Central Okanagan Aerospace Regional Asset Map

2017

REGIONAL DISTRICT of CENTRAL OKANAGAN

CENTRAL OKANAGAN ECONOMIC DEVELOPMENT COMMISSION

TRACEY FREDRICKSON CONSULTING

Table of Contents

INTRODUCTION

The Central Okanagan is home to a growing segment of well-established and new aerospace companies and suppliers. Maintenance, repair, overhaul/in-service support (MRO-ISS), rotary wing, and avionics are well represented, and there is an increasing number of companies offering a diverse range of products and services.

The environment for continued development of the aerospace sector in the Region is enhanced by the Okanagan's natural attributes and a strong, diversified economy. Kelowna, one the fastest growing cities in Canada, is the hub of the region and Kelowna International Airport is one of the 11 busiest airports in Canada. This rapidly growing area offers a highly desirable lifestyle, community infrastructure and connectivity that attracts entrepreneurial talent and skilled workers.

This asset map provides an overview of the built infrastructure, research and development capacity, and organizations and associations which provide a strong foundation for growth of the Central Okanagan aerospace sector.

KF Aerospace, Kelowna

The **2017 Central Okanagan Aerospace Database** provides details on companies providing aerospace products and services in the region including:

- MRO-ISS
- Avionics
- Product Development and Manufacturing
- Training Data solutions
- Fabrication and machining
- Coating/plating
- Testing
- Quality/certification/ consulting

A link to this resource is available on the **COEDC website**.

KELOWNA INTERNATIONAL AIRPORT

Website:	***www.ylw.kelowna.ca***
Address:	*1 – 5533 Airport Way, Kelowna, BC V1V 1S1*
Phone:	*(250) 807-4300*
Contact:	*Sam Samaddar, Airport Director*
Email:	***airport@kelowna.ca***

Elevation: 1421' (433 m) *Runway Length:* 8900' (2,713 m)

Kelowna International Airport (YLW) is the largest municipally owned airport in Canada serving approximately 1.7 million passengers annually and offering more than 60 daily non-stop commercial flights with nine airline partners. One of the 11 busiest airports in Canada, YLW has a total economic impact of 4,545 direct and indirect jobs and $789 million in total economic output to the province of British Columbia.

The Central Okanagan is the primary catchment area for YLW. Primary drivers of steady air traffic increases at the airport include strong population growth related to people moving to the Okanagan region, a strong and well diversified regional economy, and the importance of air travel to tourism, a significant and growing component of the regional economy.

The Airport's vision statement *"To be the best mid-sized airport in North America"* is the focus of its **Master Plan to 2045**. Among the priorities to support the objectives of the Plan are:

- Airside system development including runway extension;
- Air terminal building expansion;
- Access and parking in conjunction with City of Kelowna and BC Transit priorities;
- Commercial land development to strengthen YLW's aviation role and expand its employment base, including development of an Aerospace Campus.

Kelowna International Airport

EDUCATION AND TRAINING

Flight training is mainly out of Kelowna, the hub of the Okanagan Valley and location of Kelowna International Airport (YLW). As a Tier 2 airport, YLW is a controlled airport with many different operations and aircraft as well as enough airspace to provide important challenges associated with a high calibre of pilot training, without extended waits for practice times. To the north is a completely uncontrolled airport in the city of Vernon, a partially controlled airport to the south in Penticton, and there are a number of other small strips in the area.

AIR-HART AVIATION FLIGHT SCHOOL

Website: ***www.air-hart.com***
Address: *1348 Water St Kelowna, BC V1Y 9P3*
Phone: *(250) 762-9830*
Fax: *(250) 762-9840*
Cell: *(250) 575-7542 Toll-Free: 1-877-766-6699*
Email: ***info@air-hart.com***

Air-Hart Aviation provides comprehensive Flight Training (commercial and private license) and Float Plane/Seaplane (floatplane rating and 50 hour bush course) as well as advanced Seaplane training packages. Training includes more Visual Flight Rules (VFR) days than any other location in Canada. Air-Hart is a certified HRDC Flying School and provides an official tuition receipt.

KF AEROSPACE

Website: ***http://www.kfaero.ca***
Address: *5655 Airport Way, Kelowna, BC V1W 4T9*
Phone: *(250) 491-5500*
Contact: *Bryan Akerstream,*
Director of Business Development
Email: ***b.akerstream@kfaero.ca***

KF AEROSPACE

KF Aerospace Defence provides Basic and Advanced multi-engine and helicopter pilot training to the Royal Canadian Air Force (RCAF) under the Contract Flying Training and Support (CFTS) Program. The CFTS program trains 100% of the candidates seeking to become RCAF pilots (Selection) and 80% of all new pilots in the RCAF (Basic and Advanced) every year, and provides the Lead in Air Navigator Training Course to all potential Air Combat Systems Officers (ACSO's) for the RCAF. The modern facility leverages the ever-evolving simulation environment to optimize the training program in the development of exceptional pilot graduates. A strong partnership with the RCAF has produced a highly effective and extremely efficient training solution.

Okanagan College/Southern Interior Flight Centre

Website: ***Okanagan College Aviation Diploma program***
Phone: *(250) 765-7776 ext. 424*
Contact: *Flight School Director, Southern Interior Flight School: Marc Vanderaegen*
Email: ***marc@flysifc.ca***

Okanagan College provides a Commercial Aviation Diploma which combines relevant business experience along with the aviation training required by Transport Canada. The business portion is completed at Okanagan College and normally consists of two aviation-applicable business courses per semester for a total of eight business courses over two years. The flight training portion is taken concurrently with **Southern Interior Flight Centre (1993) Ltd.** and consists of three aviation theory courses each semester and Transport Canada prescribed flight training to the airline level.

Okanagan Mountain Helicopter Flight School & Charter

Website: ***www.okheli.ca***
Address: *5655 Airport Way, Kelowna, BC V1V 1S1*
Phone: *(250) 491-9359*
Contact: *George Cann*
Email: ***George.cann@okheli.ca***

Okanagan Mountain Helicopters offers comprehensive helicopter pilot training tailored to meet the needs and demands of commercial helicopter companies in Canada. The company has chosen Kelowna/Okanagan area for its training to take advantage of dynamic, challenging environment with various mountainous winds and weather.

Kelowna International Airport offers exclusive helicopter training areas. Multiple training locations for confined areas and mountain flying introduction are located within the control zone. Several uncontrolled airports in close proximity to Kelowna are used for cross country navigation, flight training, radio and emergency procedures.

RESEARCH AND DEVELOPMENT

UBC Okanagan supports a multi-disciplinary approach to innovation with close ties to both industry and government. In addition to the School of Engineering, UBC Okanagan is home to facilities which connect industry with academia, research, testing and commercialization of new technologies and hands-on experiential learning.

COMPOSITES RESEARCH NETWORK

Contact:	*Dr. Abbas Milani,* *Coordinator, Okanagan Node*	*Suzana Topic,* *Manager, CRN*
Phone:	*(250) 807-9652*	*(604) 822-6178*
Email:	***abbas.milani@ubc.ca***	**suzana@composites.ubc.ca**

The Composites Research Network (CRN) works with small and medium-sized companies to support the continued growth and maturation of the composites manufacturing capacity. This work takes the form of short term projects which address business needs of the client organization while also connecting to the underlying fundamental science which supports composites manufacturing. Launched in 2012 with significant investment from Western Economic Diversification Canada, the CRN has its hub at The University of British Columbia in Vancouver with nodes in Kelowna and other locations across Canada.

THE LEARNING FACTORY

Contact:	*Dr. Philip Barker, Vice-Principal, Research*
Phone:	*(250) 807-9412*
Email:	***vpresearch.ok@ubc.ca***

The University of British Columbia, in partnership with the Avcorp Group (Avcorp) and the Boeing Company is exploring the development of a unique research, training and job-creation initiative called the Learning Factory for Advanced Composites. The Learning Factory will merge industrial production lines to produce complex parts for Boeing aircraft while facilitating learning and research. This initiative will create an industrial facility at UBC's Okanagan campus, essentially a teaching hospital for manufacturing innovation where advanced manufacturing engineers and technicians solve real world problems in aerospace manufacturing while providing unique training opportunities in an advanced factory.

The project will provide a platform that will engage global firms such as Boeing, Fuji Heavy Industries and Subaru in the BC Interior. The research conducted at the Learning Factory, led by UBC's Composite Research Network will give British Columbia and Canada a global competitive advantage in developing and producing advanced composite materials and aeronautic parts.

MATERIALS AND MANUFACTURING RESEARCH INSTITUTE

Contact: *Dr. Abbas Milani, Director*
Phone: *(250) 807-9652*
Email: ***abbas.milani@ubc.ca***

MMRI

The newly established Materials and Manufacturing Research Institute (MMRI) serves as a multi-disciplinary, inter-departmental research hub, centrally operated in Kelowna and linking both UBC campuses with other regional, national and international universities, industry partners and government research organizations. Pursuant to other Canadian research institutes, the MMRI will create linkages between researchers from traditionally distinct disciplines, including engineering, chemistry, physics, biology, medicine, health and medical science, computer science, social science, applied mathematics, management, among others, to co-create and launch large-scale strategic research projects in the core and applied materials and manufacturing domains. Initially, the institute has included five research pillars as follows:

1. Aerospace and Transportation Materials and Manufacturing (ATMM)
2. Biomedical and Biological Materials and Manufacturing (BBMM)
3. Building and Construction Materials and Manufacturing (BCMM)
4. Electromagnetic and Nanoscale Materials and Manufacturing (ENMM)
5. Polymer and Natural Materials and Manufacturing (PNMM)

SURVIVE & THRIVE APPLIED RESEARCH INITIATIVE (STAR)

Contact: *Kent Dehnel*
Phone: *(250) 354-3657*
Email: ***kent.dehnel@ubc.ca***

STAR

From measuring fatigue in aerial pilots battling wildfires to protecting first responders on the front lines of war and disaster, UBC's Survive and Thrive Applied Research (STAR) Initiative utilizes the power of collaborative R&D to solve human protection and performance challenges in extreme environments. STAR researchers work directly with entrepreneurs and strategic partners to develop new technologies, strategies and standards with a focus on:

- Before and after disaster
- Intelligent materials
- Decision support

STAR provides scalable R&D support from fee-based technical services to multi-year consortium-driven research projects. Research teams have access to specialized lab facilities, incubation space, equipment and expertise, including a fully-equipped STAR Hub with virtual 3D environment for rapid prototyping, modelling and new product design, a custom-designed ballistic and blast simulation facility, advanced machining capabilities, and a digital media production facility.

INDUSTRIAL RESEARCH ASSISTANCE PROGRAM (IRAP) – PACIFIC

Contact: *Maureen Hatanaka*
Phone: *(250) 712-4303*
Email: ***m.hatanaka@nrc.gc.ca***

The National Research Council of Canada Industrial Research Assistance Program (NRC-IRAP) supports small and medium-sized enterprises in Canada in building their technology and innovation capabilities. Industrial Technology Advisors work with companies on-site, coordinating direct technical assistance, access to the latest technological advances, expertise, facilities and resources. Expertise reflects regional industrial profiles and covers a range of technologies including forestry, mining, electronics, software and hardware, advanced materials, industrial engineering, food technology, biotechnology, construction, aerospace, fuel cells, electrochemistry, information technologies, engineering and physics. NRC-IRAP may also provide cost-shared financing of innovative technical projects to qualified firms.

INDUSTRY ASSOCIATIONS

AEROSPACE INDUSTRIES ASSOCIATION OF CANADA (AIAC) PACIFIC

Contact: *Mike Mueller, Vice President, Operations & Marketing*
Phone: *(604) 655-3566*
Email: ***m.mueller@aiac.ca***

For 50 years, the Aerospace Industries Association of Canada has worked with its members to develop what is today the fifth-largest national aerospace industry in the world. AIAC collaborates with industry and government to develop products, services, programs and policies that enhance Canadian aerospace companies, helping industry to invest, innovate and develop best-in-class capabilities in the civil, defense and space sectors.

AIAC Pacific is able to leverage the national association's established network, brand and national and international programs designed to enhance business development, investment and global competitiveness. AIAC Pacific works to ensure British Columbia's aerospace industry is fully engaged in the many opportunities and developments that are taking place at the national level, including:

- The Canadian Aerospace Summit
- International market access opportunities made possible by AIAC's agreement with Western Economic Diversification Canada
- The Technology Demonstration Program
- A national supply chain initiative currently in development
- The Consortium for Aerospace Research and Innovation in Canada (CARIC)
- Multiple initiatives in support of small business
- Key industrial capabilities and the Defense Procurement Strategy

PACIFIC NORTHWEST AEROSPACE ALLIANCE

Contact: *Melanie Jordan, CEO*
Phone: *(425) 268-2617*
Email: ***mjordan@pnaa.net***

Pacific Northwest Aerospace Alliance is a coalition of aerospace companies that serve North America's largest commercial aerospace manufacturing cluster which is centered around the Boeing Company just outside of Seattle, Washington. With members and affiliates around the world, PNAA strengthens the manufacturing supply chain through various programming including:

- Education and networking events designed to inform aerospace leaders, connect aerospace interests, and inspire industry collaboration and innovation
- Representation of the Pacific Northwest Aerospace Cluster at regional and international conferences and air shows
- Scholarships at colleges throughout the Pacific Northwest to support the development of next generation of aerospace workers.

CONSORTIUM FOR AEROSPACE RESEARCH & INNOVATION (CARIC)

Contact: *Dwayne Lucas, Regional Director, British Columbia and Alberta*
Phone: *(604) 807-6136*
Email: ***Dwayne.Lucas@caric.aero***

The Consortium for Aerospace Research and Innovation in Canada (CARIC) is a federally-funded non-profit organization dedicated to advancing the Canadian aerospace industry with regional offices across the country.

CARIC's mission is to generate and foster dialogue and collaboration between industry, and provide tangible financial support to launch R&D projects that will advance aerospace in Canada. Industry specialists and researchers from colleges, universities and research centers can submit project ideas to CARIC; entrepreneurs looking to develop an innovation strategy for their SMEs can benefit from the resources available through CARIC membership including access to financing, integration to the aerospace supply chain connection, sharing of costs and risks and pooling of human and physical resources, and strategic networking.

MATHEMATICS OF INFORMATION TECHNOLOGY & SYSTEMS (MITACS INC.)

Contact: *Jennifer Tedman-Jones,*
Director, Business Development, BC Interior
Phone: *(250) 870-1514*
Email: ***jtedman@mitacs.ca***

Mitacs is a national, non-profit organization that designs and delivers research and training programs in Canada. It works with 60 universities, businesses and both federal and provincial governments to build partnerships that support industrial and social innovation in Canada.

Mitacs was founded in 1999 as a Canadian Network of Centres of Excellence, dedicated to supporting applied and industrial research in mathematical sciences and associated disciplines. In 2003, it launched a research internship program designed to increase deployment of highly educated graduates into the private sector. Mitacs has expanded in response to industrial and university needs, including programs in R&D management, professional skills development and international research training. Fully independent since 2011, Mitacs' core vision remains focused on supporting research-based innovation projects in partnership with partners in industry, academia and government.

Mitacs also has a partnership with **CARIC** and the **Consortium for Research and Innovation in Aerospace in Quebec** (CRIAQ) whereby organizations can submit joint projects. A regional initiative example is the pilot fatigue study being done with collaboration from the **Survive and Thrive Applied Research** (STAR) facility at UBC-Okanagan (see above), **Conair**, **Camosun College** and **Latitude Technologies**.

CANADIAN MANUFACTURERS & EXPORTERS ASSOCIATION (CME)

Address: *55 Standish Court, Suite 620*
Mississauga, Ontario L5R 4B2
Phone: *(905) 672-3466*
Website: ***www.cme-mec.ca***

Canadian Manufacturers & Exporters (CME) is Canada's largest trade and industry association. It represents more than 10,000 leading companies nationwide engaged in manufacturing, international trade, and service-related industries with 85 per cent of members being small and medium-sized enterprises.

CME is ranked as one of the top five lobby groups in Canada, advocating for progressive manufacturing policies to all levels of government. For example, the 2013-14 federal budget included $1 billion over five years for strategic investment funds for the aerospace and automotive industries as a result of CME-member input. CME worked closely with the

Aerospace Industries Association of Canada and its working groups in defining a common vision for the future of the industry in the **Aerospace and Space Programs and Policies Review** in 2012. CME also supports its members through events, workshops and networking councils; publications, newsletters, reports and briefings, and industry-best education opportunities.

GOVERNMENT

GLOBAL AFFAIRS CANADA

Global Affairs Canada

Global Affairs Canada is the department of the Government of Canada that manages Canada's diplomatic and consular relations in order to encourage the country's international trade, and to lead Canada's international development and humanitarian assistance programs. It provides a wide range of services, from information on working in a foreign country, authentication of documents and contact information for government offices that provide consular services to Canadian citizens.

The **Canadian Trade Commissioner Service** (TCS) has trade offices across Canada and in over 150 offices around the world, providing research on export markets, on-the-ground assistance and information on expanding a business abroad and in Canada.

INTERNATIONAL BUSINESS DEVELOPMENT DIVISION, MINISTRY OF INTERNATIONAL TRADE

BRITISH COLUMBIA

The **International Business Development Division** of the **Ministry of International Trade** has overall responsibility for growing the number of companies that export to Asia, increasing the value of investments that grow the Province's sectors, and enhancing the flow of goods, services, people and ideas between BC and priority markets. The Division provides services, programs and information to looking at exporting, importing and/or investment as a means to growth. Focus is on the Province's in-market activities, such as business-to-business meetings and events, and leveraging the strengths of the province's Trade and Investment Representatives and BC's Special Representative in Asia to support the entry of BC companies into new markets and to support the development and realization of an LNG industry.

Priority sectors include Technology & Innovation, Agrifoods, Natural Resources, Transportation, Infrastructure and Professional Services.