Fiscal year 2019

Annual Activity and Corporate Social Responsibility Report

Your worldwide training partner of choice
About this report

Our approach and scope

This Annual Activity and Corporate Social Responsibility Report consolidates information on our company strategy, corporate social responsibility (CSR) activities and fiscal year 2019 performance into one document. It includes all the information previously found in our CSR Report and the editorial pages of our Annual Report. All financial data for fiscal year 2019 is available in our Financial Report.

Integrating our reporting in this way enables us to provide stakeholders with a single source of information in key areas. It also signals that CSR is inseparable from our core business strategy and activities. As you'll read in this report, our training solutions generate benefits across the three central elements of sustainability: economic, environmental and social.

This report covers our global operations and, unless otherwise stated, presents quantitative and qualitative information for fiscal year 2019 (ended March 31, 2019).

Reporting standards

This report is aligned with the Global Reporting Initiative (GRI) Sustainability Reporting Standards. An independent institution, the GRI provides a standard framework for sustainability reporting across companies and industries. You'll find an index outlining our alignment with the GRI Standards core reporting requirements and references to other relevant information sources here.

All figures in this report are in Canadian dollars unless otherwise stated.

Feedback

We welcome your views on the topics covered in this report. Please send your comments, suggestions and questions to media.relations@cae.com.

How to use this report

Interactivity

When opened in Adobe Reader, this PDF document incorporates several interactive features as indicated below.

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10,000 employees with a singular focus on excellence in training

CAE delivered a record financial performance in fiscal 2019 with annual revenue growing 17% to $3.3 billion and earnings per share before specific items\(^1\) growing 13% to $1.25. We also generated $324 million of free cash flow\(^1\), which represents a near one-to-one conversion of net income, and is a positive statement about the underlying quality of CAE’s earnings. Our outstanding results this past year are the product of a sound strategy and the singular focus of CAE’s more than 10,000 employees worldwide to deliver excellence in training. Our continued success winning our customers’ trust further validates our training strategy and adds to our already highly recurring revenue profile. We continued to build momentum growing our share of market, and I am especially pleased with our record $4 billion in annual order intake\(^1\) and $9.5 billion backlog\(^1\), which help position CAE for continued superior growth in the period ahead.

In Civil Aviation Training Solutions—the largest of our three business units—we grew annual segment operating income before specific items\(^1\) by 13% and booked orders totaling a record $2.8 billion, including an unprecedented 78 full-flight simulator sales. Our order book also includes a higher number of long-term training contracts, which is indicative of a larger pipeline and our ability to accelerate the pace of airline outsourcing. Among these are a 10-year pilot training contract with easyJet, exclusive multi-year pilot training agreements with Asiana and CityJet, and an exclusive 15-year training outsourcing agreement with Avianca. We also greatly expanded CAE's position in business aviation training with the purchase of Bombardier's Business Aircraft Training unit—a transformative move for CAE and our largest-ever acquisition. Business aviation training is an important, high-value segment and we now have much greater access to the operators of more than 4,800 Bombardier business jets in service worldwide. We also have an expanded position in some of the largest and fastest growing segments of the business aviation training market, specifically in the medium- and large-cabin business jet segments.

Last year, we delivered more than one million hours of aviation training for the first time in our history. CAE is now the largest civil aviation training company in the world, with over 280 full-flight simulators at more than 50 locations. I believe our success is due in large part to the fact that we are uniquely a training pure-play and we bring to bear a long track record of credibility as an innovation leader and a resolute focus on our customers' experience and needs.

In Defence and Security, we also delivered superior market performance with annual segment operating income\(^1\) growth of 9%\(^2\) and we booked $1.1 billion in orders, including training systems integration programs, for a record $4.5 billion backlog. Our status as a global top-tier training systems integrator (TSI) is solid. Among the key contracts we won during the year are the U.S. Air Force C-130H Aircrew Training Services program and the U.S. Navy CNATRA CIS program that will see us provide instruction at five Naval Air Stations in support of primary, intermediate and advanced pilot training. We also signed a contract to provide a comprehensive training solution and long-term training services to the Royal New Zealand Air Force.
NH90 helicopter program; a contract with Boeing to provide a P-8A Poseidon aircraft simulator for the Royal Air Force; a contract with the German Air Force to provide upgrades and updates on Eurofighter simulators; and a contract with Lockheed Martin to provide C-130J full-mission simulators for the U.S. Air Force. General Atomics also awarded us a contract to develop the synthetic training system for the UK Protector remotely piloted aircraft system.

We anticipate even more growth opportunities in the United States with the strategic acquisition of Alpha-Omega Change Engineering. This acquisition enhances our core capabilities as a TSI in the U.S. and expands CAE’s position to include a broader range of enduring aircraft platforms. Together with our newly created subsidiary CAE USA Mission Solutions, this gives us an expanded addressable market with the ability to pursue and execute even higher-level security programs.

And finally, in Healthcare, we continued to leverage CAE’s expertise in simulation and training in this compelling third core market for CAE. The steady stream of new simulation products that we have brought to market and the expansion of our salesforce led to accelerated revenue growth toward the end of the fiscal year. And by continuing to use Healthcare’s internally generated funds, we met several strategic objectives during the year, including the development and launch of innovative products to secure future growth. We introduced the CAE Luna infant simulator for neonatal and infant care training, and the well-received CAE Ares, our emergency care manikin. We also welcomed Rekha Ranganathan as the new President of CAE Healthcare. Rekha has a deep commercial experience in the healthcare field and I am confident that she will leverage our current progress and lead the business to a significantly larger scale.

Driven by a noble purpose

CAE’s value creation goes well beyond superior financial results. In addition to creating significant value for our customers and our shareholders, we also create real value for over 10,000 CAE employees and their families in over 35 countries across the world. Collectively, we derive a great sense of satisfaction from our company’s noble purpose. We are fortunate to provide the training solutions that help make air travel safer, enable defence forces to be mission ready, and help medical personnel save lives. This serves as a powerful motivator for our employees to provide the best training services and products in the industry. In turn, a passionate and committed workforce translates into the highest level of customer satisfaction and trust.

Eyes on the next horizon

We are making great progress on our key strategic priorities to drive innovation and delight our customers by further establishing CAE as the thought leader in aviation training. Our vision to be the worldwide training partner of choice is anchored in our ambition to be essential to our customers. While digital innovation is not new to CAE, this year we bolstered our capabilities with the launch of our Digital Accelerator to systematically develop even more competitive differentiators and to find ways to further delight our customers—faster. We are advancing the science of training by leveraging the latest in artificial intelligence, data analytics and other exciting digital technologies that provide our customers with previously unattainable training insights and greatly enhance their experience with us. You can read more about it in the following pages of this report. The Digital Accelerator is only one element of a much larger and bolder commitment we made this year: to invest $1 billion over the next 5 years in Digital Intelligence to revolutionize pilot, aircrew and healthcare professional training.

CAE is a pure-play training company that continues to benefit from secular tailwinds in our core markets. I am highly encouraged by the continued evolution of CAE’s strategy to garner sources of growth and long-term competitive advantage. I am enthusiastic about the company’s prospects for sustainable and profitable growth and our ability to generate attractive returns in large markets where CAE benefits from an excellent position and a high degree of recurring business. We expect to continue exceeding underlying market growth as we deliver on a record backlog and convert a large pipeline into higher market share and new enduring customer partnerships.

2 Before acquisition and integration costs incurred in fiscal 2019 in the Defence and Security segment.
In Civil aviation, market fundamentals remain supportive with continued passenger traffic growth and an expanding global in-service fleet of aircraft. We expect to continue growing our share of market through innovation and with the benefits of the largest and broadest global training network, market-leading simulation products and support, and the most comprehensive offering of cadet-to-captain training solutions. Our customers face complex challenges, including securing a supply of new pilots to support their operations. CAE forecasts a requirement for 300,000 new pilots globally in the next 10 years to serve the commercial and business aviation markets. We see this as a great opportunity to enable our customers to recruit and develop the next generation of pilots. We have positioned CAE to be the go-to company for training solutions, and increasingly, for pilots. Among several other initiatives, to ensure we tap into the full available talent pool, we launched the CAE Women in Flight scholarship this year, to encourage more women to consider becoming pilots. You can read more about it in this report.

In Defence and Security, the market is also highly supportive with governments around the world placing a high priority on mission readiness and looking at outsourcing to partners like CAE to help create and maintain critical operations personnel. Here too, we're seeing good momentum as we convert a large bid pipeline into orders.

And finally, in Healthcare, our new products and strengthened front-end organization show a lot of promise, and I'm confident that there's a large enough market for CAE to build on the innovations CAE Healthcare has already fielded and achieve greater scale.

Bolstering talent and promoting a One CAE culture

Bolstering talent is one of our top strategic priorities and we continually strive to be an employer of choice, ensuring that we engage and attract the best people. We understand that at the heart of CAE are its people, and just in the last year we have grown our team by more than 1,000 employees. What makes us unique is our One CAE culture that places a high value on employee empowerment and engagement. I am pleased with our cultural evolution and will highlight just a few elements that we have implemented this past year.

We launched a Diversity and Inclusion initiative aimed at bolstering the participation of women in a traditionally male-dominated industry. I have made it my personal mission to ensure that women at CAE can realize their full potential as equal partners with men in the workforce and have every opportunity for advancement. Here too, we are making good progress: this year, we were selected for the 2019 Bloomberg Gender-Equality Index, which highlights 230 firms that are trailblazers in their commitment to transparency in workplace gender reporting. You can read more about our Diversity and Inclusion progress in this report.

We also introduced an agile and innovative Employee Performance Management system focused on employee development, frequent conversations, agile goals and skills-learning. To be an employer of choice, we also increased our focus on the wellness of our employees, promoting physical and mental health.

Our outstanding results are made possible by the commitment, passion and customer-focus of our people. CAE employees are to be commended for their dedication and excellence and I cannot thank them enough for their contributions. It is my great privilege to lead CAE, a dynamic growth company that each day moves closer to the realization of our vision of being the worldwide training partner of choice. As an industry leader, I take great personal satisfaction in our role to help make the world a better and safer place for everyone.
Overview

Our noble purpose of making the world a safer place motivates our employees on a daily basis. It is gratifying to know that the training we provide helps make air travel safer, prepares defence forces to be mission-ready and enables medical personnel to save lives.

Marc Parent
President and CEO, CAE

Roots in innovation

When Ken Patrick, a former Royal Canadian Air Force officer, founded CAE in 1947, his goal was to “…take advantage of a war-trained team that was extremely innovative and very technology intensive.”

By the mid-1950s, we were already creating our first flight simulators. One innovation led to another and, by 1982, we had developed a flight simulator so realistic that training on real aircraft was no longer necessary. The rest is history.

It’s all about safety, efficiency and readiness

Today we’re the training partner of choice in end-to-end virtual-to-live solutions for a growing number of aircraft operators, defence forces and healthcare professionals and institutions. Our training network, the world’s largest, spans more than 65 training centres and flight academies around the globe.

Each year, we train more than 220,000 civil and defence crewmembers, including more than 135,000 pilots. We work with more than 300 airlines and major business aircraft operators to increase the safety of air travel. As a leader in training systems integration, we deliver air, land, naval and public safety training to approximately 50 defence forces in over 35 countries. We help ensure these men and women return home safely by preparing them for a range of missions. We’re also a leading provider of innovative healthcare training solutions that enable medical personnel to provide better care.

At CAE, our mission is to make air travel safer, allow defence forces to be mission ready, and help medical personnel save lives. We’re confident that Mr. Patrick would be proud of what we’ve become.
Worldwide presence

160 + locations
35 + countries
10,000 + employees
## FY19 financial and business highlights

<table>
<thead>
<tr>
<th>Financial Highlights</th>
<th>Value</th>
<th>Business Highlights</th>
</tr>
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<tbody>
<tr>
<td>Record annual revenue</td>
<td>$3.3 billion</td>
<td>Sold 78 full-flight simulators (FFS), surpassing our previous record of 53 FFS sales.</td>
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<tr>
<td>Record backlog</td>
<td>$9.5 billion</td>
<td>Announced a plan to invest $1 billion in research and development (R&amp;D) innovation over the next five years, including Project Digital Intelligence (PDI). The Governments of Canada and Québec have agreed to participate in PDI through partially repayable investments of $150.0 million and $47.5 million, respectively.</td>
</tr>
<tr>
<td>Record annual order intake</td>
<td>$4.0 billion</td>
<td>Acquired Bombardier’s Business Aircraft Training (BAT) business to expand our position in business aviation training.</td>
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<tr>
<td>Earnings per share</td>
<td>$1.25</td>
<td>Acquired Avianca’s 50% participation in the recently formed training joint venture Avianca-CAE Flight Training.</td>
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<tr>
<th>Key Performance Indicators</th>
<th>Value</th>
<th>Business Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on capital employed</td>
<td>12.9%</td>
<td>Formed SkyAlyne Canada, a joint venture with KF Aerospace, that will focus on developing world-class military pilot and aircrew training in Canada.</td>
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<tr>
<td>Civil training centre annual utilization rate</td>
<td>76%</td>
<td>Won notable contract awards, including services or equipment for the following programs: the USAF KC-135; the New Zealand Defence NH90; the U.S. Navy Naval Air Stations; the USAF C-130H; the U.S. Navy for the Royal Australian Navy’s MH-60R; the German Eurofighter; Lockheed Martin C-130J for the USAF; the Royal Air Force P-8; General Atomics Aeronautical Systems United Kingdom’s Protector remotely piloted aircraft.</td>
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<tr>
<td>Annual SOI before specific items</td>
<td>$487.4 million</td>
<td>Launched the CAE 700MR Series FTD for military helicopter flight and mission training; the CAE Medallion MR e-Series Visual System for military fighter and fast-jet training and introduced CAE Rise™ to the defence market.</td>
</tr>
<tr>
<td>Annual book-to-sales ratio</td>
<td>1.20x</td>
<td>Launched the CAE Ares emergency care manikin, the CAE Luna infant simulator for neonatal and infant care, and the Anesthesia SimSTAT - Appendectomy and Robotic Surgery modules.</td>
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1 Before FY19 specific items, which include the costs arising from the acquisition and integration of Bombardier’s BAT business.
Strategy

End-to-end training partner of choice

Our vision is to be the recognized global training partner of choice to enhance customer safety, efficiency and readiness.

Achieving this vision depends on the successful implementation of four strategic imperatives, which will help protect our leadership position and grow our market share.

Our global leadership stems from our:

- Comprehensive training solutions
- Highly qualified and passionate employees
- Extensive experience and credibility delivering academic, simulator and live-flying training
- Industry-leading global training network
- Commitment to excellence and innovation spanning more than 70 years
- Close collaboration with regulators and policymakers to help shape the future of training
- Ability to reduce customers’ environmental impact through simulation-based training

Four areas of strategic priority

Four areas of strategic priority to protect CAE’s leadership position, achieve superior growth, and ultimately realize our vision to be the recognized worldwide training partner of choice:
**Six pillars of strength**

Our strategy and investment theses are based on six interrelated pillars of strength. We benefit from a high degree of recurring business, a strong competitive moat and significant headroom in large markets that are being driven by secular tailwinds. These factors, combined with our culture of innovation, give us the potential to generate superior returns. As we look ahead, we're confident in the strength of our position and the supportive fundamentals of our end markets.

### High degree of recurring business

We operate in highly regulated industries with mandatory and recurring training requirements for maintaining professional certifications. Our long-term agreements with many airlines and business aircraft operators and defence forces are also an important source of our recurring business.

### Headroom in large markets

Significant untapped market opportunities exist in our three growing core businesses. While we lead in the simulation product market, we're also pursuing the training market, which is several multiples larger than the product market.

### Potential for superior returns

At CAE, we believe we have the potential to grow faster than the underlying markets and that our large backlog and recurring revenue profile give us greater visibility into what lies ahead.

### Strong competitive moat

Our global training network, unique end-to-end cadet-to-captain training solutions, training systems integrator (TSI) expertise, unrivalled customer intimacy and strong, recognizable brand further strengthen our competitive moat.

### Underlying secular tailwinds

The civil aviation and defence sectors are enjoying strong tailwinds. Air passenger traffic and defence budgets are expected to continue to increase globally.

### Culture of innovation

Innovation is part of our DNA and our people make it happen. In collaboration with our customers, we design and deliver the most advanced training solutions.
Business highlights
Leading the industry

Our Civil Aviation Training Solutions business is recognized for its commitment to quality, reliability and innovation. It’s how we’ve built the world’s largest civil aviation training network. It’s also how we’ve become the global training partner of choice for aviation professionals, airlines, business aircraft operators and aircraft manufacturers globally.

Over the decades, we’ve developed first-to-market simulators for more than 35 types of aircraft and simulated a total of over 150 aircraft platforms. Today we deliver end-to-end aviation training solutions that address the pilot’s total lifecycle needs, from cadet to captain. And now, our game-changing training system CAE Rise™ is set to significantly elevate every pilot’s training experience.

#1 in civil aviation training

55 + training centres and aviation academies
Year in review

During fiscal 2019, Civil booked a record total $2.8 billion in orders and a record backlog of $5 billion, which is 22% higher than last year.

Notable wins included a 10-year pilot training contract with easyJet, exclusive multi-year pilot training agreements with Avianca and CityJet, and a record total 78 full-flight simulator sales to customers worldwide.

Overall for the year, Civil grew segment operating income before specific items\(^1,2\) by 13% and filled its training centres to 76% utilization, while at the same time adding over 30 new simulators to meet customer demand.

In total, CAE’s Civil aviation training network now operates over 280 full-flight simulators from more than 55 locations, and for the first time in our history, we delivered more than one million hours of training last year.

With this growth, CAE has become the largest Civil aviation training company in the world.

FY2019 highlights

<table>
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<tr>
<th>15% revenue growth</th>
<th>13% segment operating income growth(^1,2)</th>
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<tbody>
<tr>
<td>1.48x book-to-sales ratio(^3)</td>
<td>$2.8 billion record order intake</td>
</tr>
<tr>
<td>$5 billion record backlog(^4)</td>
<td>76% utilization rate(^5)</td>
</tr>
<tr>
<td>78 full-flight simulator sales</td>
<td>1 million hours of training delivered</td>
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1 Segment operating income (SOI) is a non-GAAP measure and our key indicator of each segment’s financial performance. This measure gives us a good indication of the profitability of each segment because it does not include the impact of any items not specifically related to the segment’s performance. We calculate it by taking the operating profit and excluding the impact of restructuring costs.

2 Before specific items for fiscal 2019 including the costs arising from the acquisition and integration of Bombardier’s Business Aircraft Training (BAT).

3 The book-to-sales ratio is a non-GAAP measure calculated as total orders divided by total revenue in a given period.

4 Backlog is a non-GAAP measure that represents the expected value of orders we have received but have not yet executed.

5 Utilization rate is a non-GAAP measure that assesses the performance of our Civil Aviation simulator training network.
Our pilot training network sees robust growth

Our longstanding relationship with easyJet continues to grow. The European leading airline awarded CAE a contract to train all of its pilots, allowing CAE to expand its training network in Europe. The airline will benefit from three new European pilot-training sites equipped with a fleet of CAE's latest XR Series flight simulators. A new, state-of-the-art training centre will be built at London Gatwick with dedicated space for easyJet. The location will be equipped with nine Airbus A320-family full-flight simulators (FFSs) and three flight training devices (FTDs). Two additional centres are to be established in Manchester, UK and Milan, Italy. We have been providing training solutions to easyJet since 2004. In other jurisdictions, long-term training agreements were signed with Avianca, AirAsia, Volaris and CityJet.

Expanding our presence in the business aviation training space

CAE acquired Bombardier’s Business Aircraft Training (BAT) business for US$645 million – the largest acquisition in the company's history. The acquisition offers significant growth opportunities in the business-jet segment, with CAE estimating there is a need for 50,000 new business jet pilots over the next 10 years. Bombardier business aircraft comprise one of the largest in-service fleets in the category in the world. The acquisition also allows us to expand in the business-jet sector, the largest and fastest growing categories of business aviation training. The Bombardier BAT business includes a modern fleet of full-flight simulators (FFSs) and training devices for the Learjet, Challenger and Global product lines.

Partnership with Aeromexico Formacion and other pilot creation programs

A new cadet program in partnership with Aeromexico Formacion to train future pilots is the first of its kind in Mexico. The initiative gives cadets who have no flying experience the opportunity to become Aeromexico pilots after a rigorous 18-month training program. The students are first put through their paces in ground school training at Aeromexico's training centre in Mexico City. They then get flight training at our aviation academy in Phoenix, Arizona before returning to Mexico to complete Embraer E170 type-rating training. All training is to be conducted on our fleet of Piper aircraft. Other pilot creation agreements that were signed elsewhere in the world include those with American Airlines, AirAsia, and Vueling Airlines.

Forecasting business jet pilot demand

In 2018 CAE unveiled its Airline and Business Jet Pilot Demand Outlook, an update on the previous year's report. For the first time, the outlook offers a business-jet forecast for pilot demand. The document provides fleet operators with valuable data and insight on trends and professional-pilot needs in both business and commercial aviation. Among key findings, the report indicates that the active business-jet pilot population will reach 65,000 by 2028, an 18% increase, with a turnover rate of almost 100%. The report can be downloaded at cae.com/civil-aviation.

Training the next generation of pilots at AirAsia

We signed a new five-year Multi-Crew Pilot License (MPL) training program agreement with AirAsia. The program will train more than 400 cadets to become pilots with AirAsia. Training takes place at CAE Kuala Lumpur, CAE Melbourne and CAE Phoenix. Once they have successfully completed their training after a comprehensive 18-month program, the cadets will become first officers with AirAsia. The agreement represents an extension of the MPL training program that we introduced with AirAsia as our launch customer in 2010.
Looking ahead

Demand for trained aviation professionals is driven by air traffic growth, pilot retirements and the increase in active aircraft fleets. As global economies and airline fleets continue to expand, so does the demand for qualified airline personnel.

CAE is well known as an innovation leader, with the largest and broadest global training network, and the most comprehensive offering of cadet-to-captain training solutions. We’re harnessing the latest in augmented and virtual reality and the power of digital, with new data-driven solutions such as CAE Rise™.
Encouraging more young women to become pilots is a central goal of a unique new scholarship program launched by CAE called CAE Women in Flight. Promoting the advancement of women in aviation, a male-dominated industry, helps broaden the civil aviation talent pool and address the industry’s need to train over 300,000 new pilots over the next 10 years. The scholarship recipients will become CAE Women in Flight ambassadors and role models, tasked with the mission to inspire the next generation of women to join them on the flight deck!

As a global leader at the heart of the pilot-training process, CAE feels a responsibility to help increase the number of women in the industry and in the academies. A study we conducted, which included interviews with over 100 women, confirmed that there are not enough female role models in this sector. So we decided to do something about it.

Currently, only 5% of professional airline pilots in the world are female. This situation also gives us a clear opportunity to increase diversity and address a historic gender imbalance. We believe much more effective action is needed to attract women to the profession.

Five women out of a total of 350-plus applicants were selected as CAE Women in Flight scholarship recipients for this first edition of the program.
Defence & Security

Helping improve mission readiness worldwide

Our Defence & Security business is a world leader in helping defence forces achieve and maintain the highest levels of mission readiness. As a globally recognized training systems integrator (TSI), we develop and deliver integrated live-virtual-constructive (iLVC) training solutions for our air, naval, land and public safety customers. We serve our global defence and security customers through regional operations in Canada, Europe/Africa, Asia-Pacific/Middle East and the United States/Latin America.

100 +
customer sites providing training services

Acquired Alpha-Omega Change Engineering Inc. (AOCE) to pursue higher-level security programs in the U.S.

25,000 +
aircrews trained in 2018
Year in review

In fiscal 2019, our Defence & Security business grew its operating income by 9% and booked $1.1 billion in orders.

The Defence backlog reached a record $4.5 billion with key wins during the year that firmly established CAE’s position as a top-tier global Training Systems Integrator. These include the U.S. Air Force C-130H Aircrew Training Services program, and the U.S. Navy CNATRA CIS program where we provide instruction at five Naval Air Stations to support primary, intermediate and advanced pilot training. As well, we won a contract to provide a comprehensive training solution and long-term training services for the Royal New Zealand Air Force NH90 helicopter program.

We also acquired Alpha-Omega Change Engineering Inc. (AOCE) during the year, which together with our enhanced structure in the U.S., expands our addressable market to now include higher-level security programs.

FY2019 highlights

21% revenue growth

9% segment operating income growth

1.03x book-to-sales ratio including options

$4.5 billion backlog

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1 Before expenses related to the acquisition and integration of AOCE.

2 Segment operating income (SOI) is a non-GAAP measure and our key indicator of each segment’s financial performance. This measure gives us a good indication of the profitability of each segment because it does not include the impact of any items not specifically related to the segment’s performance. We calculate it by taking the operating profit and excluding the impact of restructuring costs.

3 Book-to-sales ratio is a non-GAAP measure calculated as total orders and options divided by total revenue in a given period.

4 Backlog is a non-GAAP measure that represents the expected value of orders we have received but have not yet executed.
A U.S. acquisition enhances growth opportunities in defence

Our role as one of the world’s leading training systems integrators (TSI) for defence and security forces got a boost with the acquisition of Alpha-Omega Change Engineering (AOCE), based in Williamsburg, Virginia, and the formation of CAE USA Mission Solutions. The acquisition allows our U.S. subsidiary, CAE USA, to pursue higher-level security programs in the United States, the world’s largest defence market. CAE USA Mission Solutions now provides a variety of aircrew training services as well as operational test and evaluation and engineering support services to the U.S. Department of Defense.

Supporting the U.S. Navy’s pilot training

We strengthened our relationship with the United States Navy last year when we were awarded a contract to provide the Chief of Naval Air Training (CNAVTRA) with instructor support services. The contract calls for us to support the delivery of ground-based training for the U.S. Navy. CAE USA is now providing classroom and simulator instructors at five Naval Air Stations (NAS) to support primary, intermediate and advanced pilot training for the U.S. Navy.

A significant win: the U.S. Air Force C-130H aircrew training contract

The United States Air Force chose us as its prime contractor for its C-130H Aircrew Training System (ATS). The eight-year contract, valued at more than US$200 million, is a major achievement for us as we had been a subcontractor on the program for almost 20 years. The C-130H is a workhorse for the U.S. Air Force with approximately 200 aircraft providing tactical airlift and transport. Each year, more than 11,000 crewmembers from the U.S. Air Force and other U.S. defence services, as well as over 30 other countries, are trained under the C-130H ATS program. CAE USA is now responsible for providing classroom and simulator instruction, training device modifications and upgrades, system engineering support, program management and contractor logistics support.

Extending our digital reach

CAE Rise™ has proven itself as an innovative, data-driven, real-time training system for our airline partners. Last year, it was introduced to the defence market. CAE Rise™ (real-time insights and standardized evaluations) makes pilot-training more efficient, standardized and objective by analyzing massive amounts of data during training sessions and providing instructors with real-time assessments of student performance. Assessment subjectivity is reduced and training insights are gleaned in order to help continuously adapt and improve the training program.

High fidelity simulation for the UK’s next-generation remotely piloted aircraft

General Atomics Aeronautical Systems (GA-ASI) awarded us a contract to develop a synthetic training system for the United Kingdom’s Protector remotely piloted aircraft system (RPAS) program. Protector will be operated by the Royal Air Force and is a variant of GA-ASI’s SkyGuardian RPAS. The training system to be designed and developed by CAE will include desktop and high-fidelity mission training devices. The SkyGuardian RPAS and the UK’s Protector variant can meet the most stringent certification requirements of aviation authorities.

Advances in helicopter training solutions

The CAE 700MR, a next-generation flight training device tailored specifically for defence helicopter flight and mission training, was launched at the 2018 Farnborough Airshow. Shortly thereafter, the New Zealand Defence Force selected the CAE 700MR as part of a comprehensive NH90 helicopter training solution that CAE is now developing for the Royal New Zealand Air Force. Last year also saw the launch of the CAE Medallion MR e-Series turnkey visual solution for fighter and fast-jet training. Both systems offer highly immersive and realistic simulation environments for cost-effective mission training.
Looking ahead

With the global emphasis on national security and increasing defence budgets around the world, we see a strong bid pipeline and numerous growth opportunities. Defence forces are making substantial investments in new technologies, networked systems and interoperability, all of which create training requirements aligned with our TSI solutions and capabilities.

In addition, defence forces face challenges with pilot recruitment, training, and retention, thus creating opportunities for industry-enabled and outsourced flight training.

Our extensive research in areas such as integrated live-virtual-constructive (iLVC) training, virtual/augmented/mixed reality, and cybersecure synthetic environments positions us well in this market. So does the growing acceptance by governments and defence forces of outsourcing training services.

At CAE, we’re committed to providing our defence and security customers with comprehensive training solutions to optimize their efficiency and effectiveness, and most importantly, help them achieve mission readiness. And we anticipate significant opportunities ahead for forging long-term partnerships with our defence customers.
Feature story

Supporting United Nations' peacekeeping efforts in Mali

Royal Canadian Air Force crew members are on a critical mission airlifting supplies to a particularly dangerous zone in strife-torn Mali. Suddenly, they are thrust into crisis mode, with the loss of power in two of the four engines on their CC-130J Hercules transport plane.

Gusty winds and threats on the ground complicate a hair-raising emergency landing.

That’s just one CAE-designed flight simulation scenario among dozens that RCAF aircrews dealt with in rigorous pre-deployment training for the Mali peacekeeping mission, at Canadian Forces Base Trenton in Ontario.

Proud CAE employees

Canada is supporting the United Nations’ peacekeeping efforts in Mali with about 250 Canadian Armed Forces personnel providing medical evacuation, transport and logistics aid. A critical component of the pre-deployment operations was immersive flight preparation on advanced CAE training systems, not only for the CC-130J aircraft but also for CH-147F Chinook and CH-146 Griffon helicopters.

Supporting peacekeeping activities and humanitarian assistance with high-fidelity simulation training is an integral part of the services offered by CAE’s Defence and Security division. CAE employees are proud that their work supports such important peacekeeping missions.

“I feel very honoured and privileged to be able to help create a training scenario that assists the Canadian Government to provide critical peacekeeping support to that war-torn African country,” says Darryl Pajot, a CAE Flight Evaluation Pilot at the Air Mobility Training Centre (AMTC) in Trenton. “As a former military pilot on the Hercules, I have flown many peacekeeping missions throughout the world and I know first-hand how we Canadians are appreciated. To be able to have major influence in this capacity once again is very satisfying for myself and for my CAE colleagues here at the AMTC who have similar backgrounds.”

Darryl’s work on the Mali simulation program for Task Force Mali included creating high-fidelity virtual databases that allowed for the accurate representation of the various airports and landing strips in Mali as well as their surroundings.

“I make sure they’re as close to the real thing as possible,” he says. “It’s all exactly the way it would happen in the real world.”

All told, there were nine CAE employees who worked on the project at the AMTC. Three members of the team worked on developing the visual scenes while the rest created the lesson plans and scenarios for training, recalls Darryl.

Simulations included low-level flights and the onloading or offloading of cargo at airports within minutes.
Rehearsing life-saving missions

The year-long Canadian participation in the Mali initiative — officially known as the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) — includes the 24/7 capability to medically evacuate UN forces by air.

Mali is considered the UN's most dangerous peacekeeping mission. It represents Canada's first significant deployment for the UN in almost 15 years.

"We knew Task Force Mali would be a very high tempo mission requiring our aircrews to be prepared and ready at a moment's notice. Simulation-based training is an invaluable tool in helping familiarize our aircrews with the operational environment and giving them the ability to practice and rehearse a variety of mission scenarios before actually having to perform these life-saving missions for real."

Colonel Mark Goulden, Commander 8 Wing, RCAF

As of mid-March 2019, Task Force Mali had conducted eight medical evacuation missions and the helicopters flown more than 2,500 hours in support of MINUSMA.

The simulation-based pre-deployment mission training for MINUSMA involved RCAF Chinook aircrews from 450 Tactical Helicopter Squadron at Petawawa, Ont.; Griffon aircrews from 408 Tactical Helicopter Squadron in Edmonton; and Hercules aircrews from 8 Wing Trenton.

CAE developed its high-fidelity virtual database of Mali using the Open Geospatial Consortium Common Database (OGC CDB) for the Chinook and Hercules programs, and a generic database of the Mali region for the Griffon simulator.

"Simulation is an ideal tool for pre-deployment operation and mission rehearsal training because it gives aircrews the opportunity to safely and cost-effectively prepare for real-world operations in a virtual environment," said Joe Armstrong, Vice President of Operations, CAE Defence & Security. "CAE is the RCAF's training partner on all the aircraft platforms involved in Task Force Mali, and we bring a great deal of experience and expertise as a training systems integrator in being able to help the RCAF leverage its simulation-based training enterprise to support its operational missions."
Healthcare

Enhancing patient safety

Just as passenger safety is the top priority in civil aviation, patient safety and outcomes matter most in healthcare. Medical errors are the third-leading cause of death in U.S. hospitals. Simulation-based training provides a low-risk alternative for practising lifesaving procedures, rapid response and interprofessional clinical teamwork and major disaster response.

Building on our aviation expertise, we launched our Healthcare business 10 years ago to enhance healthcare training and education as well as improve patient outcomes in clinical settings. Today we’re a training partner of choice for the healthcare industry, scientific societies and associations worldwide, helping foster confidence, competency and teamwork. We offer the industry’s broadest portfolio of healthcare simulation products and solutions along with world-class support.

14,000 + simulators installed worldwide

50 + Industry's broadest training products and services portfolio
FY2019 highlights

$121.6 million in revenue (6% higher than last year)

Expanded sales force by 30%

Year in review

In fiscal 2019, we accomplished a number of strategic objectives to enable future growth, we further developed sales and distribution and we launched a series of innovative products. CAE Ares, our emergency care manikin, was very well received by customers, and we introduced CAE Luna, an innovative newborn simulator designed for newborn care in the first 28 days of life.

We made good inroads as a thought leader with the release of the next two modules of Anesthesia SimSTAT for Appendectomy and Robotic Surgery, and we released CAE Vimedix 2.0 for ultrasound simulation, which is now compatible with new augmented reality add-ons.

Our new simulation products and expanded salesforce led to accelerated revenue growth toward the end of the year. We recently appointed Rekha Ranganathan as our new Healthcare leader who brings deep commercial experience to leverage our current achievements and take that business to the next level of scale.

Anesthesia SimSTAT was awarded the Power of A Silver Award by the American Society of Association Executives
HPSN 2019

At HPSN World 2019, we showcased a prototype of our CAE AresAR high-fidelity emergency care manikin with a Microsoft HoloLens application. CAE Ares is our newest mid-fidelity manikin, designed to fulfill the requirements for Advanced Life Support (ALS), Advanced Cardiac Life Support (ACLS) and emergency care team training within academic programs, hospitals, and emergency care services. CAE Ares is portable, lightweight and durable, with the right mix of features for life-saving simulation training.

A productive year for launches

Among exciting launch events were the release of the CAE Ares training simulator for the Emergency Medical Services (EMS) market. CAE Ares is an emergency care manikin operated by CAE Maestro software. In collaboration with the American Society of Anesthesiologists, we released the Anesthesia SimSTAT — Appendectomy online training module for Maintenance of Certification in Anesthesia (MOCA). Anesthesia SimSTAT — Appendectomy is the latest module in our interactive, screen-based simulation, designed to provide practicing anesthesiologists with advanced training to handle difficult patient emergencies in five different clinical environments.

The market has responded enthusiastically to our new CAE Luna infant simulator, which meets rigorous clinical training requirements for neonatal and infant critical care in the first 28 days of life, including emergencies requiring interprofessional teamwork.

Other product launches include the CAE Vimedix 2.0 ultrasound simulator; a fully redesigned CAE CathLabVR cardiac surgical simulator that is mobile and modular; the CAE Blue Phantom Cardiac Echo ultrasound training model; and CAE Blue Phantom's new Pediatric Regional Anesthesia and Central Line Ultrasound Training Model.

ISO 9001:2015 certification for Sarasota, Florida

The hard work of our Sarasota team was rewarded with ISO 9001:2015 Quality Management System certification. ISO 9001:2015 is recognized as the world's preeminent quality standard. It sharpens an organization's focus on delivering to customers a consistent level of quality in products and services. Indeed, in some parts of the world, only companies that are ISO certified are allowed to bid on tenders. ISO certification sends a strong message to customers and potential customers that our products and processes are standardized. The next big challenge is helping all our suppliers to become ISO certified.

A Code of Ethics for healthcare simulation

CAE Healthcare’s Chief Medical Officer, Stefan Monk, was part of the working group that developed the Simulationist Code of Ethics, a document that spells out the highest standards for individuals and organizations involved in healthcare simulation. The code affirms six “key aspirational values: Integrity, Transparency, Mutual Respect, Professionalism, Accountability, and Results Orientation.” It has already been formally adopted by many societies, including the Society for Simulation in Healthcare (SSIH), which also participated in its development. As a growing and increasingly important sector, healthcare simulation can only benefit from a code providing a strong ethical framework for everyone working in the field.

Microsoft highlights our LucinaAR

We are proud of the fact that Microsoft chose our LucinaAR childbirth simulator with HoloLens for a VIP visitor demonstration room at its headquarters. A Microsoft team traveled to several CAE locations to produce this video about our training solutions, which demonstrate the power of our technology partnership with them.
Looking ahead

Simulation-based training represents the future of healthcare training and patient safety. The world's aging population will increase both people's healthcare needs and nations' healthcare costs. New regulations are expected to further stimulate the adoption of simulation-based training in medical schools and for certification purposes. Limited access to real patients during training and advances in medical technology are driving the use of simulation. New medical devices and procedures, such as intra cardiac echocardiography, cardiac assist devices, and mechanical ventilation enhancements, require advanced training solutions, such as simulation, for internal product development and customer training.

According to a study by patient-safety researchers published in the British Medical Journal in May 2016, medical errors are the third-leading cause of death in U.S. hospitals and the World Health Organization reported in 2018 that there is a 1 in 300 chance of being harmed during health care. Training using simulation can help clinicians gain the confidence, knowledge and expertise for improving patient safety in a risk-free environment.

When Harry met Lucina

Prince Harry and Meghan Markle got a first-hand look at our Lucina manikin and childbirth simulator system during a visit last October to the Dubbo Base of the Royal Flying Doctor Service of Australia. The organization uses the Lucina childbirth training simulator as an important tool in its aeromedical services to rural and remote regions of Australia and was very proud to show its work to the royal couple.

New simulation centre in Buenos Aires

The Medical Federation of the Province of Buenos Aires (FEMEBA) announced the opening of INSPIRE, an ultramodern simulation centre that has CAE as a partner and whose aim is to deepen the skills of practicing physicians in a wide variety of areas, including laparoscopic surgery, endoscopy and microsurgery. The emphasis is on making simulation an important part of the academic curriculum.

Latin America's first mobile simulation centre

State-of-the-art simulation training is now more widely available in Costa Rica thanks to Latin America's first ever mobile simulation centre. The School of Nursing at the University of Costa Rica is behind the project, which also offers emergency medical support. Two CAE manikins – the CAE Apollo and the CAE Juno – are available for simulation training in more than 70 standard clinical procedures and interventions. Students and clinicians learn and practice how to deal with everything from cardiorespiratory arrest to childbirth. The trailer also transforms into a classroom for debriefing sessions. What's more, the centre's training methods get a boost from CAE LearningSpace, a powerful tool to assess and review the training environment performance and educational outcomes. In addition to simulation training, the centre also offers CPR and first aid courses in local communities.

Code Orange drills in Montreal hospitals

Our team participated actively in the Code Orange mass casualty incident drill with two major Montreal hospitals: Hôpital du Sacré-Coeur and Montreal Children’s Hospital. CAE Healthcare’s patient simulators were used for the first time as part of this exercise, which previously worked only with live actors. This addition helped in the full-scale testing of the local health network’s response capabilities in the event of a Code Orange situation involving the mass transport of casualties to hospitals.

CAE OnBoard: healthcare professionals get the full aviation safety experience

CAE OnBoard was a one-day event in Toronto that allowed 12 influential healthcare leaders to fly an Airbus A320 in a simulator as well as experience aviation safety practices. The session included crew briefings and debriefings that allowed participants to get to know better the aviation industry’s culture of safety. Many aspects of the aviation industry’s approach to safety are applicable in the healthcare field and patient safety.

Renewal of a contract for a Brazilian healthcare training facility

We renewed our service agreement with Hospital Israelita Albert Einstein for another three years. A complete training centre solution is offered: classrooms, equipment, courseware, simulators and task trainers, LearningSpace and technical support inside our CAE aviation facility in Sao Paulo, Brazil. The CAE Training Centre for Healthcare Professionals trains over 4,000 professionals every year. In addition to providing the most advanced technology on the market, the centre includes a realistic hospital environment for immersive training and advanced high-fidelity simulation products. Best practices from aviation are transferred to the healthcare sector to help improve patient safety.
Feature story

To Err is Human
A documentary highlighting the need to reduce preventable medical harm

Protecting a patient’s safety is a foundational principle of healthcare. It’s at the very heart of the healthcare professional’s solemn commitment to “Doing no harm.” And yet that noble ideal can get lost in the stressful day-to-day bustle that healthcare professionals and caregivers are caught up in. A mistake in surgery or the miscommunication of a critical medical detail can result in patient harm and even death.

To Err is Human, a feature-length documentary film directed by Mike Eisenberg, zooms in on the issue of medical mistakes and what steps can be taken to reduce alarmingly high rates of preventable errors leading to patient harm. The movie underlines the significant role that simulation can play in the mission of patient safety: practice and mistakes should be made on manikins or in virtual-reality environments, not on humans. The idea is to train practitioners in safe-to-fail environments so as to lower the chances of errors being made in the real world.

CAE was one of the sponsors of the film after its release and has organized private viewings for employees and customers.

Heartbreaking personal experience

“We actually watched our son suffer brain damage in the hospital before our eyes and, quite honestly, that will haunt me forever,” Sue Sheridan, long-time patient safety advocate, says in the film. She recounts how newborn son Cal’s brain was permanently damaged after his severe newborn jaundice went undiagnosed and was not appropriately treated. Brain damage from newborn jaundice is known as kernicterus and results in cerebral palsy as well as hearing, speech and ocular impairments. Years later, Sue’s husband Patrick was diagnosed and treated for a mass in his cervical spine that was reported to be a benign tumor. He was treated for a slow-growing, apparently benign brain tumour. Tests from pathology actually revealed a malignancy but somehow the results got lost in the shuffle or were never communicated to Patrick’s physician. By the time the cancer had spread and become very aggressive, treatment proved ineffective and Patrick died in 2002 at the age of 45.

Rather than despair, Sue channeled her energies into fighting for changes to the U.S. healthcare system. She is currently director of Patient Engagement with the Society to Improve Diagnosis in Medicine. Son Cal and daughter Mackenzie are patient safety advocates as well. “I am hopeful and I have seen change. That’s what really encourages me, when patients and family members get engaged with the healthcare system in driving change,” Sue stated in an interview.

While agreeing that simulation is a key element in the overall medical picture, Sue believes it can be a lot more effective when developed in tandem with the patient community. She took part in a keynote panel on the impact of medical errors at HPSN World 2019, the Human Patient Simulation Network conference in Orlando, Florida. She and her family also shared their personal stories at the 100th screening of To Err is Human during HPSN World.
In terms of change in healthcare, there needs to be a partnership with the patient community in identifying what are the areas that really need addressing because people have been harmed. And we have so much knowledge and so much wisdom to impart. We can help write the script. We've lived it, we know it. I think with simulation, especially when you're writing scripts and trying to portray a real patient, we need patients in there co-designing,” said Sue Sheridan at HPSN World.

A growing role for medical simulation

Director Mike Eisenberg – whose father John was a pioneer of the patient safety movement in the U.S. – wasn't sure what to expect when he first embarked on the film project but says he came to realize that medical simulation has an important part to play in helping reduce patient harm. “It really was eye-opening for us how much of a role simulation had in patient safety and how interesting it was to us,” he says.

Estimates put the number of preventable deaths from medical mistakes at upwards of 400,000 in the United States alone, the third leading cause of death after heart disease and cancer. Reducing errors means remaking the healthcare system from top to bottom, experts interviewed in the film attest. That includes transferring to the healthcare sector the deeply ingrained safety-critical culture of high-risk industries like aviation and nuclear power. And that's where simulation-based training, such as that offered by CAE, can be an invaluable tool.

For example, hospitals are increasingly using simulation in the staging of exercises for the practice of handoffs, the transfer of patient care from one shift to another, or from one department to another. Handoffs are one of the leading causes of medical error because of the high risk of a breakdown during the transfer of critical patient data from one medical team or department to another. “Patients that are transferred from point to point have one of the highest rates of error tied to them,” says Dr. Amar Patel, Chief Learning Officer at CAE Healthcare. “That's where simulation starts to play a role. We can build workflow models and processes where it makes it easier for handoffs to occur, communication to be more effective and, ultimately, safety to be managed.”

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In To Err is Human, former airline pilot Chesley “Sully” Sullenberger, who famously landed US Airways Flight 1549 in the Hudson River ten years ago after both engines blew when hit by a flock of birds, talks about how critical simulation training and practice is to the aviation industry and how simulation can make a huge difference in preventing harm when fully integrated into the healthcare sector. “There are some things that just can't be practiced safely any other way than in a simulation for the first time and it gives you a chance to practice things over and over again,” Sullenberger says in the film.

There is a growing recognition among healthcare professionals, educators and safety advocates that the vulnerabilities and weaknesses built into the healthcare system need to be addressed more forcefully. Since To Err is Human’s limited release for healthcare audiences in 2018, nearly 200 leading medical universities, colleges and hospitals have screened the film for practitioners as part of efforts to raise awareness. The documentary is also now available to the general public on Amazon and iTunes.

“Simulation is such an important part of learning,” says Sue Sheridan. “Simulation has been a gift.”
At CAE, we believe in the benefits of giving back to the community and helping make the world a better place.

We know that encouraging employees to contribute to good causes in support of people and communities in need is not only personally enriching but also promotes a better, healthier workforce.

Studies show that companies with a volunteering-friendly culture improve their employee morale and are better at attracting and retaining talent.

The spirit of giving

It is in this spirit that CAE is significantly ramping up its commitment to volunteering, including honouring employees who go above and beyond the call of duty by devoting their time, energy and skills to causes dear to their hearts. These compassionate individuals are everyday heroes at CAE who inspire their co-workers with their selflessness. Their stories are shining examples of how one person can make a significant difference in the lives of others.

The year 2019 saw the launch of the first edition of our Volunteer of the Year awards program. It’s a high-profile way to recognize the outstanding work being done by CAE employees who fully engage in the spirit of giving on their own time. So many exceptional submissions reached us that it was decided to award more prizes than initially envisaged – six instead of three.

“Although we already knew CAE employees were generous and involved in their communities, the stories and letters of support were beyond any expectations and revealed that giving back is a passion for many of the participants,” stated Hélène V. Gagnon, CAE’s Vice President, Public Affairs and Global Communications.

The Gold prize for Sheridan's Sunshine Foundation

The Gold prize winner is James Bautista, a CAE USA KC-135 Boom Operator Instructor at Altus Air Force Base in Oklahoma. James put in 1,300 hours last year for Sheridan’s Sunshine Foundation, which he created with his wife Melinda in memory of their daughter Sheridan, who suffered from a form of bone cancer and passed away at the age of 8 in December of 2011.

As she bravely fought the disease, undergoing chemotherapy treatments and limb-salvage surgery at the Children's Hospital in Oklahoma City, Sheridan told her parents her wish was for a foundation to raise awareness of childhood cancer and raise funds for research. Even through the trying days of her treatment and recovery efforts, Sheridan participated in cancer walks and cancer research fundraising events. “The families and children affected by this disease are my reason to keep fighting for a cure,” James stated. “Even though the days are long, I know our efforts are not misspent.”

The foundation opened in 2012 and US$89,000 has been raised so far for childhood cancer research. Other initiatives that are part of the group’s work include offering financial help to families touched by childhood cancer. One activity in partnership with Altus Air Force Base is the Pilot for a Day program that gives kids and their families a chance to experience a typical day in the life of a jet pilot.

The award comes with a $10,000 direct contribution to his foundation. “I feel very excited, very honoured,” James says about the recognition. Asked what he would say to CAE employees who are perhaps hesitant to commit to volunteer work, he replies: “I would tell them: Try it. You never know. What you think you may feel about it will come out in a totally different, positive light.”
Three Silver awards for Search and Rescue teams

The jury decided to award silver prizes in a tie decision to three employees who are part of Search and Rescue teams. Although full-time CAE employees, they are also on-call 24/7/365, handling critical situations and saving lives. They are their communities’ guardian angels! And they are role models for CAE, living our mission daily.

For Nicole Deguire, search and rescue (SAR) volunteering is an opportunity to put her pilot skills in the service of others. “I wanted to do something helpful that would draw on my experience,” says Nicole, Project Controller in the Defence & Security division at CAE Montreal. “It’s specialized volunteer work calling for a strong sense of altruism and the desire to do everything possible to save a human life.” She is one of three recipients of the Silver award, with $5,000 going to each of their organizations. Nicole put in almost 500 hours in 2018 as assistant director and training officer with SERABEC, Montreal region. SERABEC, Quebec Air Search and Rescue, is a volunteer group that provides support to the National Search and Rescue Program.

Kevin Burnett, a System/Software Developer – Air Traffic Control – at CAE Halifax, put in more than 300 hours with Halifax Search and Rescue. Over the past seven years with the volunteer group, Kevin has contributed a total of about 2,000 hours. His work ranges from rescue missions in the wild to urban search and rescue and responding to incidents involving people with mental health issues or who are despondent. Dealing with medical distress events in remote locations is part of his skill set as well. He and fellow team members are also on call for any kind of civil emergency. Rescue efforts can occur in extreme weather conditions over extended periods of time. “Reuniting lost loved ones with their families, performing a suicide intervention, or providing medical care to save lives in remote areas are all events that are their own reward,” said Kevin. “Rescues can turn into recoveries. Not all suicides can be prevented. Volunteering will mean you put yourself in a position of seeing things that can’t be unseen.” Among Halifax Search and Rescue’s more notable missions is the assistance provided to emergency response and recovery efforts following the crash of Swissair Flight 111 off the coast of Nova Scotia in 1998.

David Millett and his bloodhound Beauregard are volunteers with MARK9, a Texas non-profit organization that helps locate missing people using sniffer dogs. A retired military pilot with a background in military and civil Search and Rescue (SAR) operations, David has always felt an obligation to help and protect the most vulnerable among us. “Reaching back to my time in the military, I have always felt an intense obligation and desire to help protect the vulnerable,” said David. At CAE in Dallas, he is Group Leader, Training Standards. MARK9 provides free assistance to law enforcement, fire-and-rescue, parks and wildlife and other groups involved in all kinds of SAR activities: urban, wilderness, disaster, water, and body recovery. David trains every week with Beauregard for four to six hours. There are mandatory training weekends every quarter and regularly scheduled seminars and classroom sessions. Only volunteers who are rigorously prepared and who observe the highest professional standards are accepted. David devoted 260 hours of his own time to MARK9 last year.
Two Bronze awards

Monica Kirkland is a devoted member of the Junior League of Tampa (JLT), a group committed to breaking the cycle of poverty through child welfare and educational programs in the community. Monica, Senior Program Accountant at CAE Tampa, has been Chair of JLT’s Family Literacy Night Committee for the past two years. She and her team have provided backpacks, school supplies and books to hundreds of children in the Tampa Bay region. The committee partners with local schools in programs that promote literacy for parents and children, with events that encourage reading at home.

Monica loves to share her passion for reading with families at school events. Other programs she has helped out on or organized include the Diaper Bank, and Kids in the Kitchen. It was her energy and commitment that made it possible for the Family Literacy Night Committee to hand out over 3,300 books.

Last year, she gave 350 hours of her time. Monica’s organization received $2,000 from CAE.

Cristina Cifre is a Senior Cabin Safety Instructor at CAE Madrid who got involved in the non-governmental organization (NGO) Together for Cambodia after she visited the country in 2014. She was touched by the group's efforts to fight human trafficking and the sexual exploitation of women. “I feel the need to give something back and year after year I have had the opportunity to see how any contribution, however humble it is, makes a real difference,” she says.

The NGO’s mission is to help build a better future for women, disadvantaged Khmer children and families. Cristina has contributed 390 hours in activities for Together for Cambodia that include sharing her English-language skills in speaking and listening classes.

She has also supported the NGO with the proceeds from her initiative to transform discarded life jackets into tote bags that are then sold. Cristina’s group also received $2,000.

We now have a team volunteering program to encourage employees to organize and participate in activities once a year that benefit the community, during work hours. The initiative is meant to build team spirit while helping local organizations. Employees can volunteer from a few hours to the equivalent of a workday, up to about eight hours of time in total per year. The activities can take place as a single event or be spread out over a longer period of time in a number of separate events. This newly launched initiative was applauded by employees and we are looking forward to sharing the results of the program's first year in FY20.

To further encourage volunteerism among CAE employees, we have launched Dollars for Your Cause, a program that awards $250 to each non-profit organization of 150 CAE employees who have demonstrated a strong commitment to their charity outside work hours. We're confident this will be another successful effort in advancing good causes through employee involvement.
Feature story

Gender equality matters

Our tagline “Thousands of differences. One CAE” is more than just a way of paying lip-service to the importance of diversity and inclusion in the workplace.

We know that fostering a diverse and inclusive workforce is simply good business and a smart strategic priority in a highly competitive global industry. Above all, it is the right thing to do – it makes us stronger and better. For example, the wider and deeper your talent pool, the greater the positive impact on operations. And the greater that sense of belonging, of fairness and gender equality, of opportunities for recognition and promotion, the more employees will contribute to innovative thinking and heightened productivity. Studies conducted by consultants McKinsey & Co. indicate that gender-diverse companies are 15% more likely to outperform non-gender-diverse companies and that ethnically diverse companies are 35% more likely to outperform.

“The right thing to do”

At CAE, we’ve decided to make gender diversity one of our strategic priorities, given the existing gender imbalance in some areas of the business. Our workforce of over 10,000 people around the world is 80% male and 20% female. In CAE’s Engineering talent pool, 14% of engineers and technical staff are women, compared to an average of 23% of women studying engineering in Canada.

Our Chief Executive Officer Marc Parent continues to speak emphatically to employees and stakeholders about the importance of diversity in our ranks. “Diversity is important to me, first and foremost because it’s the right thing to do,” states Marc. “And I say that as a father. The last thing I would want is for my son to have more opportunities than my two daughters would have. They should be able to rise to their potential. And as a business, it is critical because we want to be able to tap into the full talent pool in order to grow our business.”

CAE’s senior management has signaled a strong commitment to programs and initiatives aimed at fostering a culture of D&I throughout all layers of our company. A workshop with our senior management generated many great ideas that were included in our strategic plan.

A key part of that engagement is making adjustments to HR practices and processes to better accommodate the needs of employees, particularly women, such as flexible work schedules, extended leave policies and back-to-work programs, says Dan Sharkey, Vice President, Human Resources. “Ensuring that people have the ability to manage their work/life balance is an important aspect for us,” he said.

On the leadership front, existing programs are being fine-tuned and new ones adopted to ensure that women are better represented and enjoy opportunities for positions of influence.

Dan Sharkey
CAE’s Vice President, Human Resources

There was the realization that, as the business continues to grow quickly, what really is going to enable us is the ability to have the right talent. It’s necessary for us to make sure we’re fully engaged in the entire talent pool.
STEM careers for women

There is also a significant effort required to get more women into Science, Technology, Engineering and Mathematics (STEM) programs at colleges and universities so as to broaden recruitment and find qualified female candidates to fill engineering, software development and simulation instructor positions.

“We’re understanding the journey of a woman who goes to college and decides she’s interested in becoming a flight instructor,” says Marine Messin, Director, Leadership and Organizational Development, Human Resources at CAE who is one of the co-leads on CAE’s D&I committee.

What are the stumbling blocks or barriers to that young woman actually becoming a flight instructor, pilot or engineer? And what can be done to make it easier for her to succeed? These issues won't be resolved in the short term. But work has begun on putting in place an educational program to build a STEM pipeline. For example, making sure more women role models go out to do recruiting in the colleges and universities, says Pascale Alpha, Director of Public Affairs and Global Communications at CAE and co-lead of the D&I committee.

The initial three-year D&I program at CAE got started in 2018 with the help of external experts who champion women’s progress in the workforce and accompany businesses in their D&I journey, said Josée Gauvin, Senior Director, Global Strategic Sourcing at CAE. “CAE leadership was committed, very implicated and engaged,” says Josée, also a co-lead of the D&I committee.

Putting D&I in motion

Our D&I programs include Training & Coaching; Women in Leadership program; mentorship and networking initiatives; and the employee-led CAE Professional Women’s Network (PWN).

On a company-wide basis, about half of the employees have already gone through a required training program which is focused on awareness and understanding of the importance and value of diversity.

Externally, we launched the CAE Women in Flight scholarship program to encourage women to become professional pilots. We will provide financial support to aspiring female pilots by awarding up to five full scholarships to attend one of CAE’s cadet pilot training programs. Less than 5% of pilots and instructors today are women, and yet we will need over 300,000 new pilots in the civil aviation industry over the next decade.

Workplace gender practices disclosure

By strengthening the D&I program, we are aligned with the Government of Canada’s focus on diversity in aerospace and defence procurements. We also support the federal government’s new diversity requirements under Innovation, Science and Economic Development Canada’s (ISED) Industrial Technological Benefits (ITB) Policy.

Transparency and benchmarking are a key part of our D&I policy. We are one of 230 companies around the world to have made it onto Bloomberg’s 2019 Gender-Equality Index (GEI). The companies on this exclusive list are deemed to have set a new standard of transparency as a core part of their commitment to gender equality. Currently, only 10% of eligible companies are disclosing their workplace gender policies and practices.

Among our shorter-term goals:

• Ensuring that 30% of Board members are women by 2022
• Increasing the number of high-potential employees in key roles by 20%, with 30% of newly identified high-potential employees being women, by fiscal 2023
• Benchmarking current best practices and setting targets to increase the recruitment and placement of female leaders

Currently being put into place as part of our three-year plan are Employee Resource Groups, and employee feedback mechanisms. “Diversity and Inclusion can’t just be top-down. It involves everyone, takes time and requires a lot of effort,” says Marine. “I’m so proud of the fact that Diversity and Inclusion was made an integral part of our business strategy,” states Pascale. “This is a priority for the company. There’s a ‘wow’ factor at work. It’s like a signal to everyone: We believe it.”
Corporate social responsibility
A focus on workplace gender equality

Fiscal 2019 was a significant year for CAE as we deepened and strengthened our corporate social responsibility (CSR) commitments. We acted decisively with concrete actions on several fronts, notably in workplace diversity and inclusion, and implemented policies, programs and initiatives that are rooted in our core CSR values.

Living up to our commitments

Among recent measures that are making a real difference is the creation of an Executive Diversity Council to not only oversee progress in diversity and inclusion (D&I) awareness throughout CAE but also ensure that our three-year plan is on track. In terms of overall CSR policy, we have chosen to place a strong emphasis on gender diversity. That's not surprising, given the gender imbalance in our industry generally and at CAE specifically.

In fiscal 2019, initiatives aimed at redressing the gender imbalance included unconscious bias training, women's leadership development, programs promoting work-life balance, women role models in non-traditional jobs, female talent acquisition and advancement, as well as scholarships for women in Science, Technology, Engineering and Mathematics (STEM). We also conducted a training and survey for employment equity across Canada, including the requirement for contracts with the Government of Canada, and we are working towards creating Employee Resource Groups (ERGs) to foster a more inclusive culture.

CAE Women in Flight

There are compelling reasons for getting more women interested in careers in aviation. They currently represent less than 5% of professional pilots and instructors. That needs to change, not only in the interest of fairness and gender equality but also because higher pilot demand is anticipated over the next decade. Tapping into the widest pool of talent possible is the smart and equitable thing to do. With that in mind, CAE proudly created the CAE Women in Flight scholarship program. It's a highly visible way to promote the advancement of women in the profession. CAE will fully finance the cadet training of the five women to be selected for the scholarships. The winners will have the opportunity to secure their first pilot job with one of five participating airlines. They will also act as ambassadors and role models to inspire more women to join the pilot profession. CAE is investing $1 million a year in the multiyear program. Already, we are seeing positive results. There has been an increase in the number of women applicants to our training academies since the announcement of CAE Women in Flight at the 2018 Farnborough Airshow.

The Bloomberg 2019 Gender-Equality Index

Much remains to be done in workplace gender diversity and career development for women. But we are seeing positive and encouraging results. CAE is proud to have been chosen as one of only 230 companies on Bloomberg's 2019 Gender-Equality Index (GEI). This puts us among “trailblazers in their commitment to transparency in workplace gender reporting” across these four pillars. You’ll find our new pillars and their associated goals and objectives outlined in this report.
The rewards of volunteering

All of us at CAE are getting behind employee volunteerism in a big way. We are particularly pleased with our team volunteering program, which frees up employees to work together on community projects by donating their time up to the equivalent of a day’s work, once a year. Team volunteering is one way to encourage employees to participate in community actions for the first time. And it’s a terrific way to foster a cooperative team spirit at work. Also recognized at CAE is individual volunteering. We have just launched the Volunteer of the year awards highlighting the wonderful work of our “super volunteers” while also helping fund their chosen good causes. Finally, through Dollars for Your Cause, 150 CAE employees who are actively involved in helping their communities are eligible for a $250 award to their non-profit organization.

Taking digital to the next level

At CAE, we have been at the forefront of digital technology – notably in our pioneering use of virtual reality training – for decades. Our $1 billion investment in innovation over the next five years includes funding for Project Digital Intelligence, a program to transform the customer experience through the leveraging of data analytics, artificial intelligence and other digital and machine learning breakthroughs. We are keen to take digital to the next level. At the same time, we are well aware of the ethical issues involved, such as the risks related to data profiling and monitoring. We are committed to upholding the highest ethical standards on the digital front. To that end, we are proud to launch our new Data Ethics principles that will guide our actions in the coming years.

Innovation and noble ideals

Innovation is at the heart of what we do at CAE. But meaningful progress also requires an unceasing dedication to furthering our noble ideals of gender diversity, community involvement and workplace inclusiveness. That’s what makes us unbeatable as One CAE.

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**CSR governance and oversight**

**Our CSR Committee**

- Includes members from all functions and business units
- Includes three members of our Executive Management Committee
- Interacts with our various stakeholders (investors, employees, customers, suppliers, aviation regulators, governments, local communities and universities)
- Oversees our four core CSR priorities

The CSR Committee meets quarterly to review progress and, through the CSR Committee Chair, reports performance to the Executive Management Committee and periodically to the Board of Directors. The Chief Compliance Officer provides monthly compliance reports to the Executive Management Committee and quarterly reports to the Board.

**Materiality matrix**

In fiscal 2018, we revisited our materiality matrix following consultations with internal and external stakeholders to focus our efforts on the issues that matter most.
People and safety

Why it matters
At CAE, our purpose is all about ensuring the safety and well-being of our employees, customers and our industry. It's about putting people first. As our company shifts from a product to a training service focus, attracting, developing and retaining the best talent is more crucial to fulfilling our mission than ever. So is cultivating the highest levels of employee engagement.

We’re committed to ensuring that flying stays one of the world’s safest mode of transportation by advancing the highest standards of aviation safety, from the ground up into the skies.

Our goal
Be a global employer of choice and a world-class leader in safety.

Our objectives
As part of our Corporate Social Responsibility roadmap, we are continuously working towards the following objectives and measuring our progress.

- Achieve world-class performance in occupational health & safety
  - Reduce our Injury Frequency Rate (IFR) and our Days Lost Rate (DLR) by 5% annually
  - Develop interdependence behaviours to increase our Near Miss Reporting Rate (NMRR) by 5% annually
  - Include H&S as a key indicator in the governance process for all our business units
  - Continue investing in our Global Health & Safety Management System to achieve our zero-injury vision

- Attract and retain the most talented and engaged people around the world
  - Craft and implement tailored development plans to support the growth of our people
  - Move or promote 20% of identified high-potential employees to new roles annually
  - Continue to maintain and create co-op and internship opportunities in Canada every year, including Work-Integrated Learning (WIL) activities (seminars, industry-led classes, industrial visits, hackathons on industrial challenges, mentoring, etc.)

- Increase diversity and inclusion throughout our workforce
  - By 2022, ensure 30% of our Board members are women
  - By FY23, improve our gender diversity by increasing the number of female employees by at least 10%
  - By FY23, increase the number of high-potential employees in key roles by 20%, with 30% of newly identified high-potential employees being women
  - Establish a Diversity Council made up of members of CAE’s leadership team
  - Benchmark current best practices and establish targets to increase the recruitment and placement of female leaders
Aviation safety

Aviation safety is a deeply ingrained part of CAE’s culture. As a leading global provider of simulators and training services, we contribute to flying’s enviable reputation as one of the world’s safest means of transportation. That also means a rigorous adherence to the most stringent safety measures in everything we do in our flight operations and on the ground.

A new Aviation Safety Management System

We successfully completed the full rollout of our new Aviation Safety Management Software to all Civil Aviation and Defence & Security live aviation training operations around the world. We are very proud of this achievement because it enables us to use one unified system to collect, manage and monitor all data and information related to aviation safety hazards and risks. We get near real-time (NRT) updates and statistics that help us gauge how effective our integrated system is. An added plus is that the new system allows us to perform superior data analysis, which in turn aids us in identifying potential hazards based on trends.

As far as the incident reported last year that occurred at our flight academy in Gondia (India), the investigation concluded that rogue pilot behavior was the cause of the accident. As a result, we reviewed our operational controls.

Recognizing our safety champions

When our people do remarkable deeds in aviation safety, we like to single them out. Here are some of the employees who garnered safety awards, certificates and commendations for FY19:

Aswin Del Monte, a Flight Instructor at CAE Oxford Aviation Academy, was awarded a CAE Flight Safety Commendation for his quick thinking and action. Having been cleared onto the runway, Aswin felt unhappy with the feel of the rudder pedals and aborted his sortie. Upon further examination, it was found that a rudder control cable had failed and could have caused an accident. CAE notified the aircraft manufacturer and a worldwide mandatory service bulletin was issued.

CAE Gondia, India Cadets Rutesh Nazirkar and Hitesh Gait were presented with Flight Safety Awards for their superb voluntary efforts in assisting with flight safety analysis and production of flight safety presentations whilst continuing with their pilot training.

Congratulations and certificates were handed out to a very special group of people at CAE Abu Dhabi Aviation Training Centre. The team was recognized for professionalism in handling a very difficult emergency that required flying an RQ-1E Predator UAV with engine problems and returning it safely to the airfield on three separate occasions. They are: Alan Mark Sickling, Curtis Bradley, Tristan Vincent-Philpot and John James.

Our Safety Manager at CAE Phoenix Aviation Academy, Brent Crow, was awarded two prestigious safety awards: FAA Safety Team (FAASTeam) Representative of the Year for Arizona and The Ruth Reinhold Award given by the Arizona Pilots Association.

Community of best practices

Brainstorming on safety issues was the order of the day at a special gathering of CAE people from disparate locations and business units. In fiscal 2019, we held the first ever combined CAE Civil Aviation and Defence & Security aviation safety conference. It was hosted by our CAE USA Dothan Training Center in Alabama. Aviation safety employees from all of our live aviation training sites attended the five-day conference. Among the topics discussed were the sharing of best practices and finding innovative ways to continuously improve and measure the effectiveness of our aviation safety program. The conference was deemed a great success, with a number of impressive ideas that will no doubt contribute to a stronger One CAE Aviation Safety Team.

Creating ways to heighten safety awareness

When it comes to aviation safety, we are always on the lookout for ways to heighten employee awareness. In fiscal 2019, we created a three-minute video that explores the concept of aviation safety, why it’s important, and what a “Just Culture” is. The Chief Aviation Safety Officers of our Civil Aviation and Defence & Security business units hosted the video. It is available to all employees through the CAE intranet. Complementing the video is a Lunch & Learn education program offered at all of our CAE aviation training locations by one of our two Chief Aviation Safety Officers.

In June 2018, one of our employees on a maintenance test flight at our Melbourne, Australia flight operation died in a fatal crash of a Cessna C172S that experienced engine failure. The cause of this tragic accident is under investigation and we will apply any conclusions from the inquiry to enhancement of aviation safety.
Health and Safety

We are relentlessly working towards a zero-accident goal. Health and safety performance is a process that relies on leadership and the active participation of every employee. This year, we launched a questionnaire to get employees' views on CAE’s health and safety culture. The feedback from this safety diagnostic allowed us to suitably assess the current situation and implement targeted action plans for aspects that might need improvement. We also updated and refined our strategic plan. Among the highlights:

- Increase focus on risks and hazards in daily operations
- Emphasize the importance of leadership in terms of setting clear expectations regarding environmental, health and safety issues
- Reinforce the responsibility of each employee in identifying and controlling risks
- Increase alignment and integrate Environment, Health and Safety (EHS) procedures in daily operations to increase their efficiency

Other measures being implemented include merging the Global Environment and Global Health and Safety departments to enhance the reporting process and allow for improved responses by team members.

Taking the pulse of our health and safety culture

We are constantly looking for ways to improve our performance and we value the input of employees. To that end, we launched a questionnaire to get employees’ views on CAE’s health and safety culture. Here are the highlights of the survey:

Health & Safety a priority

90% of respondents believe their leaders prioritize safety and set the example. Health and wellbeing are the main areas for improvement identified by participants.

Safety conversations

87% consider that the right H&S conversations are taking place. However, 76% consider that this topic is mainly brought up by the Environment, Health & Safety (EHS) representative.

Event reporting

84% confirm reporting accidents when they happen. However, 10% anticipate negative repercussions when reporting incidents.
Near-miss training launched in September

One of the best ways to lower the workplace accident rate is proactive identification and reporting of near miss events. A near miss incident is defined as an unexpected event that did not result in injury, illness or damage but that had the potential to do so. The reporting of a near miss situation allows CAE to act in a preventive way instead of reacting to events after they occur. As part of our accident awareness campaign, we have set up mandatory near miss online and video training for employees to help them improve their ability to identify any at-risk situation and/or behavior. The training was launched in September 2018. By the end of February 2019, the video had been seen by more than 8,500 employees worldwide! Near miss training is also required for all new employees.

Updated EHS event reporting standard

To be even more proactive in health and safety you need to adopt more detailed and probing measures for the EHS reporting protocol. At CAE, we modified our EHS protocol to highlight the most credible and realistic outcome of an event. Before fiscal 2019, the requirement was to investigate an EHS event based on the actual consequence of an incident. In simple terms: “I have a scratch on my arm as a result of what happened.” Today, the requirement is based on the potential outcome of the situation and what the likelihood is of that possible outcome occurring. So: “I have a scratch on my arm but I could possibly have had a fracture as a result of what happened.”

In this way, the new approach allows us to:

- Identify risks and hazards that we might have overlooked
- Spot trends and tendencies in minor events before they turn into serious events
- Put in place more mitigation and controls

FY19 highlights

A prevention culture: 22% increase in events reported

Our health and safety performance in fiscal 2019 may not have been up to our expectations, but we are proud of a positive shift in our reporting culture. There was a 22% increase in the number of events being reported, with 467 in FY19 compared with 382 the previous year. This shows quite clearly that our safety culture is trending in the right direction, as even the very minor events get reported. It reflects well on CAE employees and their commitment to active involvement in our safety-focused values and practices.

A brand new EHS management software!

We’re getting lots of positive feedback from employees regarding our new platform for the reporting of health and safety risks or events. It’s a Global Environment, Health and Safety (GEHS) management software that will help take our culture and performance to the next level. CAEGEHS, offers the following benefits:

- Standardizes event reporting process, investigation and communication
- Increases the accuracy of our metrics and Key Performance Indicator (KPI)
- Gives all EHS Leaders real time access to their safety performance data
- “One-stop shop” for tracking of corrective actions following events

Slippery parking? Report it and break the ice!

When winter blows in, we need to be extra cautious about icy and slippery surfaces. Unfortunately, some of our colleagues at CAE headquarters in Montreal slip and fall in the parking lot in the wintertime. To mitigate this risk, the Montreal EHS team launched an awareness campaign. Besides a high-profile communications operation, “Ice Reporting” stations were set up at the security desks of main entrances. When someone notices a patch of ice in the parking lot, they get priority attention at security, where they are asked to identify the icy area on a map. Security alerts facility services so they can quickly go to the spot and spread an abrasive on it.

In addition, “Attention Slippery” signs are put up at parking entrances on icy days. Employees are also asked to review a guidance sheet on safe behaviour in the parking lot.
Today, CAE boasts 10,000-plus employees at 160 sites and training locations in more than 35 countries. It’s One CAE, a huge, diverse family made up of individuals who are committed to driving the company forward as the training partner of choice in civil aviation, defence and security, and healthcare. Empowering our various teams and fostering a sense of belonging are central to our philosophy.

**Total Health Index as a pilot project**

In January, CAE conducted a Total Health Index (THI) assessment in Canada and Malaysia. The THI is a confidential 25-minute online assessment performed by Morneau Shepell, our employee and family assistance provider.

This index provides employees with important information about four aspects of their overall health: physical health, mental health, personal life and work environment. Immediately after the assessment, employees received a report with personalized recommendations, resources and advice to let them know what to focus on to improve their health. The aggregated results helped CAE take the right initiatives to improve employees’ professional wellbeing.

What’s more, managers can track the wellness of their team through weekly Officevibe pulse surveys that include wellness as a key metric. This year, our overall objective was to improve the wellness results by 5%. But the emphasis we put on this important factor resulted in a wellness-score improvement of 11.9%. Such an enhancement is the result of an awareness that the gap existed, expectations set by the CEO that we need to improve wellness, and teams implementing plans and taking action to address the issues raised by employees.

**Employee engagement initiatives**

Meet the team! is an engaging and popular program based on the humble, old time tradition of sending a postcard. Colleagues around the world are encouraged to send a quick note to all employees via bi-weekly newsletters telling us about their site, what the team does and what makes them feel connected to One CAE. Fun facts about the site, as well as favorite meals, the main languages spoken and preferred traditions or celebrations at the site are also part of the missive.

**Wellness**

Employee wellbeing means having access to the tools and resources that help maintain a balance between work, personal life, physical and mental health. Our guide to wellness in the workplace is updated regularly to give CAE Montreal employees access to timely information on a variety of related topics and resources. For example, there is the Employee and Family Assistance Program (EFAP), a confidential, free resource offering a range of consulting services that includes family, legal, financial and nutrition counselling, health coaching and support in fighting addiction. There are also onsite wellness activities such as yoga, conferences on issues like stress management, and policies to enhance the work/life balance (remote work, flexible hours).

**Working remotely**

One way to promote a flexible workplace is to offer employees the option of occasionally working remotely. For CAE, remote-work arrangements for eligible employees are enhancing the employee experience by providing flexibility and greater work/life balance. They empower employees, giving them a heightened sense of autonomy and personal accountability. Our working remote guidelines allow employees to work where they will be most efficient at achieving results and making decisions at their level, with personal accountability. Having the ability to work remotely is known to help increase productivity and job satisfaction as well as ensure business continuity. It’s also aligned with our values and culture evolution.
Diversity and inclusion: A business imperative

At CAE, we’re proud of our noble purpose. We are also actively building a company that’s more open, progressive and people centric, and creating a workplace where all employees can feel accepted, included and valued for who they are.

Sharpening our focus on Diversity & Inclusion is both the smart and right thing to do. The more diverse our people are and the more inclusive our culture is, the more innovative and successful we’ll be in achieving our purpose. Greater diversity and inclusion will also help us attract and retain top talent as well as better connect with customers worldwide.

This year, we have several notable accomplishments:

- Launched our Diversity & Inclusion program including D&I philosophy and policy
- Created a communications campaign including employee and CEO video to promote D&I awareness and regular articles in employee newsletters as well as Lunch & Learns, a section on cae.com and on our intranet
- Launched a D&I awareness training for all employees globally
- Launched our Executive Diversity council chaired by our CEO
- Launched a training for Employment Equity in Canada
- Reviewed all job offer templates to incorporate inclusive wording
- Launched CAE’s remote working guidelines
- Participated in l’Effet A, a development program for women
- Propelled CAE’s Professional Women’s Network to a new level
- Held a special awareness workshop for CAE leaders on unconscious bias
- Launched the CAE Women in Flight scholarship
- Launched CAE Tech: Program your career!, a scholarship program for technicians promoting diversity among applicants
- Supported a Poly-Out event, the LGBTQ+ group at Polytechnique Montréal (Engineering faculty at Université de Montréal)

Professional Women’s Network

Promoting the personal and career development of women at CAE is the mission of the Professional Women’s Network. The volunteer group, started by five women at CAE in 2015 and revamped in 2018, also works to raise awareness of the importance of diversity in the workplace. It’s guided by an advisory committee made up of CAE executives. The group’s activities and initiatives are open to everyone and include mentorship programs, networking events, wellness workshops, conferences and training support.

The PWN’s mission is to promote the development of women at CAE and to raise awareness of the importance of diversity via activities centred around two strategic pillars: professional development and wellbeing.
Initiatives for talent recruitment

Over the past five years, our employees have helped develop Canada’s next generation of talent and expertise by working side by side with over 1,400 co-op students. The benefits to both CAE and the students are significant. Our employees also actively mentor high school students interested in engineering and science through diverse programs and competitions.

To support CAE’s growth in fiscal 2019, we leveraged several tools and events to tap into our global pool of external candidates.

Because our employees are well-positioned to identify new members of the CAE family, we also improved and relaunched CAErefer, our employee referral program to increase eligibility and participation.

The recruitment team in Canada has worked relentlessly to achieve ambitious recruitment goals in a highly competitive job market.

- Increased the number of hires by more than 40% compared to last year
- Developed a series of video job postings in various disciplines, which were highly publicized internally and externally on our social media channels. In each capsule, an employee holding the same position as the one advertised talks about what the job and work atmosphere are all about, so that potential applicants can have a clear idea of what it’s like to work at CAE
- Increased the number of co-op and internship opportunities by more than 20%
- Increased CAE’s participation in university and college events by over 50%
- Hosted over 25 industrial tours for students
- Launched the CAE Tech: Program your career! initiative

In May 2018, CAE was named 2nd Best employer brand in Canada by Randstad. The winners were determined through an impartial survey conducted by Randstad Employer Brand Research (REBR). Participants in the REBR survey ranked companies based on 10 factors: salary and benefits, career progression, financial health, contributions to society, interesting job content, job security, work atmosphere, use of the latest technology, reputation, and work-life balance.

Pulse surveys to measure employee engagement

Since 2017, we have been using a simple Officevibe five-minute employee engagement pulse survey that runs every two weeks. The survey allows employees to express themselves and gives leaders real-time valuable insight into their team’s mindset at any given point. It also catalyzes more open discussions between leaders, employees and teams and, where needed, helps them work together to address areas requiring improvement and celebrate achievements.

Leaders are able to spot trends over time and focus their efforts accordingly. They’re also encouraged to share findings and learn from each other to collectively focus on fostering an excellent employee experience at work.

CAE+me: our new approach to performance development

CAE+me is all about the performance development experience, a new, lighter approach centered on employee development. Its focus is feedback and feedforward conversations in which employees, colleagues and leaders help each other to grow and continually improve along lines of performance excellence. The user experience is the driver, and the focus is on regular conversations between the employee and the leader. The frequency of the touchpoints is based on what works best for them. Performance ratings have been replaced by a Talent Compass, a tool to help employees reflect on key topics: contributions, values, growth, compensation and rewards. Discussion topics can range from coaching to hone skills and help with challenges; regular feedback/feedforward exchanges; to setting priorities.

Starting conversations with Conversations!

To enable our CAE+me performance development approach, which is based on regular one-on-one discussions, we launched Conversations, a dynamic and user-friendly online platform. The platform allows employees to easily capture highlights of their one-on-one conversations with their leader, request and give feedback, and set agile goals. The platform is fully integrated with CAEchampions, our worldwide recognition program, so employees can see both their performance development and recognition moments in one place!
Developing talent at CAE

As part of our CAE+me performance development approach, a strong focus has been placed on coaching. All CAE leaders have been invited to an online training session followed by an in-person training to teach them about the GROW coaching model, which structures the coaching conversations around the discovery of **Goals**, current **Reality**, available **Options** and summoning to **Will** to achieve the goals.

### Mentoring program

Mentor-me is a mentorship program offered by CAE’s Professional Women’s Network to all female employees. The mission of the program is to:

- Build relationships and enable the professional and personal growth of women at CAE by providing an open and flexible mentoring framework
- Help in finding a mentor according to the individual’s personalized goals
- Offer the support and tools to facilitate participation in the program
- Review participants’ experience and conclusions after 120 days

### In-house training programs

- Leadership for the Future 1, 2 and Leadership for the Future – Leaders of Influence are internal development programs for leaders at different levels in the organization, with a goal to improve the leadership skills of CAE leaders in alignment with our values and the CAE+me philosophy.
- The Ken Patrick program: The mission of the Ken Patrick program is to create the next generation of leaders at CAE. Over the course of two years, the best university graduates in engineering accelerate their development as they rotate through four intensive, stimulating assignments, one in each CAE business unit. Applicants will interact regularly with their peers and present their accomplishments to other Ken Patrick program participants and senior management. The variety of assignments and challenges will allow participants to acquire a unique understanding of CAE’s business units, services, roles and opportunities.
- Leadership Development Program (LDP): Developing CAE leaders is important for our future. The Leadership Development Program (LDP) is designed specifically for leaders across the world with great potential. The program provides leaders with the knowledge and skills to understand our business challenges and lead with greater purpose by questioning assumptions, disrupting the usual ways of doing business, and introducing unexpected ways of thinking.

### Online training programs

CAEacademia is CAE’s online learning management system. Via CAEacademia, employees can access CAE trainings, such as trainings on Health and Safety, IT security, CAE+me, various e-learnings on specific topics, or language courses.

### New collective agreement: Overcoming our challenges

In July 2018, the company experienced a five-week work disruption which preceded the successful negotiation of a new collective agreement on a four-year term and one-year option with CAE’s manufacturing employees in Canada. We overcame our challenges and delivered a record number of FFSs with excellent quality.

One outcome of the new agreement was the increase in investment for production equipment. Since CAE has begun the required investment for equipment that will be operational in 2019, the collective bargaining agreement effective on June 20, 2018 will now stand until June 19, 2023.
Ethics and integrity

Why it matters
Adhering to the highest ethical standards is essential to building stakeholder trust, goodwill and value in today’s world. We expect our employees and business partners to consistently meet these high standards.

Our goal
Reach the highest integrity and ethical conduct standards across all our activities.

Our objectives
As part of our Corporate Social Responsibility roadmap, we are continuously working towards the following objectives and measuring our progress.

- Instill and apply an ethics and integrity mindset to all actions and decisions
  - Ensure CAE lives and works by its five core values
  - By FY19, target 100% acknowledgement of compliance with the CAE Code of Business Conduct by all employees
  - Continue to train all management and key personnel on the CAE Code of Business Conduct, and by FY21 extend the training to all employees

- Conduct our business with world-class processes to meet and surpass data privacy and export control standards
  - Standardize data handling processes in all regions worldwide to help continually enhance our compliance processes and maintain state-of-the-art security and controls of controlled data
  - Standardize export control training processes in all regions worldwide

- Manage our supply chain in accordance with the highest ethics and sustainability standards
  - Establish and communicate a policy on responsible procurement to suppliers and employees
  - Evaluate major suppliers representing 50% of our annual spend on CSR compliance
Launching our new ethical principles for the responsible use of data analytics

The adoption of new technologies and the use by CAE of machine learning and artificial intelligence algorithms capable of extracting advanced insights from raw data will result in emerging and complex data risks that need to be managed effectively. In addition to identifying and assessing data-related risks, CAE adopted ethical principles for the responsible use of data analytics to better manage risks associated with new technologies used for profiling and monitoring purposes. The adoption of these principles affirms our commitment to adhere to the highest standards of ethical conduct in our dealings with employees, customers and all other stakeholders in our ecosystem. The principles are also a commitment to go beyond what is legally required to protect CAE’s and its stakeholders’ data. We look forward to a productive dialogue on these issues with customers, partners, employees and legislative bodies. Our guiding principles will evolve with these discussions and the ever-changing technological landscape.

Our principles are:

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<thead>
<tr>
<th>Safety first</th>
<th>Transparency</th>
<th>Empowerment</th>
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<tbody>
<tr>
<td>Our goal is to improve safety</td>
<td>Our analytics intelligence is transparent and understandable</td>
<td>Artificial intelligence in our systems is intended to empower people</td>
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<tr>
<th>Duration</th>
<th>Privacy and Security by Design</th>
<th>Non-discrimination</th>
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<tbody>
<tr>
<td>Individual learning data must have agreed life span</td>
<td>We put data protection and security at our core</td>
<td>Artificial intelligence that creates unfair bias will not be pursued</td>
</tr>
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Data protection: an essential part of doing business

We value the trust that our customers, employees and business contacts place in us. Protecting their privacy in all areas is crucial to maintaining that trust. This means putting a premium on the careful handling of personal information. We treat all data and information with the requisite level of sensitivity and confidentiality in compliance with all laws and regulations. Under the oversight of the Global Ethics and Compliance Office, we adapted our business processes and activities to comply with the EU’s new General Data Protection Regulation (GDPR) and have started to consider the impact of other changes to data protection requirements globally.

Our team of 12 data protection officers continues to strengthen its mission of overseeing our activities for the implementation of applicable data protection regulations. Meetings and conference calls amongst data protection officers are held on a regular basis to discuss global data protection requirements, emerging issues and trends. These forums serve as a means for data protection officers to share best practices and stay up to date with the evolving data protection regimes in a digital economy.

We also implemented controls designed to ensure the protection of intellectual property and the exportation and importation of commodities, services and technical data.

Under the leadership of our Chief Information Officer (CIO), we aligned our IT policies framework with the U.S.’s National Institute of Standards and Technology (NIST) 800-053 and 800-171. To further enhance our protection against data security breaches, we continue to invest in the deployment of cyber security controls to comply with aerospace and defence industry standards.

Every year, all employees participate in mandatory IT security awareness training. We recently strengthened this training program to further enhance employees’ knowledge of cyber risks and information protection measures. We also regularly assess our IT security controls. Our CIO reports IT security incidents to the Executive Committee and the Board’s Audit Committee. The CIO also presents our IT security plan and reports on its progress.

Ensuring our data systems and technologies are well protected

Vigilance is the watchword when it comes to making sure the vital electronic information and data we rely on every day are secure and protected. Security awareness is everyone’s business, especially as cyberattacks and systems breaches become ever more sophisticated and potentially damaging. We don’t leave valuables in unlocked cars. So too should we take the necessary steps at work to protect against online and computer-related risks like phishing (using a disguised email as a tool to steal information), malware (malicious software), viruses and identity theft.

Security experts say that end users — in other words, we humans — are the weakest link in the IT chain. Changing our behaviour, becoming more aware of the threats that are out there and cultivating habits that boost cybersecurity are key elements of a more secure IT environment.

At CAE, we are taking decisive action to address cybersecurity concerns:

- We have revamped our annual mandatory IT Security Awareness Training program to modernize it and make it more engaging for employees.
- We strengthened our IT security governance by creating a Cybersecurity Steering Committee to support security initiatives and the realization of the security program.

A fun awareness campaign featuring cartoon characters was rolled out to remind employees of the main IT security threats to beware of.
Building a global Ethics and Compliance organization

In August 2018, CAE’s Chief Compliance Officer appointed a new Global Leader, Ethics and Compliance whose mandate includes the development, implementation and monitoring of CAE’s global Ethics and Compliance programs and initiatives, including those related to the Code of Business Conduct, the ethics and anti-corruption program as well as the data protection program.

A diagnostic was performed to assess the maturity level of various components of CAE’s Ethics and Compliance program against leading industry practices. The results of this diagnostic were presented to the Board of Director’s Governance Committee and used to develop a three-year roadmap to further enhance CAE’s compliance program and systems. The Governance Committee will oversee the execution of this roadmap.

One of the many priorities stemming from this diagnostic is the need for a more formal and structured Ethics and Compliance Office comprised of dedicated Ethics and Compliance professionals, in addition to establishing a network of compliance ambassadors to support the business units in key regions in their management of compliance-related risks. The ambassadors will be part of the businesses and work with local employees daily. They will assume the role of compliance ambassador on a voluntary basis and in addition to their actual role outside the Ethics and Compliance Office.

The Ethics and Compliance Office plays a pivotal role in promoting CAE’s strong culture of integrity, and in overseeing the implementation of strategies, policies and processes to manage ethics and compliance risks.

Reinforcing our Code of Business Conduct

In fiscal 2016, we launched a process to enhance our Code of Business Conduct, underscoring our commitment to address major business ethics risks. This included integrating our CSR core priorities into the Code and training our managers on the Code. In May 2018, we also launched a revamped Code of Business Conduct to make it more succinct and user friendly.

Starting in fiscal 2020, all employees worldwide are required to follow mandatory periodic training as well as to read, acknowledge and agree to comply with our Code on an annual basis.

Pivotal steps to improve business integrity and ethics governance

Bribery and corruption are risks faced by virtually all organizations operating globally. Over the last few years, we've taken several significant measures to address these risks and strengthen our compliance program.

In fiscal 2019, we continued to take pivotal steps to better manage the risks posed by foreign representatives, consultants and other third party intermediaries. We terminated or didn't renew a number of agreements with foreign representatives as we expanded our local presence around the globe. Since 2014, we've reduced the number of foreign representatives we use by over 60%. Channeling our efforts toward growing our worldwide sales force has, in turn, decreased our need for third-party intermediaries. For fiscal 2019 and beyond, our goal is to continue to reduce the number of third-party representatives we use. We carefully monitor our foreign representatives’ activities, conduct risk-based due diligence prior to engaging or renewing their agreements, and require that they sign an anti-corruption certification every year.

In fiscal 2019, we initiated the review of CAE’s Anti-Corruption Policy and ancillary policies (including the Gifts and Entertainment Policy) and delivered live training sessions on CAE’s Anti-Corruption Policy to certain targeted groups of employees, including the sales and business development teams. We continued to improve our Corporate Policies and Procedures, including looking at ways to make them more accessible to all employees.

We will continue to leverage our ongoing compliance review to reinforce our governance, risk management and internal controls. Periodic risk assessments and audits of our areas of risk help us maintain oversight on our practices and operating guidelines. Our Global Ethics and Compliance Office works closely with the internal audit team to ensure that adequate actions are taken to address findings and recommendations based on risks. The team also conducts risk assessments and monitoring on different programs as the need arises.

FY19 highlight

97% of management and of employees in key functions completed online training and certification for our Code of Business Conduct
Reinforcing ethical standards in our industry

CAE believes socially responsible conduct is expected by our leadership and our stakeholders, and is critical to our Company's success and reputation. In December 2018, CAE joined the International Forum on Business Ethical Conduct (IFBEC) for the Aerospace and Defence Industry, an association committed to global principles of zero tolerance for corruption and the sharing of best practices to reinforce ethical standards in our industry. IFBEC has more than 30 member companies and its global principles were first issued in 2009. We appreciate the opportunity to reinforce our values in partnership with IFBEC.

United Nations Global Compact

We became a signatory to the UN Global Compact in fiscal 2016. Since then, we’ve aligned key documents with the UN Global Compact’s Ten Principles and the United Kingdom Modern Slavery Act. We now require vendors to confirm their commitments to high ethical, environmental and social standards.

We developed a companywide Human Rights Policy, which was rolled out during fiscal 2018.

EthicsPoint: Our third-party anonymous and confidential reporting system

EthicsPoint helps us ensure that our local and international business activities meet the highest ethical standards. The EthicsPoint website and call centre service provides employees, customers, partners and suppliers with a simple, risk-free way to confidentially report issues of concern associated with unethical or illegal activities including potential violations of our Code of Business Conduct and key corporate policies. We do not tolerate any punitive action or sanction against anyone who, in good faith, asks a question or submits an allegation of non-compliance through EthicsPoint or any other reporting channel.

We strongly encourage our employees and any party we conduct business with to come forward if they notice or become aware of an activity of concern, including potential unethical or illegal activities. Our Whistleblowing Policy, which recently underwent a complete review, protects good-faith whistleblowers from retaliation. Our whistleblowing process will also undergo significant enhancements in FY20 to ensure that all CAE employees understand and are aware of the different channels through which they may report concerns anonymously and confidentially.

Most concerns reported in recent years relate to human resources issues. We ensure all reports are rapidly and confidentiality handled as required by law. Certain violations such as breaches to the Code of Business Conduct require disciplinary action which varies depending on the severity of the breach. We make sure that appropriate incident investigation and corrective actions are taken for all reports. The Global Ethics and Compliance Office provides monthly compliance reports to the Executive Management Committee and quarterly reports to the Governance Committee of the Board of Directors.

In fiscal 2019, the number of whistleblowing reports increased compared with 2018 as shown in the table. We communicated the accessibility and confidentiality of Ethicspoint and we are glad that our employees are increasingly using it. The most common type of EthicsPoint report relates to equal opportunity and harassment issues (10 in fiscal 2018 and nine in fiscal 2019).

EthicsPoint reports since FY18

<table>
<thead>
<tr>
<th>ISSUES</th>
<th>FY19</th>
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<tr>
<td>Total</td>
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</table>

See all our site certifications
Enhanced export control processes and training

In fiscal 2019, we migrated a large part of our technical data to a new Digital Library, to strengthen our export control processes.

The new library offers a standardized and robust solution for handling our technical data worldwide. It delivers enhanced protection throughout the data lifecycle, increased reporting capabilities and standardized business rules for handling technical data. It also minimizes the risk of proliferating and disclosing technical data to unauthorized parties.

The digital library’s new search capabilities and shorter processing time for approving access are among the new features that improve our export control process efficiency.

We also launched new online training modules specially adapted for each department. This training is better adapted for each department and standardizes the export control training worldwide.

Global alignment for strategic sourcing

The Global Strategic Sourcing team continues to work with representatives from multiple regions to communicate, exchange and align on key initiatives and topics. Topics such as corporate social responsibility, health and safety, and the European Union’s General Data Protection Regulation (GDPR) are among those approached from a global perspective. Opportunities for synergies within the procurement processes were leveraged in several projects, yielding value and alignment within the organization.

Responsible supply chain management

As a signatory to the UN Global Compact, we demonstrate our commitment to upholding its principles, in part, by taking steps to ensure responsible procurement. We integrate labour, environment and anti-corruption considerations into our global strategic sourcing tools and processes.

An assessment of CAE’s core supply chain validated the alignment of our strategic suppliers’ CSR principles with those of CAE. Procurement documents such as Request for Proposal, Supplier Survey Report and Purchasing General Terms and Conditions include clauses that address compliance with laws and ethical business conduct. Employee health and safety, combating bribery, prohibiting the use of child or forced labour, hazardous materials, data protection and conflict minerals are among the issues addressed.

Social and environmental factors are considered alongside financial factors when making procurement decisions, and are detailed among the criteria used for supplier selection. We conduct spot verifications on suppliers and their supply chain when necessary. If a verification reveals non-compliant practices, we suspend all activities with the supplier and demand an immediate action plan and remediation. If the delinquent supplier implements corrective measures and demonstrates compliance with our policy, we then decide whether to resume business with the supplier. We had no reported incidents on supplier practices in fiscal 2019.

Conflict minerals

We continue to communicate our Conflict Minerals Policy to our suppliers, and include the requirements set out therein in our Purchasing – General Terms and Conditions. Our due diligence process, which includes supply chain surveys, supports this policy. We have suspended or discontinued our business relationship with some suppliers who failed to respond to or provide complete responses to these surveys. We also verify smelters reported in supplier surveys to ensure their participation in the Responsible Minerals Assurance Process (formerly the Conflict-Free Smelter Program).

Learning about export control processes and having fun

Your mission, should you decide to accept it: track a package and successfully complete six assignments in order to become an export control special agent. It’s a video game created by the imaginative members of our Global Communications and Global Export Control teams who not only want CAE employees to learn about export controls but also have fun doing so. Export control is an important, at times complex, part of doing business internationally. Different countries and regions have different laws and regulations and it’s crucial that a major exporter of simulation products and services like CAE comply with them.

The video game is one of several teaching tools that was produced this year to give CAE employees in all departments a better understanding of this serious topic. More than 600 people played the game and 85% of employees completed the mandatory export control training session that is specific to their department.
Innovation and customer experience

Why it matters

Providing an outstanding customer experience and innovative products and services is key to our competitive advantage. Our strong innovation culture and commitment to best-in-class customer service ensure our industry leadership. They also support our vision to be recognized as the global training partner of choice.

Our goal

Provide the best products and services in the industry by continually improving the quality, efficiency and safety of our customers’ training experience.

Our objectives

As part of our Corporate Social Responsibility roadmap, we are continuously working towards the following objectives and measuring our progress.

Elevate the CAE customer journey with a seamless training experience and delight at every interaction

- Implement our digital strategy to enhance our customer experience and leverage the latest learning technologies
- By FY23, provide training to employees on our digital strategy
- Continue to differentiate our suite of core simulation products by achieving 95% or more on our quality and schedule performance metrics

Be a thought leader on the evolution of safety practices in the aviation and healthcare sectors

- Continue to invest significant amounts in research and development every year
- Design and deliver quality and sustainable next-generation training products and services
- Partner with at least one important society/regulatory body in new product development
- Participate in at least one research program demonstrating the effectiveness of simulation in healthcare training
Product excellence and innovation

A passionate commitment to R&D and a deeply ingrained innovation culture at CAE go a long way to explaining our status as the leading-edge training partner of choice, developer of flight simulators, training systems integration (TSI) solutions and immersive patient simulation. We consistently rank among the top 20 Canadian companies for R&D investment.

A transformative investment in the future

CAE plans to invest $1 billion over five years in a program of innovation to stay at the forefront of the global training industry. A key aspect of the program is the funding of Project Digital Intelligence, an ambitious venture to develop the next generation training solutions for aviation, defence and security, and healthcare.

Project Digital Intelligence aims at nothing less than transforming CAE’s products and services with cutting-edge digital technologies and systems such as big data, artificial intelligence (AI), cloud computing, cybersecurity and augmented/virtual reality. Plans call for three major activity areas: advanced digital technology development, digital transformation of the training and user experience, and CAE innovation and collaboration facilities.

“By seizing new technologies such as artificial intelligence, big data, or augmented reality, as well as many others, and applying them to the science of learning, we will revolutionize the training experience of pilots, aircrews and healthcare professionals, as well as improve safety.”

Project Digital Intelligence will be carried out in Canada, using CAE’s R&D laboratories and test and integration facilities. There will be collaboration and technology codevelopment with small- and medium-sized companies across Canada and the qualification of more than 150 new suppliers throughout the country. CAE will also work with over 50 post-secondary institutions and research centres. The governments of Canada and Québec are contributing a combined investment of $200 million over the next five years.

Executive Officer of CAE. “By seizing new technologies such as artificial intelligence, big data, or augmented reality, as well as many others, and applying them to the science of learning, we will revolutionize the training experience of pilots, aircrews and healthcare professionals, as well as improve safety.”

Sustainable products and services

CAE is the global leader in the sale of full-flight simulators (FFSs), a climate-friendly product. In fiscal 2019, we sold 78 civil FFSs.

Our simulators save millions of tonnes of CO₂ annually. In our Civil Aviation training network alone, the simulators we operate save over five million metric tonnes of CO₂ per year. We estimate this number using the number of training hours spent on CAE flight simulators and multiply this by the normal burn rate (at cruise) of equivalent real aircraft. We lead the industry in introducing disruptive sustainable innovations to meet the highest safety standards required by governments, regulatory authorities and airlines. One of our latest pilot training innovations, the CAE Rise™ training system, takes pilot training standardization and evaluations to a whole new level.

Design for safety and environment

Our Global Engineering department designs our simulator technologies and training materials to improve resource efficiency, eliminate hazardous materials and increase our customers’ energy efficiency. We follow numerous standards throughout our products’ lifecycle, from the design and manufacturing stages to the end-of-life phase. As an example, we adhere to the Restriction of Hazardous Substances (RoHS) directive of the United Nations’ Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation.

In fiscal 2019, we continued assessing the environmental impact of our simulator product line, including the design and development of the CAE 600XR Series flight training device (FTD), the latest addition to our innovative suite of XR Series training solutions.
Research that’s relevant for society

While collaborative R&D with partners is key in advancing our technologies, we are also invested in ensuring the research is relevant for society. Leveraging simulation to develop an innovative emergency response ecosystem is one example. In this case, CAE, three partner companies and three universities are joining forces to leverage the latest artificial intelligence-based unmanned aerial vehicle (UAV) technology to enhance crisis response, management, training and data analysis.

We are also part of the Partnership for the Organization of Innovation and New Technologies (4POINT0), an ambitious cross-sectoral and interdisciplinary research group which mobilizes 14 Canadian universities and five institutions in France, Italy, the United Kingdom and the United States, as well as 30 partner organizations.

As one of IVADO’s founding members, we take pride in helping provide its 900 affiliated scientists with a multidisciplinary institute for developing processes to extract trends, metrics and concrete information from big data. Experts from IVADO's talent pool work alongside our subject matter experts on research projects related to safety, security and efficiency, using data science and artificial intelligence.

Our inventors go green

There aren’t many green technology applications filed every year with the Canadian Intellectual Property Office. In FY18, a total of 38 were filed with the agency and one of them belongs to CAE. Éric Debonville, a Project Manager in Civil Simulation Products and Sébastien Labelle, a Technical Leader in Electrical Engineering, came up with a novel way to pump hot air from the electronic racks to the pilot/instructor’s area in the simulator to offset the chilly environment needed for cooling purposes. This innovative technology can result in savings of up to 20,000 kWh per year per simulator. The patent application was allowed in FY19 and the patent was granted in May 2019. CAE has decided to offer this feature as an option on its 7000XR FFS.

Click here for a summary of the patent.

Using neuroscience and big data to improve pilot performance

In fiscal year 2018, we joined forces with HEC Montréal's Tech3Lab to study how biometrics, neuroscience and big data analysis can be used to learn about behavior in a training context and to identify high-performance factors. Tech3Lab is one of North America’s leading user experience research labs. This year, we continued advancing this research. As part of a joint project with Concordia University, McGill University, National Research Council of Canada (NRC), Université de Montréal and the CRIAQ/CARIC, we further explore novel methods for using biometric data to significantly advance aircraft pilots’ user experience in flight simulators.

From supporting McGill University’s ATLAS Lab's conference on the Role of Emotions in Technology-Rich Learning Environments to advancing research on human factors and crew resource management for aircrews working in offshore transportation, we continue to invest in strategic R&D initiatives.

In fact, we are currently partnering with over 25 universities, research centres and post-secondary institutions to advance research and prototyping in a broad range of domains from aerodynamics algorithms and models to cybersecurity, augmented and virtual reality, and next generation immersive technologies.

Paying tribute to our inventors

We operate in an industry where securing intellectual property (IP) is vital to protect our innovations in a competitive market.

As of today, we hold 132 patents and 171 patent applications thanks to our creative employees and the teams that support them. In fiscal 2018, we were granted 39 new patents derived from our R&D activities of previous fiscal years. We also filed several new patent applications and rewarded their inventors through our Eureka Program that recognizes CAE inventors.
Underscoring the importance of intellectual property

Intellectual property is a driver of innovation. At CAE, we take IP and its protection very seriously. Our IP team’s mandate includes raising employee and manager awareness of IP and explaining why it matters. The team held a series of Lunch & Learn sessions with Engineering employees to help them better understand key aspects of IP, including patents and trade secrets. Members of the team also distributed an amusing shape-shifting cube as part of an information kit underscoring the important role that IP plays, such as protecting our position as a global industry leader, preserving our competitive advantage, and preventing rivals from copying our innovations. The kit also encourages creativity and inventiveness, while stressing the need to follow company guidelines on IP protection. And it touts the Eureka rewards program for employee-inventors.

OneSpark: igniting employee creativity

A single spark of an idea can have a profound impact on the way we do things. The OneSpark program is an opportunity for employees to share ideas that could enhance our processes, the way we work or just about anything else. It puts the employee at the heart of global innovation at CAE. The idea, for example, could be a way of streamlining a work method that is clunky or inefficient. Or it could consist of automating a task that the employee or colleagues perform repeatedly.

OneSpark is open to all CAE employees with ideas they are passionate about and that improve what they usually accomplish in their daily activities. The program can also contribute to an employee’s professional development. Employees can submit a new concept for which they will be granted eight hours to develop the idea and discuss it with a supervisor. Once it passes muster at that stage, there is a further 24-hour fine-tuning period before submission to second-level management.

All told, 100 proposals were submitted. Sixty-eight ideas were approved for the eight-hour development period. Six made it to the 24-hour phase. And 10 ideas were implemented.

CAE Tech: Program your career! helps students get their careers off the ground

Assisting technical students with their career advancement is the mission of CAE Tech: Program your career! We partnered with five post-secondary institutions (CEGEPs) in Quebec and their respective foundations on a three-year program offering student scholarships and on-the-job training at CAE Montreal.

Every year over the course of the program, CAE will offer the following to two full-time students from each CEGEP:

- Scholarship and tuition fees
- Paid summer internships or jobs
- The opportunity for an offer of full-time employment at the end of their studies
- Mentorship
- The opportunity to get an “on-call” work contract during the school year until completion of their program. Priority will be given to the intern’s studies and his or her class schedule will be respected.

The aerospace industry is rapidly evolving and so is the workforce. Programs like CAE Tech support our future talent, help us meet our growth objectives and support our efforts around the digital transformation.

The focus is on students in computer science, software development, avionics, digital technologies and systems integration. Grantholder selection will also take into account CAE’s values of diversity and inclusiveness.

The participating CEGEPs are André-Laurendeau, Bois-de-Boulogne, Édouard-Montpetit/École nationale d’aérotechnique (ÉNA), John-Abbott and Montmorency.
Swimming with the sharks

At CAE, we have a knock-off version of the popular TV show where budding entrepreneurs pitch their concepts to seasoned business pros in hopes of getting financial backing. We call it the Innovation Challenges.

This popular CAE initiative encourages employees to pitch their innovative ideas in predetermined subject areas. Submitted ideas are reviewed by members of the Technology and Innovation team, with a few finalists selected in each category. The finalists then go before a panel of CAE leaders. In fiscal 2019, more than 100 ideas were submitted for the three themes or challenges: artificial intelligence, Blockchain and Customer Satisfaction. The selected ideas will be announced in fiscal 2020.

Partnering with innovative young minds

CAE is a key early member, with Montreal's École de technologie supérieure (ÉTS), of the Collision program at ÉTS' Centech technology-company accelerator. The initiative involves the creation of 10 open innovation cells that foster creative exchanges and collaboration between students, tech experts, innovative young firms and established technology companies. The goal is to produce marketable products and solutions in a variety of areas. Centech is one of Canada's leading university-associated tech incubators.

Awards

CEO of the Year

Congrats to Marc Parent, our President and Chief Executive Officer. He was named 2018 CEO of the Year in the “Large Company” category by Les Affaires, Quebec’s premier business publication. In explaining why it chose Marc, the magazine said: “CAE and its leader, Marc Parent, are often under the radar. However, with Mr. Parent at the helm, the Quebec aerospace giant has undergone a major transformation over the last ten years that is propelling it to new heights.”

Anesthesia SimSTAT wins prestigious award

Anesthesia SimSTAT won the 2018 Power of a Silver Award given by the American Society of Association Executives (ASAE). The award is one of several that celebrate the extraordinary contributions that associations make to society by enriching lives, creating a competitive workforce, driving innovation and making the world a better place. Anesthesia SimSTAT was developed by the American Society of Anesthesiologists and CAE Healthcare in collaboration with SimTabs. It gives practicing physician anesthesiologists advanced training in dealing with emergency situations using high-fidelity scenarios in a virtual environment. The modules feature 3D graphics and interactive methods.
Customer service

At CAE, we're serious about making the customer experience a delight. Our global Customer Service team is made up of dedicated individuals who are single-minded about meeting all of the needs of our growing customer base around the world.

A busy year in customer service

In Civil Aviation, our 24/7 emergency support system delights our customers by leveraging our worldwide locations. Our global team answers more than 500 emergency calls per year and supports our customer needs at all times. We also maintained our focus on providing proactive technical communications.

A strong focus was put on the development of our leadership team. Monthly sessions on different leadership topics were held and different tools and techniques were presented in conferences in order to improve our team's engagement. The focus has yielded results: we have seen a ratings improvement of over 10%.

Getting closer to the customer: the Amsterdam experience

CAE Amsterdam recently completed one year as the first CAE Customer Service Centre to be co-located with Civil and Business Aviation Training facilities. That means a closer relationship with our customers as well as the ability to respond even faster to their needs. We are also extending quicker customer response throughout Europe by implementing a regional customer-service experience. European customers can speak directly with their Customer Experience Lead in the same time zone. On-site visits to customers are also more frequent, with a technical support team that can be quickly deployed to different locations.
The Digital Accelerator: a high-level roadmap for digital innovation

Our dedication to continually improving the customer experience is getting a huge boost from the CAE Digital Accelerator. It’s an innovative approach to designing and delivering digital solutions to customers. With the Digital Accelerator, we are driving innovation and transforming our industry ahead of the competition. Although we have built a strong digital foundation at CAE, we need to speed up the pace of the solutions we provide as the global leader in simulation training. The Digital Accelerator team will work on customer experience innovations that reach initial release within weeks and months rather than months and years. So far, we have created eight digital “lighthouse” projects in the Civil unit and we will extend that approach to the other divisions over time. Each lighthouse, led by an assigned “Journey Owner”, is responsible for coming up with a vision for an innovative digital solution along with a roadmap to build the components of that vision. The teams work in close collaboration with the customer over the entire timeframe of the development process. Our approach is multidisciplinary and cross-functional, involving everyone from data analytics experts and human resources people to marketing and finance employees. Some projects involve partnerships with other companies as well. One of the lighthouses is focused on providing new digital solutions that make the pilot training experience smoother and more efficient.
Community and environment

Why it matters

We know that we can only be successful if the communities and economies in which we operate are thriving and prosperous. Minimizing the environmental impact of our operations helps protect natural resources, improve employee and community quality of life, and preserve our license to operate. Our training solutions contribute to this wellbeing by increasing aviation safety, strengthening public security and improving patient outcomes.

Our goal

Create a positive and sustainable impact in our communities and our environment.

Our objectives

As part of our Corporate Social Responsibility roadmap, we are continuously working towards the following objectives and measuring our progress.

Reduce our environmental footprint across our operations

- By year-end FY19, implement at least one paperless initiative in each of our sites
- By FY21, conduct or update energy and waste audits*
- By FY22, source 75% of the electricity consumption of our European sites through renewable energy*
- By FY23, install LED or energy efficient lights*

Support the communities where we operate through our global community investment program

Canada

- In FY20, expand and promote the Canadian scholarship program to cover technicians, people wanting to become pilots, and students willing to be ambassadors to promote Work Integrated Learning in Canadian aerospace companies
- By FY21, launch a diversity scholarship program to allow women, Indigenous Peoples, persons with disabilities and visible minority individuals to complete their studies and better access positions with a greater representation gap
- By FY23, collaborate with over 50 post-secondary institutions and research centres

Worldwide

- Better promote the CAE scholarships offered globally
- By FY21, spend at least 40% of our donations and sponsorships budget on education
- By FY23, develop a volunteering program for our employees

* At all CAE sites where we have operational control of the building or control on energy sourcing

Employees from our Kanata, Ontario office supported the Ottawa River flood disaster relief effort.
A neighbour of choice

Investing in local communities and their economies is key to building a reputation for being a neighbour of choice everywhere we operate. It also helps strengthen employee engagement across CAE. In fiscal 2019, our employees made a difference in several ways around the world.

Riding to conquer cancer

FIRST Robotics: Mentoring youth

RoboCup 2018

Positively Pink, Europe to Brazil

Jacob gets his wish

Student societies and engineering and commerce competitions

Post-secondary scholarships

Centraide/United Way campaign

We (virtually) went up, up and away Down Under

Putting a smile on a child’s face
Engaging with stakeholders

We proactively engage with a diverse range of stakeholders on a broad number of issues. This engagement takes the form of conferences, sectorial and cross-sectorial initiatives, partnerships with government and educational institutions as well as direct dialogue with various community groups.

Contributing to fundamental and applied research

Over the past eight years, we’ve contributed talent and more than $9 million to collaborative projects with universities and research institutes. Projects range from basic research to product, process and service commercialization.

Examples include:

• Founding member of IVADO (Institute for Data Valorization)
• Operational Research Chair at École Polytechnique de Montréal
• Healthcare partnership with Université de Montréal
• Key early member of the Collision Program launched by École de technologie supérieure via its technology company accelerator Centech

Women in Engineering Chair at University of Ottawa

We continue to advocate for more women in engineering through professional networking, training and employment at CAE and across the industry.

We’re donating $20,000 annually for a period of three years, for a total of $60,000 toward establishing a fund for the promotion and advancement of girls and women in science and engineering at the University of Ottawa’s engineering faculty. The fund will finance activities and initiatives that encourage girls to consider studies and careers in engineering and provide them with positive female role models.

Bridging the gap between engineering and commerce

We are proud to support the Engineering and Commerce Case Competition (ECCC), an annual Montreal event aimed at promoting interdisciplinary collaboration between the faculties of engineering and commerce to better prepare students for professional careers. Universities from around the world participate. In 2019, CAE awarded the Certificate for Best Ethics and Sustainability Solution and was on the judging panel of the case competition.

Contributing to a maritime network strategy for Quebec

We contributed to the Scientific Committee of the Quebec Maritime Network, the Réseau Québec maritime (RQM), which conducted an assessment and recommendation exercise for ensuring the success and sustainability of the network. Created in 2016, RQM’s mission is to provide a consultation and cooperation maritime research tool.

Supporting local economies

Through our presence in more than 35 countries around the world, we’re helping create economic growth by delivering goods to our customers, jobs for our employees, payments to our suppliers, investments in communities and value to our investors. Here’s a snapshot of how we supported local economies in fiscal 2019.

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<td>Total operating costs</td>
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<td>Salaries and other short-term employment</td>
<td>$1,071.2</td>
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<td>Corporate income taxes paid</td>
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<tr>
<td>Community investment and charitable donations</td>
<td>$2.3</td>
</tr>
<tr>
<td>In-kind donations</td>
<td>$18.7</td>
</tr>
</tbody>
</table>
Promoting STEM careers

Getting young people fired up about science and encouraging them to explore rewarding careers in Science, Technology, Engineering and Mathematics (STEM) is something we strongly believe in. That’s why we support the Eurêka Festival!, the largest science fair tailored for children and families. Since 2007, more than 868,000 people, including 48,000 students, have visited the annual festival at the Montreal Science Centre in Montreal’s Old Port.

We are also a dynamic member of the Canadian Aero/Space Skills Network. Through this network and its Career Exploration Fair, we share our passion for science and technology and help inspire the next generation.

Another way we extend our STEM outreach is via the Classes Affaires one-week internships offered to high school students under the Montréal Relève program. Over the past year, over 400 students visited our facilities and production cells and met with our employees.

Making lives safer and more efficient

In the spirit of enhancing safety, improving efficiency, maintaining readiness and solving challenging problems in all aspects of Canadians’ lives, we are involved in the geospatial community as co-chairs of the Open Geospatial Consortium’s Canada Forum on Geospatial Standards. The Canada Forum is dedicated to better serving the country’s needs for geospatial data and services by focusing on the sharing of information, capacity building, innovation, outreach and industry business development. The forum also acts as a venue for enhancing the level of Canadian influence in the OGC geospatial standards process.

The talents of tomorrow

CAE has for many years been helping advance student training and education in Quebec universities. We continue to build on that legacy by being actively involved in sharing our technical know-how. We are eager to develop the talents of tomorrow. Here are some of the ways we do that: teaching a credited aerospace undergraduate course at Polytechnique Montréal in one of the CAE-funded simulation laboratories, hosting a masterclass for University of Sherbrooke students on gameplay techniques, mentoring engineering teams working on a variety of capstone projects and industry challenges, and presenting a seminar on real-time image synthesis technologies.

Championing work-integrated learning

Over the past five years, we have created more than 1,400 co-op and internship positions in Canada alone. In fiscal 2019, more than 350 co-op and student positions were offered. We plan to do a lot more, with our commitment to enhancing the number and relevance of work-integrated learning opportunities. We are a founding member of the Canadian Mobility and Aerospace Institute. The institute coordinates and enhances the delivery of Work-Integrated Life-Long Learning (WILL) opportunities in the transportation and aerospace sectors.

As a member of the Business/Higher Education Roundtable, CAE is a Champion of the organization’s Work-Integrated Learning (WIL) program — WIL in Action — for the mobility and aerospace sectors. The goal is to create an additional 10,000 WIL opportunities in those sectors.

Watch the video
Growing employee engagement

Across CAE, we're increasingly sharing best practices and initiatives that cover all our environmental aspects, including energy efficiency and waste reduction. Our global presence spans 160 sites and training locations in over 35 countries. Our Environmental Policy and ISO-14001-inspired Environmental Management System (EMS) guide us in managing our environmental impact across these sites and locations. Enviro-News, our global internal environmental newsletter, is sent out monthly and provides updates on best practices and initiatives taking place across the company. This communication tool enables us to share corrective actions and stimulate continuous improvement in our environmental performance.

Shrinking our environmental footprint

We are proud of the environmental strides being made at CAE. Here is a summary of our top five environmental achievements in fiscal 2019, in line with our objectives:

• For the fourth consecutive year, we celebrated Earth Day across our sites, with a twist: exploring the potential of combining environmental improvement with community involvement.
• Renewable energy and paperless initiatives.
• Key Environment, Health and Security (EHS) representatives got together to share best global practices and offer training sessions targeting specific improvement projects.
• A global platform in EHS data management was launched in order to facilitate risk management and the filing of performance indicators.
• We developed a sustainable mobility program offer at our headquarters in Montreal.

A new approach to workspace design

Our Montreal location has over the past few years been reconfiguring the workspaces in a program called AGORA. Our Facilities team has developed these collaborative environments allowing a better sharing of spaces, which leads to a reduction of our energy footprint. The guiding principles for the remodeling are:

R: Reuse and recycle and, whenever possible, sell or give away the material or furniture being replaced rather than trash it.
A: Awareness – Information tools have been developed and shared with employees, and a point of contact is designated in each area being remodeled.

Coalition for Greener Aircraft

CAE is a member of the Coalition for Greener Aircraft, a non-profit organization whose mission is the development of smarter, more efficient and effective technologies while reducing the environmental footprint of the aerospace industry. The group is devoted to maintaining Quebec's competitive position in a quickly changing global aeronautical market by focusing on R&D activities in response to new environmental regulations to combat climate change.

Doing their bit to fight litter

CAE Dothan in Alabama joined the “Adopt-a-Mile” program in an environmental and community-involvement effort to remove trash along a local roadway.

Local green heroes on Earth Day

CAE encouraged employees to both help the environment and get involved in the community by joining clean-up groups in areas close to the site. CAE colleagues in Tokyo had already made a tradition of the activity, which involves clearing garbage around their building every Earth Day. Many other CAE sites decided to follow suit this year.

Watch the slideshow featuring our green heroes
New certifications

All of our Oceania sites, excluding the co-enterprise ones, are now certified ISO 14001. It’s an international standard that specifies what is required for an institution to have an effective Environmental Management System (EMS).

Our Stolberg, Germany centre successfully obtained “Ökoprofit” certification. “Ökoprofit” is a one-year cooperative partnership between local or regional authorities and private-sector companies for EMS implementation and improvement.

Doing more for recycling

With a view to improving their recycling performance, several CAE sites made improvements to their garbage collection and recovery systems. The new and improved measures included setting up recycling islands, banishing individual trash bins and introducing composting. At our training site in Kidlington/Oxford, UK, arriving new student pilots are provided with clear guidance regarding the waste sorting rules on campus.

Down with single-use cups, plates and utensils!

The year saw the growing popularity at some of our sites of measures to ban or reduce the use of single-use plastic or Styrofoam items like cups, plates and straws. Employees are provided with ceramic plates and cups in the cafeterias and encouraged to use eco-cups for their coffee, while new arrivals were issued reusable water bottles.

Towards improved energy efficiency

At CAE, we are always keen to find ways of making our energy use more efficient and environmentally friendly. Among site-specific initiatives are the switch to heating and air conditioning that require less energy, placing solar screens on windows or fans in some buildings to disperse the heat in winter, the use of natural light in simulator bays or offices, or the installation of motion sensors. Some sites are already equipped with LED lighting that helps lower energy use while also cutting the electricity bill!

Sustainable mobility initiatives at CAE Montreal

Members of our environment team in Montreal continued honing their expertise and introducing improvements in the area of sustainable mobility, making it easier for employees to use alternatives to the automobile. Here are some highlights:

- The number of electric vehicle (EV) charging stations grew to 34 at our headquarters, not counting the increase in many of our locations, reflecting the growing use of EVs.
- CAE’s subsidy of employees’ annual public transit pass increased.
- A sustainable mobility fair was organized. Employees got to test electric bikes and EVs. Many members of the mobility community were present to explain their services, such as public transit, bike repair workshops, and ride-sharing platforms.

Smart commuting gets a boost

Another environmental feather in CAE Montreal’s cap is the sustainable mobility “Leaders” award from MOBA and Voyagez Futé, an honourable mention for continuity in our green initiatives. Voyagez Futé is a Montreal-based sustainable mobility hub promoting and supporting alternatives to solo driving. MOBA is the transport division of Développement économique Saint-Laurent.

Bicycle commuting gets its due

CAE Montreal received gold-level certification from VÉLOSYPATHIQUE, a Quebec non-profit group that encourages communities and organizations to advance the cause of cycling as an efficient, healthy and environmentally friendly means of transportation and recreation. Previously certified bronze, CAE Montreal continues to improve on the measures put in place in 2015 to inspire employees to cycle to work. The gold certification is a welcome acknowledgment of those efforts. Congratulations to all the CAE employees who contributed their time and energy to making this happen, including Jean-Yves Bilodeau, who is in charge of the Bike-to-Work club.

Claire Aubert, Group Leader in Environment, Health and Safety proudly received the Leaders award from MOBA and Voyagez Futé.
Appendix
## Site certifications

ISO 9001:2015 - Quality management systems – Requirements

### CAE Montreal Headquarters
8585 Côte-de-Liesse, Saint-Laurent, Quebec, Canada, H4T 1G6

Scope: Design, manufacture, service and maintenance of simulation products and training solutions.

400 Montée-de-Liesse, Saint-Laurent, Quebec, Canada, H4T 1N8
Scope: Storage, handling and warehousing.

150 Montée-de-Liesse, Saint-Laurent, Quebec, Canada, H4T 1S6
Scope: Assembly and test of simulation products. Storage, handling and warehousing.

### CAE Ottawa
350 Legget Drive, 2nd floor, Ottawa, Ontario, Canada, K2K 2W7

Scope: Provide software development, systems engineering, system integration, ISS, operational systems, enterprise training and consulting services for the entire system lifecycle, including integrated logistics support. This also includes aircrew training (including computer-based training), egress training, aircraft maintenance repair and overhaul, aircraft engineering support and technical management, Training Centre Operations, and simulation products maintenance for defence, aerospace, healthcare and public safety applications.

### CAE Moose Jaw
15 Wing Moose Jaw, P.O. Box 30, Bushell Park, Saskatchewan, Canada, S0H 0N0
Scope: Maintain and service flight training devices; provide supply support and provisioning; provide onsite hardware/software support; provide data and records management.

### CAE Cold Lake
4 Wing - Cold Lake, P.O. Box 6759, Station Forces, Cold Lake, Alberta, Canada, T9M 2C2
Scope: Maintain and service flight training devices; provide supply support and provisioning; provide onsite hardware/software support; provide data and records management.

### CAE Greenwood
404 Squadron, Building 250, 14 Wing Greenwood, Greenwood, Nova Scotia, Canada, BOP 1N0
Scope: Maintain and service flight training devices; provide supply support and provisioning; provide onsite hardware/software support; provide data and records management.

### CAE Gatogtown
403 Squadron, Building L24, 403 Squadron, CFB Gatogtown, Oromocto, New Brunswick, Canada, E2V 4J5
Scope: Maintain and service flight training devices; provide supply support and provisioning; provide onsite hardware/software support; provide data and records management.

### CAE Halifax
36 Solutions Drive, Suite 200, Halifax, Nova Scotia, Canada, B3S 1N2
Scope: Provide software development, systems engineering, systems integration, in-service support, operational systems, enterprise training and consulting services for defence, aerospace, public safety and security applications.

### CAE Mirabel
10000 Helen-Bristol Street, Mirabel, Quebec, Canada, J7N 1H3
Scope: Provide capacity-service support for the entire system lifecycle including systems engineering and software and integrated logistic support.

### CAE Trenton
426 Squadron, 20 Buffalo Avenue, 8 Wing Trenton, Astra, Ontario, Canada, K0K 3W0
Scope: Maintain and service flight training devices; provide supply support and provisioning; provide onsite hardware/software support; provide data and records management.

### CAE Petawawa
450 Tactical Helicopter Squadron, Building CC12C8, 450 Mattawa Trail, Garrison Petawawa, Petawawa, Ontario, Canada, K0K 2X3
Scope: Repair and maintain flight simulators, aircraft maintenance training devices and associated training equipment; provide onsite hardware/software support; manage spares and inventory; coordinate and schedule training time; provide aircrew training services; develop and maintain courseware and training documentation; provide data and records management.

### CAE Petawawa
450 Tactical Helicopter Squadron, Building CC12C8, 450 Mattawa Trail, Garrison Petawawa, Petawawa, Ontario, Canada, K0K 2X3
Scope: Repair and maintain flight simulators and associated training equipment; provide onsite hardware/software support; manage spares and inventory; coordinate and schedule training time; provide aircrew training services; develop and maintain courseware and training documentation; provide data and records management.
CAE USA – Tampa
4908 Tampa West Boulevard, Tampa, Florida, USA, 33634
Scope: Provide design, integration, testing and installation of simulation devices for military training.
5411B Pioneer Park Drive, Tampa, Florida, USA, 33634
Scope: Provide assembly and testing.

CAE USA – Orlando
2603 Discovery Drive, Orlando, Florida, USA, 32836
Scope: Provide assembly and testing.

CAE USA – Sherwood
2402 Wildwood Avenue, Suite 501, Sherwood, Arkansas, USA
Scope: Provide analysis, design, development, implementation and evaluation of integrated training solutions.

CAE USA – Altus
203 North 6th Street, Building 179, Room 154, Altus, Oklahoma, USA, 73523
Scope: Provide simulation device integration, installation, maintenance and training.

CAE USA – MacDill AFB
7800 Hanger Loop Drive, MacDill AFB, Tampa, FL 33621
Scope: Provide simulation device integration, installation, maintenance and training.

CAE USA – March ARB
1250 Y Street, March Air Reserve Base, Riverside CA 92518
Scope: Provide simulation device integration, installation, maintenance and training.

CAE USA – Fairchild AFB
101 W. Arnold Street, Fairchild Air Force Base, Spokane, WA 99011
Scope: Provide simulation device integration, installation, maintenance and training.

CAE USA – Hickam AFB
395 Mamiya Avenue, Hickam Air Force Base, Honolulu, HI 96853
Scope: Provide simulation device integration, installation, maintenance and training.

CAE USA – Grissom AFB
4376 Hoosier Boulevard, Grissom Air Reserve Base, Kokomo, IN 46971
Scope: Provide simulation device integration, installation, maintenance and training.

CAE USA – Milwaukee ANGB
1874 E. Grange Avenue, Milwaukee, WI 53207
Scope: Provide simulation device integration, installation, maintenance and training.

CAE USA – Kadena AFB
Building 748, Kadena Air Force Base, Okinawa, JA 904-0299
Scope: Provide simulation device integration, installation, maintenance and training.

CAE USA – Pittsburgh ANGB
304 Mustang Drive, Coraopolis, PA 15108
Scope: Provide simulation device integration, installation, maintenance and training.

CAE USA – Scott AFB
5790 Pryor Drive, Scott Air Force Base, Belleville, IL 62225
Scope: Provide simulation device integration, installation, maintenance and training.

CAE Australia Pty Ltd
Bankstown Airport, 33 Nancy Ellis Leebold Drive, Bankstown, NSW 2200, Australia
Scope: Provide maintenance support for simulation training devices.

CAE Australia Pty Ltd
Swordfish Road, HMAS Albatross, Nowra, NSW 2541, Australia
Scope: Provide maintenance support for simulation training devices; provide training services using simulation training devices.

CAE New Zealand Pty Ltd
Seasprite Simulator 6 Squadron HQ, RNZAF Base Auckland, Tainui Street, Whenuapai, Auckland, 0618, New Zealand
Scope: Provide systems engineering and maintenance support for simulation training devices.

Army Aviation Training Centre, Army Airfield Oakey, QLD 4401, Australia
Scope: Provide systems engineering and maintenance support for simulation training devices; provide training services using simulation training devices.

RAAF Base, Building 398, 292 Squadron AFS, Edinburgh, SA 5111, Australia
Scope: Provide systems engineering and maintenance support for simulation training devices.

CAE Sale Training Centre, Lot 16, Wellington Park Way, Sale, VIC 3850, Australia
Scope: Provide maintenance support for simulation training devices.

79 SQN Simulator, Building A0989, RAAF Base Pearce, Bullsbrook, WA 6084, Australia
Scope: Provide systems engineering and maintenance support for simulation training devices.

CAE Perth Training Centre, 81 Verde Drive, Jandakot, WA 6164, Australia
Scope: Provide civil aviation training services and maintenance support of flight simulators and training devices.

CAE New Zealand Pty Ltd
Seasprite Simulator 6 Squadron HQ, RNZAF Base Auckland, Tainui Street, Whenuapai, Auckland, 0618, New Zealand
Scope: Provide systems engineering and maintenance support for simulation training devices.

14 SQN Training Centre, Kororareka Ave, Ohakea, 4816, New Zealand
Scope: Provide systems engineering and maintenance support for simulation training devices. 
CAE Kuala Lumpur, Malaysia
Lot PT25B, Jalan S5, Southern Support Zone, KLIA, 64000, Sepang, Selangor, Malaysia
Scope: Provide training for commercial pilots, cabin crew, ramp, guest services and aircraft maintenance.

CAE Germany – Stolberg
CAE Elektronik GmbH, Steinfurt 11, 52222-D Stolberg, Germany
Scope: Provide operation, development, manufacturing, technical and logistic support for training equipment and synthetic environments, systems and software applications (mainly flight and tactical simulators); provide associated training programs.

CAE Germany – Bückeburg
CAE Services GmbH, Bäckerstr. 18, 31683-D Obernkirchen, Germany
Scope: Provide maintenance, support and operation of training equipment and synthetic environments (mainly flight and tactical simulators); provide associated training as required.

CAE United Kingdom
CAE Burgess Hill (UK), Innovation Drive, York Road, Burgess Hill, West Sussex, RH15 9TW, United Kingdom
Scope: Provide design, supply and maintenance of training equipment and synthetic environments, and the provision of associated training requirements analysis and through-life support; provide systems and software development and support; provide maintenance management.

RAF Benson Medium Support Helicopter, Aircrew Training Facility, RAF Benson, Wallingford, Oxfordshire OX10 6AA, United Kingdom
Scope: Provide training for commercial pilots, cabin crew, ramp, guest services and aircraft maintenance.

RNAS Culdrose Sea King & Merlin Training Facility, RNAS Culdrose, Helston, Cornwall, TR21 7HR, United Kingdom
Scope: Provide design, supply and maintenance of training equipment and synthetic environments, and the provision of associated training, customer requirements analysis and through-life support; provide systems and software development and support; provide maintenance management.

AS9100C - Quality management systems - Requirements for aviation, space and defence organizations
CMMI-DEV V1.3 - Capability Maturity Model Integration (CMMI) for Development, Version 1.3
CMMI-SVC V1.3 - Capability Maturity Model Integration (CMMI) for Services, Version 1.3

AS9100C - Quality management systems - Requirements for aviation, space and defence organizations
CMMI-DEV V1.3 - Capability Maturity Model Integration (CMMI) for Development, Version 1.3
CMMI-SVC V1.3 - Capability Maturity Model Integration (CMMI) for Services, Version 1.3
ISO 14001:2015 - Environmental management systems - Requirements with guidance for use

CAE Military Aviation Training
NATO Flight Training in Canada (NFTC), Colonel O.B. Philp Complex, Building 160, PO Box 120, Bushell Park, Saskatchewan, Canada, S0H 0N0
Scope: Provide maintenance of aircraft, ground school training and airfield operations.

CAE Australia Pty Ltd
Unit 42, Brindabella Circuit, Brindabella Business Park, Canberra Airport, ACT 2609, Australia
Scope: Provide the development of growth opportunities within the business.

Bankstown Airport, 33 Nancy Ellis Leebold Drive, Bankstown, NSW 2200, Australia
Scope: Provide maintenance support for simulation training devices.

Swordfish Road, HMAS Albatross, Nowra, NSW 2541, Australia
Scope: Provide maintenance support for simulation training devices; provide training services using simulation training devices.

Simulator Facility Building, 375 Percival Street, RAAF Base Richmond, NSW 2755, Australia
Scope: Provide systems engineering and maintenance support for simulation training devices; provide training services using simulation training devices.

350 Parramatta Road, Campus Business Park, Homebush, NSW 2140, Australia
Scope: Provide systems engineering and project and program management for simulation training devices; provide development of growth opportunities within the business.

76SQN Hawk Simulator Facility, Building 868, RAAF Base Williamtown, NSW 2314, Australia
Scope: Provide engineering and maintenance support for simulation training devices; provide training services using simulation training devices.

RAAF Base, KC30-A Sim Facility Building, 1123 F-111 Drive, Amberley, QLD 4306, Australia
Scope: Provide systems engineering and maintenance support for simulation training devices; provide training services using simulation training devices.

120 Edward Street, Brisbane, QLD 4000, Australia
Scope: Provide systems engineering, training services and project management for simulation training devices; develop growth opportunities within the business.

Building 0808, CH47F Training Centre, RAAF Base Townsville, Ingham Road, Garbutt, QLD 4810, Australia
Scope: Provide maintenance support for simulation training devices.

Army Aviation Training Centre, Army Airfield Oakey, QLD 4401, Australia
Scope: Provide systems engineering and maintenance support for simulation training devices; provide training services using simulation training devices.

350 Parramatta Road, Campus Business Park, Homebush, NSW 2140, Australia
Scope: Provide systems engineering and project and program management for simulation training devices; provide development of growth opportunities within the business.

79 SQN Simulator, Building A0989, RAAF Base Pearce, Bullsbrook, WA 6084, Australia
Scope: Provide systems engineering and maintenance support for simulation training devices.

RAF Brize Norton (UK), 24 Sqn HQ, Carterton, Oxfordshire, OX18 3LX, United Kingdom
Scope: Provide design, supply and maintenance of training equipment and synthetic environments and associated training; provide customer requirements analysis and through life support.

CAE New Zealand Ltd
Seasprite Simulator 6 Squadron HQ, RNZAF Base Auckland, Tainui Street, Whenuapai, Auckland 0618, New Zealand
Scope: Provide systems engineering and maintenance support for simulation training devices.

14 SQN Training Centre, Kororareka Ave, Ohakea, 4816, New Zealand
Scope: Provide systems engineering and maintenance support for simulation training devices.

CAE United Kingdom
CAE Burgess Hill (UK), Innovation Drive, Burgess Hill, West Sussex, RH15 9TW, United Kingdom
Scope: Provide design, supply and maintenance of training equipment and synthetic environments and associated training; provide customer requirements analysis and through life support.

RNAS Culdrose (UK), Building D51, Helston, Cornwall, TR12 7RH, United Kingdom
Scope: Provide design, supply and maintenance of training equipment and synthetic environments and associated training; provide customer requirements analysis and through life support.
OHSAS 18001:2007 - Occupational health and safety management systems - Requirements

CAE Military Aviation Training
NATO Flight Training in Canada (NFTC), Colonel O.B. Philp Complex, Building 160, PO Box 120, Bushell Park, Saskatchewan, Canada, S0H 0N0
Scope: Provide maintenance of aircraft, ground school training and airfield operations.

Cyber Essentials Scheme Test Specification - Cyber Essentials PLUS

CAE United Kingdom
Innovation Drive, Burgess Hill, RH15 9TW, UK
Scope: Cyber Essentials programme is the CAE.CO.UK network, which is administered by the Defence & Security (D&S) division of CAE (UK) Plc.

AS/NZS 4801:2001 - Occupational health and safety management systems - Specification with guidance for use

CAE Australia Pty Ltd
Unit 42, Brindabella Circuit, Brindabella Business Park, Canberra Airport, ACT 2609, Australia
Scope: Develop growth opportunities within the business.

Bankstown Airport, 33 Nancy Ellis Leebold Drive, Bankstown, NSW 2200, Australia
Scope: Provide maintenance support for simulation training devices.

Swordfish Road, HMAS Albatross, Nowra, NSW 2541, Australia
Scope: Provide maintenance support for simulation training devices.

350 Parramatta Road, Campus Business Park, Homebush, NSW 2140, Australia
Scope: Provide systems engineering and maintenance support for simulation training devices; provide training services using simulation training devices.

76SQN Hawk Simulator Facility, Building 868, RAAF Base Williamtown, NSW 2314, Australia
Scope: Provide systems engineering and maintenance support for simulation training devices; provide training services using simulation training devices.

120 Edward Street, Brisbane, QLD 4000, Australia
Scope: Provide systems engineering training services and project management for simulation training devices; develop growth opportunities within the business.

Building 0808, CH47F Training Centre, RAAF Base Townsville, Ingham Road, Garbutt, QLD 4810, Australia
Scope: Provide maintenance support for simulation training devices.

Army Aviation Training Centre, Army Airfield Oakey, QLD 4401 Australia
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RAAF Base, Building 398, 292 Squadron AFS, Edinburgh, SA 5111, Australia
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CAE New Zealand Pty Ltd
Seasprite Simulator 6 Squadron HQ, RNZAF Base Auckland, Tainui Street, Whenuapai, Auckland, 0618, New Zealand
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Scope: Provide maintenance support for simulation training devices.

79 SQN Simulator, Building A0989, RAAF Base Pearce, Bullsbrook, WA 6084, Australia
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CAE Perth Training Centre, 81 Verde Drive, Jandakot, WA 6164, Australia
Scope: Provide civil aviation training services and maintenance support of flight simulators and training devices.

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CAE Sale Training Centre, Lot 16, Wellington Park Way, Sale, VIC 3850, Australia
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79 SQN Simulator, Building A0989, RAAF Base Pearce, Bullsbrook, WA 6084, Australia
Scope: Provide systems engineering and maintenance support for simulation training devices.

CAE Perth Training Centre, 81 Verde Drive, Jandakot, WA 6164, Australia
Scope: Provide civil aviation training services and maintenance support of flight simulators and training devices.
## Global Reporting Initiative (GRI) indicators

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<td>See website – Board of Directors</td>
<td>See website – Board of Directors</td>
</tr>
<tr>
<td>102-26 Role of highest governance body in setting purpose, values and strategy</td>
<td>See website - Governance</td>
<td>FY18 Activity &amp; CSR Report, pages 30-31</td>
</tr>
<tr>
<td>102-30 Effectiveness of Risk Management Processes</td>
<td>See FY19 Proxy Circular - Audit Committee</td>
<td>See FY18 Proxy Circular - Audit Committee</td>
</tr>
<tr>
<td>102-31 Review of economic, environmental and social topics</td>
<td>page 37</td>
<td>FY18 Activity &amp; CSR Report, page 34</td>
</tr>
<tr>
<td>102-32 Highest governance body's role in sustainability reporting</td>
<td>page 37</td>
<td>FY18 Activity &amp; CSR Report, page 34</td>
</tr>
<tr>
<td>102-35 Remuneration policies</td>
<td>See FY19 Proxy Circular - Section 7 Executive compensation</td>
<td>See FY18 Proxy Circular - Section 7 Executive compensation</td>
</tr>
<tr>
<td>102-36 Process for determining remuneration</td>
<td>See FY19 Proxy Circular - Section 7 Executive compensation</td>
<td>See FY18 Proxy Circular - Section 7 Executive compensation</td>
</tr>
<tr>
<td>102-37 Stakeholders' involvement in remuneration</td>
<td>See FY19 Proxy Circular - Section 7 Executive compensation</td>
<td>See FY18 Proxy Circular - Section 7 Executive compensation</td>
</tr>
<tr>
<td><strong>Stakeholder engagement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102-40 List of stakeholder groups</td>
<td>pages 36-37</td>
<td>FY18 Activity &amp; CSR Report, page 33</td>
</tr>
<tr>
<td>102-41 Collective bargaining agreements</td>
<td>59</td>
<td>43</td>
</tr>
<tr>
<td>102-41 Percentage of employees covered by collective agreements</td>
<td>22%</td>
<td>18%</td>
</tr>
<tr>
<td>102-42 Identifying and selecting stakeholders</td>
<td>pages 36-37</td>
<td>FY18 Activity &amp; CSR Report, page 34</td>
</tr>
<tr>
<td>102-43 Approach to stakeholder engagement</td>
<td>pages 36-37</td>
<td>FY18 Activity &amp; CSR Report, page 34</td>
</tr>
<tr>
<td>102-44 Key topics and concerns raised</td>
<td>pages 36-37</td>
<td>FY18 Activity &amp; CSR Report, page 34</td>
</tr>
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<td>GRI standards</td>
<td>FY19</td>
<td>FY18</td>
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<tr>
<td><strong>GRI 100 – UNIVERSAL STANDARDS</strong></td>
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<td><strong>Reporting practices</strong></td>
<td></td>
<td></td>
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<tr>
<td>102-45 Entities included in the consolidated financial statements</td>
<td>Financial Reports: Annual Information Form for FY19</td>
<td>Financial Reports: Annual Information Form for FY18</td>
</tr>
<tr>
<td>102-46 Defining report content and topic boundaries</td>
<td>pages 36-37</td>
<td>FY18 Activity &amp; CSR Report, pages 33-34</td>
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<tr>
<td>102-47 List of material topics</td>
<td>pages 36-37</td>
<td>FY18 Activity &amp; CSR Report, page 34</td>
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<tr>
<td>102-49 Changes in reporting</td>
<td>pages 36-37</td>
<td>FY18 Activity &amp; CSR Report, pages 33-34</td>
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<tr>
<td>102-50 Reporting period</td>
<td>page 2</td>
<td>FY18 Activity &amp; CSR Report, page 2</td>
</tr>
<tr>
<td>102-51 Date of most recent report</td>
<td>Corporate Social Responsibility Report 2018</td>
<td>Corporate Social Responsibility Report 2017</td>
</tr>
<tr>
<td>102-52 Reporting cycle</td>
<td>page 2</td>
<td>FY18 Activity &amp; CSR Report, page 2</td>
</tr>
<tr>
<td>102-53 Contact point for questions regarding the report</td>
<td>page 2</td>
<td>FY18 Activity &amp; CSR Report, page 2</td>
</tr>
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<td>102-55 GRI content index</td>
<td>pages 70-77</td>
<td>FY18 Activity &amp; CSR Report, page 60</td>
</tr>
<tr>
<td><strong>Management approach</strong></td>
<td></td>
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<tr>
<td>103-2 Management approach and its components</td>
<td>People and safety, pages 38-45</td>
<td>FY18 Activity &amp; CSR Report: People and safety, pages 35-41</td>
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<tr>
<td></td>
<td>Ethics and integrity, pages 46-50</td>
<td>Ethics and integrity, pages 42-45</td>
</tr>
<tr>
<td></td>
<td>Innovation and customer experience pages 51-57</td>
<td>Innovation and customer experience, pages 46-49</td>
</tr>
<tr>
<td></td>
<td>Community and environment pages 58-63</td>
<td>Community and environment, pages 50-54</td>
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</table>
## GRI standards

### GRI 200 – ECONOMIC TOPICS

#### Economic performance

<table>
<thead>
<tr>
<th>201-1</th>
<th>Direct economic value generated and distributed</th>
</tr>
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<tbody>
<tr>
<td></td>
<td><strong>FY19</strong></td>
</tr>
<tr>
<td>Direct economic value generated ($M)</td>
<td>3,304.1</td>
</tr>
<tr>
<td>Cost of sales ($M)</td>
<td>2,362.6</td>
</tr>
<tr>
<td>Research &amp; development expenses ($M)</td>
<td>232.1</td>
</tr>
<tr>
<td>Selling, general &amp; administration expenses ($M)</td>
<td>415.2</td>
</tr>
<tr>
<td>Finance expenses - net ($M)</td>
<td>80.9</td>
</tr>
<tr>
<td>Income tax expenses ($M)</td>
<td>59.6</td>
</tr>
<tr>
<td>Economic value retained ($M)</td>
<td>205.7</td>
</tr>
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</table>

#### Financial implications and other risks and opportunities due to climate change

MD&A page 37

#### Market presence

<table>
<thead>
<tr>
<th>201-3</th>
<th>Defined benefit plan obligations and other retirement plans ($M)</th>
<th>FY19</th>
<th>FY18</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>FY19</strong></td>
<td><strong>FY18</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>212.6</td>
<td>200.6</td>
<td></td>
</tr>
<tr>
<td>201-4</td>
<td>Funding received from government ($M)</td>
<td>45.2</td>
<td>29.0</td>
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</table>

#### Proportion of senior management hired from the local community\(^2\)

<table>
<thead>
<tr>
<th></th>
<th>Canada</th>
<th>US</th>
<th>Other</th>
<th>Overall</th>
</tr>
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<tbody>
<tr>
<td>202-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>78%</td>
<td>92%</td>
<td>90%</td>
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</table>

#### Procurement practices

<table>
<thead>
<tr>
<th>204-1</th>
<th>Proportion of spending on local suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td>FY19</td>
</tr>
<tr>
<td></td>
<td>87%</td>
</tr>
</tbody>
</table>

#### Anti-competitive behaviour

<table>
<thead>
<tr>
<th>206-1</th>
<th>Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FY19</td>
</tr>
<tr>
<td></td>
<td>0</td>
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</tbody>
</table>

---

1 FY18 numbers were restated following the retroactive adoption of the new IFRS 15 accounting standard.

2 Director and up, citizenship in the country in which they work.
<table>
<thead>
<tr>
<th>GRI standards</th>
<th>FY19</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GRI 300 – ENVIRONMENTAL TOPICS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Energy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>302-1 Energy consumption within the organization (MWh)</td>
<td>281,255¹</td>
<td>292,560¹⁴</td>
</tr>
<tr>
<td>Natural gas (MWh)</td>
<td>13,404¹</td>
<td>15,507¹⁴</td>
</tr>
<tr>
<td>Electricity (MWh)</td>
<td>189,052¹</td>
<td>186,253¹⁴</td>
</tr>
<tr>
<td>Diesel, heating oil, propane, fuel for aircraft and cars, hot and chilled water (MWh)</td>
<td>78,799¹</td>
<td>90,800¹⁴</td>
</tr>
<tr>
<td>302-3 Energy intensity (MWh/$million revenue)</td>
<td>85.12</td>
<td>103.62</td>
</tr>
<tr>
<td><strong>Water</strong>²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>303-1 Water withdrawal by source (m³)</td>
<td>328,848</td>
<td>344,798³</td>
</tr>
<tr>
<td><strong>Emissions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>305-1 Direct (Scope 1) GHG emissions (tCO₂e)</td>
<td>25,213</td>
<td>28,424⁴</td>
</tr>
<tr>
<td>305-2 Energy indirect (Scope 2) GHG emissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GHG emissions (Scope 1 and 2 location based) (tCO₂e)</td>
<td>87,825</td>
<td>90,104⁴</td>
</tr>
<tr>
<td>GHG emissions (Scope 1 and 2 market based) (tCO₂e)</td>
<td>80,550</td>
<td>84,975⁴</td>
</tr>
<tr>
<td>Energy indirect GHG Emissions (scope 2 location based) (tCO₂e)</td>
<td>62,612</td>
<td>61,680⁴</td>
</tr>
<tr>
<td>Energy indirect GHG Emissions (scope 2 market based) (tCO₂e)</td>
<td>55,336</td>
<td>56,551⁴</td>
</tr>
<tr>
<td><strong>Effluents and waste</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>306-2 Waste by type and disposal method (Montreal only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste generated absolute (tonnes)</td>
<td>1,401</td>
<td>1,603</td>
</tr>
<tr>
<td>Total weight of hazardous waste (tonnes)</td>
<td>46</td>
<td>62</td>
</tr>
<tr>
<td>Total weight of non-hazardous waste (tonnes)</td>
<td>1,355</td>
<td>1,541</td>
</tr>
<tr>
<td>Non-hazardous waste recycled (%)</td>
<td>85⁵</td>
<td>86⁵</td>
</tr>
<tr>
<td><strong>Environmental compliance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>307-1 Non-compliance with environmental laws and regulations</td>
<td>No significant fine</td>
<td>No significant fine</td>
</tr>
</tbody>
</table>

¹ Conversion rates vary for each country and province. Estimates were done for sites for which information was not yet available based on data from sites with the same type of activities.
² For sites where we have operational control of the building.
³ Data published in the FY18 report is corrected due to an error in unit of measure.
⁴ Data published in the FY18 report is updated to reflect updated methodology.
⁵ Includes composting.
<table>
<thead>
<tr>
<th>GRI standards</th>
<th>FY19</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GRI 400 – SOCIAL TOPICS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>401-1 New employee hires and employee turnover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total employees</td>
<td>11,764</td>
<td>9,635</td>
</tr>
<tr>
<td>Total number of employees CAE</td>
<td>11,314</td>
<td>9,167</td>
</tr>
<tr>
<td>Number of employees (permanent)¹</td>
<td>10,032¹</td>
<td>8,000⁴</td>
</tr>
<tr>
<td>Number of employees (temporary)¹</td>
<td>1,282</td>
<td>1,167</td>
</tr>
<tr>
<td>Total number of employees in our joint ventures²</td>
<td>450</td>
<td>468</td>
</tr>
<tr>
<td><strong>Employees by gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of employees (female)</td>
<td>2,408</td>
<td>1,931</td>
</tr>
<tr>
<td>Number of employees (male)</td>
<td>9,356</td>
<td>7,704</td>
</tr>
<tr>
<td>% of female employees</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>% of male employees</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td><strong>Employees covered by collective bargaining agreements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of employees</td>
<td>2,600</td>
<td>1,700</td>
</tr>
<tr>
<td>% of employees</td>
<td>22%</td>
<td>18%</td>
</tr>
<tr>
<td>Number of non-unionized employees</td>
<td>9,164</td>
<td>7,935</td>
</tr>
<tr>
<td><strong>New employee hires</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of new employee hires</td>
<td>3,667</td>
<td>1,920</td>
</tr>
<tr>
<td>New employee hire rate (% of total employees)</td>
<td>31%⁵</td>
<td>20%</td>
</tr>
</tbody>
</table>

¹ Changed methodology by adding two categories.
² Only for joint ventures that are material.
³ Includes 214 part-time employees.
⁴ Includes 208 part-time employees.
⁵ Increase year over year is mainly due to the onboarding of employees from our acquisitions.
<table>
<thead>
<tr>
<th>GRI standards</th>
<th>FY19</th>
<th>FY18</th>
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</thead>
<tbody>
<tr>
<td><strong>GRI 400 – SOCIAL TOPICS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New employee hires below 30 years old</td>
<td>875</td>
<td>583</td>
</tr>
<tr>
<td>% new employee hires below 30 years old</td>
<td>24%</td>
<td>30%</td>
</tr>
<tr>
<td>New employee hires 30-50 years old</td>
<td>1,624</td>
<td>865</td>
</tr>
<tr>
<td>% new employee hires 30-50 years old</td>
<td>44%</td>
<td>45%</td>
</tr>
<tr>
<td>New employee hires above 50 years old</td>
<td>1,168</td>
<td>472</td>
</tr>
<tr>
<td>% new employee hires above 50 years old</td>
<td>32%</td>
<td>25%</td>
</tr>
<tr>
<td>Contractors in instruction roles</td>
<td></td>
<td></td>
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<tr>
<td>Total number of contractors</td>
<td>1,191</td>
<td>976</td>
</tr>
<tr>
<td>Number of contractors at CAE</td>
<td>1,088</td>
<td>889</td>
</tr>
<tr>
<td>Number of contractors in our joint ventures</td>
<td>103</td>
<td>87</td>
</tr>
<tr>
<td>Employee turnover number</td>
<td>1,029</td>
<td>1,064</td>
</tr>
<tr>
<td>Employee turnover rate (% of total employees)</td>
<td>10%</td>
<td>13%</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee turnover below 30 years old</td>
<td>213</td>
<td>213</td>
</tr>
<tr>
<td>% employee turnover below 30 years old</td>
<td>14%</td>
<td>20%</td>
</tr>
<tr>
<td>Employee turnover 30-50 years old</td>
<td>470</td>
<td>516</td>
</tr>
<tr>
<td>% employee turnover 30-50 years old</td>
<td>9%</td>
<td>12%</td>
</tr>
<tr>
<td>Employee turnover above 50 years old</td>
<td>346</td>
<td>335</td>
</tr>
<tr>
<td>% employee turnover above 50 years old</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee turnover for women</td>
<td>219</td>
<td>240</td>
</tr>
<tr>
<td>% employee turnover for women</td>
<td>10%</td>
<td>13%</td>
</tr>
<tr>
<td>Employee turnover for men</td>
<td>809</td>
<td>824</td>
</tr>
<tr>
<td>% employee turnover for men</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

1 "Above 50 years old" category was not included in 2018 report.
2 Change in methodology: only contractors who are in instruction roles are included as they represent a key component of delivering training to our customers. In FY18, all contractors were included regardless of their role.
### GRI standards

#### GRI 400 – SOCIAL TOPICS

<table>
<thead>
<tr>
<th>GRI standards</th>
<th>FY19</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupational health and safety</strong></td>
<td></td>
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<tr>
<td>403-2 Types of injury and rates of injury, occupational diseases, lost days, absenteeism and number of work-related fatalities¹</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incident Frequency Rate (IFR)¹</td>
<td>0.54</td>
<td>0.39</td>
</tr>
<tr>
<td>Days Lost Rate (DLR)¹</td>
<td>2.62</td>
<td>1.35</td>
</tr>
<tr>
<td>Lost Time Injury Frequency Rate (LTIFR)¹</td>
<td>0.24</td>
<td>0.16</td>
</tr>
<tr>
<td>Near Miss Rate (NMR)¹</td>
<td>0.92</td>
<td>1.21</td>
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<tr>
<td>Work-related fatalities</td>
<td>1</td>
<td>1</td>
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#### Diversity and equal opportunity

<table>
<thead>
<tr>
<th>GRI standards</th>
<th>FY19</th>
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<tr>
<td>405-1 Diversity of governance bodies and employees</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>18%</td>
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#### Non-discrimination

<table>
<thead>
<tr>
<th>GRI standards</th>
<th>FY19</th>
<th>FY18</th>
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<tr>
<td>406-1 Incidents of discrimination and corrective actions taken</td>
<td></td>
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<td></td>
<td>page 49</td>
<td>FY18 Activity &amp; CSR Report, page 45</td>
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#### Public policy

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<tr>
<th>GRI standards</th>
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<tr>
<td>415-1 Political contributions</td>
<td></td>
<td></td>
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<td></td>
<td>0</td>
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#### Marketing and labelling

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<tr>
<th>GRI standards</th>
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<th>FY18</th>
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<tr>
<td>417-1 Requirements for product and service information and labelling</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>page 50</td>
<td>FY18 Activity &amp; CSR Report, page 44</td>
</tr>
<tr>
<td>417-2 Incidents of non-compliance concerning product and service information and labelling</td>
<td></td>
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<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>417-3 Incidents of non-compliance concerning marketing communications</td>
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<td></td>
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<td></td>
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#### Customer privacy

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<thead>
<tr>
<th>GRI standards</th>
<th>FY19</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td>418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
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#### Socio-economic compliance

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<thead>
<tr>
<th>GRI standards</th>
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<th>FY18</th>
</tr>
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<tbody>
<tr>
<td>419-1 Non-compliance with laws and regulations related to socio-economic matters</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
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</tbody>
</table>

¹ Per 200,000 hours worked
### Non-GRI indicators

<table>
<thead>
<tr>
<th>GRI standards</th>
<th>FY19</th>
<th>FY18</th>
</tr>
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<tbody>
<tr>
<td><strong>ETHICS AND INTEGRITY</strong></td>
<td></td>
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<tr>
<td>Non-discrimination</td>
<td></td>
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<tr>
<td>Number of foreign agents we hire</td>
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<tr>
<td><strong>PEOPLE AND FLIGHT SAFETY</strong></td>
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<tr>
<td>Flight safety</td>
<td></td>
<td></td>
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<tr>
<td>Number of voluntary reports (per 10K flight hours)</td>
<td>39.3</td>
<td>41.0&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Number of incidents &gt;$50K in damage (per 10K flight hours)</td>
<td>0.33</td>
<td>0.39</td>
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<tr>
<td>Live flight aviation safety reviews - external</td>
<td>10</td>
<td>1</td>
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<tr>
<td>Live flight aviation safety reviews - internal (per training location)</td>
<td>13</td>
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<tr>
<td>People</td>
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<td></td>
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<tr>
<td>Number of internships</td>
<td>235</td>
<td>214</td>
</tr>
<tr>
<td>Diversity mentorship program</td>
<td></td>
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<td>page 45</td>
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<tr>
<td>Initiatives for talent development</td>
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<td></td>
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<tr>
<td></td>
<td>page 45</td>
<td>9 major initiatives including training sessions</td>
</tr>
<tr>
<td>% of students hired into a full-time position following a CAE co-op experience</td>
<td>9%&lt;sup&gt;1&lt;/sup&gt;</td>
<td>9%&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>INNOVATION AND CUSTOMER EXPERIENCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investments in research &amp; development ($M)</td>
<td>232.1</td>
<td>182.7</td>
</tr>
<tr>
<td>Number of patents requested</td>
<td>82</td>
<td>78&lt;sup&gt;1&lt;/sup&gt;</td>
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<tr>
<td>Number of patents obtained</td>
<td>39</td>
<td>51</td>
</tr>
<tr>
<td>Customer satisfaction: for on-time delivery (RFT on-time), product quality, etc. (survey – Civil and D&amp;S)</td>
<td>page 56</td>
<td>FY18 Activity &amp; CSR Report, page 47</td>
</tr>
<tr>
<td><strong>COMMUNITY AND ENVIRONMENT</strong></td>
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<tr>
<td>Renewable energy programs and targets</td>
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<td>Charitable donations and sponsorships</td>
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<tr>
<td></td>
<td>pages 58-63</td>
<td>FY18 Activity &amp; CSR Report, page 50</td>
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<tr>
<td></td>
<td>pages 58-63</td>
<td>FY18 Activity &amp; CSR Report, page 52</td>
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</tbody>
</table>

<sup>1</sup> Data published in the FY18 report is updated to reflect updated methodology.

<sup>2</sup> Number of co-op students hired as regular employees vs total number of co-op students during fiscal year.