputation in this area will also increase Canada's comparative advantage vis-à-vis developed and developing nations.

Despite TC's crucial role in bringing Canadian aeronautical products and services to domestic and international markets, capacity is being eroded. Challenges include limited alignment between relevant departments, the lack of a strategic mandate for supporting market access and market development for the aviation industry and limited resources.

Within the spectrum of government services and using a supply chain analogy, TCCA is currently at a choke point where the creation of a more strategic mandate with expanded capacity is now necessary. The redefined and expanded mandate needs to support market access and market development for the aeronautical product industry and be aligned with an overall Canadian Aerospace Strategy. Funding, services and resources for TCCA should also take into account the development, sales and export of aviation products and be commensurate with industry demands. To effectively respond to TCCA's funding challenges and to better address industry needs, an enhanced user-fee based funding and updated resource model is recommended.

Recommendations

- **Developing and Implementing a Canadian Aerospace Strategy;**
- **Strengthening TC and TCCA's Mandate and Adopting a Funding and Resource Model to Better Support Industry Needs**

Economic Diplomacy

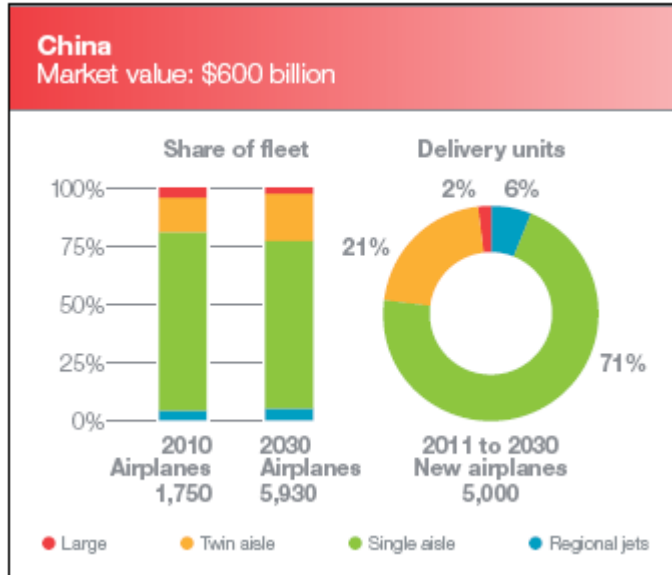
With many countries viewing aerospace as a key national and strategic industry, engaging in "economic diplomacy" and supporting campaigns of Canadian industries is crucial to complement efforts of Canadian firms abroad and often set the stage for business relations. In November 2011, for example, during a visit to Indonesia, President Obama witnessed the signing of a \$21.7 billion jet deal between Boeing and Lion's Air. Similarly, during a visit to China in April 2011, Brazil's President Dilma Rousseff announced a \$1.4 billion deal to sell regional jets and assemble a business aircraft line in the country. Given the intense competition between Canada and leading aerospace nations in a rapidly changing environment, consistent high-level political support is critical.

All developed and developing aerospace countries increasingly view their domestic aerospace sectors as a highly strategic venture where significant investment can generate widespread benefits. Heads of state from most aerospace countries routinely support campaigns and stimulate deals on behalf of their national champions and help foster strong government-to-government relationships to promote business relations. Canadian companies, moreover, increasingly face state-owned aerospace competitors who cope with significantly less risk and higher government support. To respond to what leading nations are doing, the Government of Canada needs to engage in economic diplomacy to support campaigns and stimulate partnerships. Given the highly political and strategic nature of the aerospace industry, this high-

level political support is critical to enable Canadian companies to compete on the international stage.

Looking ahead, China has articulated policies and macro plans to encourage the international expansion of its airlines and address issues regarding air traffic management and infrastructure. By 2015, China will add 70 new airports, bringing the total available for commercial aviation use to at least 250.¹⁶ Over the next 20 years, China’s GDP is forecast to grow at an average annual rate of 7.0 percent, with the demand for air travel growing at an annual rate of 7.6 percent.¹⁷ Further, Airbus expects China to become the world’s second biggest aviation market by 2025.¹⁸

Given the size and scope of China’s aviation market, as well as the potential opportunities and significant challenges to market development, a unique approach to China is required. China’s aviation industry has been expanding at an unprecedented rate and growth prospects in every segment of civil aviation, including general, business and commercial aviation, airport development and air traffic management, are substantial.



These growth prospects make China one of the largest, dynamic and promising aviation markets in the world, and create significant opportunities for Canadian aerospace firms.

While incredible opportunities exist, significant trade policy and market challenges remain. China’s market is dominated by state-owned enterprises (SOEs) and high levels of government intervention. Decision-making is centralized and a significant premium is placed on government-to-government relationships. Given the unique features of China’s system, a government platform is needed to increase certainty for Canadian firms and allow them to take advantage. Following the Prime Minister’s visit to China in February 2012 and the Government’s increased focus on enhancing trade relations with China, momentum and a window of opportunity exist to negotiate a strategic aerospace partnership agreement between Canada and China. This window, however, will close quickly.

Recommendations

- **Engaging in Economic Diplomacy at the Highest Political Level**
- **Negotiating and Implementing a Sectoral Partnership with China in Civil Aviation**

¹⁶ Boeing Report (16)

¹⁷ Ibid

¹⁸ Ibid

Levelling the Playing Field

Both policy-makers and business leaders recognize that lower barriers are vital to the competitiveness and viability of exports. As global competition increases, and the focus on manufacturing's contribution to jobs and GDP grows, there will be increasing tension between opening and protecting markets. Following the 2008 economic slowdown, growth in protectionist policies has consistently outpaced liberalizing policies.¹⁹ While most countries try to balance the approach between free, open, market-based economies and measures that enable their domestic companies to flourish, there is an important need to level the playing field to ensure that all industry players abide by the same rules.

There are several instances that contribute to an uneven playing field. For example, emerging aerospace economies, like China and Russia, are not signatories to the Aircraft Sector Understanding (ASU), while some countries were found to be non-compliant with World Trade Organization (WTO) rules on government support for aircraft program financial support. Technical barriers to trade (i.e. non-tariff issues) continue to impede access to key markets and Canada's export controls regime remains cumbersome and lengthy, putting industry at a competitive disadvantage vis-à-vis suppliers in like-minded countries.

To ensure a more level playing field, it is crucial that Canada's export control regime does not put the industry at a competitive disadvantage internationally, while addressing security concerns and international obligations. This can be achieved by implementing a number of changes that would bring Canada's export control regime on par with those of like-minded countries, such as reintroducing Project Development Permits (PDP), extending the use of Multiple Destination Permits (MDP), and creating General Export Permits (GEP) to accelerate current processing times.

In addition to a more competitive export controls regime, Canada must also encourage emerging economies to join the ASU and help ensure a more disciplined adherence to WTO regulations. More specifically, Canada can play a key role in encouraging the implementation of a new plurilateral WTO agreement with a more efficient dispute settlement process and more transparent regulations for government support for aircraft program financing.

To ensure that Canadian firms have the level of flexibility needed to retain their most valuable technology assets within Canada, as well as offer technology in exchange for market access, a more flexible SADI regime would increase market access opportunities for Canadian firms. Extending permanently EDC's domestic financing authority in aircraft financing will also make Canadian firms more competitive. Prior to the negotiation of international agreements, including Free Trade Agreements (FTAs), Foreign Investment Protection Agreements (FIPAs) and Bilateral Aviation Safety Agreements (BASAs), closer consultations with the aerospace industry could better align overall Government priorities with those of the aerospace industry.

¹⁹ WEF 33

Recommendations

- Ensuring a Competitive Export Controls Regime and Optimizing Domestic Security Controls
- Expanding the Scope and Signatories of the Aircraft Sector Understanding (ASU)
- Negotiating and Implementing a New Plurilateral World Trade Organisation (WTO) Agreement on Aviation Program Funding
- Ensuring a Flexible Strategic Aerospace and Defence Initiative (SADI) Regime to Better Support Market Access
- Extending Permanently Export Development Canada(EDC)'s Domestic Financing Authority in Aircraft Program Financial Support
- Systematically Engaging and Consulting with the Aerospace Industry prior to Free Trade Agreements (FTAs), Foreign Investment Promotion and Protection Agreements (FIPAs) and Bilateral Aviation Safety Agreements (BASAs)

Detailed Summary (By Theme)***Investing in Canada's Assets and Key Differentiators²⁰*****Recommendation 1: Developing a Canadian Aerospace Strategy**

Canada's aerospace industry is characterized by limited alignment between relevant government departments, including DFAIT, IC, Finance, DND, PWGSC and TCCA, which hinders the success of departmental initiatives and mandated programs. From industry's perspective, this fragmented approach and an undervaluation of TCCA's key role in helping bring products to market directly impacts the competitiveness of Canadian aerospace firms.

Canadian companies are developing leading-edge technologies under IC's incentive programs such as SADI, as well as support from Finance Canada and DFAIT. While DND may be the recipient of the resultant products or services in the military sector, there are significant horizontal gaps in government support. As illustrated in Example 1, poor coordination across government departments result in missed opportunities to showcase and potentially procure low volumes of the most promising technologies.

Example 1a: *CAE invested private R&D funds to bring Augmented Visionics System (AVS) to the Technology Readiness Level 6 (TRL 6 - prototype demonstration in a relevant environment). SADI funding was used to offset the cash flow required to bring the technology to a readiness level whereby the first flight trials would demonstrate the merits of the investment.*

While DND has a confirmed need for AVS, no development funds were available to support taking the AVS solution into the domestic market through support by DND as "First Customer". Using the domestic market as entry point would have better positioned CAE to be a competitor in the upcoming US tender.

Example 1b: *IC, DFAIT and Finance Canada provide financial support to the Aerospace Industry through numerous programs and incentives which enable the sector to undertake R&D investments necessary to develop the products. Under the current TCCA Mandate, however, funding and resources are not aligned or commensurate to support these activities, and limit the Industry's ability to bring products to market.*

²⁰ The recommendations in this section are credited to the Transport Canada Civil Aviation Sub-Group and its report to the Working Group on Market Access and Market Development.

Though IC has the primary responsibility and mandate to conduct aerospace policy, DFAIT funds and supports international agreements and promotes an integrative trade strategy through its Trade Commissioner Service (TCS). Because TCCA's resources are focused almost exclusively on its safety mandate, its capacity to effectively support the implementation of other departmental initiatives on aerospace is very limited.

What is needed is a comprehensive Canadian Aerospace Strategy that includes full integration, between IC, DFAIT, Finance, DND, PWGSC and TCCA. The establishment of one clear federal voice for Canadian aerospace, led and championed by a specific Minister, would streamline departmental programs and promote Canada's aerospace domestically and abroad.

For example, under DFAIT's programming and focus on integrative trade, the TCS, including its recently created Aerospace Practice, offers valuable services to Canadian industries looking to expand their commercial interests abroad. Under one Canadian Aerospace Strategy, the TCS would better align themselves with national aerospace programming and provide Canadian firms with more comprehensive government support services and foreign market intelligence. In addition, DND should work closely with DFAIT to support this model of integrative trade by using their military attaches to promote Canadian commercial military interests abroad.

The Minister responsible for Canada's aerospace industry would also be supported by a Joint Aerospace Industry Coordination Board (JAICB) consisting of senior government representatives and industry officials. The JAICB would meet periodically to help improve the coordination of strategies, mandates and resources as it relates to the aerospace industry. DFAIT's Sector Strategy on Aerospace, an integrative global trade strategy for the aerospace sector, could be an effective model to duplicate at the national level.

Recommendation 2 (a): Strengthening Transport Canada (TC) and Transport Canada Civil Aviation (TCCA)'s Mandate to Better Support Industry's Growing Needs

TC's current mandate focuses almost exclusively on the safety of the Canadian transportation system rather than the contribution of the aerospace industry in developing transportation products. Similarly, TCCA's mission statement focuses on developing and administering policies and regulations to ensure the safety of systems through the management of risk. Neither TC nor TCCA leverage the fact that more efficient certification, international acceptance and support to bringing Canadian products to market will result in safer products both domestically and internationally.

TCCA has several functions which are key to enabling domestic & foreign authority acceptance of Canadian aeronautical products. Specifically TCCA:

- Establishes bilaterals / agreements with importing countries
- Is involved in rulemaking activities for safety (design) standards harmonized with other countries
- Certifies products (type certification & post-certification activities) to meet required safety standards
- Supports type validation (acceptance) of products by foreign authorities
- Provides safety oversight of Canadian aeronautical products in the global fleet

TCCA has several functions that are crucial to enabling domestic and foreign acceptance of Canadian aeronautical products and services. Specifically, as stated under international requirements, TCCA is responsible for ensuring the safety of aviation products operating in Canada, designed and produced in Canada and imported into Canada, which is often facilitated

by the establishment of bilateral safety agreements. Other crucial functions include rulemaking activities for international safety harmonization, product certification and validation and safety oversight of Canadian aeronautical products in global fleets.

TCCA and Certification “At a Glance”

Due to international requirements, civil aeronautical products such as aircraft, helicopters and engines must meet design standards that ensure an acceptable level of safety.

In Canada, Transport Canada establishes the required level of safety by regulation and then uses a “certification” process to review the aeronautical product design to ensure that it meets the intent of the design regulations. The review of the design is conducted by TCCA certification specialists (highly specialized engineers and flight test experts) who review the proposed design with the “applicant” (the company that designs the product and applies for the type certificate) and are involved in key tests and analysis to verify that the design meets the design regulations.

When the review is completed of an aircraft, helicopter or engine design, Transport Canada issues a design approval called a “Type Certificate”. This Type Certificate must be issued by Transport Canada for the aircraft, helicopter or engine to be used in civil aviation in Canada. TCCA is responsible for ensuring that there are no unsafe features in any aeronautical product for which it has issued an initial Type Certificate, as long as there is one in use in the world. This is done in close coordination with the company that “holds” the Type Certificate and the product design.

To export the aircraft, helicopter or engine to a foreign country, the aviation authority of the foreign country conducts a design “validation” process that is based on the approval (Type Certificate) issued by Transport Canada and consists of a review of the aeronautical product design.

The “Validation” process used by foreign authorities to accept TCCA type certificated products is facilitated by the existence of Bilateral Aviation Safety Agreements (BASAs) or similar, which enable the importing (foreign) authority to allow maximum credit for the TCCA certification. It does not usually allow for automatic acceptance. If an Agreement is not in place, the importing authority can essentially conduct an in-depth re-certification process. Some countries will only import products from countries with either a Bilateral or some form of agreement in place. (e.g. US requires a BASA and China requires a product specific arrangement). TCCA plays a key role in establishing and maintaining these agreements.

On an on-going basis, Transport Canada specialists are involved in the harmonization and development of design and certification requirements with other (foreign) aviation authorities. TCCA participation in these activities is required to ensure that the Canadian aerospace industry interests are being addressed.

Despite these crucial functions, TCCA does not currently have a proactive role in international rulemaking nor has it been given a leadership role in establishing bilateral agreements. In this sense, the TCCA is at a **choke point** characterized by a limited understanding of the key role TCCA plays in bringing aeronautical products to market. With a limited ability within TCCA to provide a rationale for maintaining or increasing resources to provide needed support to industry, Canadian industry faces a **competitive disadvantage**. This is especially evident vis-à-vis aviation administrations in the U.S. and U.K. who reference strategies that support the growth of their domestic aerospace industries and maintain a high international profile.

Bilateral agreements are in place between TCCA and the Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA); however, the full benefits of the Bilaterals cannot be realized by either party

Example 2: *The TCCA “Release Certificate” (Form 1) is required for the acceptance of production and maintenance but is poorly recognized internationally. Following repair operations, maintenance organizations in the U.S. and the E.U. can release their products with the FAA Release Certificate (8130-3) or the EASA Release Certificate (Form 1), while Canadian companies must routinely take time to convince customers that the TCCA document is equivalent. This creates an extra burden and puts Canadian MRO companies at a competitive disadvantage vis-à-vis companies in the U.S. or the E.U.*

without frequent interaction between TCCA, EASA and FAA. There are numerous examples of TCCA type certified designs or changes being submitted to the FAA and EASA that are subject to delays and extensive information requests, which introduces delays in delivering the product to customers. In collaboration with the FAA, TCCA has agreed to a detailed strategy to improve the situation, however, other priorities and resource limitations continue to hinder progress.

In addition, TC had a leadership role in early 2000s during the development of Safety Management Systems (SMS) for application in the Canadian aviation/aerospace sector. Despite having regulated SMS for airline operations and maintenance organizations, TC has not pursued the requirement for SMS for design and manufacturing sectors. The U.S. FAA, however, has been running pilot programs with their domestic OEMs for more than two years. If the U.S. becomes the first country to implement SMS requirements for design and manufacturing, there is a strong possibility that Canadian industry will be required to adopt this U.S. model.

What is needed is a clear TC mandate and strategy that supports the needs of the aerospace industry. This strategy should be developed in coordination with industry and be consistent with the overall Canadian Aerospace Strategy. To maintain its international reputation as a competent and relevant authority and to better respond to industry needs, TCCA should revise its strategy to enable it to proactively participate in international activities. This includes the negotiation of international bilateral agreements and an active role in international rulemaking activities for the harmonization of safety standards and the global acceptance of products and services.

This also includes a need for TCCA to make a stronger commitment to achieving a timely and efficient outcome on certification projects and engaging with international authorities to have them respect existing bilateral agreements. An improved international profile to promote the international recognition of TCCA certified products would better support Canada’s aerospace industry and contribute to the Government’s overall objective to promote Canadian products and services abroad.

Recommendation 2(b): Adopting a Funding and Resource Model to Better Support Industry’s Growing Needs

While the competitiveness of the Canadian aerospace industry depends on TCCA’s technical competence and oversight abilities, there continues to be an increasing mismatch between TCCA’s capacity and industry requirements. Specifically, though the Canadian aerospace industry is expected to grow by approximately 50% over the next 10 years in terms of overall global revenues, TCCA is currently facing a 10 per cent

Though the Canadian aerospace industry is expected to grow by approximately 50 per cent over the next 10 years, TCCA is currently facing a 10 per cent reduction in its budget

reduction in its budget. While TCCA currently utilizes a cost recovery framework to collect fees for services provided, a concept generally accepted by Canada’s aerospace industry, the structure is out of date.

This inefficient and outdated funding model, which is not linked to any operating plan that is aligned with industry needs, is hampered by a consistent reduction in technical personnel within TCCA and the inability to fund replacements. As a result, TCCA does not currently have the resources or capacity required to support the development, certification, export and validation of aerospace products, and does not have the means to improve this situation under the current funding model.

***Example 3:** Despite the increase in industry demand for new certification programs, the current TCCA- National Aircraft Certification (NAC) Branch specialist staffing level has not changed in 10 years. Due to the volume of industry certification programs and complexity of designs and associated issues, staffing levels are now characterized as “Yellow” and progressing to “Red”. In some specialties, they are one specialist away from being unable to fulfill obligations. Due to budget limitations, there has been an ongoing challenge to fill vacant positions, and challenges remain to create any new positions beyond the current model. From a demographics perspective, some key / critical specialists are on part time in preparation for retirement and there is limited ability to pass key knowledge to new hires / other personnel.*

To better align its delivery model and process with the needs of industry, TCCA should continue to move toward a more risk-based approach in service delivery and resource utilization in certification and oversight activities. To maintain its technical competency, the TCCA should establish a human resources and financial policy in line with future forecasts of industry growth. Most importantly, TCCA must adopt an enhanced funding and resource model with the capacity and competency required to support industry demand.

To this point, the TCCA should modify the existing “fee-for-service” / cost recovery model and allow the fees industry pays to be directly allocated to TCCA to provide the services needed. The funding model should be commensurate with the services provided, and include consideration for the removal of the current fee caps.

Significant new commercial and business aircraft are currently underway and straining TCCA resources. Future programs planned will require additional skilled resources.

Sample Canadian Aerospace Products in Service / TCCA Responsibility as State of Design					
Product	Models Certified	Number in Service 2012 (Worldwide)	Operators	Countries	Est Number in Service 2020 (Worldwide)
Engines	191	~49,000	10,000	200	~70,000
Business Aircraft	10	~1,746	478	79	2,300
Commercial Aircraft	10	2,581	237	77	4,700
Helicopter	17	5,800	2,000	150	7,100

Note: This is only representative of the product types noted and not the entire number of products for which TCCA is responsible by issuance of Type Certificates.

Engaging in Economic Diplomacy

Recommendation 3: Engaging in Economic Diplomacy at the Highest Political Level

While the development of government relationships requires political diplomacy, establishing business relationships requires economic diplomacy. Leaders from large and small countries are increasingly using economic diplomacy to promote their national aerospace champions abroad, especially in key emerging markets like China where diplomatic relations often set the stage for business relations. In April 2011, for example, Brazil's President announced a \$1.3 billion deal to sell regional jets and assemble a business aircraft line in China. Similarly, during a visit to China in December 2009, France's Prime Minister signed two agreements on bilateral aviation cooperation with China. Even countries with mid-sized aerospace sectors, like Sweden, mobilize high ranking officials, like their Minister of Defence and their King and Queen, to help win lucrative aerospace contracts in 2010,²¹ Most recently, at the opening of the July 2012 Farnborough International Airshow, the UK Prime Minister declared that working with the aerospace industry to increase exports was a "government priority" and promised to visit every G20 country to help increase UK exports and push the idea that the UK is open for business.²²

State-Owned Aerospace Competitors

China → Commercial Aircraft Corporation of China, Ltd. (COMAC)

Russia → United Aircraft Corporation (UAC)

United Arab Emirates → Dubai Aerospace Enterprise Ltd.

Turkey → Turkish Aerospace Industries (TAI)

India → Hindustan Aeronautics Limited (HAL)

Israel → Israel Aerospace Industries Ltd. (IAI)

Korea → Korea Aerospace Industries (KAI)

Now more than ever, developed and emerging countries are viewing aerospace development as both a strategic and national imperative. Given the high stake and highly politicized nature of the aerospace sector where countries have national aerospace champions, state-owned operators, such as airlines and airports, as well as state-owned design and manufacturing companies, Canadian companies need high-level support to compete on the international stage. In addition, foreign officials from the highest echelons of government routinely support campaigns and stimulate partnerships on behalf of their domestic industries and help foster strong government-to-government relationships to promote business relations. To respond to what leading nations are doing and to adapt to increasing competition, which is increasingly characterized by state-owned aerospace entities, greater economic diplomacy from the Government of Canada is a necessary condition for Canadian aerospace companies to compete on the international stage.

Recommendation 4: Negotiating and Implementing a Sectoral Partnership with China in Civil Aviation

With increased global competition, Canada must establish strong international partnerships to compete, especially with emerging economies. The incredible growth prospects in China, as well as the country's determination to develop a domestic aviation industry, as stated in their most recent Five-Year Plan, provide a unique opportunity for collaboration. China is open to collaboration and there is an urgent need for Canada to act and secure access to this colossal market. A window of opportunity to negotiate a strategic aerospace agreement with China currently exists; however, this opportunity will close quickly.

²¹ The Local (English newspaper), March 24, 2010.

²² ADS Advance, July 10, 2012.

Growth of China's Market

During its 12th five-year economic plan, China is continuing to vigorously expand its air network with the aim of making the country the centre of global aviation, and the Chinese government will be investing US \$228 billion into the project in the next five years. The Civil Aviation Administration of China (CAAC) indicated that Chinese carriers would buy on average more than 300 planes a year from 2011 to 2015, bringing the total of planes in operation to around 4,700 in China. As of late 2009, China's restrictive airspace management regime had limited the number of fixed-wing general aviation aircraft in the country to 800 (compared with 230,000 in the U.S.). With reforms now underway, the number is expected to increase by 30 per cent per year over the next five to 10 years, resulting in more than 10,000 new general aviation aircraft by 2020. This forecasted increase in supply coincides with increased demand for air travel in China, which is expected to grow at nearly 8% annually, compared to 5% globally. It also coincides with aggressive airport growth where China will build 70 new airports and expand an additional 100 airports between now and 2015. For comparison purposes, the U.S. is home to 15,095 airports and 300 million citizens, while China has 1.3 billion people and only 175 airports.

Canada would not gain first-mover advantage. Indeed, Canada would be playing catch-up, as other countries are responding to China's unprecedented growth prospects and are aggressively seeking out ways to gain market access. Specifically, the United States is in its eighth phase of the U.S. – China Aviation Cooperation Program (ACP) consisting of the United States Trade and Development Agency (USTDA), the Federal Aviation Administration (FAA), U.S. industry and the Civil Aviation Administration of China (CAAC).²³ The program promotes technical, policy and commercial cooperation and has helped foster strong Chinese demand for U.S. aviation products. Similarly, through the EU-China Civil Aviation Project (ECCAP), the EU helps strengthen the institutional capacity of the CAAC and provides technical assistance and expertise in a variety of civil aviation areas.²⁴

From a Canadian perspective, the partnership would build on Prime Minister Harper's February 2012 trade mission to China, where cooperation in civil aviation was listed as mutually beneficial for both countries in the Joint List of Outcomes.²⁵

Example 4: Among the many benefits of a sectoral partnership with China is the potential to create more jobs in Canada. Canadian-based SME FTG Corp. noted that following the signing of a US\$50 million contract with Shanghai Avionics Corporation (SAVIC) to provide subsystems to the Chinese C919 aircraft, most of the development of that program took place in Canada. To support this effort, the company increased their engineering staff by 50 per cent.

The partnership would also build on the joint economic complementarity study by the Canada-China Economic Partnership Working Group, where aerospace was listed as a key area for increased bilateral cooperation. An eventual Bilateral Aviation Safety Agreement (BASA) would be one of the main goals of a Sectoral Partnership. A BASA would diminish costs for Canadian firms to have their products and services accepted in China. This cannot be negotiated overnight. A long term engagement to build confidence and knowledge of each other's methods and standards is necessary, and an effective Sectoral Partnership would be an important building block for stronger collaboration between TCAA and CAAC. The Sectoral Partnership would, ideally, revive the Memorandum of Understanding (MOU) between TCAA and CAAC that expired in 2010 and enhance the MOU between DFAIT and China's National Development and Reform Commission signed in 2009, which encourages the countries' civil aviation industries to

²³ http://www.ustda.gov/news/pressreleases/2012/EastAsiaEurasia/China/ChinaACPPPhase8_032212.asp

²⁴ <http://www.euccap.org/>

²⁵ "The two sides highlighted the complementary nature of their respective civil aviation industries and the important role they play in contributing to growth and prosperity in both Canada and China, and undertook to strengthen collaboration in this area." <http://pm.gc.ca/eng/media.asp?id=4641>

participate in new international civil aircraft development programs and promotes opportunities for collaboration and partnership with respect to international supply chains.

A Sectoral Partnership Agreement with China would also provide a forum to address current barriers to aerospace trade and investment, including intellectual property rights issues and tariff and tax policies. Specifically, the VAT of 17% on aircraft under 25 tons, which combined with the applicable tariff rate of 5%, amount to a 22.85% mark-up for imported regional, corporate and general aviation aircraft from Canada. Comparatively speaking, a combined VAT and applicable tariff of 5.04% apply to aircraft over 25 tons. Since the exchange of technology for market access underpins industrial policies in China's aerospace sector, the partnership would open up opportunities for joint ventures, the vehicle of choice for gaining access to China's market.

Importantly, a partnership would provide greater visibility and high-level political support and endorsement in China, especially given the crowded marketplace and fierce global competition. Given TC's reputation and China's desire to learn and gain international recognition, explicit technical cooperation on civil aviation between TC and CAAC could be seen as a strategic tool to gain market access. Looking forward, the partnership would provide a platform for an eventual BASA between both countries.²⁶

Levelling the Playing Field

Over the next 20 years, the highest growth rate opportunities in commercial aviation are forecasted to come from emerging markets, while mature markets such as the U.S. and E.U. predict much lower growth rates. The increasing importance of key emerging markets is expected to lead to a new competitive landscape, especially as governments invest in growing their domestic aerospace manufacturing sector.

As nations increasingly view their aerospace sector as strategically important, some may erect trade barriers to protect their domestic market. While Canada's market is largely open to imports from around the world, other countries continue to levy steep tariffs on Canadian exports and continue to subsidize their industry to the benefit of local state-owned or controlled OEMs. Because an estimated 78 per cent of Canadian aerospace products are exported, an improved domestic and export control regime and a rules-based trade environment are required to level the playing field to ensure all Canadian industry players can benefit from international growth opportunities. With respect to export controls, it is paramount that a balance be struck between national security imperatives and economic competitiveness. Although a main purpose of export controls is to prevent the exports of strategic technology that would substantially enhance other countries' technological capabilities contrary to Canada's national interests, Canadian industry needs a domestic and export control legislation that is on-par with that of the US and EU in order to fairly compete and not be disadvantaged from its own domestic legislation. Without a doubt, a level regulatory playing field is necessary for Canadian industry to benefit from international growth opportunities.

Recommendation 5: Modifying Canada’s Export Controls Regime and Optimizing Domestic Security Controls to Enhance Competitiveness of Canada’s Aerospace Industry²⁷

Export control laws are federal regulations that control the conditions under which certain information, technologies, and commodities can be transmitted overseas. Export controls laws prohibit the unlicensed export of certain products, materials or information for reasons of national security or protection of trade. Canada’s Export Controls List (ECL) is a series of seven discrete lists (referred to as “groups”) with each group having its own unique definitions, classifications and special rules of interpretation. Most generally, to enhance Canada’s competitiveness in the aerospace field, there is a need to improve Canada’s export controls regime to match the output of competing nations.

Recommendation 5.1: Exports for the Repair, Replacement and Maintenance of Aerospace Products

The current processing time to obtain Canadian export permits for replacement parts, technical data and/or technical services including for the repair of customers’ aircraft do not meet industry Aircraft on Ground (AOG) requirements. The availability of export control exemptions in the U.S. (dual-use and munitions list items) and general export authorizations (GEA) in the E.U. enable competing firms in those countries to provide faster and more efficient after-sales support than what can presently be provided from Canada both for AOG and non-AOG situations.

***Example 5:** A licensable dual-use civil avionics box was sent from Canada to a non-ACL sanctioned country where the aircraft was located. It took approximately 4-6 weeks for an export permit to be issued, with the aircraft remaining grounded for that period of time. Had the part been sent from a U.S. supplier, it could have been exported in a matter of days using U.S. licensing exemptions.*

To accelerate the process, DFAIT can create General Export Permits (GEPs) similar to those in the E.U., which do not require export license applications to export dual-use controlled parts to open policy countries (OPC) and non-sanctioned countries. If the product has already been exported to an OPC or non-OPC under an individual export permit, a GEP would be beneficial to allow for warranty support, maintenance and repair after delivery. Special consideration should also be given to establishing an expedited process for enabling the export of replacement parts for the repair of aircraft in sensitive countries. This would allow Canada to meet its obligations under international flight safety requirements.

Recommendation 5.2: Controlled Goods Coupling with International Traffic in Arms Regulations (ITAR)

Controlled goods in Canada currently are linked to munitions list items in ECL Group 2, all civil dual-use items, such as civil aircraft avionics and composites, in ECL Group 6 and all strategic items in ECL Item 5504. These civil aircraft items and technologies are treated as dual-use in the U.S. and E.U, but are considered military items in Canada. As a result and in relation to these civil aircraft items and technologies, Canadian industry currently experiences the most severe domestic and export controls in the world, especially in relation to the U.S. where many of these products originate from.

²⁷ The recommendations in this section are credited to the Export Controls Sub-Group and its report to the Working Group on Market Access and Market Development.

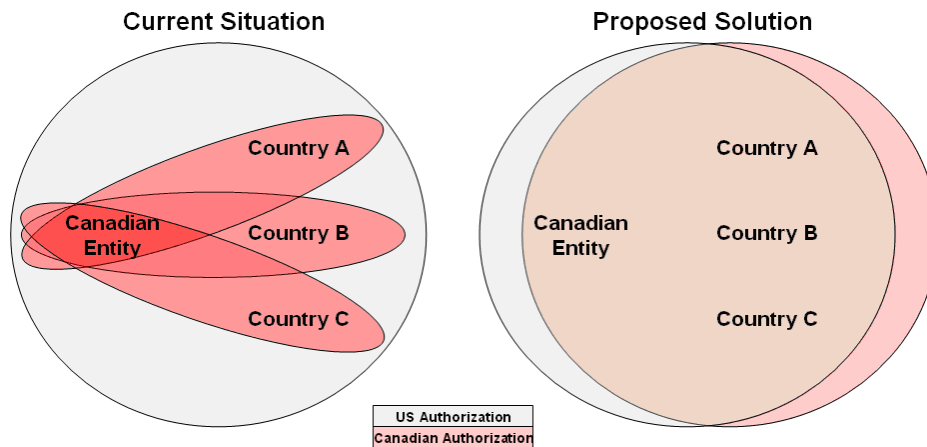
Example 6: Because some civil aircraft avionics are currently treated as a controlled good on par with the treatment of military items in Canada, one must register with the CDG if repairs are required on those civil avionics incorporated on their civil aircraft.

As such, the list of Controlled Goods as set out in the Schedule to the Defence Production Act (DPA) should be delinked from Canada's ECL and instead be coupled with the US International Traffic in Arms Regulations' (ITAR) US Munitions List (USML). By doing so, civil dual-use items that fall under ECL Group 6 would no longer be treated as a controlled good, and registration with the CGD would no longer be required in Canada or prior to export as is the case in the U.S.

Recommendation 5.3: Multiple Destination Permits (MDP) for Non-Open Policy Countries (OPC) Destinations

MDPs are only applicable to the export of dual-use list items in ECL Group 1 and item 5504 to OPC destinations. The limited scope of MDPs in Canada puts Canadian industry at a licensing disadvantage since many more licenses must be applied for and issued to support export transactions involving dual-use and munitions items. In the U.S., for example, export license exceptions exist that do not require individual export license applications for some dual-use items. As well, U.S. export licenses allow for multiple destinations for munitions items.

To match the output of competitor nations like the U.S., the use of MDPs should be extended to include all civil dual-use items, including those that fall under ECL Group 6 (Missile Technology Control Regime List) and munitions items that fall under Group 2 (Munitions List), as is available in the U.S. The scope of MDPs should also be extended to apply to non-OPC destinations that are not subject to international sanctions.



Recommendation 5.4: Reintroduction of Project Development Permits

The PDP was an export permit vehicle that previously existed but is no longer available in Canada. The intent of the PDP was to allow industry to quickly respond to foreign customers' information and proposal requests. While the U.S. and the U.K offer licensing vehicles similar to the PDP (Marketing License in the U.S. and the Global Project License in the U.K), Canadian industry currently must apply for several individual export permits. To ease the export permitting requirements at the marketing stage, the PDP should be reintroduced as an export permit vehicle to allow industry to respond more quickly to foreign customers' information and proposal requests.

Recommendation 5.5: Export Permit Processing Times for Non-Open Policy Countries (OPC) Destinations

Obtaining Canadian approval for export permits for dual-use or munitions list items destined for non-OPC destinations is much slower than the process in place in the U.S. or E.U. This puts Canadian industry at a disadvantage, especially since

Proposed Priority Non-OPCs:

Latin America: Mexico, Brazil, Chile, Columbia, Peru
 Europe: Russia, Ukraine
 Africa: Morocco, South Africa, Algeria
 Asia: China, India, Malaysia, Singapore, South Korea, Taiwan, Hong Kong, Brunei, Indonesia, Thailand

many non-OPCs are strategic markets where demand for aeronautical products and services are expected to grow significantly.

Example 7: Approval for an individual permit for a Munitions List item destined to a non-OPC can vary between six to eight weeks. The process is lengthier if the end product contains U.S. military technology, as Canadian companies are required to obtain a U.S. re-export authorization prior to Canadian processing.

First, DFAIT can work to create a list of priority non-OPC countries where special licensing procedures for export permits can be made applicable with a view to expediting processing times. If, within a five-year period, an individual export permit has been granted to a non-OPC country, then subsequent exports of a similar nature to that destination should not have to undergo the same lengthy process. The second solution would improve approval times for priority non-OPCs to 2-4 weeks.

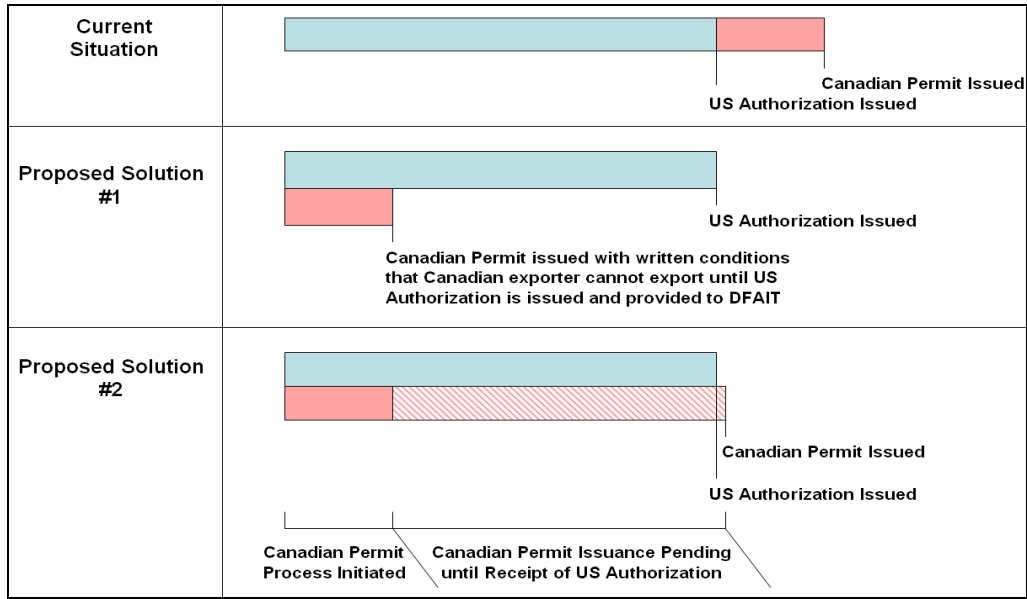
individual export permit has been granted to a non-OPC country, then subsequent exports of a similar nature to that destination should not have to undergo the same lengthy process. The second solution would improve approval times for priority non-OPCs to 2-4 weeks.

Recommendation 5.6: Export Permits for Re-Exports of U.S. Munitions List (USML) Items

The overall process to obtain a Canadian export permit for re-exports of USML items is more cumbersome and lengthy than that in the U.S. or E.U. system. Under the current system, Canadian industry undergoes a dual and linear export licensing process to re-export USML items from Canada, where Canadian industry must wait for the US export approval before DFAIT can process and authorize the export permit for same item/technology. This results in longer overall lead times to obtain Canadian export approval. To be sure, industry fully understands the requirement to obtain prior US export approval, however industry seeks a parallel, more efficient Canadian permit process for USML items that still meets the prior US approval requirement, versus the current linear Canadian permitting process. Canadian exporters currently wait in total approximately 8 to 16 weeks for export approval of USML items, which is much longer than what is available to competitors in the U.S. or the E.U.

Example 8: A military program required a Canadian company to exchange USML items and technical data with a foreign party. The Canadian company waited several weeks to obtain U.S. authorization before submitting the Canadian export permit application. Depending on the importing country, it can take additional weeks to obtain the permit. This causes increased lead times for Canadian industry to export USML items, which represents a competitive disadvantage.

To reduce lengthy processing times, two solutions are proposed (see illustration below). Both solutions would replace the current linear licensing process with a parallel process for the export of items from Group 1, Group 2 and Group 6.



Recommendation 5.7: Export Permit Reporting Conditions

Currently industry is subject to the onerous export permit reporting conditions for all ECL Group 2 exports. The current reporting conditions stem from both international commitments (such as the United Nations, the Wassenaar Arrangement, etc), and a non-legislated domestic requirement for which the latter requires Industry, through DFAIT, to report all ECL Group 2 exports to Parliament in response to Non-Governmental Organization (NGO) requests for greater transparency in arms exports.

It is proposed that the reporting of ECL Group 2 exports be reduced to only what is required to meet international commitments, which is that required by the United Nations, the Wassenaar Arrangement, etc. In other words, export permit conditions should be harmonized with Canada’s international commitments.

Recommendation 5.8: Export Control Guidance to Exporters

In an effort to provide greater information to industry, and given the difference between Canada’s export control classification nomenclature versus the US and EU, it is proposed that DFAIT explain on their website or other publications the benefits of Canada’s classification system to industry. It is also proposed that DFAIT continue to update and publish the Export Controls Handbook on its Export Controls’ website, and to include more FAQs related to export licensing procedures, examples of extraterritoriality of EIPA and updated unified lists of OPC and embargoed/sanctioned countries.

Recommendation 6: Expanding the Scope and Signatories of the Aircraft Sector Understanding (ASU)

In addition to developing a competitive export controls system, the Government of Canada can play a key role in fostering a rules-based trade environment to level the existing playing field.

ASU “At a Glance”

The ASU is a key trade agreement that provides a framework of rules governing officially (i.e. government) supported export credits for the sale or lease of aircraft and aircraft parts. Negotiated under the auspices of the Organization for Economic Cooperation and Development (OECD), the Understanding was first implemented in 1986 between the U.S. and the E.U. to control the provision of export financing by governments to support the sale of large civil aircraft. With the emergence of strong regional jet manufacturers, the OECD reopened negotiations in 2005 to update the agreement to extend its scope to cover civil aircraft of all sizes. Revised again in 2011, its updated structure now makes no distinction amongst various categories of aircraft and reflects more contemporary terms and conditions that are consistent with commercial markets.

The ASU sets out the most favourable financing terms and conditions that may be provided to purchasers of aircraft by participating governments through their own export credit agencies (ECAs). In doing so, the ASU establishes a level playing field on sales financing amongst aircraft manufacturers ensuring that competition is based on the quality and commercial competitiveness of the aircraft, rather than on the most favourable officially supported financing terms. Its prescribed export credit terms are recognized under the WTO Agreement on Subsidies and Countervailing Measures as not constitute a prohibited export subsidy. There are currently ten (10) participants to the ASU: Australia, Brazil, Canada, the European Union, Japan, Korea, New Zealand, Norway, Switzerland and the United States.

The OECD/ASU agreement establishes clear rules for export sales financing offered by export credit agencies for exported aircraft. Though the ASU was renewed and signed by the main aerospace players (Brazil, Canada, Japan, E.U., U.S.) in 2011, other emerging aerospace players such as China and Russia are not signatories. Ensuring a level playing field for OEMs requires Canada to play a key leadership role in ensuring that China and Russia join the agreement.

Several ASU members have federal loan programs for domestic sales, including Canada under EDC’s temporary domestic powers. However, the ASU does not currently regulate such loans. As a result, countries can award benefits to their domestic OEMs by granting domestic buyers more favourable financing terms than would otherwise be allowed under the terms of the ASU for the purchase of a foreign aircraft.

Similarly, in 2012, the US Export-Import (Ex-Im) Bank reauthorization process emphasized the Bank’s ability to finance U.S.-based OEMs’ domestic aircraft sales by matching terms provided by other ECAs. While the mandate for domestic financing by the U.S. has been used, its increased visibility during the reauthorization process emphasizes the need to clarify the rules to ensure a level playing field for all OEMs.

To help do this, Canada can play a key role in catalyzing discussions amongst ASU signatories to expand the ASU’s scope to govern the provision of domestic financing by domestic export credit agencies.

***Example 9:** In an April 2012 report on the global business aircraft industry, the United States International Trade Commission confirmed that EDC had financed domestic sales under terms that were compliant with ASU. The same report found that Brazil’s national development bank, BNDES, had been providing domestic financing for Embraer business aircraft at terms that were more favourable than the ASU.*

Recommendation 7: Negotiating and Implementing a New Plurilateral World Trade Organisation (WTO) Agreement on Aviation Program Funding

The international legal framework on government support to enterprises and industries across sectors is embedded in the WTO Agreement on Subsidies and Countervailing Measures (ASCM).

The ASCM includes disciplines on the provision of subsidies by government and regulates actions countries can take, through its dispute settlement procedure, to counter the trade-distorting effects of these subsidies.

Since the 1990s, many disputes have been raised at the WTO with regards to aerospace sector support programs. Though disputes have had varying degrees of success, they continue to be long, inefficient and costly for both the country and the domestic OEM. To maintain a level playing field, it is crucial that government support is compliant to WTO rules and remains competitive relative to manufacturers in other countries. This is especially important for those countries where aerospace is regarded as a strategic industry and preferential support is provided through, what is believed to be, non-compliant programs.

***Example 10:** Government support within the U.S. and the E.U. has only become publicly available through the WTO dispute settlement mechanism – which each party claims to have won. Meanwhile, there is no external visibility of the share of the Russian aerospace budget that is allocated to the UAC or its design bureaus, while the Chinese government is silent on its financing to COMAC. These questionable government support practices underscore the need for an effective WTO framework.*

To this point, Canada can play a key role in catalyzing the discussions around the negotiation and implementation of a new plurilateral WTO agreement on aviation program funding. A new agreement would help level the playing field by ensuring greater transparency between signatory countries and their manufacturers, bind emerging aerospace countries to the terms of the agreement and establish a revised and improved dispute settlement process. Strengthening this agreement would also address unfair benefits that may be conferred by non-compliant government support programs.

Recommendation 8: Ensuring a Flexible Strategic Aerospace and Defence Initiative (SADI) Regime to Better Support Market Access

As the largest direct funding incentive program in Canada, SADI has an instrumental role to play in levelling the playing field not only in terms of ensuring that Canada can maintain growth through the development of leading-edge technologies leveraged against such a funding mechanism, but also by ensuring that the terms and conditions within the SADI agreement allow for Industry to exercise judgment with respect to the resultant products needed to grow the sector. SADI terms with respect to Intellectual Property (IP) ownership and manufacturing of the resultant products exclusively within Canada can create barriers for accessing markets, especially in China where work share is increasingly viewed as the “price” of entry.

***Example 11:** Irrespective of the access to new markets, the ability to export IP within a corporation that functions on a global scale is a barrier in itself; for example, an electronics manufacturer opted to forgo SADI funding due to an inability to transfer technology to its sites outside of Canada. Similarly, a foreign technology demonstration initiative was impacted as access to a test cell outside of Canada was disallowed due to SADI’s IP constraints.*

Canadian firms need a level of flexibility to both retain the most valuable part of the technology assets within Canada (and thereby stimulate the domestic supply chain) and offer technology or lower-value manufacturing in exchange for market access. In addition, more appropriate risk-sharing on the part of the Government is necessary in order to level the playing field where countries creating competing technologies benefit from either direct subsidies or risk-sharing in the order of 50% including technology demonstrators. More comprehensive detail on

the recommendations for improving the SADI programs are covered in the Technology Development, Demonstration, and Commercialization Working Group.²⁸

Recommendation 9: Extending Permanently Export Development Canada (EDC)'s Domestic Authority in Aircraft Financing

Funding is very scarce for aircraft financing in Canada. Since Canadian commercial banks are generally not active in this area, EDC provides the only funding source in most instances. In light of tighter credit environments and more stringent capital ratio requirements, foreign banks are withdrawing from aircraft financing. Export credit financing is often a key element when negotiating deals, including in domestic markets, and export credit agencies in other countries support their aircraft industry in accordance with the terms outlined in the 2011 ASU. Moreover, the availability of ASU financing domestically has become increasingly important in this credit-challenged environment, which was emphasized by President Obama who recently announced his intention to expand the powers of EDC's counterpart in the USA (Ex-Im Bank) by allowing for domestic financing to U.S. buyers.

The current temporary nature of the EDC domestic authority introduces financing uncertainty for Canadian airlines who are considering new orders with delivery periods that exceed the temporary authority period. This disadvantages Canadian aircraft under consideration when competing against export credits from other countries.

To support a level playing field, it is crucial that EDC's domestic authority in aircraft financing become permanent. This would put Canadian companies on par with other competitive nations and ensure that contracts are awarded on the merits of the technical competence rather than inadequate domestic financing.

Recommendation 10: Systematically Engaging and Consulting with the Aerospace Industry prior to Free Trade Agreements (FTAs), Foreign Investment Promotion and Protection Agreements (FIPAs) and Bilateral Aviation Safety Agreements (BASAs)

Both formal and informal barriers can impede market access to foreign firms and provide preferential access to domestic suppliers.

More formal barriers to trade, such as excessive importation restrictions, value-added taxes on imports, customs delays or the prescribed use of brokerage firms can impede market access to foreign suppliers. Other trade-related foreign investment barriers include local content requirements that promote the interests of domestic industries and suppliers, as well as technology transfer requirements that require foreign firms to transfer their technology to local industries before gaining market access.

Canada should continue to negotiate FTAs, FIPAs and BASAs with key jurisdictions to minimize trade and investment barriers and provide Canadian exporters with greater access to crucial markets. Prior to negotiations, however, the Government of Canada should systematically and proactively consult with industry to better align strategic objectives. By ensuring greater protection

²⁸ See Section 5 of Technology Development, Demonstration, and Commercialization Working Group – Assessment of Government of Canada Policies and Programs.

Market Access and Market Development

against discriminatory and arbitrary practices, and enhancing a rules-based environment, international agreements will help Canadian aerospace companies invest abroad with greater confidence and certainty. With respect to military procurement and to facilitate the trade of military sales (through the CCC), consideration should be given to whether government-to-government arrangements can be recognized in FTAs.

Annex: Members of the Working Group

	Name	Title	Organization
Chair	David Curtis	President & CEO	Viking Air
Vice Chair	Pierre Pyun	VP, Government Relations	Bombardier
Secretary	Angela Nembaviakis	Senior Analyst	Aerospace Review Secretariat
AIAC	Maryse Harvey	VP, Public Affairs	AIAC
Industry	Mark van Rooij	CEO	Avcorp
	Eddy Morin	VP, Canada Business Development	Boeing
	Gérald Mercier		CAE
	Christyn Cianfarani	Director, Government Programs, R&D, and Intellectual Property	CAE
	Léo Sousa	President, Operations	Comer Group
	Claude Chidiac	VP, Business Development	Esterline CMC Electronics
	Dave Shapka	VP, Export Sales & Marketing	Field Aviation
	Tim Whittier	Director, Government Relations	Goodrich
	Yvan Fredette	Industrial Security Manager	Héroux-Devtek
	Bruce Latimer	Vice President & General Counsel	L-3 MAS
	Paul Mercier	Senior Director, Business Development	L-3 MAS
	Randy Joe	Corporate Director Business Development	Magellan
	Phil Murphy	VP, Government Affairs	MDA
	Jodi Diamant-Boustead	Chief Engineer, Air Worthiness and Certification	P&WC
	Maria Della Posta	VP, Business Development and Gov't Affairs	P&WC
	Bruce Lennie	Vice President, Business Development, Military/Government Services	Standard Aero
	Selena Hui-Garraud	Director, Export Controls, Legal Services	Bombardier
	Domenico Andrea Marcone	Specialist, Export Controls, Legal Service	
Stakeholders	Suzanne Benoit	CEO	Aéro Montréal
	Les Aalders	VP Operations	ATAC
	Brad Bourne	President and CEO	FTG
	Marni McVicar	VP, Operations	Aeryon
	Jean-Michel Laurin	VP, Global Business Policy	CME
Academia	Aziz Guergachi		Ted Rogers School of Management – Ryerson University
Ex Officio			Department of Foreign Affairs and International Trade (DFAIT) Department of Finance (Finance) Department of Public Works and Government Services Canada (PWGSC) Industry Canada (IC) Department of National Defence (DND) Transport Canada (TC) Export Development Canada (EDC) Canadian Commercial Corporation (CCC) Canadian Economic Development Agency for Quebec Regions