

Executive Summary

The Purpose

This study examines the feasibility of creating and operating a two-year commercial pilot diploma program through the College of New Caledonia (the College) in the community of Vanderhoof, BC.

The goal of the proposed program is to cater to students who have an interest in northern aviation, and does not have the intention of competing with existing aviation diploma programs in BC. The proposed program seeks opportunities to partner with existing programs in order to best benefit the students of the north, and aviation as a whole.

Community and industry partners are in support of the proposed program as they implement collaborative economic diversification strategies to address the negative economic impacts from a decline in the forestry sector. At the onset of this study, a Steering Advisory Committee was established to provide input from the community on what type of program would be most beneficial to the region and meet the needs of the industry. Community and industry partners from municipal and regional governments, the local school district, the local chamber of commerce, local and regional aviation industry, local small business, and First Nations have helped guide this study and explore the potential benefits of operating a two-year commercial pilot diploma program in Vanderhoof, BC.

The proposed program will have direct benefits to the community and region in the form of employment opportunities, service and supply potential, and spin-off economic prospects. Likewise, the program has the potential to spur indirect benefits as it serves as a catalytic force in reinvigorating the cultural importance of aviation in the area, and increase aviation awareness and the number of visitors attracted to the region.

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The Need

Air services requiring a commercial pilot license are vital for serving remote areas in northern Canada, not only for passenger transport, but also for medevac, fire-fighting, cargo transport, and just-in-time-delivery services. Current global economic factors have produced a slowdown in air service but this is expected to be short-lived in the region, as the vast geography of the north ensures there will be a continuous need for individuals in possession of a commercial pilot's license to provide air services.

An aging work force of experienced pilots looking to retire, pilots seeking foreign prospects, and active recruiting by the military are creating new career opportunities at all levels for Canadian pilots (ATAC 2009). As early as 2001, the Human Resource Study of Commercial Pilots in Canada (ATAC 2001) cited a potential shortage in the future number of qualified commercial pilots applying to major airlines. A follow-up study (Sypher:Mueller 2003) indicated new growth in the aviation industry even outside these traditional positions.

Large airlines are no longer able to draw upon the military in the same numbers as they once were and are now turning to smaller regional carriers to fill their needs. Regional carriers in the north often hire new pilots from outside the region who possess low hours and are looking for an opportunity to build flight time. Northern Air Operators invest a great deal of in-house training time in these individuals only to lose them to the lure of the larger airlines as they are promised positions that offer tantalizing benefits and amenities. When trained personnel leave to go elsewhere, Northern Air Operators are forced to start anew in their hiring process and must wait

another three to five years until they have an individual trained to the level of the pilot who recently left.

Exacerbating the problem are the dwindling number of commercial pilot training programs in operation in the north, the increasing desire of recruiters and insurance companies to hire pilots with a broader education, and the remote lifestyle of the north. Additionally, a gap is projected for the north in the supply and demand of professionals in the Natural and Applied Sciences, of which pilots are a subset, between 2007 and 2015 (Barry 2008).

The goal of the proposed program in Vanderhoof is to provide an opportunity for northern students to study and work in the north. In so doing, it is hoped the northern aviation industry can draw upon a pool of individuals who wish to remain and contribute to the industry in the region.

Northern Air Operator Survey

To assess the current need for commercial pilots in the north and gauge the outlook of those operating aviation businesses in northwest Canada, a survey was conducted of air operators listed on the Transport Canada Air Operator list in northern BC, the Yukon, southeast Alaska, western Northwest Territories, and northwest Alberta.

Northern Air Operators who responded to the survey generally feel they pay their employees well, but recognize the geography and lifestyle of their region can be a limiting factor when seeking new personnel. In general, northern operators seem optimistic about the future of the industry and are planning to hire new pilots over the next five years.

Not all Northern Air Operators are concerned if an applicant has a diploma, but they admit they would like to see more pilots with good communication and business skills, as well as decision-making abilities with regard to managing people and operational logistics. Northern Air Operators value individual attitude and initiative in job applicants, but many are finding their insurance companies prefer more. This is reflected by the Air Transport Association of Canada who recognizes applicants who are graduates from a college or university make better pilots because of the broader education they receive, and successful completion of a diploma or degree demonstrates a pilot is trainable and can stick to a challenging curriculum (ATAC 2001).

The proposed program will not only provide Northern Air Operators with a pool of applicants who make a commitment to learn and complete a goal within a set time frame, but also applicants who are familiar with the region and possess the business sense and professionalism they desire.

The Location

Vanderhoof, British Columbia (population~4,000) was founded in the early 1900s near the geographic centre of BC and has an early history with flight, going back to the 1920's and expanding its importance during the second world war (WWII). Vanderhoof's location provides student pilots with easy access to different geographic features such as rivers, mountains, lakes, and pastures. In addition, its year-round access makes it an ideal place to train throughout the year. The Vanderhoof Airport air traffic is light in comparison to existing facilities in other areas of BC, and recent and planned lighting and navigation upgrades provide 24-hour air service to the community.

The College of New Caledonia's Vanderhoof campus is located less than five minutes from the Vanderhoof Airport, and just upstream from the community float plane dock on the Nechako River. Additionally, Vanderhoof is home to one of the three remaining private fixed-wing (airplane) flight training schools in northwest Canada, providing a partnering opportunity for the College with industry that is already part of northern Canada's Northern Pilot Network.

The Proposed Program

Community and industry partners serving on the Steering Advisory Committee for the proposed program stated it was important as a community to provide a program that reflected feedback from the Northern Air Operator Survey and where students could stay tied to a northern lifestyle, train in an uncongested air traffic space, and have the opportunity to fly in multiple weather conditions during four distinct seasons.

To ascertain essential program components that could be applied to a program in Vanderhoof, BC, key personnel from Selkirk College, the British Columbia Institute of Technology (BCIT) Aerospace Centre, Pacific Flight Club, the University of the Fraser Valley, Coastal Pacific Aviation, and Montair were interviewed. Components of these programs determined by community support partners to best suited to meet the needs of the north and align with the feedback from the Northern Air Operator Survey included:

- A program that accepts students without requiring they already possess a private pilot's license;
- A program designed to prepare students for real-world industry by providing skills and knowledge on how to run a business;
- A program that promotes the overall awareness of human factors and interpersonal skills needed to work effectively in a team;
- A curriculum no longer than two years with courses transferrable toward a four-year degree that would include the core skills of verbal communications, project management, safety management, and basic aircraft maintenance;
- Class 1 or Class 2 instructors with real world experience;
- A practical syllabus that would incorporate practical theory, even on flight training devices/ simulators.

The University of the Fraser Valley, and its flight training partner, Coastal Pacific Aviation, were determined to have a program that best met the needs identified by the Steering Advisory Committee and were approached regarding a partnership agreement between them and the College of New Caledonia. Benefits of partnering to the University of the Fraser Valley are the use of its curriculum in another part of BC and the possibility of funneling more students into its 4-year degree programs. Benefits of partnering to the College of New Caledonia are the access to proven and reputable curriculum and the ability to tap into an existing network with a continual draw of students. Program administrators from both institutions are in favor of such a partnership agreement and detailed discussions are underway at the time of this study.

Program Structure

The proposed two-year commercial pilot diploma program is envisioned to be delivered in five semesters over a 20-month period. Thus, the program will be slightly accelerated and augmented when compared to a traditional two-year, four semester program. The program will take students through the private pilot license (PPL) and commercial pilot license (CPL), while providing non-flight courses in business training and will offer an opportunity to add-on a float rating. Following completion of the diploma and commercial pilot license, the student will have the opportunity to add-on an instructor rating or a commercial helicopter license if he/she chooses to remain in the area. If the student wishes to acquire multi-engine and multi-engine instrument flight rules training, he/she will have the opportunity to ladder to the partnered program at the University of the Fraser Valley to do so, and receive his/her diploma from the College of New Caledonia upon completion. If the student wishes to acquire a Bachelor of Business Administration or a Bachelor of Business Administration in Aviation, he/she will also

have the opportunity to ladder to the partnered program to do so, and receive his/her degree from the University of the Fraser Valley.

Technical Feasibility

The College of New Caledonia will provide the credential for the proposed program and be responsible for the development and delivery of all non-aviation courses, which will be taught on the Vanderhoof campus. In addition, the College will be responsible for the management, administration, marketing, and student support of the program.

Transport Canada's Canadian Aviation Regulations require all flight training and aviation courses be taught by a certified flight school with certified flight instructors. Thus, all flight instruction and aviation courses will be contracted by the College to the local flight school. This will allow students to pay one tuition payment each semester, and allow program costs to stay eligible for student loans.

A flight training device/simulator will be purchased for the proposed program in order to replicate the cockpit of a number of aircraft that will be available through the local flight school. This will ensure continuity of curriculum delivery with that of the University of the Fraser Valley/Coastal Pacific Aviation and allow students to train during poor weather conditions and practice difficult maneuvers. In addition, when not being used for the proposed program, the flight training device/simulator can be used to provide recurrent training to regional pilots, creating the potential of further employment in the community.

Financial Feasibility

The financial feasibility of the proposed program presumes all costs will be recoverable from fees charged to students and are estimated as such for the purpose of discussion. All estimates are based on the assumptions the program will run for five semesters in a 20-month time frame, with an annual intake minimum of 16 students each May. All flight time costs are based on current fuel costs and are subject to recalculation if significant changes occur.

Costs for the proposed program are estimated and summed up on a cost per student basis to include college tuition for non-aviation business courses, flight school fees covering aviation training manuals, texts, workbooks, charts, maps, log books, and other relevant supplies needed for flight training, non-aviation course books, a per semester uniform cost, and living expenses.

Costs per student for the basic commercial pilot diploma are estimated at \$77,500, and costs per student for the commercial pilot license with a float rating are estimated at \$86,000. Upon completion of the commercial pilot license (with or without the float rating), a student has the option of adding an instructor rating, estimated at an additional cost of \$11,100 (tuition, flight school, books, and living expenses) or commercial helicopter license, estimated at an additional cost of \$32,100.

Students who choose to ladder to the University of the Fraser Valley for multi-engine ratings will do so after completing four semesters at the College of New Caledonia, then complete the final 50 hours needed for the commercial license at the University of the Fraser Valley and receive his/her diploma from the College of New Caledonia. All fees for courses completed through the University of the Fraser Valley will be charged to the student according to the University of the Fraser Valley and Coastal Pacific Aviation fee structure. Likewise, students who choose to acquire a Bachelor of Business Administration or a Bachelor of Business Administration in Aviation, will ladder to the University of the Fraser Valley after four semesters at the College of New Caledonia then complete their training in Abbotsford, BC under the fee structure of the University of the Fraser Valley and Coastal Pacific Aviation.

Although comparable in some aspects, the proposed program at the College of New Caledonia is different than two-year aviation diploma programs offered by other post-secondary institutions in British Columbia and Alberta. The majority of these programs train students for work with large airlines and require the student to obtain a private pilot license prior to acceptance into their two-year curriculum (a cost that can range between \$8,500 and \$11,000 and is generally not eligible for tuition assistance).

The strength of the proposed program is in the choices available to the student. While the focus is to create pilots who possess the necessary skills to contribute to aviation in the north, the program does not limit the student to only that focus. The proposed program allows a northern student to train within an environment which he/she is familiar, while providing opportunities that reach far outside the region if that is where he/she wishes to go.

The Challenges

Challenges for the proposed program exist around keeping it sustainable, ensuring employment for its graduates, supporting students with suitable/affordable housing, and seeking funding from government and non-government sources for related community projects eligible for infrastructure and capital investment funding.

The Conclusion

Much of what is needed for the proposed program is already in place:

- The College's proximity to the Vanderhoof Airport and the municipal float plane dock on the Nechako River allows for an uncomplicated commute between classroom and non-classroom instruction for staff and students.
- All curriculum needed is developed, proven, and ready to be shared by a willing partnering institution.
- The College is well established in the region, possesses sufficient classroom space for the proposed program, and is well equipped to offer administrative, marketing, and student support services.
- The local flight school at the Vanderhoof Airport currently holds all Transport Canada required certificates and already has a sufficient number of instructors to provide all flight training modules for the proposed program.
- The Vanderhoof Airport possesses a new lighting system allowing for 24-hour access, and is adding a new navigation system and an Automated Weather Observing System (AWOS) to allow for further advancement.

Start-up efforts for the proposed program which will be undertaken include:

- A formal partnership agreement between the College of New Caledonia and the University of the Fraser Valley and between Coastal Pacific Aviation and the local flight school for curriculum,
- A formal partnership agreement between the local flight school and the College of New Caledonia for delivery of aviation courses and training,
- The purchase of a Level 2 or 3 Flight Training Device/Simulator and its placement, and
- The hiring of a Program Coordinator and non-aviation course instructors to teach on the Vanderhoof campus.

The proposed program teaches skills useful in the aviation industry and transferable to other aspects of a pilot's life journey. The results of this study demonstrate a viable educational program opportunity with a proposed two-year commercial pilot diploma program at the College of New Caledonia - Vanderhoof campus. The College and its partners are committed to proceeding with this program in time for a May 2011 start date. The need for the proposed program is clear and supported by the community and industry.