

The purpose of air traffic control

[Environment](#), [Air](#)



This strategic human resource planning project is a view of Air Traffic Control in Canada from its inception in early 1939 to today. It has fallen under the umbrella of several masters during the past 71 years beginning with the Federal Department of Transport, and then The Ministry of Transport, followed by Transport Canada and finally NAV Canada, where it broke away from its former Crown Corporation status and became a private sector, non-share capital corporation.

Any attempt to compare it with strictly profit seeking corporations will be met with failure because the ultimate purpose of this organization is to provide " Safety", first and foremost, followed a distant second by efficiencies of service and operation and lastly attention to environmental concerns. These values will be highlighted individually throughout this report.

Likewise, any attempt to match NAV Canada operations to Michael Porters model presents a serious challenge. This is no mere " Low Cost" strategy, or a " Broad Differentiation" strategy, or a " Market Niche, Low Cost" strategy, or a Market Niche, Differentiation" strategy. The best match would be a limited comparison to Porters " Best Cost Provider" strategy using the concepts of Safe, Orderly and Expeditious in place of dollars.

Air Traffic Control began out of a rapidly growing need for safe guidance of commercial aircraft as the Trans-Canada and International air routes opened up and also because of the onset of World War 2 and the Commonwealth Air Training Plan, both of which would present serious safety issues if they were not addressed in a timely manner.

Human resource planning and recruitment was very simple in the beginning with Canada's first Air Traffic Controller being trained in the United States, where ATC had been in existence for 11 years already. That same first controller was then asked to implement a nationwide Air Traffic Control system. The selection and training process evolved steadily over the years but has exploded in scope and scale since the takeover by NAV Canada in 1996.

See appendix, page 36, ATC History

NAV Canada

Vision, NAV Canada, 2010

NAV CANADA's vision is to be the world's most respected ANS:

in the eyes of the flying public for our safety record;

in the eyes of our customers for our fee levels, customer service, efficiency and modern technology; and

in the eyes of our employees for establishing a motivating and satisfying workplace with competitive compensation and challenging career opportunities.

Mission

NAV CANADA facilitates the safe movement of aircraft, efficiently and cost effectively, through the provision of air navigation services on a long-term, sustainable basis.

Overarching Objectives

The Company will achieve its Mission by:

Maintaining a safety record in the top deciles of major Air Navigation Service Providers (ANSPs) worldwide;

Maintaining ANS customer service charges, on average, in the bottom quartile (lowest charges) of major ANSPs worldwide;

Implementing and maintaining a modern, cost-efficient ANS technology platform in the top quartile of major ANSPs worldwide;

Ensuring that the growth in costs of providing air navigation services does not exceed the growth in charging units, thereby resulting in a decline in customer service charges over the long term; and

Creating a productive and fulfilling workplace environment which places NAV CANADA amongst the best employers in Canada.

Corporate Governance

NAV CANADA is the private sector, non-share capital corporation, financed through publicly-traded debt, whose business is to own, manage and operate Canada's civil air navigation system (the "ANS"). Its primary role is to provide and operate a safe ANS as an essential, national service. Transport Canada regulates the Company in respect of safety.

Company Formation

NAV CANADA was formed as the result of a broad consensus amongst all the key stakeholders in the ANS - the Government of Canada, users of the ANS

(private, business, and commercial operators and carriers) and employees of the ANS represented by the bargaining agents. These stakeholders felt that the ANS could be provided more efficiently by a private commercial entity than it had been by the Government of Canada. NAV CANADA acquired the ANS from the Government of Canada for a purchase price of \$1.5 billion, and began operating the system on November 1, 1996.

No Profit Motive

NAV CANADA's corporate structure is specifically designed as an economically self-regulating entity, with a system of checks and balances to ensure that all elements of a safe, cost-effective and efficient ANS are assured. This is achieved primarily through its status as a non-share capital corporation. NAV CANADA has no shareholders; there is no profit motive behind corporate decisions since all revenues stay within the ANS. No individual, company or other entity benefits or receives any financial return in compensation from the operation of the ANS. The Company is financed through the debt markets, with \$2.175 billion in long-term bonds available for trade every day.

History

NAV CANADA is the first private sector company in the world to use a non-share capital structure to commercialize a government service.

On November 1, 1996, the responsibility for the country's Air Navigation Services' (ANS) network and facilities was transferred from Transport Canada, part of the Canadian federal government, to NAV CANADA for \$1.5 billion (Cdn).

The company was created primarily through the collaborative efforts of employees, unions, pilots, airlines, government officials, and other members of the aviation sector who shared concerns over the ability of the ANS to meet the challenges of the next decades.

Under the Civil Air Navigation Services Commercialization Act, the company is enabled to charge for air navigation services. Service charges levied on airlines and aircraft operators, are designed to recover the costs incurred by NAV CANADA in providing air traffic control, flight information, and other ANS services. The full implementation of service charges means that NAV CANADA now operates independently of government funding.

Human Resource Planning

Human resource planning began in 1938 when New Brunswick born bush pilot, Curt Bogart was selected to be Canada's first Air Traffic Controller and sent to New Jersey for training. Mr Bogart was tasked with building our national ATC system and within the first year saw rapid growth in ATC and the planning or building of 188 airports across the country. There was also a huge surge in demand due to the Commonwealth Air Training Plan that had come into existence as a result of the Second World War.

Growth of ATC and its related selection and training programs slowed after WW2, but still evolved at a steady pace until NAV Canada took over responsibility for the system in 1996. The changes in " Human Resource Planning and Development", has been greater than in all previous years combined. Changes in technology, air traffic volumes and system growth

have all contributed significantly and NAV Canada has exercised a more dynamic, professional, business approach to Human Resources than its predecessors, Transport Canada, Ministry of Transport and Department of Transport.

The NAV Canada goal is to staff the organization with highly competent professionals who will contribute to the corporate goals of total safety, fuel saving efficiency and reductions in greenhouse gas emissions. This statement demands that only highly qualified and capable employees man the stations in Control Towers and Radar Centers. As such the selection process targets people with the inherent aptitude to be Air Controllers.

As a Federally regulated agency NAV Canada must also have active diversity practices built into its HR Planning while still maintaining the rigid performance requirements necessary for commercial aviation.

Excerpt from Value Diversity, NAV Canada, 2010

NAV Canada is committed to building a workplace that values diversity. A positive and inclusive workplace enriches our corporate culture, enhances teamwork, and makes us better able to respond to the needs of customers and other stakeholders.

Competitive Strategy

Excerpt from Safety First, NAV Canada, 2010

NAV CANADA's one and only product, conceptually speaking, is safety. It is the core principle underlying everything the Company does. We are

committed to making a safe system safer by maintaining a safety record in the top deciles of Air Navigation Service Providers worldwide. NAV CANADA currently maintains one of the best safety records in the world.

Excerpt from Environment, NAV Canada, 2010

The Company's efforts to offer safe, fuel efficient service, and so reduce GHG emissions, have had a positive impact on customer fuel bills. In total, NAV CANADA estimates that GHG emissions will have been reduced by approximately 12.7 million metric tons of CO₂e, and its customers will have saved \$4 billion in reduced fuel costs between 1996 and 2016.

Even with a competitive strategy focused primarily on safety rather than dollars, NAV Canada is clearly achieving its safety and economic goals and is doing it while reducing overall operating costs.

The definition of ATC says it all...

The purpose of Air Traffic Control is to provide for the safe orderly and expeditious flow of air traffic in controlled airspace and to vehicles and aircraft operating on airport maneuvering areas.

Selection Process, NAV Canada, 2010

How you train to become a NAV CANADA air traffic services specialist depends on the career best suited to your skills. Our air traffic specialists receive the best training in the industry-in classroom, in simulation and on the job. Bring your game, apply yourself, and you'll have great chances of success.

<https://assignbuster.com/the-purpose-of-air-traffic-control/>

IFR Air Traffic Controller Training

The IFR Controller training program is delivered at each of NAV CANADA's seven Area Control Centres. Initial training lasts seven to 14 months, and is followed by paid on-the-job training of six to 12 months. The tuition for the IFR Controller training program is \$3, 500. Students usually complete their initial and on-the-job training at the Area Control Centre in their region.

VFR Air Traffic Controller Training

VFR Air Traffic Controllers receive initial instruction at regional training units located at our seven ACCs. Lasting four to six months, it is followed by paid on-the-job training of another four to 12 months at an air traffic control tower. Tuition for the VFR Controller training program is \$2, 500.

Apply Online

The first step is to complete our online application. Make sure you understand the basic eligibility and tuition requirements of each program before you get started. It should take about 30 minutes to fill in the application. You will be able to gain access to the web site at any time to track your progress through the selection process.

Complete the Online Tests

Once you complete your online application, you'll be required to take two online tests. There are no costs associated with the online tests. The tests are timed and should take about 30 minutes to complete. You will be notified by e-mail of your results.

Participate in an Assessment Session

If you scored well on the first two tests, you may be invited to an in-person assessment session in the flight information region where you live. This testing is more extensive and will take approximately 3.5 hours to complete. To support the administration of this test, NAV CANADA charges a \$200 assessment fee (plus applicable taxes). We only run testing sessions when we anticipate spaces becoming available for training and only those invited will be eligible to attend the testing sessions.

The assessment session includes a variety of tests that measure:

1. Thinking and reasoning
2. Communication
3. Multi-tasking
4. Attention
5. Information processing
6. Memory
7. Motor ability
8. Agreeableness
9. Conscientiousness
10. Emotional Stability

11. Knowledge

Interviews

The most successful candidates from the assessment session participate in a two-stage interview process. An initial interview is conducted by teleconference, during which you'll be asked about specific situations in which you've been involved that reflect the qualities we look for in our team. If you meet our criteria, we'll invite you to an in-person interview conducted by operational managers in the Flight Information Region where you are located. Bilingual applicants are required to participate in a language assessment.

Enter Candidate Roster

If you successfully complete the first four steps, you will be placed on the roster for the next training session. Your testing and interview results will determine the role you are best suited for: IFR Controller, VFR Controller or Flight Services Specialist. Please note that being placed on the roster does not guarantee that you will be invited for training. Applicants are selected based on their overall qualifications and assessment scores, not by the date they were placed in the roster. We only train when we anticipate a requirement in your region.

Offer and Course Preparation

Once you have been selected for an upcoming course, you must undergo a medical exam and a security check. NAV CANADA will provide you with the necessary information in order to complete these requirements. We typically give three to five months' notice of training so you can plan your stay near

the training facility for the time required. As your training approaches, we will send you a pre-course program called Introduction to Aviation. This 30 to 50-hour online program will give you the foundation you need for your course and must be completed before your training begins.

Timeframe

We recognize our process is intensive. We designed it that way to help you be sure you're making the right career choice-and to help us be sure you're the right candidate for the job.

Time-wise, our process can last anywhere from one to four months. Don't leave your current work situation right away-and don't be discouraged if you don't hear from us for a while. You can follow the progress of your application online.

Selection Requirements, NAV Canada, 2010

You don't need aviation-related experience or knowledge to apply for a career with NAV CANADA, but there are some basic prerequisites. All candidates must be:

At least 18 years old

Canadian citizens or permanent residents

High school graduate

Available for training within the next 18 months

Willing to relocate

<https://assignbuster.com/the-purpose-of-air-traffic-control/>

Willing to undergo a medical exam

Prepared to undergo a Secret Level security check

Willing to train intensively

English-speaking, or fluently bilingual (French and English)

What we look for

Our job at NAV CANADA is to give you the knowledge and skills you need to do the job right-to be among the best in the world. What we look for in you are the qualities it takes to be a top-notch air traffic services professional:

Sharp judgment

Strong motivation

Excellent problem-solving abilities

A clear voice

Keen hearing

A good memory

Valuing Diversity

At NAV CANADA, our goal as an employer is to recruit and retain people who have not only talent and skill but a range of backgrounds and perspectives.

That's because diversity in the workplace makes us all higher performers. It makes a company stronger by promoting new ideas and new ways of

thinking. It generates creativity and adaptability. And it is a basic element in at least two areas critical to NAV CANADA's future as a global leader: problem solving and innovation.

For all these reasons and more, we are committed to building a workplace that values diversity. A positive and inclusive workplace enriches our corporate culture, enhances teamwork, and makes us better able to respond to the needs of customers and other stakeholders.

A workplace that reflects and respects diversity – in all its forms – is one that empowers its employees to reach their full potential. Each employee has a unique contribution to make, and our responsibility as a company is to ensure they have the tools and environment they need to thrive and to succeed.

That is why NAV CANADA recently adopted the following as one of its Overarching Corporate Objectives: “ Creating a productive and fulfilling workplace environment which places NAV CANADA amongst the best employers in Canada.”

Our strength as a company depends on building a workplace that is positive, dynamic and as diverse as the country itself.

How to become an Air Traffic Controller. NAV Canada, 2010

The Selection Process

All applicants must take written tests that measure their ability to learn and their suitability for a career in Air Traffic Services. A \$200 fee, plus any

applicable taxes at the session site, is required for the test administration and scoring. Please bring a copy of your most recent resume to the testing session. The tests take between four to five hours to complete and are held throughout the country. Your test score will determine your eligibility for the next step in the selection process - an interview.

You will be asked to complete five separate ability tests and a behavioral styles questionnaire. The ability tests are all timed assessments (lasting between 10 and 30 minutes) which will examine your ability to deal with the type of information that Air Traffic Controllers and Flight Service Specialists use on the job. The behavioral styles questionnaire takes approximately 45 minutes to complete and asks you about your preferred or typical style of behaving at work.

The test administrator will make sure you understand what is required before you start each test. The tests are designed to be done under time pressure so it is unlikely that you will finish all of the items in any particular test.

The ability tests include:

Verbal Evaluation

Numerical Estimation

Diagramming

Spatial Reasoning

The important thing to remember with the testing session is to arrive prepared and be relaxed during the session to allow you to perform your best.

Before the session:

Get a good night's sleep – fatigue effects performance. Give yourself plenty of time to get to the session and be on time; no candidates can enter the room once the testing has started.

If you wear glasses, be sure to bring them with you.

If you have a disability that you feel would effect your test performance or have specific accessibility requirements, please contact SHL prior to the testing session in order to ensure proper arrangements are made.

Ensure that you have your identification, payment and a copy of your most recent resume ready to bring to the session, as required.

During the session:

Listen to the instructions and follow them carefully.

Do not be afraid to ask questions during the introductory segment of each test.

Read each question carefully before answering.

Work quickly and accurately, remember that the tests are timed.

Try as hard as you can.

If you are unsuccessful in the testing process, you may reapply after one year from the date of your test, by completing a new application and obtaining a new Applicant/Candidate Number. You will then be tested again.

Please note: It is not current policy of SHL and NAV CANADA to provide candidates with additional information or feedback relating to the assessment process. This is due to the complexity of the scoring process, the large quantity of candidates tested, and the need to maintain the integrity of the process.

Language Test

Fluency in the English language is essential for all Air Traffic Controller and Flight Service Specialist operational positions. In addition, knowledge of French is required for some Flight Service Specialist and Air Traffic Controller positions in Eastern Canada, and for all positions in Québec. You will be required to pass a language test (oral communication test) for bilingual training positions. The oral interaction test assesses your ability to speak and understand French or English as your second official language.

Interviews for Suitability

Applicants who pass the testing process will be asked to attend an interview. Interviews are held between three to five weeks after the testing session. In order to reduce inconvenience to applicants, interviews are conducted in major centres throughout the country. During this conversation, our trained interviewers will look for evidence that you possess the necessary characteristics required of all ATS employees. During the interview you will be asked to provide examples of specific situations you have been involved

in that illustrate the skills that are required to be successful in Air Traffic Services.

Reference Checks

After successful completion of the interview, reference checks will be conducted as appropriate.

Security Clearance and Medical Examination

Once you have satisfactorily completed the selection process, and upon being referred to the NAV CANADA Office of The Registrar, you will be asked to undergo the appropriate medical check and Secret Level security check.

Specific Medical Requirements for Air Traffic Control

Among other requirements, you must meet the standards outlined in the “Canadian Aviation Regulations” (CARs) in the “Personnel Licensing and Training Standards – Section 424 – Medical Requirements. The CARs are a publication of Transport Canada, Safety and Security and can be found on their website, [http://www. tc. gc. ca/](http://www.tc.gc.ca/) All applicants for controller positions are required to provide a urine sample during the medical examination.

Some of the medical requirements which you must meet are listed below:

Vision

You must have a distant visual acuity of not less than 6/9 in metric (20/30 in feet) in each eye separately with or without the use of correcting lenses.

Where the standard of visual acuity can be obtained only with correcting lenses, you may be assessed fit provided that:

1. you wear such correcting lenses when exercising the privileges of the license or rating applied for or held;
2. you have a visual acuity without correction in each eye separately of not less than 6/60 in metric (20/200 in feet) and the refractive error falls within the range of plus or minus five diopters (equivalent spherical error); and
3. you have a spare pair of suitable correcting glasses available for immediate use when exercising the privileges of your license. Applicants whose refractive error in either eye falls outside the range of plus or minus five diopters (equivalent spherical error) may be accepted as fit (according to accredited medical conclusion).

You must demonstrate normal colour vision.

You must meet the medical standards outlined in the Canadian Aviation “ Regulations Part IV, Subpart 4”. For information on these standards you should contact the closest approved Civil Aviation Medical Examiner for ATC.

Note: Physical disabilities may not be detrimental to eligibility. The requirement is to meet the medical standards.

The Regional Aviation Medical Officer (RAMO) will review the results of your medical examinations to determine your medical fitness for an ATC position.

Falsifying Information

Falsifying any information throughout the process may disqualify you or, if discovered after appointment, may result in your dismissal.

We realize that it is sometimes difficult to answer certain questions (such as those concerning convictions) but this type of information may not be disqualifying. Please bear in mind, however, that failing to provide the information could be grounds for disqualification or dismissal.

Qualification Processing

Including the completion of additional forms and reference checks may take from one to four months. So don't leave your current job or be discouraged if you don't hear anything from us for a while.

Myths & Misconceptions, NAV Canada, 2010

You may have heard or formed some ideas of your own about a career in air traffic services. The truth might surprise you. Here are a few myths and misconceptions we'd like to set straight.

1. NAV CANADA IS A GOVERNMENT ORGANIZATION

Not true! NAV CANADA is a private company with the job of running Canada's air traffic control centers nationwide. We're a business, and we operate like one-moving quickly and efficiently and focusing on customer service and innovation.

2. YOU NEED PREVIOUS EXPERIENCE TO BE IN AIR TRAFFIC SERVICES

All you need is you-if you fit the profile of the kind of person who succeeds at an air traffic services career, we'll give you all the training you require. It's your abilities, aptitudes and character traits that matter to us.

3. AIR TRAFFIC CONTROLLERS HAVE TO WORK OUTDOORS DIRECTING PLANES

You're thinking of airport ground crews, who use light sticks to direct aircraft into and away from the terminal. Those individuals work for the airport authority, not for NAV CANADA.

4. TRAINING FOR AN AIR TRAFFIC SERVICES CAREER TAKES A VERY LONG TIME

We won't tell you it doesn't take time to go through the process of becoming an air traffic services professional. After all, you're training to become an expert. But in fact our training takes less time than for other comparably specialized careers, such as the military or RCMP.

5. ATS TRAINING IS REALLY HARD, AND NOT MANY PEOPLE MAKE IT THROUGH

Our training is challenging, and it all starts with our application and selection process. We want to make sure the people who make it to training are well suited to the work ahead. If you make it to the training stage, it's because we know you have what it takes. And, we offer training only when we have the need to fill positions, not on a regularly scheduled basis.

The ATS training program does require commitment and motivation – like many other professional training programs. But when you are finished it gives you all the skills and expertise you need to be a successful controller or flight service specialist.

6. AIR TRAFFIC SERVICES CAREERS ARE ONLY FOR MEN

Like many careers, Air Traffic Services is not a man's world anymore. Anyone can be a successful controller or flight services specialist. Just ask the growing number of women already working for NAV CANADA!

7. NAV CANADA IS THE ONLY ORGANIZATION THAT CHARGES FOR TESTING

Not true. Think of our testing and training like taking your LSATs to become a lawyer, or going to medical school after university. Both require an investment on the part of applicants-and on the part of the organization administering the tests or providing the training. We charge fees to help cover our costs. As a business, we have to. But as the industry's professional training body in Canada, you can also be assured that we put our full energy and resources into your testing and training, to make sure that air traffic services in Canada remain among the best in the world.

8. NAV CANADA IS THE COUNTRY'S AVIATION AUTHORITY

Our job is strictly associated with training ATS professionals and running the country's air navigation system. Transport Canada-which is a government department-is the national authority that issues licenses to controllers and flight services specialists and regulates the safety of the system.

9. TAKING A COLLEGE COURSE IN AIR TRAFFIC SERVICES GUARANTEES YOU A JOB IN THE FIELD

Some post-secondary institutions across the country do offer courses in air traffic services. Their training, however, is not accredited-meaning you still

have to go through NAV CANADA's program if you want to get a job as a controller.

Salary

Salaries and Benefits for Air Traffic Controllers ranges between \$57, 000 and \$123, 000 per year depending on position, facility type and location, plus your level of experience. You will also enjoy comprehensive health coverage and pension benefits.

For example;

Tower Controllers are paid at a lower rate than Radar Center Controllers, primarily due to the significant difference in stress and training. Likewise, a Controller with several years more seniority is also paid higher than someone else working at the same job, but with lower seniority.

During On the Job training you can expect to earn ~\$30, 000 per year.

When can I expect to start getting paid?

After you successfully complete your initial training program, you will begin on-the-job training. At that point, you will begin to earn a salary of approximately \$30, 000 per year. Your salary increases once you're fully qualified.

Can I earn more working in a remote location? What other compensation might I receive?

Positions in some locations qualify for an 'isolated post allowance'.

Additional compensation in all locations is provided for holidays, shift and weekend premiums, and overtime.

What are my prospects for advancement within NAV CANADA?

We encourage career-long learning and advancement and promote regularly from within. You'll have opportunities to move into management, take on special projects, become an instructor, or move to other parts of Canada.

See appendix, page 37, NAV Canada Career Brochure

Training Curriculum and Intensity, NAV Canada, 2010

Before being rewarded with the responsibility and career benefits of controlling, directing and advising aircraft in Canadian airspace, air traffic controllers and flight service specialists go through intensive training programs that last anywhere between one and two-and-a-half years.

The curriculum and duration of our training programs depend on the stream you are selected for. What we can say about all of them is that they're challenging. They require your focus, hard work and commitment.

Training is delivered on a full-time basis, Monday-to-Friday. Class times vary by location, but they are typically eight hours per day. You are also expected to put in additional study and simulator time to prepare for the next day. You

can expect to invest a further two to three hours after class hours to succeed.

Needless to say, you'll want to be dedicated to your training. Holding down a part-time job on the side or participating in overly demanding extra-curricular activities can greatly reduce your chances of success. Having the support and understanding of your family and friends goes a long way.

In the words of one of our air traffic controllers, you “ eat, sleep and breathe” air traffic services in training. Well, not literally. But it is immersive and you need to stay focused on your goal.

“ This is one of those rare opportunities where an organizatio