

WHEN WE BUILD IT, THEY WILL COME: AN AEROSPACE INNOVATION CLUSTER IN BC OUTSIDE OF THE LOWER MAINLAND WILL BENEFIT NEW BUSINESS IN BC AND CANADA

Opening Statement

Aviation and aerospace are highly integrated industries, both with strong roots in the Central Okanagan region. Rapidly recovering from the negative impacts pandemic, these sectors are rebounding, due to the re-emergence of the growing global demand for commercial aircraft¹. Leveraging regional strengths in these sectors will go a long way to create additional economic activity, diversify the region's industrial base, and build high-quality employment throughout the province.

Background

The Okanagan region has significant assets, in an environment which are favourable to the development of an aerospace and aviation cluster. These include:

1. A critical mass of aerospace and aviation companies of various sizes
2. Kelowna International Airport (YLW) - the 10th largest in the country
3. Major company KF Aero, one of western Canada's largest aerospace firms, including its Centre of Mechanical Engineering. KF Aero is developing a \$25M Centre of Excellence (aviation museum, hangar and conference centre) within YLW's campus
4. Okanagan College's Aerospace Department offers state-of-the art aerospace maintenance training programs as well as a Commercial Aviation pilot-training program in collaboration with Southern Interior Flight Centre
5. UBC Okanagan performs expanding aerospace and defense-related research and development within its laboratories and in its Innovation Precinct development north of campus. This R&D is augmented by collaboration catalyzed by the UBC STAR initiative, plus the growth of advanced composite materials research. All create the conditions for additional collaborative aerospace R&D within the region.
6. These activities are all taking place within one of the country's fastest growing tech sectors

In order to maximize the impact on the Central Okanagan, we must pool human, financial, R&D and knowledge-based resources. This impact will attract new players, spur new collaborative research and innovation and contribute to new solutions to current challenges facing these sectors.

¹ Canadian Council for Aviation & Aerospace 2018 labour market information report states that this number will significantly increase when new flight duty time rules are put into effect by Transport Canada. As noted in the report, half of flight operators state that finding qualified pilots is a significant challenge, with regional airlines reporting flight cancellations due to a lack of flight crew in the busy summer months. Kevin Hillier, Vice-president, Carson Air, has stated: "If and when the proposed Fatigue Management Regulations for pilots come into effect, we estimate that there will be up to 30% more pilots required for the work that we are doing today. This does not take into effect attrition through retirement and airline hiring in the future. This will force operators to reduce service, and potentially create safety issues for operators who have no qualified pilots." *April 20, 2018*
<https://www.avaerocouncil.ca>; October 18, 2018, Member Motion M-177, Hansard.

Two challenges worth noting: training of pilots and fully licensed Aircraft Mechanical Engineers (AMEs)². Pre-pandemic studies showed that demand in both fields outstripped training pipelines. That trend has re-emerged as both sectors recover from impacts of the pandemic.

Pilot shortage

Canada will need 7,000 to 10,000 new pilots by 2025, resulting in a projected shortage of at least 3,000 pilots, given current training rates.³ This problem will worsen significantly in the future, affecting the travelling Canadian public, unless it is addressed soon.

Airlines are now experiencing post-pandemic growth amid the retirement of senior pilots, creating an increase in the rate of “move-up” pilots from regional airlines and small operators. Move-ups affect regional carriers, as they lose pilots to larger carriers, often preferred by pilots on aggressive career paths.

Pilots’ current move-up timeframe is six to 18 months, rather than the historic three years. Type endorsement training costs have traditionally been amortized over the expected retention period of a pilot. With retention periods dropping from three years to six months, economics change dramatically.

Regional airlines report cancellations of flights due to this lack of pilots and/or higher training costs. Flying schools can’t maintain sufficient instructors for chief or senior roles, further reducing training capabilities.

The current pathway to becoming a pilot in Canada involves studying to earn licenses and ratings – this endeavour costs approximately \$75,000, but can climb to twice that, with tuition and other student costs, when combined with post-secondary education. Most student pilots take on substantial debt to cover these expenses. It is common to see high rates of attrition in flight programs due to lost financing.^{4, 5}

² Canadian Council for Aviation & Aerospace 2018 labour market information report states that this number will significantly increase when new flight duty time rules are put into effect by Transport Canada. As noted in the report, half of flight operators state that finding qualified pilots is a significant challenge, with regional airlines reporting flight cancellations due to a lack of flight crew in the busy summer months. Kevin Hillier, Vice-president, Carson Air, has stated: “If and when the proposed Fatigue Management Regulations for pilots come into effect, we estimate that there will be up to 30% more pilots required for the work that we are doing today. This does not take into effect attrition through retirement and airline hiring in the future. This will force operators to reduce service, and potentially create safety issues for operators who have no qualified pilots.” *April 20, 2018* <https://www.avaerocouncil.ca>; *October 18, 2018, Member Motion M-177, Hansard.*

³ *Ibid.* CCAA

⁴ *Ibid* CCAA

⁵ “As an Aviation Council that is focused on ensuring the sustainability of our industry, BCAC fears this pilot shortage will have severe and critical impacts not only on our economy and operators, but on our remote and Indigenous communities. As one of the barriers to increased pilot supply is definitely the financial burden of obtaining the requisite flight time experience, we feel increased financial aid would be a strong indicator that the government is aware of the issue and supporting positive change.” *Heather Bell, Chair, BC Aviation Council, February 7, 2019* <https://www.bcaviationcouncil.org/wp-content/uploads/2019/02/BCAC-Presentation-to-House-of-Commons-Standing-Committee-on-Transport.pdf>

AME shortage

Similarly, the CCAA estimated in 2018 that more than 5,300 aircraft maintenance technicians will be needed in Canada by 2025. Of the 600 annual aircraft maintenance graduates, 77 per cent work in the industry. This will leave the industry short of 1,200 technicians by 2025. While the pandemic paused this trend; it is expected to pick up again as the industry recovers and be exacerbated by the retirement of older aerospace workers.⁶

These challenges, combined with additional aviation and aerospace service-related hiring requirements, call for immediate action from both the provincial and federal governments.

The creation of a Centre for Aviation & Aerospace Innovation based in Kelowna could represent the first step of a concerted action plan leading to the development of such a cluster. The Centre's activities would focus, among other areas, on leveraging the region's existing assets to identify creative solutions to existing aviation and aerospace challenges, thereby helping to position sectors to take advantage of future growth opportunities. Such a facility would have a direct positive economic impact on the region with regards to employment, housing, education and taxes.

Such a Centre could leverage related industry segments, including digital technologies, advanced materials, advanced manufacturing, communication systems, and other related support industries, either resident in the Okanagan, in the lower mainland or in other provinces.

Location in the Central Okanagan would mean good access to and from northern communities, including the oilsands. The introduction of state-of-the-art technologies such as flight simulators for both fixed and rotary wing pilot training would act as a national and international draw, further stimulating local economies.

THE CHAMBER RECOMMENDS

That the Provincial Government:

1. Work with the Federal Government, and relevant provincial governments, to focus financial assistance on British Columbians pursuing careers in aviation and aerospace;
2. Support financially the creation of a Centre for Aviation & Aerospace Innovation in the Central Okanagan, to address the aviation and aerospace needs of the Province in conjunction with post-secondary institutions and the private sector.

Submitted by the Kelowna Chamber of Commerce

⁶ The most pressing problem facing the industry is a severe labour shortage that is predicted to be even worse than that facing the pilot profession. The Canadian Council for Aviation and Aerospace (CCAA) labour market report predicts 5,300 new AMEs will be needed by 2025 to keep up with growth and retirements. *April 20, 2018 <https://www.avaerocouncil.ca>; BC Aviation Council, February 25, 2019 AMEs unite to create strong national voice*