



Canadian Club Speech

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Thank you and good afternoon. It is an honor and a pleasure to be here today. I am pleased to have the opportunity to share my passion for defence and aerospace and, in particular, for CAE – Canada's very own, high tech, global champion with annual sales of \$2.1 billion of which almost 90% are exports and international sales.

I suspect many of you have heard of CAE, but allow me to give you a brief overview.

Essentially, most know CAE for developing and then applying simulation technology to provide flying experiences and training for pilots. That's not all we do, especially here in Canada where our defence business also provides training solutions and in-service support across air, land, sea and public safety. But for now I will focus on our pilot training capabilities.

Our simulators and training devices use software, literally 5 to 10 million lines of code, to replicate, almost like magic, the experience of flying. We expertly simulate the exact performance of each aircraft type and then create what we call a virtual world where the training takes place, complete with all kinds of weather and challenging situations.

On the screen right now, you can see one of our simulators dancing, during a family day in our plant. Our simulators are on six jacks, allowing movement in many directions, like a real plane. This is actually no small feat, as a simulator like this one weighs between 10 and 15 tons and is 30 feet tall !!!

The interior is either a real cockpit, or one that we simulated. In both cases, it replicates exactly the cockpit of the aircraft. One of CAE's strengths is the visuals we develop, or, as we like to say, the world we create around the crew. This immerses pilots in an environment as if they are operating the actual aircraft.

Pilots appreciate our simulators because they are so realistic – they often say it's incredibly difficult to tell the difference between the aircraft and simulator. And they need to be realistic because the first time a co-pilot flies a commercial aircraft is with passengers like you and me in the back, with all the training having been done in a simulator. And we do a lot of that.

One of the things that makes me very proud is the fact that, no matter where you fly in the world, there is more than a 70% chance that the pilots in front of the airplane have been trained on CAE equipment which has been designed, manufactured and assembled right here in Canada.

But a simulator is not a video game, and it is very serious business training airline pilots to fly passengers safely or military aircrews to perform missions successfully. The simulators have all the controls and devices of live aircraft. They have motion, sound and visuals.

The training programs are intensive, fully regulated and so rigorous that they can subject pilots to flight experiences they would never want to encounter when actually flying. But you need to be prepared to do so. The great thing about simulation, though, is we can provide these experiences in a safe and cost-effective training environment.

Our military simulators – for helicopters, transport and fighter aircraft – involve even more complex software for the simple reason that military pilots operate aircraft with a range of capabilities and fly missions in concert with others.

Military training is more challenging as, often, during a mission, there may be someone shooting at them!

On the screen, you can see one of our simulators being used to practice aerial refueling. This is a very demanding and highly dangerous manoeuvre that military pilots must practice.

Aerial refueling is a critical capability for defence forces because it allows them to get to the mission area, stay there until the mission is accomplished, and then return safely.

It is also one of the most difficult and expensive missions to train for, because it involves training an entire mission crew – including pilots and boom operators – in both the tanker and receiver aircraft. Aerial refueling is a task where simulation-based training shows its value, and CAE is at the forefront of developing and delivering world-class tanker training on programs such as the KC-135 for the U.S. Air Force.

As you can see, the simulators we make are very innovative. As a matter of fact, today we are THE world leader in simulation.

But how did we get there? How come a relatively small Canadian company on the global stage has become the flagship it is today, recognized around the world as best-in-class with amazing products, comprehensive services and world-class training centres?

Allow me to go back in time.

There are key elements of Canadian history that helped make CAE the icon it is today. Although the company started in Montreal in 1947, with a Canadian pilot coming back from the war, as a small Canadian aviation electronics company - hence the acronym "CAE" - its antecedent was the British Commonwealth Air Training Plan established during World War II.

Few Canadians may realize that pilot training is now a core, industrial capability in Canada thanks in part to an investment back in 1939 of almost \$2 billion (that's \$200 billion in today's dollars).

That investment, most of which came from Canada, established over 150 schools and training sites across Canada and trained more than 130,000 pilots and aircrew during the war. A massive undertaking at the time and, today, it is a proud heritage that we continue to build on.

Most of the training then was done on live aircraft and that, in turn, provided a catalyst for manufacturing companies such as De Havilland (now Bombardier Aerospace), Fleet, Vickers and Pratt and Whitney, among others.

It is also why, today, Canada's aerospace industry as a whole stands in the front rank globally and generates revenues in excess of \$42 billion annually – 80% of which come from exports. And the future for our industry is most encouraging. Commercial air travel is expected to grow by 5% annually over the next twenty years, meaning that air traffic will double and there will be a need for 20,000 new pilots per year for 20 years. This is very exciting news for Canada's aerospace and, of course, for CAE.

CAE's strength and our principal market differentiator is a highly skilled workforce – more than 8,000 world-wide, half of whom are here in Canada. Predominantly graduates from engineering schools, technicians and flight instructors who originate from more than 100 nationalities and are able to speak to our customers in more than 100 languages.

Our employees not only speak the language but they also live the culture of our clients. Canada's cultural diversity is definitely an asset for companies like CAE and is a major contributor to our global success.

And we have many other attributes:

We not only manufacture and sell simulators and training devices – about 2,000 to date – but we are also a major training service provider in our own right. Our network for pilot training spans the globe with 67 state-of-the-art training locations where more than 120,000 civil and military aircrews train annually. Why is this important?

Because pilots must be trained every six months, which I am sure is reassuring for all of us. As a matter of fact, we sell more than 70% of the simulators worldwide, and we are also THE world leader for training commercial pilots.

In many instances, CAE partners with local airlines. As an example, we have a joint venture with the largest airline in China, China Southern Airlines, where we train more than 20,000 pilots annually.

And here at home, we have a long standing relationship with Air Canada as we operate its training centres in Toronto and Vancouver which are equipped with our simulators.

Overall, we have more than 30 long-term training agreements and joint ventures with civil airlines and aircraft operators around the world. As well, we take young men and women and start them from the beginning as cadets all the way to becoming full-fledge airline pilots in one of our nine schools in seven countries around the world.

Another little known fact is that we are the largest provider of airline pilots in the world.

The military portion of our business is where CAE actually started in flight simulation. In 1952, we were awarded our first simulator contract from the Canadian Defence Forces for the CF-100 Canuck interceptor, a plane developed and manufactured here in Canada. Eight years later, we won a milestone contract to build simulators for the CF 104 Starfighter.

That became a launch pad for CAE into the global market with sales to several NATO allies. In defence procurement, that is often how it works. Becoming a champion with a seal of approval at home leads to global success.

Later, we have subsequently secured contracts for simulators and training services with every branch of the U.S. Armed Forces.

For example, Seahawk helicopters for the U.S. Navy; comprehensive aircrew training for KC 135 tankers for the U.S. Air Force; and UH-72 Lakota helicopter simulators for the U.S. Army, to name but a few.

We also deliver academic, simulator and live flying instruction to all the U.S. Air Force Predator and Reaper aircrews. These are the remotely piloted aircraft, commonly called drones by the general public, that have become absolutely critical in today's military operations. This again is proof of CAE's global leadership : the U.S. Forces awarded us the contract, us a Canadian company.

And we continue our expansion; just last month, we announced that we were buying from Bombardier the NATO Flying Training in Canada program, known as NFTC. This is where Canada and other allies train future fighter pilots. The program is based in Moose Jaw, Saskatchewan and Cold Lake, Alberta. Soon, we will have 200 new CAE employees joining our workforce here in Canada. And we intend to use this as our platform to grow this business.

The school is another arrow in our quiver and it will allow us to have a deeper understanding of the comprehensive training required to produce the next-generation fighter pilot. We were already providing and maintaining the simulators for the T-6 and Hawk aircraft used at NFTC.

In fact, our experience delivering training devices for these two aircraft helped us secure contracts over the past year with the air forces in New Zealand and Australia. Once again proof of the importance of securing contracts in our own country.

Defence forces around the world value our expertise, our reliability and our service commitment. They recognize that this is a core competence for Canada.

To maintain our position of global leadership and stay ahead of the game, we need to invest and innovate constantly.

Most recently, we developed training solutions for Bombardier's new CSeries and for its Global 7000, 8000 business jets. We also developed the first simulator for the Airbus A350.

For the military, we are jointly developing with Boeing the simulators for the U.S. Navy's new maritime patrol aircraft, the P8 Poseidon, and we are part of a team for the sales of the U.S. Navy's MH-60R naval helicopter.

I want to emphasize that tangible and mutually beneficial partnership with government is essential if companies like CAE are to maintain their competitive edge versus major competitors because governments around the world are strongly committed to sustaining the value of their aerospace industry. It is critical that we maintain this partnership in order to nurture our market niche and reinforce our global advantage.

- In the past decade, we have invested jointly with Industry Canada more than \$1.2 billion in R&D – funds that have enabled us to develop next generation simulation platforms, enhanced visual systems and synthetic environments for new aircraft. In short, that R&D investment is used for innovation. The portion from government is being repaid as per schedule.

I would like to take the opportunity to thank the Conservative government for having put in place the Strategic Aerospace and Defence Initiative or "SADI" program, which allows CAE and other aerospace companies to remain at the leading edge of innovation.

- As a global player, CAE also benefits from new free trade agreements like the ones with Korea and the European Union. They will provide better market access, greater certainty from clearer rules and stronger foundations for growth. CAE encourages and supports more of the same.
- Similarly, new bilateral defence cooperation agreements underpin sales and training services in more than a dozen countries.

- In making international sales, we benefit enormously from support provided by our Embassies and Consulates around the world, by Ministerial and Prime Ministerial visits to key markets and from the active engagement of government agencies such as EDC and the Canadian Commercial Corporation.

I want to highlight the privileged partnership we have with Canada's Department of National Defence, which is a top priority for CAE and is indeed vital to our global success. As I mentioned earlier, when we win at home, it bolsters our prospects for global success.

I want to congratulate the Harper government who had the vision to reequip our troops with new airplanes and helicopters. This has allowed our forces to play a key role around the world.

Back in the 2009 and 2010, CAE won contracts to be the Operational Training Systems Provider for Canada's new fleets of CC-130J Hercules transport aircraft and CH-147 Chinook medium and heavy lift helicopters. These contracts meant CAE and its pan-Canadian team of suppliers would develop the training programs for these aircraft, and then provide 20 years of in-service support for the training systems.

These contracts have created and/or maintained thousands of jobs in Canada; 30% of these jobs out West, 30% in Ontario, 30% in Quebec and 10% in the Atlantic provinces. Not only did we offer employment during the manufacturing phase, but today we have employees in Trenton and Petawawa; these are high quality jobs for 20 years.

The contracts have solidified Canadian expertise in an area of key industrial capability and formed the basis for follow-on exports.

As a matter of fact, since the contract to develop training solutions for the Royal Canadian Air Force's Hercules, we have signed contracts for 19 simulators from six different countries around the world.

As the prime contractor leading a consortium of Canadian companies, we have helped establish the Air Mobility Training Centre at Canadian Forces Base Trenton that is truly one of the world's most advanced military training centres. It is a 'made in Canada' model that can be adapted efficiently to accommodate training for additional types of aircraft.

Many foreign defense forces have come to Trenton to see how Canada's approach to training systems integration might be implemented back at home. They were all very impressed with the training solutions and the Royal Canadian Air Force's forward-thinking adoption of simulation-based training. Today, the Trenton Centre is becoming the standard that defense forces would like to have in their own country.

Testimony to this fact, some countries, including the United States, are considering sending their teams to train in Trenton.

Our success here at home with comprehensive training systems like the one in Trenton will help bolster sales to other markets, which ultimately leads back to benefits here in Canada.

The cost savings of this model for governments are significant. Simulation-based training is much less expensive than live training by an average ratio of 10:1. And with today's simulation technology, you do not sacrifice realism or capability by training in simulation. On the contrary, you enhance readiness by practicing events we hope will never happen in real life.

We provide tangible spinoffs to hundreds of small to medium-sized businesses in Canada who rely and thrive on our global success.

One great example is Bluedrop Performance Learning of Newfoundland that provides software for distinctive, mission training solutions and has become Canada's top, full service 'e-learning' company. We have included Bluedrop in our supply chain for the Hercules and Chinook training programs in Canada and for exports to countries like Australia.

But, keep in mind that almost every country in the world has a defence industrial policy that obliges some degree of domestic job creation and high value in-country work from defence expenditures.

If we do not keep pace and maintain our resolve against these competitive pressures, especially in an area like simulation and training where we have demonstrated genuine, global excellence, we will inevitably fall behind. It is that simple, and continuing government support is that vital.

But what does support really mean? It means awarding contracts to companies, such as CAE, who are recognized world leaders and who work with other Canadian companies, developing a strong industry that WE can export anywhere around the world.

The government's new Defence Procurement Strategy and Value Proposition Framework can have a very positive impact on Canada's defence and security firms. The Trenton Centre is just one example of how it is working, and more can be done. CAE has also demonstrated that we can adapt and transfer technology efficiently from global partners to DND and then export these solutions, with added Canadian content, to other nations.

Today, Royal Canadian Air Force crews must travel abroad to train on some aircraft fleets. Also, a lot of this training is done on real aircraft. We hope that over time we can secure the opportunity to train them here in Canada, using simulation.

If we were to replace out-of-country training by simulation training in Canada, we estimate that we would save up to \$1B over 20 years.

As well, in-country training would maintain and/or create thousands of jobs across the country whilst allowing us to enhance our expertise and, hence, increase Canadian exports.

And, as you know, there is no compromise: buying from CAE is buying from THE recognized world leader.

CAE continues to win contracts – civil and military – because we have an established reputation for quality and a passion for excellence. There is nothing “simulated” about our record of success.

We are known for providing the very best training for pilots which in turn enables them to give safe, reliable service on a consistent basis to passengers, or be prepared and ready to handle the military missions they must perform. That is what makes CAE a partner of choice for our customers who put a premium on safety, efficiency and readiness.

Innovation is a constant catalyst for our success. A commitment to innovation is also what attracts people to find employment at CAE. I always say that innovation is in our DNA. We also invest in research partnerships with universities to help ensure a continuous flow of talent. We collaborate directly on research development with more than 20 Canadian universities including Carleton University.

Incidentally, beyond aerospace, CAE provides simulation technology for health care as well – more than 9,000 of our healthcare simulators are being used today in medical schools, nursing schools and hospitals to allow doctors and nurses to practice safely before doing the procedure for real on people like you or me.

Your paramedics here in Ottawa are using CAE solutions to help make timely resource deployment decisions during emergencies.

Think of this. You may be on a plane that the CAE trained-pilot is flying for the first time. Or you may be treated by a paramedic or by a surgeon in an operating theatre who were trained on CAE simulators. In each case, you will be in excellent hands.

Above all, please be assured by the message I have shared with you today and from CAE's track record for global excellence – the most reliable and most advanced simulation and training systems available anywhere in the world, bar none, are available right here in Canada.

You will certainly realize by now that I am personally passionate and proud of what we are doing at CAE. I also believe that success stories like ours should be a source of pride - something for all Canadians to celebrate.

Thank you.