

**MADE IN ONTARIO...  
EXPORTED TO THE WORLD**



**Ontario Centres of  
Excellence**

Where Next Happens

Ontario Centres of Excellence is a member of



**Ontario**

# ROI

Ontario Centres of Excellence Inc.

ANNUAL REPORT 2017-18



## About Us

For over three decades, Ontario Centres of Excellence (OCE) has worked alongside the Government of Ontario to drive economic development and job growth.

In partnership with government, industry and academia, we bring together Ontario's world-class colleges, universities and research hospitals, its dynamic companies and new generations of entrepreneurs to develop made-in-Ontario products and services that can be marketed around the world.



### Our top three measures of success



- Number of jobs created or retained
- Industry co-investment
- Follow-on investment by the private sector

### History

In 1987, seven not-for-profit centres were formed focused on fostering industry-academic collaborations in various industry sectors. In 2002, the Honourable Jim Wilson, the former Ontario Minister of Energy, Science and Technology and current Minister of Economic Development, Job Creation and Trade, initiated the merger of the centres to form Ontario Centres of Excellence Inc., with a goal of achieving greater efficiency and economic outcomes.



### Province-wide footprint

OCE deploys an experienced team of Business Development Managers across the province to help build industry-academic collaborations and support the launch and growth of businesses.



### Efficiency

We administer programs on behalf of the Province through a highly efficient and accountable model that drives job creation and economic development and ensures a strong return on investment throughout the province.



### Governance

A not-for-profit organization governed by an independent Board of Directors that includes observers from the provincial government, OCE is funded by the Government of Ontario and is a member of the Ontario Network of Entrepreneurs (ONE). OCE also receives funding from the Government of Canada.



## Our Mandate

On behalf of the Province, OCE supports projects that create jobs, attract local and international investment and make Ontario more globally competitive.

### Collaborative R&D

- Bringing colleges and universities together with industry to solve industry challenges that result in job creation
- Providing Ontario's next generation of graduates and entrepreneurs with industry experience that results in the creation of new jobs

### Commercialization

- Moving ideas from the lab to the marketplace
- Supporting the demonstration of new technologies and products
- Helping Ontario start-ups scale and succeed
- Connecting Ontario companies to early adopters across government and industry

### Entrepreneurship

- Supporting entrepreneurship activities by students and youth through:
  - Seed financing of high-potential, youth-led start-ups
  - Campus accelerators and incubators

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### How would you describe the kind of year OCE had in 2017-18?

**Michael:** It was a breakthrough year for jobs created through provincial programs administered by OCE. It was also a breakthrough year for capital investments and financial commitments by the private sector in companies supported by those programs.

**Tom:** OCE's programs driven by private-sector partners, created or retained nearly 10,000 high-value jobs last year – a record number. These jobs came about directly as a result of OCE program support. As an organization whose funding model requires industry to co-invest in projects, OCE is incentivizing significant industry investment in job creation in Ontario.

**Michael:** OCE's contribution to job creation in Ontario goes well beyond the direct support given to entrepreneurs to help them establish and build companies and secure new markets. OCE is also the catalyst for investment that builds sector capacity in new

and emerging technologies and services in areas such as artificial intelligence, autonomous vehicles, next-generation networks and cleantech. These investments contribute to the massive job growth occurring in these sectors and corresponding growth in Ontario's GDP. Through OCE-administered programs, the Province and its private-sector domestic and global partners, are driving this economic growth.

**Tom:** Through our unique role in supporting job creation, we foster partnerships with global companies, which create vast opportunities to expand exports and add jobs. We are also opening export opportunities for Ontario companies through our international relationships with countries such as Israel and China.

**Michael:** OCE's model for delivering programs and achieving strong results is what led Israel to seek OCE out as a partner organization to work with on behalf of the Province.

### What is OCE's model for doing business?

**Tom:** OCE supports projects in sectors of the economy that the Province has identified as having strong capacity to create jobs and compete globally. Sixteen years ago, the provincial government initiated the merger of the centres into a single organization: Ontario Centres of Excellence. This integration created a single, highly efficient platform for delivering programs that can adapt quickly to meet the priorities and policy objectives of government.

### What impacts can you point to?

**Tom:** We have seen the strong impact of OCE project investment on the performance of OCE-supported companies. A recent impact study conducted on 3,100 OCE-funded projects from FY 2015 to 2018, demonstrated that \$514 million in OCE funding and co-investments with industry and partners into these projects led to \$1.7 billion in private-sector follow-on investments, \$518 million

in incremental sales revenue for the funded companies and 20,791 jobs.

**Michael:** It's noteworthy as well that every \$1 of investment that OCE has made on behalf of the Province has attracted an additional \$2.20 in project co-funding, mostly from the private sector.

### How is OCE helping to ensure Ontario remains competitive?

**Tom:** We are now involved in major initiatives that are being rolled out across the Province and beyond. This includes the Next Generation Network Program (NGNP), which is developing ultra-high-speed digital infrastructure which will advance digital innovation. Ontario companies will be able to develop and test prototypes of new networking technologies, develop talent and access technical and business support. In helping to establish the digital backbone for Ontario's economy, NGNP will create high-quality jobs and drive future growth.

**Michael:** OCE is also very active in the automotive sector. Our work in creating jobs through supporting companies and researchers in the development of autonomous vehicle technologies is critical to ensure that the Province retains its global leadership in this sector. Also, our partnership with the Automotive Parts Manufacturers' Association (APMA) supports Ontario's auto parts sector in adopting industry-leading software and hardware that drives efficiencies in the automotive sector's supply chain, thereby making it more competitive. This joint program is proving to be one of our highest job-creating initiatives.

### How does OCE's approach ensure value for taxpayers?

**Tom:** We are investing in

creating jobs for Ontarians – including the jobs of the future in exciting new areas. Provincial program funding is an investment that is returned in full to the province in the form of incremental sales and income taxes.

**Michael:** OCE requires our private-sector partners to invest in OCE's program initiatives. For every dollar OCE invests on behalf of the Province, industry invests over twice as much. This leverage increases the funding invested in Ontario's key job creation sectors.

### How does the election of a new government in Ontario affect OCE?

**Michael:** The new government has identified job creation

as a priority and this is the key impetus behind all OCE's program activities. We look forward to learning more about the job creation priorities of the new government and how we can assist it in attracting private-sector investments in support of these priorities.

**Tom:** This is such an exciting time for Ontario and OCE. We are seeing Ontario reap the benefits of the work that OCE has done for the Province over many years to build relationships with industry and position key sectors of our economy to create jobs and compete globally. Made in Ontario: Exported to the World. That is how we think of our work at OCE.

### Thank you from OCE's President and Board Chair

OCE's successes this year are due to the combined efforts of our partners in the province's innovation ecosystem, the confidence of our private and public sector funders and the talent and commitment of the OCE team.

Thanks also to our distinguished volunteer Board of Directors whose guidance has been invaluable.

We are grateful to the Government of Ontario for entrusting us with this important mandate and allowing us to help drive the province's success in building a vibrant and globally competitive job-creation focused innovation system.

Thanks also to the Canadian government and our provincial counterparts for partnering with us to strengthen national job creation efforts.

We are proud to report outcomes from the past year. We invite you to review this record of our performance and join us in celebrating the success of the entrepreneurs, companies, researchers and students profiled in this year's Annual Report.

**Tom Corr**  
President and CEO

**Michael Nobrega**  
Chair, OCE Board of Directors

## Measuring Success Our Performance in Fiscal 2017-18

Invested by OCE in Ontario's innovation ecosystem:

**\$81**  
Million

Cash or in-kind contributions from our partners, the highest in OCE history and a **72 per cent increase** over last year.

**\$177.8**  
Million

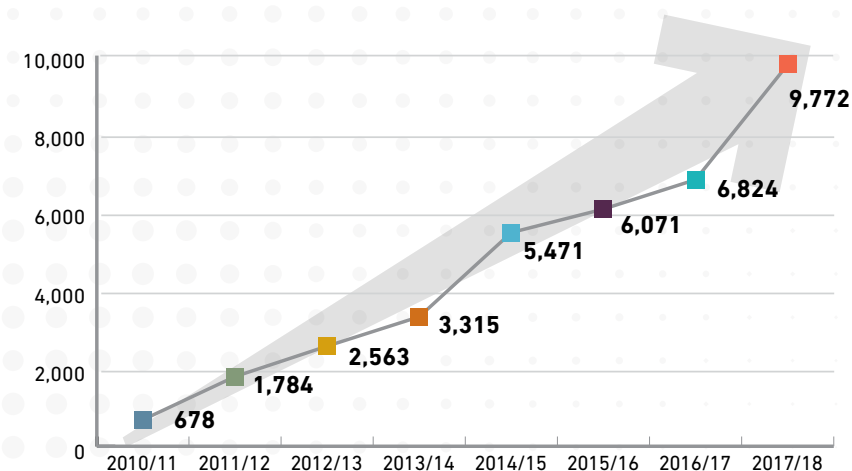
New R&D, commercialization and talent projects funded by OCE:

**930**

In the past five years, OCE has funded projects in **160 communities** across Ontario

New or retained jobs directly attributed to OCE-funded projects, the highest in OCE history and a **43 per cent increase** over last year:

**9,772**  
Jobs



## OCE more than tripled the amount of government funding through leverage

### Funding attracted through public-private partnerships

The leverage attracted by OCE through public-private partnerships beyond direct government funding was more than twice the amount of funding that we delivered on behalf of the Province and federal government. As a result, OCE tripled the amount of our government funding for investment in Ontario.

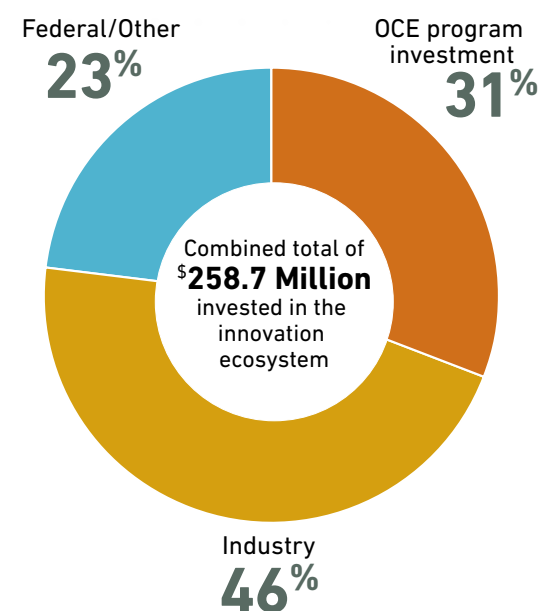
**Start-ups** created or supported directly through OCE seed financing or indirectly through other OCE programs, a **41 per cent increase** over last year.

**2,557**

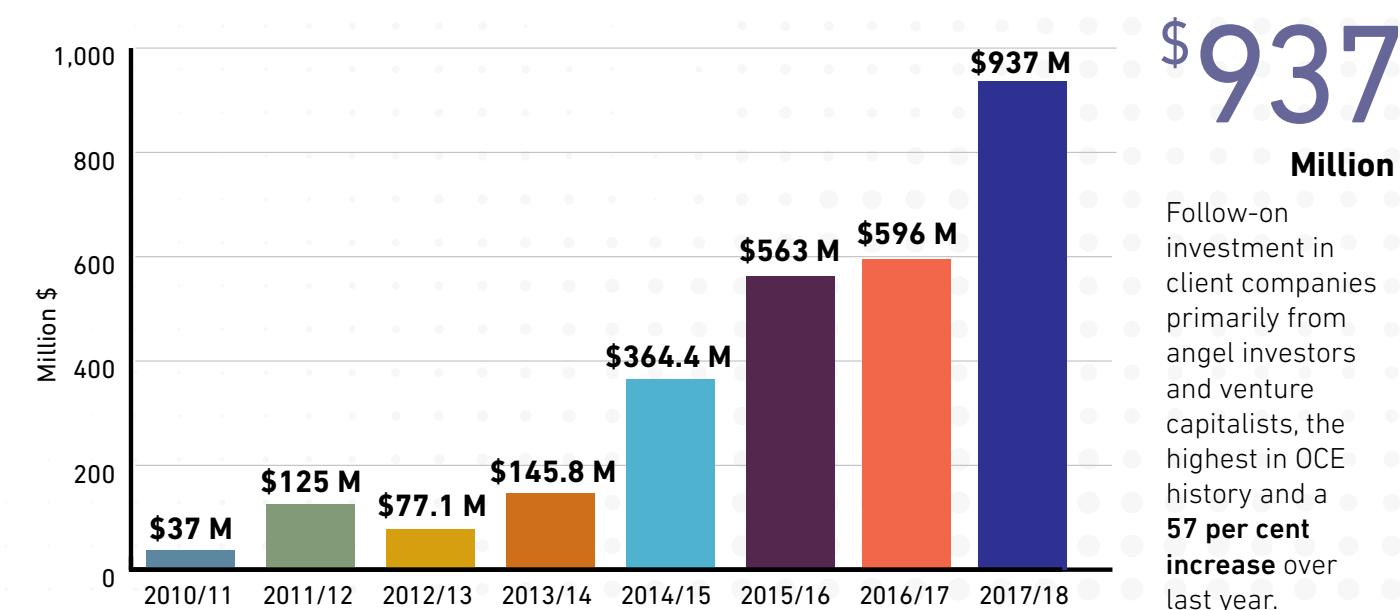
Incremental sales by client companies as a direct result of OCE-funded projects, a **48 per cent increase** over last year:

**\$224**  
Million

Innovation investment OCE has achieved as a result of direct government funding combined with co-investments from industry and other partners, including the federal government.



## Increase in Follow-on Investment from 2010-11 to 2017-18



## Distribution of OCE Investments by Sector

Advanced Health Technologies

**12.3%**

Advanced Manufacturing

**19.8%**

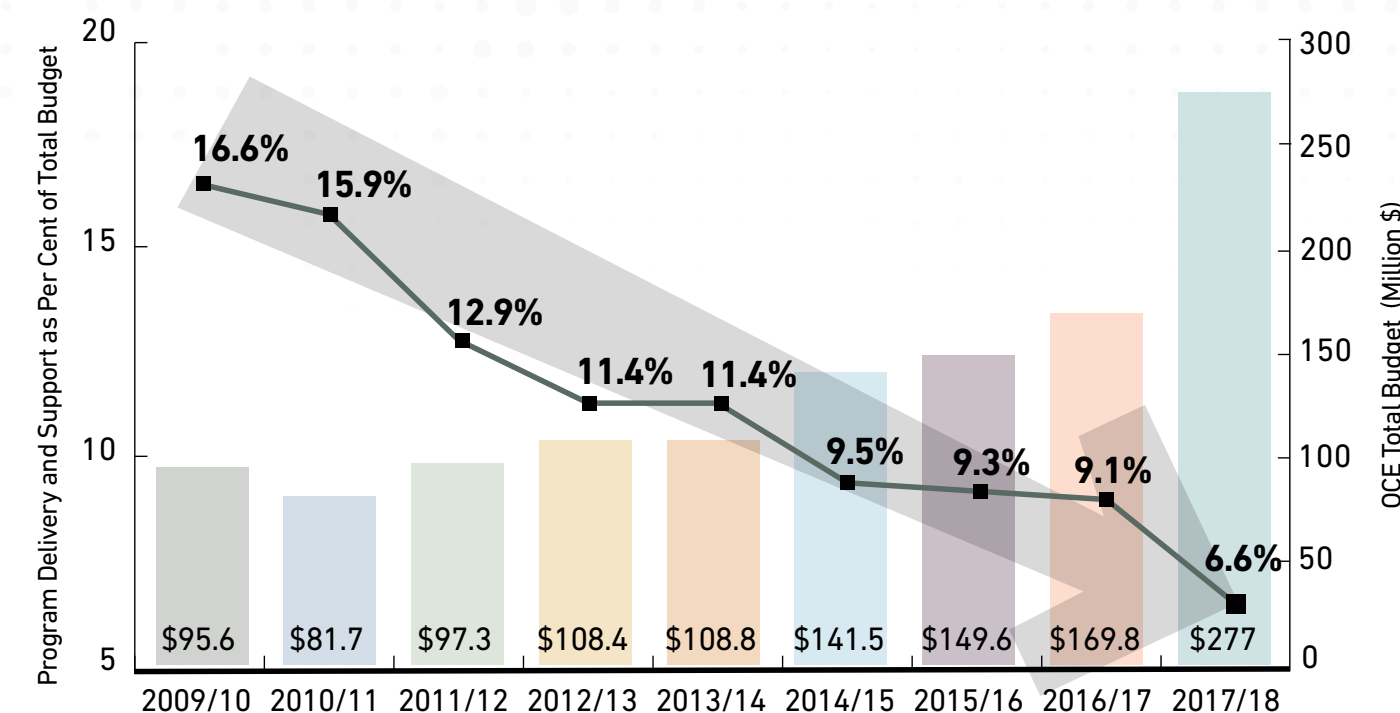
Bio-Economy and Clean Technologies

**44.2%**

Digital Media and ICT

**23.7%**

## Efficiency – OCE Program Delivery

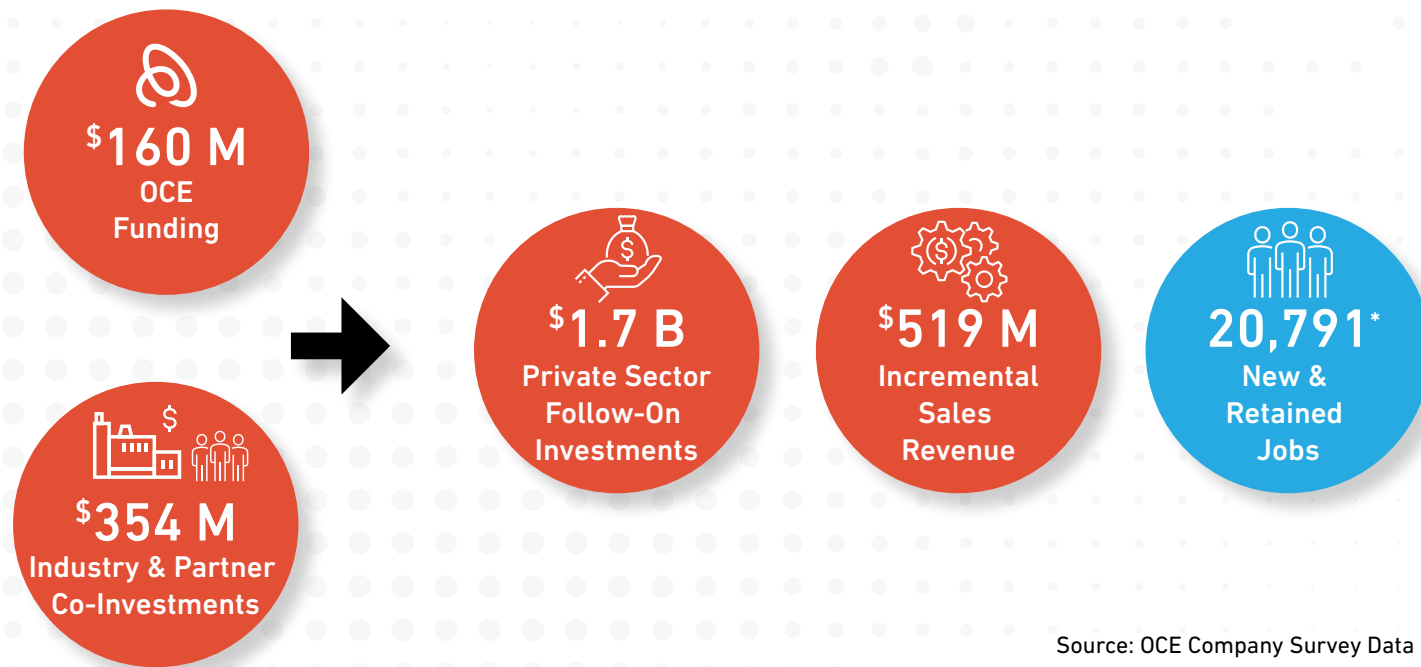


OCE continues to see a decline in its cost of delivering programs as a percentage of total funding deployed (total program, program delivery and matching funding), decreasing from 16.6 per cent in 2009-10 to **6.6 per cent in 2017-18**. Excluding matching funding the cost is **18.3% in fiscal 2017-18**. This outcome is the result of an ongoing commitment to efficiency, attraction of ever increasing industry co-funding, leveraging of our existing organization to deliver new programs and ongoing streamlining measures.



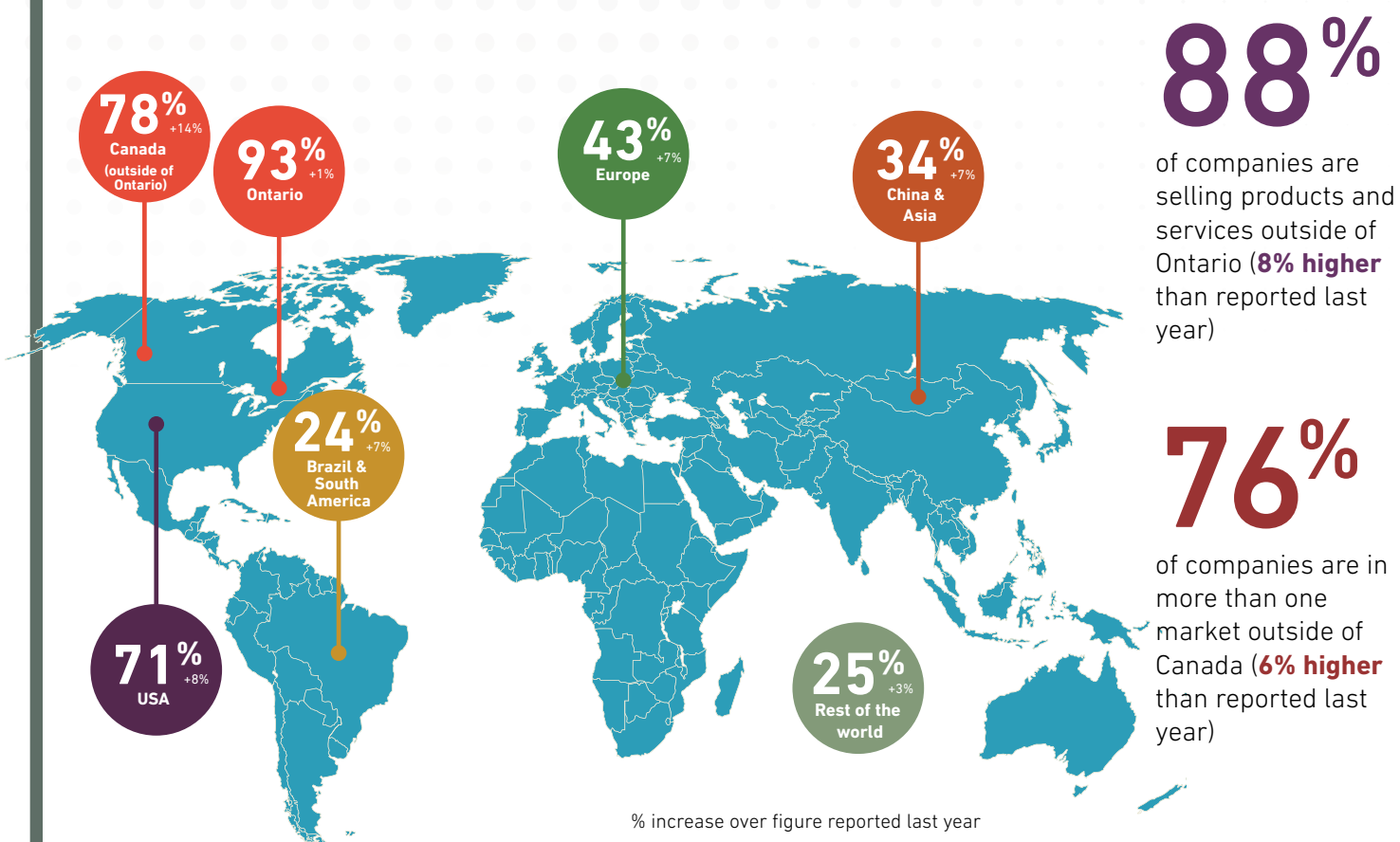
## Impact of OCE Project Investment on Firms' Performance

Across 3,100 projects over four years from 2014-15 to 2017-18



Source: OCE Company Survey Data  
\*Direct jobs resulting from OCE-funded projects

## Global Presence



## OCE-Supported Projects

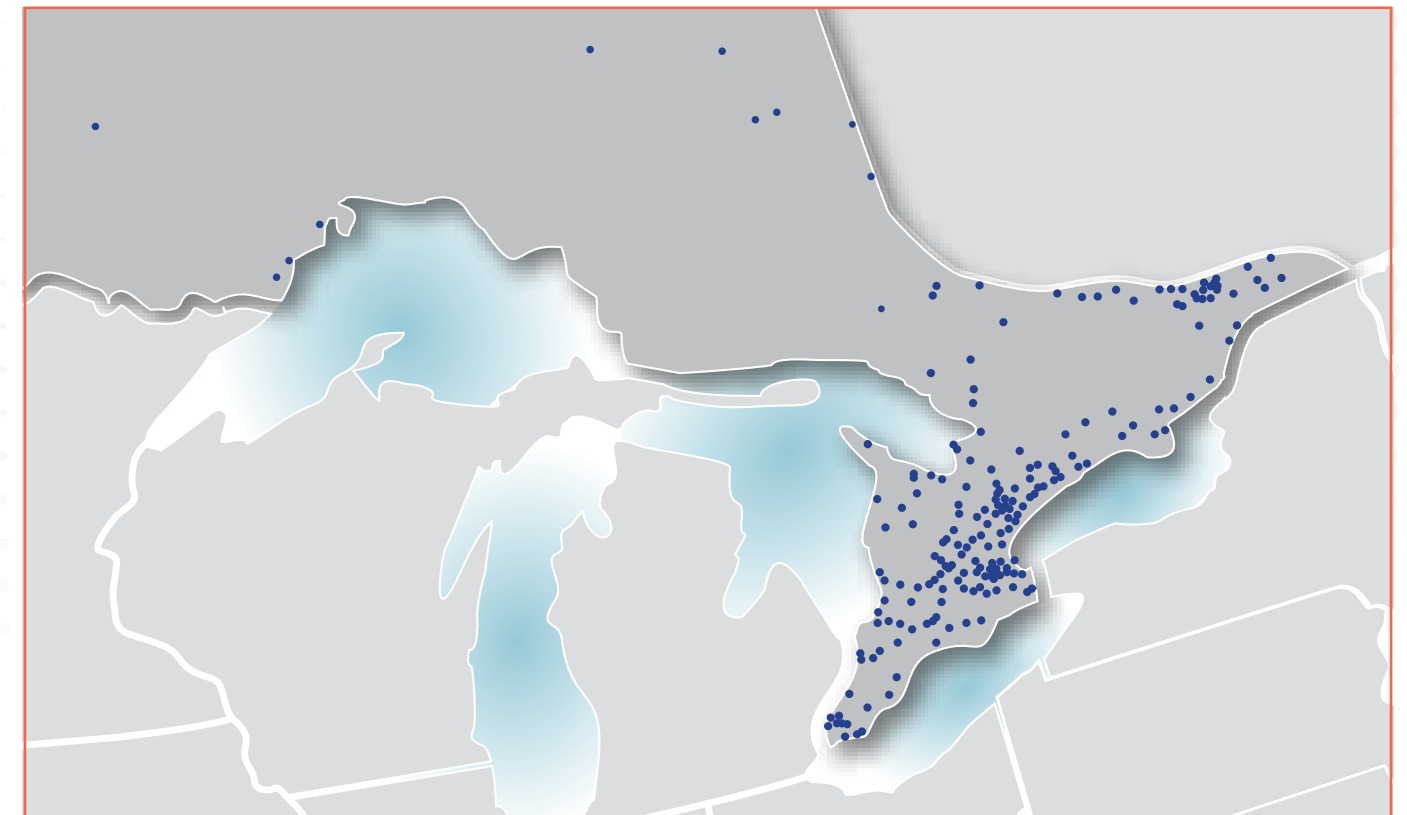
During the past five years, OCE funded projects in 160 communities across Ontario

The *Our Projects* page with its interactive map on OCE's website allows users to search our projects by region, economic sector, company/partner, academic institution, company location and project location. A short description and details related to funding are provided for each project.

This site also provides a view of the distribution of OCE funding by sector, number of projects by

university, college or health institute/research hospital and key metrics related to industry and partner leverage, outcomes such as jobs created and retained and number of award-winning companies.

Also available on the page are full downloads of the complete project listings from April 1, 2013 to March 31, 2018 along with the funding by institution.



### List of communities across Ontario with recipients of OCE-funded projects

- Acton
- Ajax
- Algonquin Park
- Almonte
- Alvinston
- Ancaster
- Arnprior
- Ashburn
- Aurora
- Aylmer
- Bath
- Barrie
- Beamsville
- Belleville
- Bewdley
- Big Trout
- Bleazard Valley
- Bolton
- Bowmanville
- Brampton
- Brantford
- Breslau
- Brossard
- Bruce Mines
- Burlington
- Caledon
- Caledonia
- Cambridge
- Carlsbad
- Carp
- Cayuga
- Chatham-Kent
- Clarkburg
- Cobden
- Cobourg
- Collingwood
- Concord
- Cornwall
- Delhi
- Dorchester
- Dundas
- Durham
- East York
- Eden Mills
- Essex
- Etobicoke
- Fergus
- Flamborough
- Flesherton
- Fort William
- First Nation
- Georgetown
- Gloucester
- Goderich
- Grand Bend
- Gravenhurst
- Greely
- Guelph
- Hamilton
- Hanmer
- Hearst
- Huntsville
- Ingersoll
- Ingleside
- Jordan
- Kanata
- Keswick
- Kingston
- Kingsville
- Kitchener
- LaSalle
- Lively
- Lindsay
- Lion's Head
- London
- Maidstone
- Manilla
- Maple
- Markham
- Midland
- Milton
- Mississauga
- Mitchell
- Mono
- Napanee
- Nepean
- New Hamburg
- New Liskeard
- Newmarket
- Niagara Falls
- Niagara-on-the-Lake
- North Bay
- North York
- Oakville
- Ohsweken
- Oldcastle
- Orangeville
- Orillia
- Orleans
- Oshawa
- Ottawa
- Paris
- Pembroke
- Penetanguishene
- Peterborough
- Petersburg
- Pickering
- Picton
- Plympton-Wyoming
- Port Colborne
- Port Elgin
- Port Perry
- Prescott
- Prince Albert
- Puslinch
- Putnam
- Renfrew County
- Richmond Hill
- Ridgetown
- Rockton
- Rodney
- Sarnia
- Sault Ste. Marie
- Scarborough
- Shuniah
- Sioux Lookout
- Smooth Rock Falls
- Simcoe
- St. Catharines
- St. Marys
- Stayner
- Stittsville
- Stratford
- Sudbury
- Sutton West
- Tecumseh
- Thornhill
- Thorold
- Thunder Bay
- Tilsonburg
- Timmins
- Toronto
- Troy
- Uxbridge
- Val Rita
- Vankleek Hill
- Vaughan
- Wallaceburg
- Wallenstein
- Waterdown
- Waterloo
- Welland
- Wheatley
- Whitby
- Willowdale
- Windsor
- Woodstock
- Woodbridge
- York



Helping Ontario solidify its place as the North American leader in automotive technologies, OCE supports commercialization of best-in-class, Ontario-made solutions and adoption of leading technology, through programs such as ASCIP, to improve competitiveness. Initiatives include:

- In 2004, gaining early entry into the connected and autonomous vehicle (C/AV) space by supporting collaborations between businesses and academic researchers to develop next-generation technologies in driverless and connected vehicles.
- In fiscal 2017-18, approving OCE funding for 34 new projects with Ontario auto parts companies through the Automotive Supplier Competitiveness Improvement Program (ASCIP) to help the sector adopt advanced software, hardware and process training. ASCIP, a partnership with APMA and the Ontario government, resulted in fiscal 2017-18 in 960 jobs being created or retained, and \$57.3 million in incremental sales by ASCIP-supported companies.
- In fiscal 2017-18, launching the Autonomous Vehicle Innovation Network (AVIN), including Canada's first Demonstration Zone in Stratford to test autonomous vehicles in real-life traffic scenarios.
- As part of AVIN, creating six Regional Technology Development Sites across Ontario, each with a unique specialization.
- Investing in Ontarians' talents and skills in the auto industry via our TalentEdge internship program.

## AarKel Tool & Die

### Increasing productivity from design to shop floor

To remain competitive in the auto parts manufacturing industry, AarKel Tool & Die required software that would optimize shop floor data.

With support from the Automotive Supplier Competitiveness Improvement Program (ASCIP), the company adopted new software and hardware that improved productivity in both the design department and on the manufacturing shop floor.

Implementation of the software quickly yielded benefits for the company, as it now has less need for re-work, employees are more adept and productive and there is better uptime on equipment.

"The new software eliminated steps in our process, from engineering to use of the machines," says Larry Delaey, President and CEO of the Wallaceburg-based company. "We can now focus on training our employees to streamline processes so that we're all using one software and not translating the data so many times."

#### ROI

- Created/retained 155 jobs
- 2 new customers
- Incremental sales in Canada: \$100,000
- Incremental international sales: \$4 M



## Eclipse Automation

### Adopting industry-leading software

Eclipse Automation, a Cambridge-based maker of custom automated manufacturing and testing equipment for the automotive and other sectors, has significant expansion underway in 2018.

One of the sparks for Eclipse's latest round of growth was participating in ASCIP.

In the dynamic auto manufacturing industry, which makes up 60 per cent of Eclipse's revenues, the company needed to upgrade

its software to keep up with customer demand. Increasing the company's software capacity with the addition of advanced simulation and robotics programming has been critical.

"The ASCIP project provided our engineering and design teams with the advanced engineering software and training necessary to complete valuable contracts with innovative automotive sector clients, which we would otherwise need to turn away,"



says Steve Mai, President and CEO of Eclipse.

#### ROI

- Created/retained 17 jobs
- 5 new customers
- 20% increase in sales

## Innovative Automation

### Entering a new playing field with process innovation

For two decades, Innovative Automation has introduced software and tools that interfaced with down-stream departments, including purchasing and manufacturing. A national leader in automotive manufacturing processes and robotics solutions, the company turned to ASCIP when it needed to upgrade software to increase engineering efficiency, shorten the design cycle time and increase product quality.

The newly implemented Product Data Management (PDM) software enforces a standard workflow and allows outputs from one department to interface seamlessly with down-stream departments. The software also enables the company to automate the export of drawings both to other departments and customers. What once took hours is now done with a few clicks, increasing departmental efficiency and global competitiveness.

"Having OCE available to support this PDM project has allowed us to jump into a new



playing field and focus on being innovative," says Kim Marshall, the company's Finance and Resource Manager.

#### ROI

- Grown from 55 full-time employees in late 2014 to 125 full-time employees, plus 18 summer students
- Customer demand prompted a 24,000-square-foot addition to company's facility, creating a further 20 full-time jobs in Barrie. By September 2019, company is projected to employ 150 full-time people in Barrie



# Healthcare >

## Improving patient care and increasing efficiency

Recognizing the critical role governments can play as first customers, OCE has been a leader in promoting government procurement.

Delivered by OCE on behalf of the Ontario government:

- The Health Technologies Fund (HTF) supports the development of made-in-Ontario health technologies by accelerating evaluation, procurement and adoption throughout the Ontario health system. Focusing on technologies that deliver better coordinated and integrated care closer to home, HTF has engaged more than 5,000 patients in technology demonstrations, supported 10 start-ups and created or retained 304 jobs.
- REACH helps Ontario health service providers and shared-services organizations identify and procure innovative technologies focused on solving challenges in the healthcare system. In fiscal 2017-18, approximately 100 highly skilled people received training.
- AdvancingHealth supported partnerships between public healthcare providers and companies to pilot innovative solutions to critical system challenges. The program has resulted in 77 product licences, \$33.7 million in follow-on investment and over 110 jobs created or retained.

### AlayaCare

#### Bringing healthcare management home

Hospital visits and readmissions can be time-consuming and arduous, especially for chronically ill patients who require frequent care.

Through the AdvancingHealth program, AlayaCare, in collaboration with Southlake Regional Health Centre and CBI Health Group, uses its technology platform to enable patients to monitor vital signs and remotely complete a clinician-designed daily self-monitoring workflow. This helps patients with one or more chronic conditions to better manage their own care at home and reduce hospital visits and costs.

The technology provides a highly user-friendly interface for patients and clinicians, incorporates video conferencing and uses machine learning algorithms to provide risk scoring for patients on the basis of demographic, diagnostic and biometric data. "This allows clinicians to intervene on a timely basis to reduce preventable hospital visits," says Adrian Schauer, CEO of Toronto-based AlayaCare.

The OCE-supported project allowed AlayaCare to demonstrate how its technology can reduce hospital use by chronically ill patients and helped the company attract more customers for its software.

#### ROI

- Created/retained 60 jobs
- 20 new Canadian customers
- 10 new customers internationally
- Incremental sales in Canada: \$1 M
- Incremental international sales: \$1.5 M
- \$14 M in follow-on investment



### Sioux Lookout Meno Ya Win Health Centre

#### Closing the distance for patients from First Nations communities

Unless properly managed, diabetes can lead to amputations, vision loss, kidney failure and cardiovascular complications. Many people living in remote and rural communities, most notably First Nations communities in Northwestern Ontario, have limited access to healthcare due to travelling distances to hospitals.

"The distance to Sioux Lookout from some of our northernmost communities is like flying to Sioux Lookout from Toronto," says Chris Young, Clinical Informatics Specialist at Sioux Lookout Meno Ya Win Health Centre (SLMHC). "Most communities are fly-in only. You can't even drive here during the spring, summer and fall months."

SLMHC serves about 30,000 people living in 28 First Nations communities and four southern communities and is addressing the challenge



with support from the Health Technologies Fund (HTF).

Together with their technology partner Reliq Health Technologies and their iUGO Care platform, the hospital equips diabetes clients with an easy-to-use digital health solution for remote client monitoring and secure communication among all members of a client's circle of care, including family members and healthcare providers.

Clients can now receive state-of-the-art care in their homes, improving health outcomes, minimizing complications and reducing costs.

### NexJ Health

#### Leveraging Virtual Care

With support from the Health Technologies Fund (HTF), NexJ Health launched a platform that addresses the need for innovative technology solutions for young adults with mental health challenges. The NexJ Connected Wellness platform supports education, collaboration, engagement, intervention and goal-focused coaching, and is accessible via a mobile app, tablet or computer.

Once registered, a client is matched with a peer coach for ongoing support and check-ins and access to educational content and guided therapy.

"Reconnect Community Health Services and Stella's Place, as well as at St. Joseph's Healthcare Hamilton's Youth Wellness Centre, use NexJ Connected Wellness for virtual care and online support for approximately 1,000



young adults," says Gary Baksi, Executive Vice President and General Manager of NexJ Health.

"NexJ Connected Wellness is expected to increase efficiency and enhance the capacity of these organizations to support young adults in Toronto and Hamilton."

This project resulted in the hiring of a project manager at NexJ Health and the addition of several clinical and peer support workers at Stella's Place. The company plans to scale its technology-driven mental health solution to integrated service hubs and other mental healthcare settings provincially and nationally.



# Innovation Procurement: SBIC

## Addressing public sector challenges

The Small Business Innovation Challenge (SBIC) supports the growth of high-potential, technology-driven small- and medium-sized enterprises (SMEs) in the province.

Through SBIC, SMEs are challenged to develop and test innovative solutions for provincial public sector challenges.

The initial round of challenges relate to digital identity and vehicle occupancy detection. The subsequent round of challenges launched in fiscal year 2017-18 relate to detection of drug-impaired drivers and preventing suppression of electronic sales.

The program has already proven successful. While the majority of projects are ongoing, some early outcomes noted in 2017-18 include:

- Development of 23 prototypes and 18 prototypes at demonstration stage
- Ninety-five jobs were created or retained
- More than \$3.7 million in investments attracted by SMEs, mostly from private investors
- Incremental sales of \$750,000 in Canada and globally

### Bluink

#### Averting an identity crisis

Who wouldn't like to be wallet-free?

Bluink's eID-Me app enables users to securely carry identity documents electronically on smartphones. Through back-end verification, the app easily adds new cards and issues a certificate-based identity to the phone. Users can log into government and commercial websites without a password, prove their identity in medical clinics and age-restricted stores and potentially eliminate the need to attend Service Ontario centres.

With support from SBIC, Ottawa-based Bluink is demonstrating strong identity proofing, user control over identity information and secure logins in one place, while maintaining compatibility with identity systems and cards that are being used today.

"This meets a current need in the market, where governments, banks and companies are seeking solutions to solve the omni-channel identity problem," says Bluink CEO Steve Borza. "Having the right technology at the right time makes us excited for our future growth and prospects."

With the success of the eID-Me app, Bluink has grown and sparked partnership interest from some larger Ontario and international companies.

Bluink will continue the development and commercialization of the system into the next year. It is now focused on building a complete solution that fills the gap for e-identity.

#### ROI

- Added 5 new employees



### Highlights of some SBIC-awarded projects

#### Vehicle Occupancy Detection

Challenge: As high-occupancy toll (HOT) lanes are implemented in Ontario and abroad, there is a growing need for an enforceable means of determining if a vehicle in a specific lane should be fined based on the number of people in the vehicle.

##### Invision AI – Toronto

Invision AI is integrating object detection software within roadside systems using commercial Multiband Infrared (IR) Cameras. It will be able to detect a vehicle and count its occupants in various conditions, which will streamline toll collection and enforcement for HOT lanes, reduce costs and benefit all road users.

##### Miovision – Kitchener

Miovision is testing a smartphone-based solution that automatically detects vehicle occupants using the company's state-of-the-art computer vision algorithm. This solution will result in lower infrastructure investments and offer superior occupant detection.

##### The Sky Guys – Oakville

The Sky Guys' Aerial Sensor Fusion and Smart Analytics (ASFSA) platform combines drones, advanced sensors and deep learning AI to further the vision of maximizing highway efficiency. With ASFSA, they look to tackle the problem of accurate vehicle occupancy detection on HOV/HOT lanes across Ontario.

##### TWG – Toronto

TWG is creating a solution that provides real-time occupancy data that augments or replaces the need for external hardware such as traffic cameras. Through an in-car solution, the company will make it possible to collect vehicle occupancy density data on highways and roadways to better understand movement and inform future traffic initiatives.

#### Digital Identity

Challenge: Recognizing the critical role that digital identity can play in enabling the digital economy across different sectors, the Ontario government requires a cost-effective way for Ontarians to prove who they are when interacting with government that is secure, user-friendly and protects privacy.

##### 2Keys – Ottawa/Toronto

2Keys is developing its leading open-standards digital identity platform to be used as a prototype. This platform will provide the choice and flexibility needed for market adoption as a trusted method for delivering digital services to Ontarians and others across Canada. 2Keys is partnering with Interac Corp.

##### Bluink – Ottawa

Bluink's eID-Me is a secure digital identity carried on user smartphones that allows Ontarians to strongly prove their identity for online services and allows face-to-face uses. The technology can also be used as an electronic alternative to the Ontario Driver's Licence and Ontario Health Insurance Photo cards (see full story page 12).

##### IDENTOS – Toronto

IDENTOS is demonstrating the Convenient Citizen Private Identity Network (CCPIN), which builds on its existing Public Key Infrastructure (PKI) technology and includes a selection of secure and convenient mechanisms for citizen authentication and credentials from an existing trusted identity provider on the network.

##### Mavennet – Toronto

Mavennet is using a blockchain-based solution to help the public sector solve the major pain point of digital personal identities. The system will enable the public sector to build a cost-effective digital ecosystem that improves governance and operational efficiency.

##### Simeio Solutions Canada Inc. – Toronto

Simeio is using its Trusted Digital Identity Platform, which will provide an end-to-end Identity & Access Management solution for digital identity proofing. This will offer identity assurance in a privacy-enhancing manner and enable ease of use while maintaining security controls.



**H**undreds of Ontario manufacturing companies seeking to innovate have taken advantage of the opportunity to collaborate with Ontario's universities, colleges and research institutes. OCE's flagship Collaboration Voucher Program (CVP), offered on behalf of the Ontario government, provides easy access to the province's post-secondary institutions to address industry challenges and improve productivity and competitiveness.

During fiscal 2017-2018, the CVP supported 132 start-ups, created or retained more than 1,310 jobs and trained more than 1,200 people in high-skilled positions.

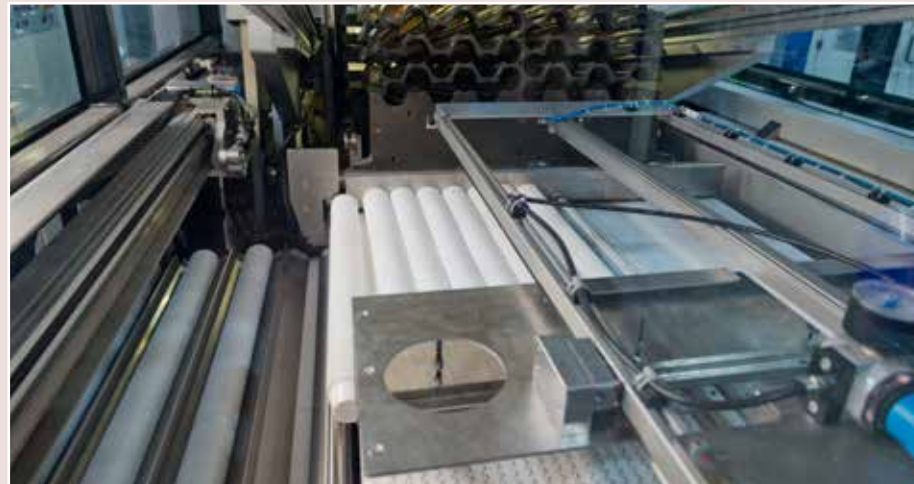
Recognizing the importance of exports to Ontario's manufacturing sector, OCE supports companies in seeking global markets, including through program partnerships with China and Israel.

OCE has also formed strong partnerships at home with industry leaders to develop and commercialize leading-edge products and boost Ontario's global competitiveness. These partners include Canadian Manufacturers & Exporters, Ontario Aerospace Council, Consortium for Aerospace Research and Innovation in Canada and the Centre for Excellence in Mining Innovation.

To address the sector's urgent need for high-skilled workers, OCE's TalentEdge program places student interns and postdoctoral graduates in industry settings to gain real-world job experience.

## E. Hofmann Plastics

Making your morning joe a sustainable brew



When single-serve coffee pods first hit the market, they were hailed as the ultimate convenience. Once consumers realized they weren't recyclable, they demanded better.

That's where Orangeville-based E. Hofmann Plastics came in. The company produces rigid packaging for the food industry.

Working with the Centre for Advanced Polymer Processing and Design at McMaster University, the company initiated a project using a Voucher for Innovation and Productivity (VIP) through OCE to develop compostable bioplastic-based material containing natural fillers.

The company used different materials such as agricultural fibers, including coffee bean shells and discovered them to be an ideal filler, making use of biowaste from another food process to manufacture a sustainable coffee pod.

The six-month project included small-scale exploratory batch trials for producing gram quantities of test materials. Next, scaled-up trials produced kilogram quantities of the best materials where prepared coffee cups were tested at both the university and company for suitability. They are transferring the technology through on-site trials at facilities where packaging parts are made and tested.

The novel material not only responded to market demand for cleaner coffee pods but also broadened Hofmann's customer base while building its identity as a leader in bio-compostable packaging.

### ROI

- Created/retained 21 jobs
- 3 new customers (2 international)
- \$400,000 follow-on investment

## FreePoint Technologies Inc.

Connecting machines and people

FreePoint Technologies Inc. enables manufacturers to connect existing manufacturing equipment to a cloud-based data collection and analytics system quickly and cost-effectively – without modifying their machines or their IT infrastructure. It also helps better engage employees by allowing them to see how their work impacts others who are relying on their efforts.

Through a Voucher for Innovation and Productivity (VIP) project, OCE supported a collaboration between London-based FreePoint and Fanshawe College to deploy real-time data collection for measuring

equipment efficiency. That initiative, with additional support from NSERC, spurred the company's early growth, leading OCE to further invest through its Market Readiness Company Building (MRCB) program. OCE's investment and other private-sector investment led to more growth and the hiring of key people while attracting additional follow-on investment.

"OCE's contribution goes beyond dollars and cents. The advice and guidance OCE offered was equally valuable," says Paul Hogendoorn,



FreePoint President and co-founder. FreePoint now has more than 1,000 machines connected in more than 70 plants around the world.

### ROI

- Follow-on investment of \$950,000
- Created/retained 21 jobs
- Expecting continued revenue growth to \$3.5 M in 2019 and \$5 to \$6 M in 2020



## Eurospec Tooling

Using white light to scan future growth

The solution involved adopting a compact and portable white light scanning system, which performs a 3D scan of the stamping

die and the stamped part itself. The 3D scanned image is then compared to the one provided by the customer, with adjustments being made in real time. Capturing 4.2 million data points within 20 milliseconds per exposure, the technology dramatically reduces the time and operating cost to produce high-quality images and, ultimately, produces better dies for auto parts and tools.

To remain globally competitive, Newmarket-based Eurospec Tooling needed to upgrade its tool and die testing process. Its existing process was time-consuming and often needed to be repeated in multiple trials. With the goal of expediting the die design and development process, the company participated in the Automotive Supplier Competitiveness Improvement Program (ASCIP).

die and the stamped part itself. The 3D scanned image is then compared to the one provided by the customer, with adjustments being made in real time. Capturing 4.2 million data points within 20 milliseconds per exposure, the technology dramatically reduces the time and operating cost to produce high-quality images and, ultimately, produces better dies for auto parts and tools.

"It allows us to improve our product quality and broaden our horizon in the automotive world," says Pius Ng, Engineering Manager for Eurospec.

### ROI

- Created/retained 22 jobs
- Expects 15% growth in the next two years
- 5 to 8 potential new jobs in Newmarket
- Developing an advanced skill set in its workforce
- \$1.2 M in incremental international sales



# Cleantech

On behalf of the Government of Ontario, OCE is supporting cleantech projects that are good for the environment and the economy.

This includes the following companies/partnerships:

- McPherson Transfer Ltd./St Marys Cement
- Pond Technologies, Stelco, SNC-Lavalin
- General Motors of Canada/Integrated Gas Recovery Services, Walker Environmental, Alectra Utilities
- Resolute Forest Products, Thermal Energy International
- Lafarge Canada
- Goldcorp
- Ontario Clean Water Agency/ Suez Water Technologies & Solutions, City of Stratford
- Stelco, Walker Environmental
- Terrestrial Energy
- QD Solar
- CHAR Technologies
- McMaster University/ Sevcon Canada
- University of Toronto/ eCAMION
- McMaster University/ Carleton University/ Hamilton Utilities/ GridSmartCity/ S2E Technologies/ GeoSource Energy/ Siemens Canada
- University of Toronto/ EllisDon/BASF Canada/ WSP Canada

## Goldcorp

### Electrifying the future of mining in Ontario

Diesel-powered vehicles account for more than 70 per cent of total emissions in a typical underground mine. A project supported by OCE aims to eliminate those emissions by building a mine with a Battery Electric Vehicle (BEV) fleet of equipment. Located in Chapleau, Goldcorp's all-electric Borden Gold project is a first in Canada and could be a game-changer for mines worldwide.

While battery-powered electric mining equipment is more energy-efficient and reduces the cost of ventilation needed to ensure clean air, it can be up to 30 per cent more expensive. Also, the risk of adopting early-stage technology has deterred industry at large from electrifying trucks and other machinery.

Support from the TargetGHG Industrial Demonstration Program helped Goldcorp become an early adopter. "This kind of support incentivizes investment in cleaner technologies and mitigates the risk of doing so," says John Mullally, Goldcorp's VP of Corporate Affairs and Energy. Sandvik, a Swedish-Finnish mining engineering group, will develop a 40-tonne electric haul truck for this project and will also deliver scoops and drills, while Collingwood-based MacLean Engineering will deliver other ancillary vehicles.

The mine will result in the reduction of 81,000 tonnes of industrial emissions in Ontario by 2030.

#### ROI

- Created/retained 70 jobs
- Project expects to create an additional 200 full-time, highly skilled jobs in the Chapleau region, west of Timmins
- Goldcorp will provide training and jobs for local First Nations communities



# Combatting pollution with innovative technologies

## Lafarge Canada

### Replacing fossil fuels

Lafarge Canada, the country's largest producer of diversified construction materials, including cement, is replacing fossil fuels with locally produced, lower-carbon fuels.

As part of a larger, overall carbon reduction emissions project at the company's Bath plant near Kingston, Lafarge is reducing moisture in low-carbon fuel supplies and modifying the combustion location in the main kiln burner to reduce nitric oxide generation. With a Voucher for Innovation and Productivity (VIP), Lafarge and Queen's University researchers developed a handheld prototype to efficiently measure moisture in low-carbon fuel supplies, enabling the plant to identify the best drying technique for a given material. The project also ran a computational fluid dynamic model of the flame in the kiln burner to determine the prime location to inject the fuel and whether changing



technical parameters helps maximize reduction of air pollution.

"We're on the cusp of going commercial, and this new approach could rapidly advance to Lafarge's plants across Canada," says Robert Cumming, Environment Director at Lafarge Canada.

Along with the development of the prototype, the project led to a testing standard for determining drying techniques for each class of low-carbon fuels and a better understanding of the complex combustion of various fuels.

## St Marys Cement/McPherson Transfer Ltd.

### A concrete solution for an energy-efficient future

A demonstration project delivered by OCE has paved a way to turn waste into energy for the cement industry.

St Marys Cement, a leading cement producer in Ontario that operates as part of Votorantim Cimentos, produces nearly two million tonnes of cement annually at its manufacturing facility in Bowmanville.

With support from the TargetGHG program, St Marys partnered with Ontario-based waste transfer company McPherson Transfer Ltd. to reduce fossil fuel consumption at the plant while lowering emissions.

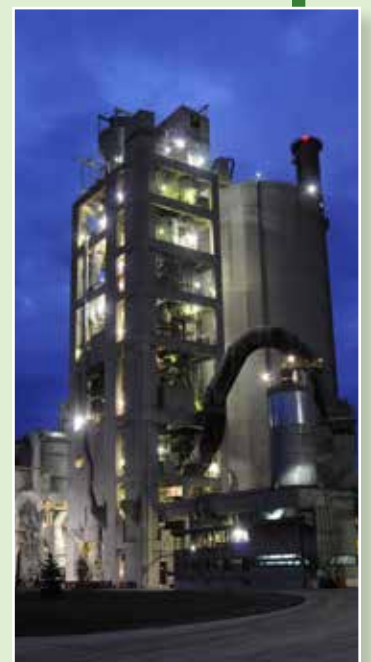
Construction and demolition wood destined for landfills is broken into fragments to generate low-carbon fuels that will replace four per cent of fossil fuels used by the plant.

McPherson will source incoming waste materials and prepare, store and transport low-carbon fuels to the St Marys facility.

"This kind of project produces the traction that the province needs to make a difference in a big way," says Marc Vermeire, the company's Director of Engineering and Capital Expenditures.

The project is expected to divert up to 40,000 tonnes of waste annually from landfills and cut emissions by about 2.6 million tonnes over 10 years.

St Marys plans to boost substitution rates to up to 30 per cent in the future.





**W**ith the tremendous growth of the digital economy, OCE invests a significant amount of its funding – currently close to 24 per cent – in the communications and digital media sector.

For more than six years, OCE has worked with the Ontario government and IBM to ensure small- and medium-sized businesses (SMEs) get access to the advanced computing and global supply chains that can help them scale their businesses.

Through the combined efforts of the Province, OCE, IBM and SOSCIP (Southern Ontario Smart Computing Innovation Platform), Ontario companies are now being offered an integrated suite of globally disruptive, advanced computing technology infrastructure and programming. This includes artificial intelligence and leading cloud and cognitive technologies, including IBM's Watson platform. Program streams focus on customer demonstration, data analytics internships and post-doctoral fellowships through the SOSCIP Research Consortium.

Six co-located innovation locations across Ontario have opened to support this program.

## P&P Optica

### Smart detection of food flaws

Food producers face three main challenges when ensuring quality and safety: minimizing risk of contamination for consumers and company partners; differentiating between high- and low-quality food to accurately grade and price product; and improving the sorting process by determining quality to reduce food waste.

Approximately one third of the world's food products don't make it from the farm to the dining table, partly due to foreign object contamination and poor sorting practices.

Waterloo-based scale-up P&P Optica has developed a new approach for objectively and efficiently assessing the quality of food products. Unlike

current methods that can miss irregularities or alien objects because of detection limitations, P&P Optica's Smart Imaging System detects many types of foreign materials in food through hyperspectral imaging and can determine quality by using AI and machine learning techniques to analyze the chemical composition of food at processing speeds on production lines.

Supported through an OCE-managed IBM Customer Demonstration Project, P&P Optica partnered with Maple Leaf Foods to demonstrate the capability of the technology, in-line and in real time, at a Maple Leaf facility. This allowed the company access to IBM's cloud infrastructure to assist with the management of their own data collection system.

"Knowing that our technology is making a difference in the world is important to me. Food waste and food safety are global problems and to provide a solution that can help address these issues is inspiring to the PPO team," says Olga Pawluczyk, CEO of P&P Optica.

#### ROI

- Created/retained 39 jobs
- Raised \$3.1 M in follow-on investment to advance the development and deployment of the company's Smart Imaging System
- Developed 3 prototypes and launched one



## DOZR

### Creating an equipment rental market

Some contractors experience dry periods when equipment is idle, while others who need to rent equipment spend valuable time searching for it and pay a high price to big rental companies.

Seeing his own landscaping equipment sitting unused during the winter, Kevin Forestell and his co-founders Erin Stephenson and Tim Forestell developed a platform to connect contractors. Their start-up, DOZR, is an online marketplace for rental of heavy equipment that lets contractors earn additional revenue from their available equipment or find equipment for rent at lower than normal market rates.

Able to quickly navigate the

network of rental partners, DOZR does the search work for the client and finds the contractor with the best rental package. Utilizing artificial intelligence (AI), the company has developed data acquisition strategies and AI-powered products to drive continued growth in the equipment sharing industry.

Supported through SmartStart in 2017, DOZR expanded its user base to more than 3,000 companies and launched the platform into three new regions, including the U.S. The company also established itself as North America's trusted source for heavy equipment rentals.

"Working with OCE gave DOZR the opportunity to create jobs in Ontario and advance our

business and technology," says Erin Stephenson. "OCE's support enabled the company to work faster and more efficiently to advance the economy and efficiencies in the industry through technology and innovation."

The company's focus is now on improving customer experience and developing strategic partnerships.

#### ROI

- Added 15 new employees
- Raised \$2.5 M in follow-on investment
- Expanding team with sales, marketing, product and engineering staff



## Metrolinx/Cord3 Innovation

### Shoring up security against costly data breaches

Metrolinx, an Ontario crown agency serving over 13 million passenger trips a year, urgently needed a technology partner that could help them avoid a data breach.

With support from Ontario's Cybersecurity Fintech Innovation Pilot Program (CFIPP), managed by OCE and Toronto Financial Services Alliance (TFSA), Metrolinx partnered with Ottawa-based Cord3 Innovation. The company's UNITY security platform helps organizations secure information for users and customers through

easy-to-use features. Metrolinx, for example, was able to integrate its existing user authentication system so riders don't need separate credentials to protect their information. Cord3's technology also ensures that only authorized users can access encrypted documents.

As part of this demonstration project, Cord3 will implement the UNITY platform for mobile devices to fully protect Metrolinx's sensitive information. This represents the first time the UNITY platform has been



commercially installed on a large scale.

"The project is accelerating Cord3's growth, creating high-quality jobs and acting as a case study for future clients," says Kevin Carroll, the company's VP of Client Engagement.

#### ROI

- Created/retained 25 jobs
- 1 product developed
- 3 patents filed



The burgeoning ag-tech sector is seen to hold solutions for many of the world's urgent challenges: a growing population, quality and supply of water and harmful emissions associated with food waste.

Over the years, OCE has supported a range of ag-tech projects. These include production of biomass wood pellets from Ontario forests as a renewable source of energy; development of quinoa varieties conducive to Ontario's climate and soil conditions; creation of special LED greenhouse conditions for growing vegetables all year round in some of Canada's harshest climates and other extreme climates; green roof technology; and development of agricultural mulch film that reduces the need for water, pesticides and fumigants in growing a wide variety of grain and vegetable crops while also reducing farming costs.

### Mori Essex Nurseries

#### Harvesting a bushel of benefits for the apple rootstock production industry in Ontario

Apples don't fall far from trees or grow far from the rootstock — a stem with an established root system that is required to produce fruit crops by grafting on a bud from another apple plant. Selecting the right rootstock will ensure adaptation to specific environments. However, Ontario apple growers must import rootstocks from international producers, leading to delays in production, inconsistent plant growth, trees that are ill-suited to local climates and unpredictable costs due to currency fluctuations.

The University of Guelph's Gosling Research Institute for Plant Preservation (GRIPP) partnered with Mori Essex Nurseries, now managed by Upper Canada Growers and Harster Greenhouses, to cultivate a domestic supply of apple rootstocks on a commercial scale, with support from Ontario's Voucher for Innovation and Productivity (VIP) program, managed by OCE.

Building on the success of an earlier VIP project, GRIPP researchers used plant tissue culture to propagate rootstocks suitable for Ontario's climate. GRIPP's researcher Dr. Mukund Shukla worked with staff at Harster Greenhouses to create a protocol for Harster's commercial-scale tissue culture facility. The mass-produced rootstocks were then field-tested at Mori Essex's sites in Harrow, Ontario. Apple growers can now buy locally produced rootstocks at a lower cost, with millions of dollars remaining in the province. "Money invested by OCE has really returned the value," says GRIPP Director Dr. Praveen Saxena. "This could signal the beginning of a domestic industry in Ontario, not just for apple crops but also for other fruits."

#### ROI

- Created/retained 25 jobs
- Incremental sales in Canada \$4 M
- 5 new customers in Canada
- \$1 million follow-on investment



### Ferrero Canada

#### Cultivating a new crop for Ontario

Growing hazelnuts locally has become a new opportunity for Ontario but ensuring the ideal conditions for the plants to flourish poses a significant challenge.

Researchers from the University of Guelph have teamed up with Ferrero Canada, the manufacturer of Ferrero Rocher chocolates and Nutella spread, to solve challenges facing the expansion of hazelnut plantations in Southwestern Ontario. With a Voucher for Innovation and Productivity, Dr. Praveen Saxena and his team are exploring aspects of hazelnut cultivation in two different projects. One project focuses on identifying specific locations in the province

that provide the best environment for different hazelnut cultivars to thrive, as the production is significantly impacted by environmental factors. The other aims at scaling existing bioreactor technologies developed at the University of Guelph for the mass propagation of plants and evaluating the ability to distribute the cultivars most suitable for Ontario's climate.

With the projects currently underway, project researchers are uncovering important data that are providing valuable insights. In an integrative plant production system developed from previous projects, plants are produced through multiplication of shoot

meristems in a controlled growth environment. Further work done by the team at the University of Guelph will improve the production technology and advance it to the point that it can be adapted and shared with Ontario farmers, who can then grow and sell to Ferrero Canada providing a local supply of hazelnuts.

Using locally grown hazelnuts to replace imports will give Ontario farmers an opportunity to diversify and create more job opportunities while at the same time providing additional benefits for local equipment suppliers and service businesses. There may also be an opportunity to use hazelnut shells in the manufacture of other products.





# Artificial Intelligence >

Many Ontario entrepreneurs are inspired by the possibilities of artificial intelligence, a breakthrough that will profoundly shape our future.

OCE has supported a range of AI companies including Meta, which uses AI to monitor and map the universe of scientific information; WinterLight, which is commercializing AI technology that can diagnose and track cognitive and mental conditions; Fintos, which uses AI to match finance professionals with employment opportunities; and Ametros Learning, which creates and delivers online simulations and modules that enable students headed for fields such as medicine, law or engineering to learn through realistic simulations involving artificially intelligent characters.

## Plum

### Finding plum employees through new predictive hiring process

Plum allows a hiring manager to see into the future. Its software-as-a-service (SaaS) predicts whether a job candidate will succeed by assessing work ethic as well as ability to innovate, contribute to culture and more. Based in Kitchener, Plum combines cutting-edge organizational psychology with proprietary algorithms to deliver a highly advanced, scientific psychometric assessment that gives companies unprecedented predictive capabilities about applicants.

The scalable and cost-effective cloud-based hiring solution works independently or within an employer's existing system, removing bias and emphasizing talent, experience and merit.

OCE's Market Readiness Company Building (MRCB) program helped the company further its early-stage commercialization and scale the business.

Plum was able to launch a new website and the fourth version of its SaaS platform "Ultraviolet," with a major differentiator that allows employers to also determine how applicants match other roles in the company.

"With OCE's investment and a larger team, we were able to meet milestones and enterprise security needs," says Caitlin MacGregor, CEO and co-founder of Plum. This enabled Plum to keep growing and enter a \$500,000 partnership with the University of Waterloo to help it place 20,000 co-op students per year.

#### ROI

- Created/retained 6 jobs
- Follow-on investment: \$3.8 M



# Unlocking the potential of AI

## Ecopia

### Converting images of earth to glean precise insights

Millions of geospatial images are captured every day by satellites, airplanes, drones and other vehicles. Extracting useful insights from the flood of pixels is an extremely time-consuming and costly endeavour, making geospatial data analysis largely inaccessible for those who need it most.

Waterloo-based Ecopia is an industry-leading artificial intelligence (AI) company that specializes in extracting insights from geospatial big data. Ecopia's intelligent proprietary systems leverage groundbreaking advancements in machine learning to convert high-resolution imagery of earth into HD maps. Ecopia

has experience applying its technology to extract HD maps from satellite imagery, aerial orthoimagery, aerial oblique imagery and street-view imagery. Ecopia provides actionable insights for observing, analyzing and monitoring business processes like urban planning and asset monitoring for industries such as energy, insurance, real estate, telecom and location-based services.

Ecopia is a graduate of Waterloo's Accelerator Centre, supported by Ontario's Campus-Linked Accelerators Program delivered by OCE. With support from SmartStart, another OCE program, Ecopia was able to formalize

business practices, develop strategic partnerships and get its technology ready for market adoption. With further funding from the related Market Readiness Customer Creation (MRCC) program, the company continued to develop its product and increase its customer base.

Ecopia currently employs 25 people in Ontario. Its suite of products is being used internationally.

#### ROI

- Created/retained 17 jobs
- 3 new Canadian customers and 2 new international customers





OCE is a key partner to government, industry and academia in helping to develop the next generation of talent to meet the needs of industry now and in the future. This includes providing Ontario students and recent graduates with real-world job experience and the entrepreneurship training and support to launch their own companies.



### TalentEdge

The TalentEdge Internship and Fellowship program exposes Ontario students and recent graduates to industry challenges and job prospects and gives

partnering companies access to leading-edge knowledge and expertise. Since 2016, the program, managed by OCE on behalf of the Province, has expanded to include sector and

technology-specific internships and fellowships in the areas of smart computing, data analytics, cybersecurity, and connected and autonomous vehicles.

#### TalentEdge outcomes in fiscal 2017-18:

Supported  
**339**  
internships  
**122**  
fellowships

**198**  
interns and fellows  
were hired by  
participating  
companies

**946**  
Jobs created  
or retained

**\$21.9 M**  
in incremental sales  
resulting from the  
work performed by  
TalentEdge interns and  
fellows

### SmartStart

With provincial and federal funding, SmartStart helps businesses transition from product development to new market entry and company building capacity. Training

and development are vital components of SmartStart. Through courses, advisory services, sector-specific training, conferences and workshops, the program

has assisted hundreds of entrepreneurs navigate complex and often difficult business waters.

#### SmartStart outcomes in fiscal 2017-18:

New  
Start-ups  
supported  
**71**

**1,028**  
Jobs created  
or retained

Trained  
**389**  
highly  
qualified  
personnel

Follow-on  
investment  
**\$30.8 M**

Sales revenue  
from start-ups  
**\$10.5 M**

Products  
launched  
**180**  
Services  
launched  
**112**

### MindBridge Ai

#### Engineering student finds a bridge to the real world

A company with the world's first audit tool based on artificial intelligence found some valuable help in developing its product from a PhD student at Carleton University.

Artificial intelligence (AI) isn't just about robots and other forms of fantastical technology. It can, in fact, be implemented in a field that still often relies on traditional tools and dated methodologies. Enter MindBridge Ai and its groundbreaking new program the MindBridge Ai Auditor.

The Ai Auditor empowers people to make more effective and informed decisions by leveraging AI to uncover anomalies in financial data. The company's first target market was the auditing industry.

For help in achieving its goals, MindBridge turned to OCE's TalentEdge Fellowship Program, which supports Ontario-based PhD graduates and postdoctoral fellows to work on industry-driven research and development projects.

Newly graduated with a doctorate in electrical and computing engineering, Robert Peace climbed on board at MindBridge through the fellowship program. Now he is a lead data scientist in charge of a small team of developers who are building and tuning MindBridge's big data analytics stack.

"Rob contributed to our effort to create this technology, which enabled us to be the leading company in the field with more than 160 customers around the world," says Eli Fathi, CEO of MindBridge. "His contribution was very valuable to get us to where we wanted to go."

"Seeing MindBridge grow from an early-stage start-up to a successful, revenue-generating company has been a true learning experience," says Peace.

MindBridge plans to keep working with universities and colleges to grow the AI ecosystem in Canada. The company recently closed its Series A round of financing, which resulted in \$13 million being raised to date.

#### ROI

- Over 30 new jobs created during the course of program participation
- Over 120 customers secured
- Generated \$1 M in sales, with 85% outside of Canada



### Campus Linked Accelerators (CLA)

#### On-Campus Entrepreneurship Activities (OCEA)

Ontario's on-campus entrepreneurship programs, administered by OCE, support post-secondary institutions

in creating a culture of entrepreneurship among students and youth in their regions and provide coaching

and mentorship to students in Ontario's colleges and universities.

#### CLA/OCEA outcomes since 2014:

Start-ups  
supported  
**6,000 +**

Follow-on  
investment nearly  
**\$500 M**

Sales revenue  
from start-ups nearly  
**\$200 M**

Total jobs  
created  
**9,000 +**



## Investing in a connected and competitive Ontario

Eyeing global markets and job creation at home, Ontario is establishing high-impact technology platforms – the underlying digital framework for the province's economy of the future.

### ENCQOR: Building a digital super highway in Ontario and Quebec

In March 2018, Ontario launched ENCQOR, laying a path to establish the first Canadian pre-commercial corridor of 5G digital infrastructure and making the digital economy a reality.

ENCQOR (Evolution of Networked Services through a Corridor in Quebec and Ontario for Research and Innovation) is developing a world-class collaborative platform, assembling a vast network of SMEs, industry, government, researchers and academia in Ontario and Quebec.

ENCQOR's cutting-edge platforms will enable entrepreneurs and SMEs to develop and export breakthrough products and services in areas such as smart cities, e-health, connected and

autonomous vehicles, fintech, cybersecurity and the Internet of Things (IoT).

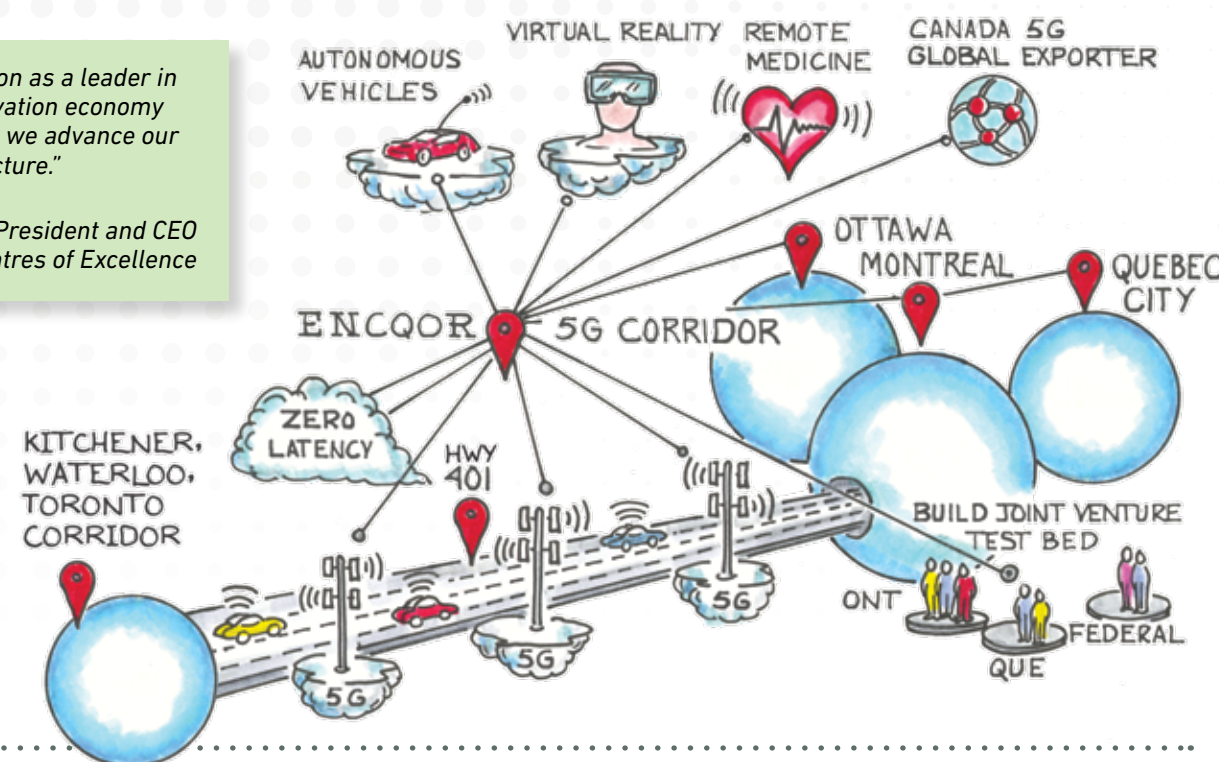
It will also secure over 4,000 skilled jobs including 1,800 specialized 5G jobs over the next five years and create jobs at SMEs in both provinces.

The \$400-million partnership, supported by the Canadian government, Quebec, Ontario and industry, brings together global digital technology leaders Ericsson, Ciena Canada Inc., Thales Canada Inc., IBM Canada and CGI.

OCE is the project's provincial coordinator for Ontario in partnership with Prompt, CEFRIQ and Innovation ENCQOR in Quebec.

"Ontario's position as a leader in driving the innovation economy depends on how we advance our digital infrastructure."

– Tom Corr, President and CEO  
Ontario Centres of Excellence



### CYBERSECURITY: Accelerating the growth of cybersecurity companies in Ontario

The Cybersecurity Fintech Innovation Pilot Program (CFIPP) is an initiative funded by the Ministry of Economic Development, Job Creation and Trade and delivered by OCE in collaboration with the Toronto Financial Services Alliance (TFSA). The program accelerates the growth of

cybersecurity start-up and scale-up companies in Ontario through partnerships with financial institutions seeking innovative solutions to cybersecurity challenges.

The program is supporting 33 technology development and demonstration projects, 65

internships and one fellowship. While most projects were just getting off the ground as of March 2018, companies have already reported 147 jobs created or retained, and more than \$250,000 in incremental sales and \$5 million in private-sector follow-on investment generated.

### NGNP: Helping industry and entrepreneurs compete in the global economy

Ontario's industry and entrepreneurs are being equipped to compete in a global digital economy.

OCE and CENGN (Centre of Excellence in Next Generation Networks), a leader in the rapid commercialization of network products, applications and services, have joined forces to catalyze the development of advanced networking technologies and further elevate the province as a global leader in this emerging field.

The Next Generation Network Program (NGNP) is developing a next generation network testbed that connects three hubs (Invest Ottawa, MaRS and Communitech), Ontario's Regional Innovation Centres, industry and academia to incentivize collaboration in creating and commercializing disruptive products, processes, and services.

NGNP will also help firms capitalize on new opportunities in fields such as autonomous vehicles (AV), aerospace, public safety,

cybersecurity, information and communications technology (ICT), mining, e-health, smart agriculture and broadband internet technologies for rural and Northern Ontario.

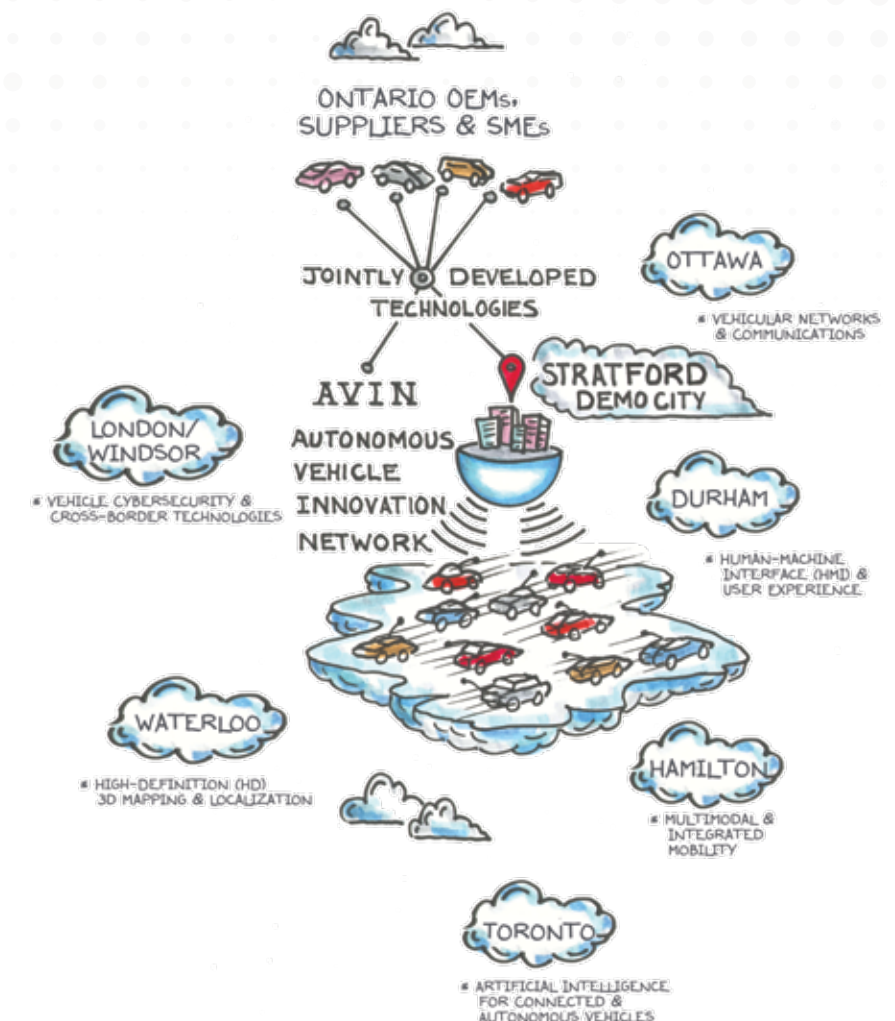


### AVIN: Steering into the future as a leader in automotive technologies

Launched in November 2017, the Autonomous Vehicle Innovation Network (AVIN) is helping companies develop leading solutions for the global automotive and mobility markets by supporting research and development, encouraging talent development, facilitating technology acceleration, providing business and technical support and enabling the testing and demonstration of new technologies.

Ontario's top five global automakers, the concentration of IT companies and a highly skilled workforce position the province with a dynamic locally connected and autonomous (C/AV) vehicle industry for researchers, developers and entrepreneurs who are pioneering new products.

AVIN, offered by the Ontario government and administered by OCE, is seen by the industry as critical to helping the province grow its automotive technology cluster.





## PARTNERSHIPS UPDATE

OCE leverages partnerships nationally and internationally to provide a competitive advantage for Ontario in the global economy.

### Ontario-Alberta

## Working across governments for a stronger Canadian economy

Collaborative R&D between Ontario and Alberta has resulted in 20 exciting projects aimed at solving some of the most intractable challenges facing Canadian industry. Drawing on industry and academic expertise in both provinces to advance innovative solutions, the collaborations cover a wide range of economic

sectors, including advanced manufacturing, agriculture, digital and energy and cleantech.

The Ontario portion of the projects under the Alberta-Ontario Innovation Program are funded by OCE, with funding for the Alberta portion from Alberta Innovates, Emissions Reduction Alberta

and the Natural Sciences and Engineering Research Council of Canada (NSERC). The total project value of \$36.6 million includes funding of \$3.5 million through OCE and \$3.4 million from Ontario industry partners, which has been leveraged by an additional \$29.7 million from federal and Alberta funding agencies and industry partners.

### International

## Forging expanded partnerships

OCE has expanded its partnership with Israel adding a new stream of project funding to its Ontario-Israel R&D Program that enables Ontario and Israel to collaboratively develop and demonstrate technological solutions that further strengthen their global competitiveness.

Under this stream, multinational anchor firms are matched with Ontario and Israeli SMEs to develop solutions for identified challenges. Three projects have been approved, which focus on developing cybersecurity solutions for the financial sector.

The new stream, Ontario-Israel Collaboration Program (OICT), will focus on Ontario and Israel business-to-business and academic collaborations with

the first round concentrating on agri-food and advanced manufacturing, including robotics. Managed by OCE and the Israel Innovation Authority, the Ontario portion of the program is funded by the Ontario government.

Part of OCE's international portfolio are two program partnerships with China. The Ontario-China Research and Innovation Fund (OCRIF),

which supports bilateral scientific and technological collaborations, is offered through a partnership between China's Ministry of Science and Technology (MOST) and the Ontario government. The Ontario-Jiangsu Industrial Research and Development Program (OJIRDP) supports joint industrial R&D projects that lead to commercialization in global markets.



### China Angels Mentorship Program (CAMP)

## Doing business in China

Through their participation in the 2017-18 China Angels Mentorship Program (CAMP), 11 Ontario companies received funding commitments from Chinese investors. A joint initiative of OCE, China Canada

Angels Alliance (CCAA), River Capital and Zhongguancun Haidian Science Park (Z-Park), CAMP is a virtual incubation program launched in 2015 that helps early-stage companies enter the Chinese market.

Companies from this year's cohort travelled to Beijing in March 2018 as part of the program to gain on-the-ground business perspectives and cultural insights into the Chinese market.

### Venture for Canada

## Placing top graduates at Canadian start-ups

In a changing economy, young people now more than ever need entrepreneurial skills, work experience and resiliency to succeed.

OCE continues to work with Venture for Canada under expanded provincial funding to support youth working at small- and medium-sized companies in Canada. A not-for-profit, Venture for Canada offers those selected

for the program a month-long training camp, two years working at innovative Canadian companies and ongoing support, training and mentorship. Partner employers with Venture for Canada have hired 536 people and raised an additional \$173 million in investments since they began hiring VFC Fellows. "Venture for Canada is a once-in-a-lifetime opportunity to

launch a career in emerging areas of our economy. Joining a Canadian start-up is one of the fastest ways to sharpen your professional skills and learn the ins and outs of an industry or function."

**Jeanette Stock**, *Venture for Canada Fellow*  
Named one of the Most Influential Women in Tech by *The Review*, *DMZ*

### OneEleven

## Scaling up and out

Focused on helping Ontario's most promising, high-growth technology companies scale, OneEleven has now opened an office in Ottawa and is embarking on a global expansion leading to additional hubs, including in London (UK), New York, Boston and Vancouver.

Founded in November 2013 in partnership with OMERS Ventures, OCE and Ryerson University, the scale-up hub provides companies with access to a highly-connected global network, curated peer community and tailored resources including access to expert advice, world-class workspaces, technology and specially-designed services to support sustainable growth.

"It has been very exciting to see the scale up and success of so many Ontario companies under OneEleven's roof," says OCE President and CEO Tom Corr.

In 2017-18, OneEleven companies created 394 jobs and attracted more than \$330.9 million in follow-on investment. OneEleven currently houses 37 companies and has supported over 60 companies since its inception.





## OCE AWARDS AND COMPETITIONS

### No beacons, magnetic tape or laser paths required

OCE's Mind-to-Market Award for 2017 went to **OTTO Motors**, a division of Clearpath Robotics and the **University of Waterloo**. The OTTO self-driving vehicle is for material transport in industrial environments. Its advanced sensors and artificial intelligence provide flexible automation that does not require fixed infrastructure (no beacons, magnetic tape or pre-defined laser paths). Providing obstacle detection and avoidance, the vehicle moves efficiently through facilities to its destination. The award recognizes outstanding achievement in OCE-supported research collaboration and commercialization.



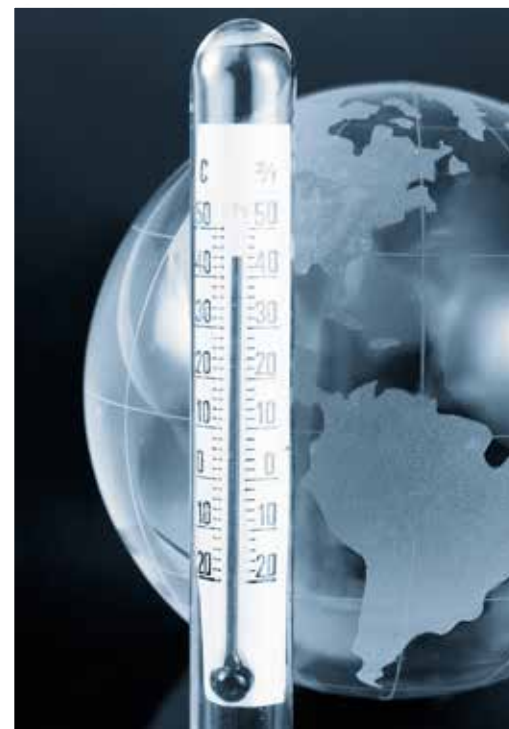
### Eyes on the ultimate viewer experience

OCE's Martin Walmsley Award for Entrepreneurship went to **Dr. Abdul Rehman**, CEO of **SSIMWAVE Inc.** The company provides video viewer intelligence that helps deliver the ultimate viewer experience. Its products enable the media and entertainment industry to manage video quality with the lowest possible delivery infrastructure cost in a market worth approximately \$5 billion. The award supports businesses of Ontario students that are founded on university-based research.



### Ontario company is a finalist in global climate change competition

An Ontario team that is producing formic acid, an environmentally friendly product, at up to five times lower cost than today's fossil fuel-based processes is a finalist in the \$20-million Global Carbon XPRIZE Challenge. **CERT**, led by University of Toronto Professor **Ted Sargent**, is one of three Ontario companies that were among 27 semi-finalists. Also making it to the semi-finals was a team led by **Peter Howard** from **Pond Technology's** Carbon Cyclers, which is producing biodiesel and solid biofuel, and a team led by **Jerry Flynn** at **Tandem Technical**, which is producing health supplements, toothpaste and fertilizers. The three companies received OCE support under Ontario's TargetGHG program to develop and demonstrate concepts while competing as semi-finalists. The winner will be announced in March 2020.



## Seven finalists announced in Ontario's global cleantech challenge

A three-phase competition over three years, the Solutions 2030 Challenge is helping to identify and accelerate the development of technologies with strong potential to address cleantech challenges.

These seven finalists proceed to Phase 2 of the Challenge and are awarded up to \$250,000 each to support costs related to their participation. With up to \$7 million in funding, the competition offers up to \$3 million in support for the winning team to bring its transformative technology to market.



#### Pyrowave Oakville

Pyrowave has developed small equipment for plastics recycling to provide low-carbon chemical feedstock to petrochemical producers. Its microwave technology breaks down plastic polymer chains into monomers and polyolefins for the production of new plastics. The project allows for a demonstration in partnership with a chemical plant in Sarnia.

#### Extract Energy Waterloo

Extract Energy is a spin-off of Smarter Alloys Inc., a Waterloo-based start-up that has developed a Multiple Memory Material (MMM) technology that can be integrated into a heat engine to extract low-grade waste heat to produce electricity. This project would mark the first MMM technology application for the energy sector.

#### Solar Fuels Team Toronto

Led by University of Toronto professor Geoffrey Ozin, the Solar Fuels research cluster is devoted to developing light-powered processes for the conversion of gaseous CO<sub>2</sub> to value-added synthetic fuels, via heterogeneous hydrogenation photocatalysis. This project proposes to develop a laboratory-scale CO<sub>2</sub>-to-fuel device prototype, exemplified by the conversion of CO<sub>2</sub> to syngas, CO-H<sub>2</sub>.

#### Carbon8 Systems UK-Kent

Carbon8 Systems has developed a utilization technology, called the Accelerated Carbonation Technology (ACT), that treats thermal residue from large industrial facilities by injecting CO<sub>2</sub> to produce cemented construction materials. Their proposed project aims to move their technology from the United Kingdom to Ontario where there is greater opportunity to scale up the technology and experiment with new, unpurified sources of CO<sub>2</sub>.

#### Carbicare Quebec-Montreal

Carbicare is a start-up that offers concrete manufacturers the process, materials and support to make cement-free, carbon-negative concrete. Their process replaces cement with steel slag and cures blocks utilizing CO<sub>2</sub>, which is then captured in the blocks. This project allows team members to bring the technology they have been developing in a lab at McGill University to Ontario to develop their first customer demonstration.

#### Concord Spirits USA-Boston

Concord Spirits technology transforms CO<sub>2</sub> into impurity-free alcohol for use in consumer products. Water and renewable electricity are the only other inputs, making the process carbon-neutral. The project allows the team to scale up its technology and develop a pilot in Ontario.

#### CVMR Toronto

CVMR develops technologies for extracting and refining metals for the mining and manufacturing industries. The OCE project will enable the company to pilot its technology that utilizes CO<sub>2</sub> from industrial stack gas to produce graphene and graphite at a competitive cost. This will help reduce greenhouse gas emissions and introduce material that has useful applications in various sectors.



# DISCOVERY HIGHLIGHTS

## Record-breaking 3,600 attendees and 550 exhibits

Discovery is Canada's leading innovation-to-commercialization conference, held April 30 and May 1, 2018. Discovery brings together key players from industry, academia, government, the investment community as well as entrepreneurs and students to pursue collaboration opportunities.

- Representation from China, Hong Kong, Poland, Czech Republic, Hungary, India, United States and the United Kingdom.
- Trended #1 in Canada on Twitter for the fourth straight year.
- Keynote speaker Sophia the Humanoid Robot, developed by Hanson Robotics, opened Discovery via an interactive discussion with OCE's President Tom Corr, later joined by David Hanson, Founder, CEO and Chief Designer, Hanson Robotics, delivering his keynote presentation via hologram.
- With over 10,000 square feet of innovative Canadian technology, this year's WOW Showcase Zone featured 29 companies at the forefront of cutting-edge technologies in Ontario and beyond. The themes were virtual reality, health technology, robotics, artificial intelligence, drone technology, aerospace and mining.
- Another highlight was the keynote address of Megan J. Smith, CEO of shift7 and the first woman to serve as Chief Technology Officer of the United States. She is also former Vice President of New Business Development, Google.
- Twenty-eight major companies and 99 SMEs participated in the B2B Zone. One hundred and forty one-to-one meetings took place over the two-day show.

## High schools show entrepreneurial spirit!

Meet the six winners of the Young Entrepreneurs, Make Your Pitch high-school competition.

More than 200 high school students from across Ontario applied to the fifth edition of the competition, presented by OCE and the Government of Ontario. Six finalists were selected after pitching before a panel of judges from the entrepreneurial community at OCE's Discovery 2018 conference.



• **Mackenzie McGuire**  
Imagine That, Grade 12,  
Moir Secondary School,  
Belleville

• **Mackenzie Huckvale**  
Mighty Molecules  
Entertainment Co.,  
Grade 11, Bell High  
School, Ottawa



• **Molly Collier**  
Hockey Stick Holder,  
Grade 11, Kingsville  
District High School,  
Harrow

• **Yumnah Hussain**  
UniVisor, Grade 10,  
Dunbarton High School,  
Pickering



• **Luke Edward**  
BookSmart, Grade 11,  
St. Robert Catholic High  
School, Markham

• **Austin Chan**  
The Wydlis Course,  
Grade 10, Markville  
Secondary School,  
Markham



## Accessibility

Catering to the dexterity needs of Essential Tremor and Parkinson's disease patients, **Stediwear Inc.** won this year's Accessibility Tech Pitch Competition.

The company, with co-founder and CEO **Mark Elias**, has developed the Stediwear glove, which is battery-free and designed to intelligently stabilize the wrist joint using vibration dampening technology.

The aim of the company, which received a \$20,000 award to assist with further development of their assistive technology solution, is to improve independence and quality of life through assistive device technology.

This year, more than 35 companies participated in Discovery's Accessibility Innovation Showcase and Pitch Competition to display their innovations, increase awareness of their work and products and network with the wider innovation and accessibility communities.



## Social Enterprise

A company that converts organic waste into high-quality bio-degradable plastics is the 2018 winner of the Social Enterprise Pitch Competition. **Genecis EnviroTech Inc.**, with founder and CEO **Luna Yu**, received an award package valued at \$20,000.

Announced during Discovery's annual award presentations, the award recognizes the entrepreneur's ability to demonstrate the product's feasibility and the tangible social or environmental impacts of their innovations. Participants represented various sectors, including cleantech, education and social technology, and health and wellness.

The Social Enterprise Zone included exhibits by 19 companies selected from 62 applicants along with the Social Enterprise Unit from Ontario's Ministry of Economic Development, Job Creation and Trade.



Discovery  
Ontario Centres of Excellence

SAVE THE DATE  
MAY 13 & 14, 2019



## OCE-SUPPORTED AWARD-WINNING COMPANIES

COMPANY NAME	NAME OF AWARD
<b>AccessNow</b>	<ul style="list-style-type: none"> <li>• 2017 Finalist, Accessibility Project</li> <li>• 2017 Winner, #MoveTheDial Hackathon</li> </ul>
<b>Aetonix</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, TELUS Outstanding Product Achievement Award for Mobility Health Innovation Excellence in Canada's Health Care Sector</li> </ul>
<b>Aiva Labs</b>	<ul style="list-style-type: none"> <li>• 2017 Grand Prize Winner, LiON'S LAIR Competition</li> </ul>
<b>Ambience Data</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, N100 Start-Up Competition</li> </ul>
<b>Amina Health (Vitamer)</b>	<ul style="list-style-type: none"> <li>• 2018 Runner-Up, Synapse Life Science Competition</li> </ul>
<b>Amintro</b>	<ul style="list-style-type: none"> <li>• 2018 Finalist, Communitech Fierce Founders Bootcamp Pitch Competition</li> </ul>
<b>Angstrom Engineering.</b>	<ul style="list-style-type: none"> <li>• 2017 Named to Profit 500 ranking of Kitchener-Waterloo's fastest-growing companies, Canadian Business Journal</li> </ul>
<b>Arcane Digital</b>	<ul style="list-style-type: none"> <li>• 2017 Named to Technology Fast 50, Deloitte</li> </ul>
<b>Axonify</b>	<ul style="list-style-type: none"> <li>• 2017 Named to Technology Fast 50, Deloitte</li> <li>• 2017 Named to Profit 500 ranking of Kitchener-Waterloo's fastest-growing companies, Canadian Business Journal</li> </ul>
<b>Bioenterprise Corporation</b>	<ul style="list-style-type: none"> <li>• 2017 Regional Premier's Award for Agri-Food Excellence (Guelph), Ontario Ministry of Agriculture, Food and Rural Affairs</li> </ul>
<b>BlueDot Inc.</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Health and Wellness, Canadian Innovation Awards, Techvibes</li> </ul>
<b>Braze Mobility</b>	<ul style="list-style-type: none"> <li>• 2017 Love Award for Best New Start-Up Idea, Power Play Pitch Competition</li> <li>• 2017 Winner, CNE Emerging Innovators Ontario Pitch Competition</li> </ul>
<b>BridesMade</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, People's Choice Award, LiON'S LAIR Competition</li> </ul>
<b>CarbonCure</b>	<ul style="list-style-type: none"> <li>• 2018 Named to Global Cleantech 100 list, Cleantech Group</li> </ul>
<b>CERT</b>	<ul style="list-style-type: none"> <li>• 2018 Finalist, NRG COSIA Carbon XPRIZE</li> </ul>
<b>Chisel</b>	<ul style="list-style-type: none"> <li>• 2017 Runner-Up, Queen's Entrepreneurs' Competition</li> </ul>
<b>Comfable</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Sci Innovation Competition, Toronto</li> </ul>
<b>CoHealth</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Synapse Life Science Competition</li> <li>• 2017 Named to Global Digital Health 100 List, Journal of mHealth</li> </ul>
<b>Eclipse Automation</b>	<ul style="list-style-type: none"> <li>• 2017 Named to Profit 500 ranking of Kitchener-Waterloo's fastest-growing companies, Canadian Business Journal</li> </ul>
<b>ecobee</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Energy and Sustainability, Canadian Innovation Awards, Techvibes</li> <li>• 2018 Named to Global Cleantech 100 list, Cleantech Group</li> </ul>

COMPANY NAME	NAME OF AWARD
<b>Enbala Power Networks</b>	<ul style="list-style-type: none"> <li>• 2018 Named to Global Cleantech 100 list, Cleantech Group</li> </ul>
<b>eSentire</b>	<ul style="list-style-type: none"> <li>• 2017 Named to Technology Fast 50, Deloitte</li> </ul>
<b>eSight</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Breakthrough Technology, Canadian Innovation Awards, Techvibes</li> <li>• 2017 Named as one of the 25 Best Inventions, TIME Magazine</li> </ul>
<b>EntreLaunch</b>	<ul style="list-style-type: none"> <li>• 2017 Finalist, Startup Nations Award for Local Policy Leadership</li> </ul>
<b>FetchIt</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, ICUBE Entrepreneurship Showcase</li> </ul>
<b>Finn.ai</b>	<ul style="list-style-type: none"> <li>• 2017 Named Best of Show, Finovate Conference</li> </ul>
<b>Flashfood Inc.</b>	<ul style="list-style-type: none"> <li>• 2017 Runner-Up, Telus Small Business Contest</li> </ul>
<b>FPrimeC Solutions</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Entrepreneurship Award, Professional Engineers Ontario—Ottawa Chapter</li> <li>• 2017 Winner, OPG Category, Ignite Start-up Pitch Competition</li> </ul>
<b>FreshSpoke</b>	<ul style="list-style-type: none"> <li>• 2017 Regional Premier's Award for Agri-Food Excellence (Barrie), Ontario Ministry of Agriculture, Food and Rural Affairs</li> </ul>
<b>GaN Systems</b>	<ul style="list-style-type: none"> <li>• 2018 Named to Global Cleantech 100 list, Cleantech Group</li> </ul>
<b>Genecis EnviroTech</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Social Enterprise Pitch Competition</li> <li>• 2017 2nd Place Winner, IT'S A START Pitch Competition, Digifest</li> </ul>
<b>Giatec</b>	<ul style="list-style-type: none"> <li>• 2018 Named one of Ottawa's Fastest Growing Companies, Ottawa Business Journal</li> </ul>
<b>GIMME360 Inc.</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Best Youth-Led Start-Up, Unlock Your Big Idea Pitch Competition</li> </ul>
<b>GoFor</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Best Mobile Application, Bootstrap Awards</li> </ul>
<b>GoWrench Auto</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, 1Awards competition</li> </ul>
<b>GreenMantra Technologies</b>	<ul style="list-style-type: none"> <li>• 2017 Named to STARTUP 50 list of Canada's Top New Growth Companies, Canadian Business Journal</li> </ul>
<b>Grobo</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Top Home Growing Box, Canadian Cannabis Awards</li> </ul>
<b>The Growcer</b>	<ul style="list-style-type: none"> <li>• 2018 Finalist, World Changing Ideas Awards, Fast Company</li> </ul>
<b>House of Anesi</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, CNE Emerging Innovators Pitch Competition—Lifestyle Category</li> <li>• 2017 Winner, Norman Esch Engineering Innovation and Entrepreneurship Award</li> </ul>
<b>Hybrid Power Solutions</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Best Peel Region Business, Unlock Your Big Idea Competition</li> </ul>
<b>Hydrogenics</b>	<ul style="list-style-type: none"> <li>• 2017 Named to Export Development Canada's Cleantech Export Stars list</li> </ul>

COMPANY NAME	NAME OF AWARD
<b>iMerciv</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Telus Small Business Contest</li> </ul>
<b>InnerSpace</b>	<ul style="list-style-type: none"> <li>• 2017 Named one of nine start-ups in INFINITI LAB Toronto's Inaugural Smart Cities Accelerator Program</li> </ul>
<b>Just Vertical</b>	<ul style="list-style-type: none"> <li>• 2018 Finalist, Social Enterprise Category, Unlock Your Big Idea Pitch Competition</li> </ul>
<b>Knockri</b>	<ul style="list-style-type: none"> <li>• 2018 Finalist, Social Enterprise Category, Unlock Your Big Idea Pitch Competition</li> </ul>
<b>Komodo OpenLab</b>	<ul style="list-style-type: none"> <li>• 2017 Finalist, Accessibility Project</li> </ul>
<b>Link2Feed</b>	<ul style="list-style-type: none"> <li>• 2017 Named "Best for Customers", Best for the World List, B Lab</li> </ul>
<b>Lumago</b>	<ul style="list-style-type: none"> <li>• 2017 Third Place Winner, LiON'S LAIR Competition</li> </ul>
<b>MediSeen</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, ventureLAB BUILD Award</li> </ul>
<b>MindBridge Analytics</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, FinTech Startup of the Year, Digital Finance Institute</li> </ul>
<b>mobileLIVE Inc.</b>	<ul style="list-style-type: none"> <li>• 2017 Named to Profit 500 ranking of Greater Toronto Area's fastest-growing companies, Canadian Business Journal</li> </ul>
<b>Monarch Clothes</b>	<ul style="list-style-type: none"> <li>• 2017 Finalist, Accessibility Project</li> </ul>
<b>Moyer's Apple Products</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Leaders in Innovation Awards, Premier's Award for Agri-Food Excellence, Ontario Ministry of Agriculture, Food and Rural Affairs</li> </ul>
<b>NERv Technology</b>	<ul style="list-style-type: none"> <li>• 2017 Student Entrepreneur National Champion, Enactus Canada</li> </ul>
<b>Nise Technologies Inc.</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Technology Startup, Unlock Your Big Idea Pitch Competition</li> </ul>
<b>Nix Sensor Ltd.</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Excellent Product Design, German Design Awards, German Design Council</li> </ul>
<b>Prodigy Game</b>	<ul style="list-style-type: none"> <li>• 2017 Named to STARTUP 50 list of Canada's Top New Growth Companies, Canadian Business Journal</li> </ul>
<b>OTTO Motors</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Mind to Market Award, Ontario Centres of Excellence</li> </ul>
<b>QoC Health</b>	<ul style="list-style-type: none"> <li>• 2017 Named one of the most innovative companies, PM360</li> </ul>
<b>QuantWave Technologies</b>	<ul style="list-style-type: none"> <li>• 2017 Second Place Winner, She Loves Tech Global Startup Competition</li> <li>• 2017 Winner, Velocity Fund Finals, \$5K Competition</li> </ul>
<b>RockMass Technologies</b>	<ul style="list-style-type: none"> <li>• 2017 Finalist, Communitech Fierce Founders Bootcamp Pitch Competition</li> </ul>
<b>Rover Parking</b>	<ul style="list-style-type: none"> <li>• 2017 Named one of nine start-ups in INFINITI LAB Toronto's Inaugural Smart Cities Accelerator Program</li> </ul>
<b>Rubikloud</b>	<ul style="list-style-type: none"> <li>• 2017 Finalist, Smart Solutions Provider, Business Excellence Awards, Toronto Region Board of Trade</li> </ul>

COMPANY NAME	NAME OF AWARD
<b>Rumie</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Google Impact Challenge</li> <li>• 2017 Winner, Elevate-R Pitch Competition</li> </ul>
<b>Secure Sense Solutions</b>	<ul style="list-style-type: none"> <li>• 2017 Named to Profit 500 ranking of Greater Toronto Area's fastest-growing companies, Canadian Business Journal</li> </ul>
<b>Sensibill</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Ingenious Spark Award, Information Technology Association of Canada</li> <li>• 2017 Named Best of Show, Finovate Conference</li> </ul>
<b>SensorSuite</b>	<ul style="list-style-type: none"> <li>• 2017 Named to STARTUP 50 list of Canada's Top New Growth Companies, Canadian Business Journal</li> </ul>
<b>SkyWatch</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Communitech Rev Demo Day</li> </ul>
<b>Sortable</b>	<ul style="list-style-type: none"> <li>• 2017 Named to Technology Fast 50, Deloitte</li> <li>• 2017 Named to Profit 500 ranking of Kitchener-Waterloo's fastest-growing companies, Canadian Business Journal</li> </ul>
<b>SSIMWave</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Communitech Demo Day Pitch Competition</li> <li>• 2017 Winner, Martin Walmsley Award, Ontario Centres of Excellence</li> </ul>
<b>Steadiwear</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Accessibility Innovation Pitch Competition</li> <li>• 2017 Winner, AGE-WELL—HACKING HEALTH National Ideathon Competition</li> </ul>
<b>Suncayr</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, 43North Pitch Competition</li> </ul>
<b>SWTCH E-CAR Inc.</b>	<ul style="list-style-type: none"> <li>• 2017 Finalist, Fierce Founders Bootcamp Pitch Competition</li> </ul>
<b>Tabnex</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Postmedia People's Choice Award, RBC EPIC Business Model Canvas Competition, University of Windsor EPICentre</li> </ul>
<b>Thalmic Labs</b>	<ul style="list-style-type: none"> <li>• 2017 Named one of seven Canadian tech companies likely to be the next billion-dollar breakout, Canadian Business Journal</li> </ul>
<b>ThoughtWire</b>	<ul style="list-style-type: none"> <li>• 2017 Named to Profit 500 ranking of Greater Toronto Area's fastest-growing companies, Canadian Business Journal</li> </ul>
<b>Top Hat</b>	<ul style="list-style-type: none"> <li>• 2017 Named one of seven Canadian tech companies likely to be the next billion-dollar breakout, Canadian Business Journal</li> <li>• 2017 Named to Technology Fast 50, Deloitte</li> </ul>
<b>Trexo Robotics</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Hawk's Next Pitch Competition, Sunnybrook Hospital Next Generation</li> </ul>
<b>TritonWear</b>	<ul style="list-style-type: none"> <li>• 2017 Winner, Communitech Demo Day Pitch Competition</li> </ul>
<b>Vena Medical</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Queen's Entrepreneurs' Competition</li> </ul>
<b>Welbi</b>	<ul style="list-style-type: none"> <li>• 2018 Winner, Founder of the Year, Bootstrap Awards</li> </ul>
<b>You.i TV</b>	<ul style="list-style-type: none"> <li>• 2017 Named to Technology Fast 50, Deloitte</li> </ul>



# ONTARIO CENTRES OF EXCELLENCE INC. GOVERNANCE

## Board of Directors 2017-18



**Michael J. Nobrega**  
Corporate Director  
• CHAIR OF THE BOARD  
• EXECUTIVE COMMITTEE (CHAIR)  
• FINANCE AND AUDIT COMMITTEE



**Bob Richardson**  
Senior Counsel to the Firm  
NATIONAL Public Relations  
• VICE CHAIR AND SECRETARY  
• GOVERNANCE AND NOMINATING  
COMMITTEE (CHAIR)  
• EXECUTIVE COMMITTEE



**Jane Allen**  
Senior Vice President,  
Strategy and Innovation  
Hydro One  
• GOVERNANCE AND NOMINATING  
COMMITTEE



**Charles Bouchard**  
Chief Executive  
Lockheed Martin Canada  
• EXECUTIVE COMMITTEE



**Dr. D. George Dixon**  
Research Professor, Faculty of  
Science, Department of Biology  
University of Waterloo  
• FINANCE AND AUDIT COMMITTEE (CHAIR)  
• EXECUTIVE COMMITTEE



**Janet L. Ecker**  
Corporate Director  
• HUMAN RESOURCES AND  
COMPENSATION COMMITTEE (CHAIR)  
• EXECUTIVE COMMITTEE



**Dr. Mo Elbestawi**  
Director, W Booth School of  
Engineering Practice and Technology  
and Professor, Department of  
Mechanical Engineering, McMaster  
University  
• FINANCE AND AUDIT COMMITTEE



**Mark Henderson**  
Chairman  
Ericsson Canada  
• HUMAN RESOURCES AND  
COMPENSATION COMMITTEE



**Dr. Dan Patterson**  
President  
Niagara College  
• HUMAN RESOURCES AND  
COMPENSATION COMMITTEE



**John Ruffolo**  
CEO  
OMERS Ventures  
• GOVERNANCE AND NOMINATING  
COMMITTEE



**Michael Silagadze**  
Founder and CEO  
Top Hat  
• HUMAN RESOURCES AND  
COMPENSATION COMMITTEE



**Dr. Anne Snowdon**  
Professor of Strategy and  
Entrepreneurship, Chair, World Health  
Innovation Network, Scientific Director  
and CEO of SCAN Health, Odette School  
of Business, University of Windsor  
• GOVERNANCE AND NOMINATING  
COMMITTEE



**Dr. Tom Corr**  
President and CEO  
Ontario Centres of Excellence

## Observers

(Board of Directors)

**Shirley Phillips**  
Deputy Minister  
Ministry of Economic Development, Job Creation and Trade

**John W. Marshall**  
Assistant Deputy Minister,  
Commercialization & Scale-Ups Division  
Ministry of Economic Development, Job Creation and Trade

## Executive Team

**Dr. Tom Corr**  
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## Annual Report

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Ontario Centres of Excellence promotes a healthy workplace,  
which is key to wellbeing and, by extension, innovation.



Ontario Centres of Excellence Inc. is a member  
of the Institute of Corporate Directors (ICD).

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# OCE At a Glance

## ABOUT OCE

- In 1987, seven not-for-profit centres were formed focusing on fostering industry-academic collaborations in various industry sectors. In 2002, the Honourable Jim Wilson, the former Ontario Minister of Energy, Science and Technology and current Minister of Economic Development, Job Creation and Trade, initiated the merger of the centres to form Ontario Centres of Excellence Inc. with a goal of achieving greater efficiency and economic outcomes.
- On behalf of the Province, OCE supports projects that create jobs, attract local and international investments and make Ontario globally competitive.
- OCE has a province-wide footprint, deploying experienced teams of Business Development Managers across the province in Kitchener, Ottawa, Windsor, London, Hamilton, Markham, Sudbury, Oshawa, Toronto, Mississauga and Waterloo.
- Through OCE support, small- and medium-sized enterprises typically overlooked by traditional investors achieve market success and attract financing from angel investors and venture capitalists.
- OCE is a member of the Ontario Network of Entrepreneurs (ONE), Ontario's industry-focused, province-wide innovation network.
- OCE has an ever-expanding network of provincial, national and international partnerships.

- OCE efforts converge on four key sectors: advanced manufacturing and ag-tech; advanced health technologies; bio-economy and clean technologies; and digital media and information and communications technology (ICT).
- OCE is playing a key role in accelerating the growth of a globally competitive digital economy in Ontario.

## PERFORMANCE OUTCOMES

- In fiscal 2017-18, OCE managed 930 new R&D, commercialization and talent projects.
- OCE invested \$81million this year in Ontario companies and leveraged an additional \$177.8 million, the majority of which comes from industry, for a total investment of \$258.8 million.
- The leverage that was attracted was 2.2 times the amount of funding we received from the government, enabling us to more than triple the amount of our government funding for investment in Ontario's innovation ecosystem.
- In fiscal 2017-18, 9,772 jobs were created or retained in industry as a direct result of OCE-funded projects and 2,557 start-ups were supported.
- OCE continues to reduce its operating costs as a percentage of total funding deployed through efficiency and streamlining measures, dropping from 16.6 per cent in 2009-10 to 6.6 per cent in 2017-18.

- Almost half of the additional investment leveraged by OCE comes from industry.
- This past year, 82 OCE-supported companies were recognized with national or international awards.
- OCE-managed entrepreneurial programs for students and youth have been established at every publicly-funded post-secondary institution in Ontario.

## DISCOVERY

- Named Canada's Best Trade Show in 2010, 2011, 2016 and 2017, Discovery brings together industry, academia, investors, government, students and young entrepreneurs to share ideas, network, invest and create business relationships that drive Ontario's economic growth and global competitiveness.
- This year's conference drew more than 3,600 attendees and 550 exhibitors. Keynote speakers were Dr. David Hanson accompanied by Sophia the Robot powered by artificial intelligence and Megan Smith, CEO of shift7 and the third Chief Technology Officer in the U.S.
- Young entrepreneurs from 100 companies supported by OCE's Campus-Linked Accelerators, On-Campus Entrepreneurship Activities or SmartStart program exhibited their creative products and services at Discovery in the Young Entrepreneur Zone.

FOR MORE INFORMATION, VISIT  
[oce-ontario.org](http://oce-ontario.org)



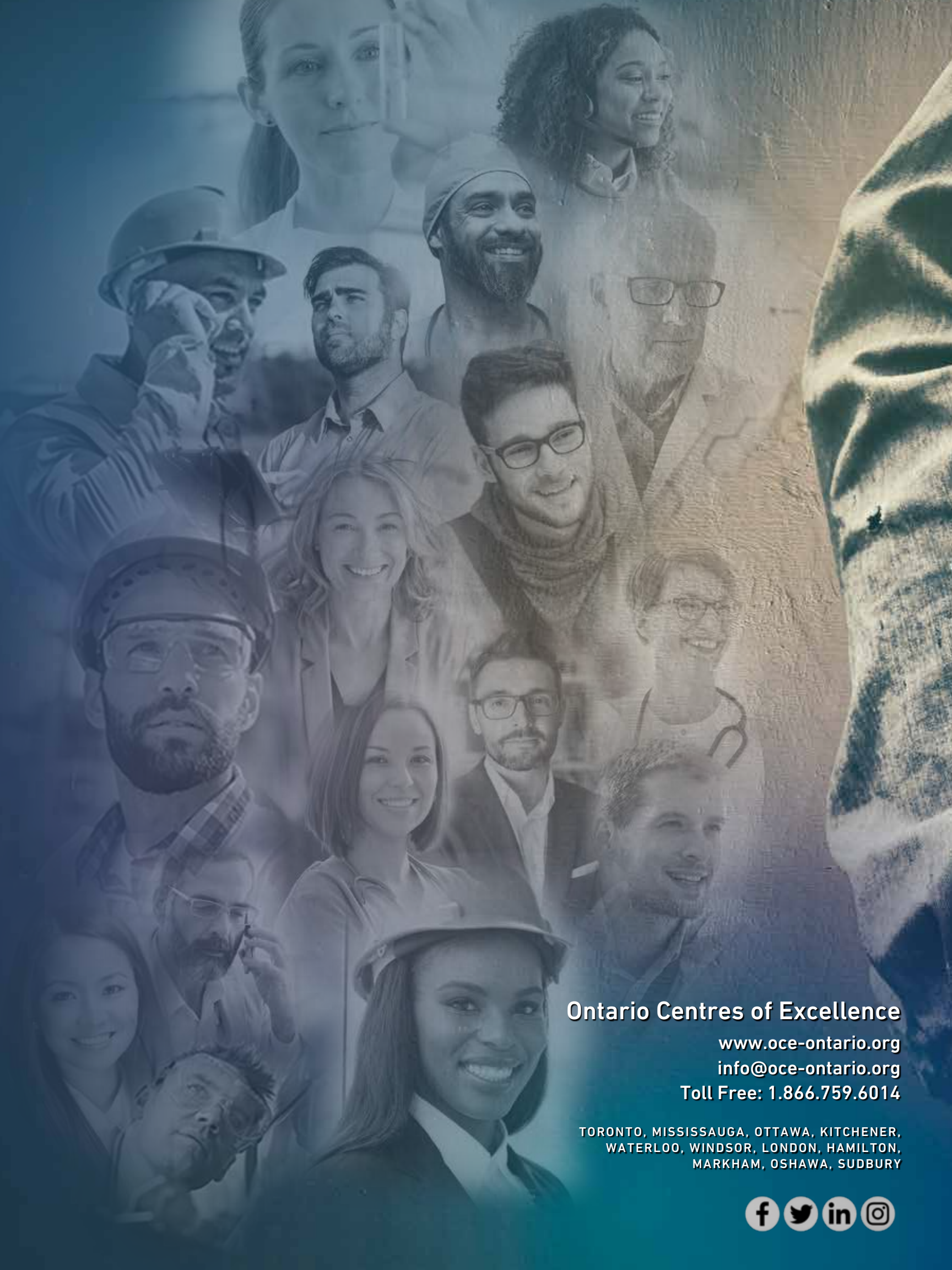
Ontario Centres of  
Excellence

Where Next Happens

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