

SUPPORT FROM  
ON-CAMPUS  
ENTREPRENEURSHIP  
PROGRAMS

COMPANY LAUNCHED

CAPTURE  
POSITIVE  
BUZZ

CAMPUS/LINKED  
ACCELERATORS  
/ REGIONAL  
INNOVATION  
CENTRE, HOOK YOU  
UP WITH POTENTIAL  
INVESTORS

INITIAL TEAM  
FORMED

START!

# ROI

RETURN ON INNOVATION

Ontario Centres of Excellence Inc.  
ANNUAL REPORT 2014/2015

WORKING  
PROTOTYPE  
DEVELOPED

PROTOTYPE TESTED

CUSTOMERS GIVE  
THUMBS UP

FAILED TO  
LISTEN TO  
CUSTOMERS

TEAM WORKING  
COHESIVELY

RAISED SOME  
INITIAL CAPITAL

DIVISIVENESS  
ON TEAM

OCE  
APPROVES  
APPLICATION  
FOR SEED  
FUNDING

HIRED A  
CTO

DISAGREE  
ON MARKETING  
STRATEGY

OVERESTIMATED  
YOUR BUSINESS  
SKILLS

HIRED FIRST  
FIVE EMPLOYEES

REVENUE  
GROWING

DEVELOPED A MVP  
(MINIMUM VIABLE  
PRODUCT)

LAUNCH  
PRODUCT

RUN OUT OF  
RUNWAY + \$\$\$ TO  
LAUNCH PRODUCT

EUREKA MOMENT!



Ontario Centres of  
Excellence

Where Next Happens

Ontario Centres of Excellence is a member of



Ontario



# OVERVIEW

## OUR ROLE AND APPROACH

OCE works with industry, academia and government to stimulate business-led innovation and accelerate commercialization. Our role is that of an innovation intermediary. We drive innovation directly by supporting SMEs and emerging firms in commercializing creative new technologies and services, and indirectly by helping to build innovative capacity within regions and sectors.

We connect both new and emerging companies and large, established businesses to the resources and expertise in our world-class universities, colleges and research hospitals. Through our investments in collaborative R&D, knowledge transfer between industry and academia, and high-potential technology-based start-ups, we promote the commercialization of new technologies across many sectors, maximizing Ontario's competitive edge in the global economy. We also support young entrepreneurs and help foster a culture of entrepreneurship on campuses and in regions across the province.

OCE's programs and strategic initiatives are informed by continuous dialogue with our industry, academic and government stakeholders. This enables us to identify and address barriers to collaboration and challenges arising from the commercialization gap. It also strongly positions us to capitalize on the exciting new opportunities arising from publicly funded research.

A not-for-profit organization, OCE receives operations and program funding from the Ontario government as well as the federal government. We are a proud member of the Ontario Network of Entrepreneurs (ONE).

## ABOUT OCE

Ontario Centres of Excellence (OCE) drives the commercialization of cutting-edge research across key market sectors to build the economy of tomorrow and secure Ontario's global competitiveness. In so doing, we help develop the next generation of innovators and entrepreneurs, and are a key partner of Ontario's industry, universities, colleges, research hospitals, investors and government.



### OCE accelerates innovation by:

- Supporting collaborative R&D between industry and academia
- Investing in early-stage commercialization of emerging technologies
- Fostering youth entrepreneurship
- Leading and developing networks around high-potential business-led opportunities

## VISION

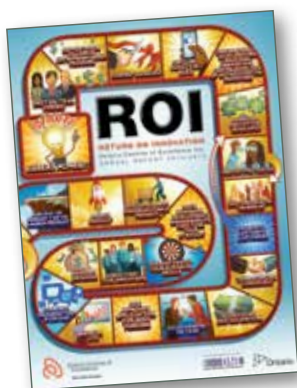
Prosperity from Innovation – an Ontario where bright minds connect to create prosperity

## MISSION

Accelerating innovation through game-changing research leading to successful commercialization and vibrant collaboration between industry and academia, launching the next generation of products and jobs

## WHO WE SERVE

- Start-up companies
- Small and medium-sized enterprises (SMEs)
- Large companies
- Technology transfer and industry liaison offices
- Entrepreneurs
- Principal investigators and students from Ontario colleges, universities and research hospitals
- Regional Innovation Centres (RICs)
- Investors



## MAKE IT HAPPEN. MOVE THREE SQUARES AHEAD.

The journey from research lab to market starts with a eureka moment—one that can sometimes change the world. But that's just the beginning. Innovation is also about the hard-fought, complex pathway to commercialization. We've had the privilege of sharing the ups and downs of that process with thousands of companies over the years. *Congratulations to you all!*

## Have a great digital experience using Layar

Scan the QR code to download the free app, find the Layar symbol within this publication and scan the page to access additional content.



Interactive Print



Download the free Layar App



Scan this page



Discover interactive content

## OUR LEADERSHIP STRENGTHS

Ontario Centres of Excellence helps Ontario create jobs and build prosperity by applying these leadership strengths built over almost three decades of operation.



**DRIVES INNOVATION** by creating an efficient marketplace for companies and entrepreneurs to access services from research institutions, moving promising technologies from the research lab to the marketplace, and aligning research institutions with the needs of industry.

**BUILDS CAPITAL** by aggregating and de-risking early-stage investment opportunities for private investors, making high-potential start-ups investor and customer ready, working with government funders and investors, and forging strategic industry partnerships to build and grow companies.

**CONNECTS THE DOTS** by providing expert advice to clients through close to 40-member team of Business Development (BD) experts deployed regionally in nine strategic locations across the province, giving access to a broad and deep network of industry and academic partners, and leveraging our networks to connect potential collaborators and create opportunities for commercializing innovation.

**FORGES TRUSTED PARTNERSHIPS** with all levels of government and across provinces to advance innovation and commercialization on a national level.

## Inside this year's Annual Report

- OCE Overview ..... 1
  - Our Leadership Strengths ..... 1
- Discussion—President and Chair .. 2
- Return on Innovation ..... 4
  - De-risking Business ..... 7
- OCE Programs ..... 8
- Industry-Academic ..... 10
- Commercialization ..... 14
- Youth Entrepreneurship ..... 16
- OCE Awards ..... 20
- Strategic Initiatives ..... 21
- Feature Success Stories ..... 22
- Event Highlights ..... 32
- Award-winning Companies ..... 34
- Board of Directors ..... 36

## Success Stories

- DNASTack ..... 13
- Aquanty ..... 13
- Encircle ..... 17
- Magnusmode ..... 17
- teaBOT ..... 17
- Velocity Foundry ..... 19
- DesignJam ..... 19
- ZoneStartups ..... 19
- HELIX ..... 19
- Entrepreneur Centre ..... 19
- London Area CLA ..... 19
- EPICentre ..... 19
- Impact Centre ..... 19
- Capital Entrepreneurs ..... 19
- Nymi ..... 20
- RMRD TECH ..... 20
- InteraXon ..... 20
- Meta (formerly Sciencescape) ..... 22
- XOR Labs ..... 23
- Hitachi High-Technologies Canada ..... 24
- Optimity (formerly myHealthSphere) ..... 25
- Durham Foods ..... 26
- GestureLogic ..... 27
- Gymtrack ..... 28
- Greenhouses Canada ..... 29
- Solantro Semiconductor Corp. .... 30
- Hudson Boat Works ..... 31

## A year of exceptionally strong results

A discussion between Ontario Centres of Excellence Board Chair Michael Nobrega and President and CEO Dr. Tom Corr

### How would you characterize the kind of year that OCE has had?

**Tom** – After rolling out a lot of new programs in 2013-2014, we are now seeing the resulting strong economic outcomes in terms of new jobs created and follow-on investment. With their focus on company creation and company building, these programs tend to produce tangible economic development outcomes fairly quickly. Under our SmartStart Seed Fund and our new campus entrepreneurship programs, for example, we are helping companies, especially early stage ones, grow and succeed. And the results are now being seen.

**Michael** – I would also say that OCE has continued to move toward becoming a sustainable organization through the strong partnerships and new sources of public and private funding it has developed. This funding diversification has enabled us to offer a wide breadth of programs and make some bold moves, such as our partnerships with OneEleven and the China Canada Angels Alliance. It's always good to have partners who can help to mitigate financial risk and allow us to take even more innovative steps. They bring with them the knowledge, financial sustainability and new skill sets that help round out what OCE brings to the table.

### Why is OCE focusing so strongly on young entrepreneur programs?

**Michael** – This is very much a reflection of what is happening in the world today. Many companies that were once big job creators are now gone and have been replaced by companies with disruptive technologies that have eliminated traditional jobs and require different job skills. We are seeing a lot of disruption in the marketplace brought about by

companies such as Uber, Airbnb and others that are significantly reshaping the economic and job landscape. We need our young people to recognize these disruptive changes going on around them. And we need to get them involved in the changes by investing in them through young entrepreneurship programs. Fortunately, many young people are very receptive to the opportunities that are being presented to them through these programs.

**Tom** – Our campus entrepreneurship programs not only help to address the challenging youth unemployment problem but also help to ensure that the world-class research being done at our universities and colleges is finding its way into the marketplace as innovative technologies. A lot of great applied research gets left on the shelf if there is no capacity to commercialize it. Typically, it is students who have created the intellectual property and products, and as a result they have a keen interest in commercializing the results of their research using the mentorship and programs available from OCE. We're helping create the ecosystem with incubators based right at the universities and colleges. Never before has there been such great support for these young entrepreneurs.

### What did you see as the most exciting achievement this year?

**Tom** – I would say it's our economic outcomes, including the extent of follow-on financing for our client companies, the number of jobs created and the level of matching dollars invested by industry in opportunities that we bring forward. Our outcomes have increased significantly over last year in part because our new programs are deployed at a later stage in the economic development continuum. At the same time, the importance of our industry-academic applied

research collaboration programs can't be overstated. Much of what we are seeing would not happen without the large investment made in applied research with our industry partners, be they start-ups or much larger organizations. But it clearly shows that supporting these companies can have dramatic results.

**Michael** – First, the outstanding performance by the OCE team in delivering this year's Discovery conference. It was a blowout success, setting new records for the number of attendees and exhibitors. Secondly, the respect for OCE from our primary client, Ontario's Ministry of Research and Innovation, and our stakeholders. There is a confidence in the OCE team to perform and deliver the goods. This respect runs deep at all levels within the government. I am proud of the entire team.

### What do you see as the top priority for OCE this coming year?

**Michael** – I believe that we have an increasing obligation to continue to reach out to industry and private investors. We need the broader community, the captains of industry, academia and government working together to assist us in creating a healthy innovation ecosystem and the sustainable jobs that will benefit the next generation. The OCE board and team are determined to provide this leadership and are already working on a number of initiatives.

**Tom** – We have seen what can be achieved when all the players in the ONE ecosystem work together. In recently hosting the Fin-Tech partnering event with our partner the Toronto Financial Services Alliance, we brought financial institutions together with top researchers, technology start-ups, and accelerators and incubators



throughout Ontario with the goal of making the Greater Toronto Area a global leader in Fin-Tech innovation. We have also played a strong role with the Southern Ontario Smart Computing Innovation Platform, a groundbreaking program that brings together researchers, government, and business to collaborate around big data and high performance computing, driven by our partnership with IBM. This collaboration is achieving what would otherwise be nearly impossible. None of us can do it alone. We all have a role to play and we must work together cooperatively.

**What do you want the public to know about today's OCE?**

**Tom** – That we are spending their tax dollars judiciously and producing results that they would agree are good economic outcomes based on the investments we are making on their behalf.

**Michael** – How hard we are working to create an environment in which their daughters and sons can achieve rewarding and successful careers. I believe that every parent wants his or her child simply to have the opportunity to succeed. OCE is providing that opportunity through many of its youth programs.



## Thank you from OCE's President and Chair

It's been a challenging but highly rewarding year, and we can now see tangible evidence of our efforts in 2014-2015 in support of innovation and entrepreneurship in Ontario. OCE has exceeded past records for creating and retaining jobs, follow-on investments and engagement by industry, academia, investors and an entire new generation of dauntless young entrepreneurs.

There is great satisfaction in helping to make the right connection between a company and academic researcher whose breakthrough work is helping to solve an industry challenge; providing a college or university student with the mentorship and support needed to build a company around a creative new technology; and building new regional, national and global partnerships that open even more opportunities for Ontario businesses aspiring to enter and capture markets here and around the world.

We highly commend the OCE team for their exceptional work and passion for the cause of innovation. They continually demonstrate impressive expertise and professionalism in helping entrepreneurs, companies, researchers and campus entrepreneurs access the OCE programs that will help them reach their personal goals and be a part of a strong economic future for Ontario.

Thanks also to our volunteer Board of Directors, comprised of some of Ontario's most distinguished industry and academic leaders, who have given generously of their time in providing invaluable advice and guidance.

We highly value our role of helping the Government of Ontario, the Canadian government and our provincial partners fulfill their visions of economic development and prosperity for our province and beyond and are grateful for the support of our private-sector partners and investors.

We invite you to learn more about our work over the past year and experience the excitement and success of the innovators celebrated in this year's Annual Report.

**Dr. Tom Corr**  
President and CEO

**Michael Nobrega**  
Chair, Board of Directors

## Return on Innovation 2014/15

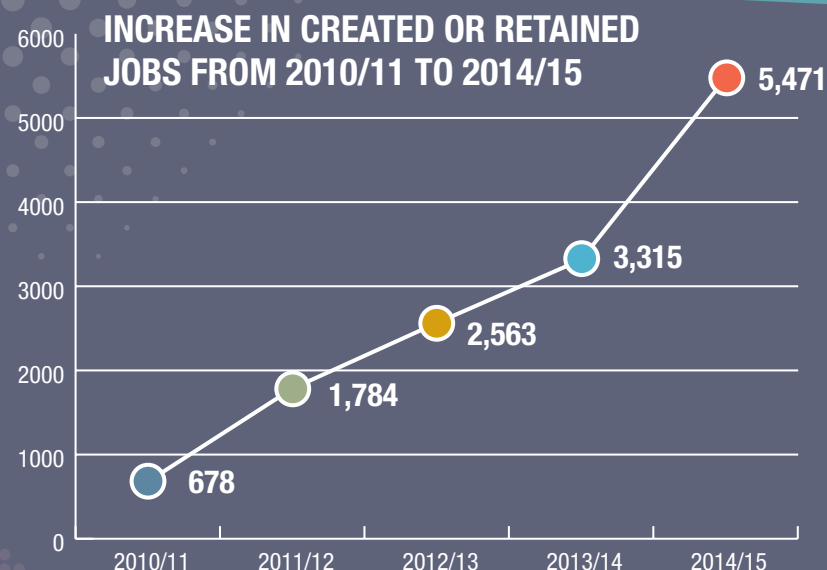
# 5,471 JOBS

Created or retained that can be directly attributed to OCE-funded projects, the highest in OCE history and a 65 per cent increase over 3,315 jobs last year. This reflects this year's expansion of our program suite with the addition of the Campus-Linked Accelerators and On-Campus Entrepreneurship Activities programs

# 1,194

Start-ups supported\*

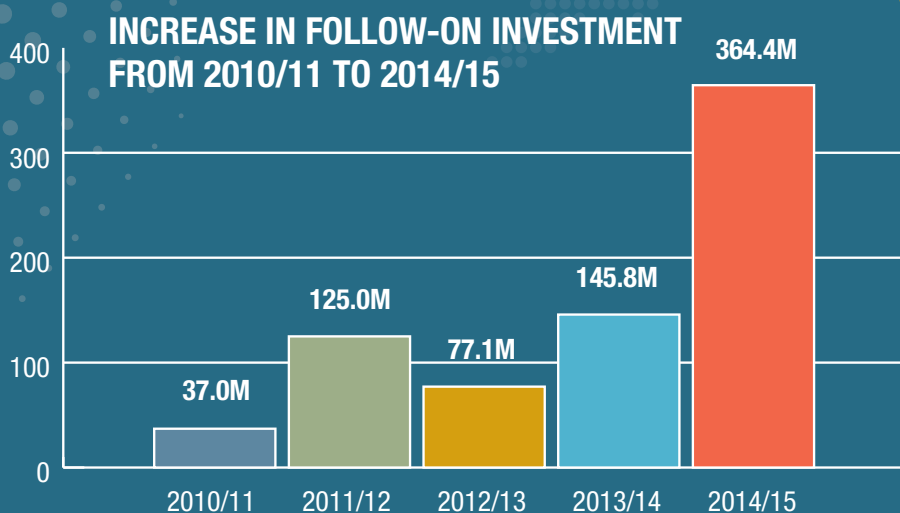
\*Start-ups supported directly through OCE seed financing or indirectly through other OCE programs



# \$32.6

MILLION

Invested in 614 active research, commercialization and talent projects managed by OCE



# \$364.4

MILLION

Follow-on investment primarily from angel investors and venture capitalists, the highest in OCE history and more than double that of last year's \$145.8 million

# \$95.5

MILLION

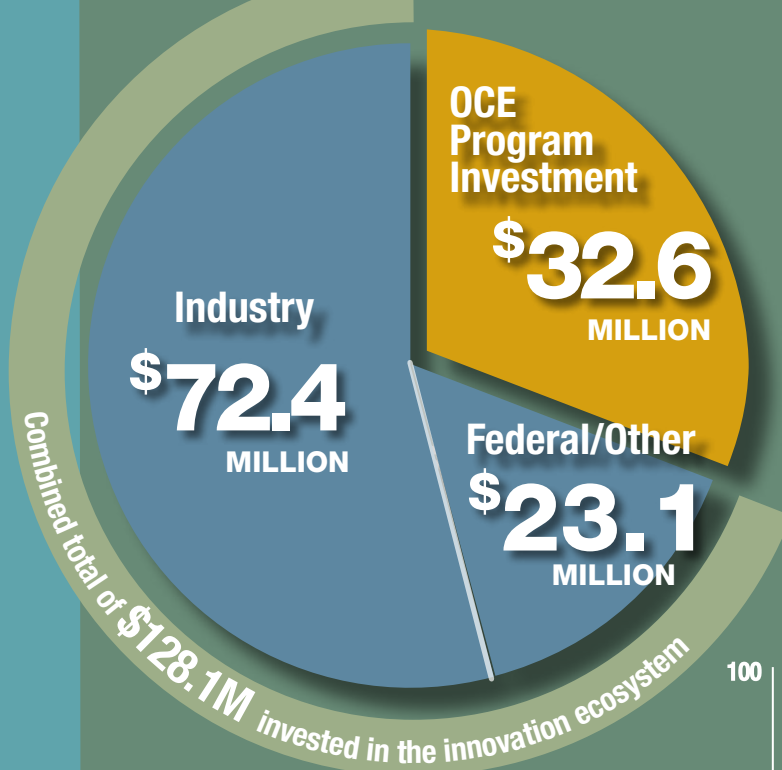
Cash or in-kind contributions from our partners, highest in OCE history

# \$42.4

MILLION

Incremental sales as a direct result of OCE-funded projects

Here we see the Return-on-Innovation outcomes OCE has achieved as a result of Ontario government funding combined with co-investments from industry and other partners including the federal government

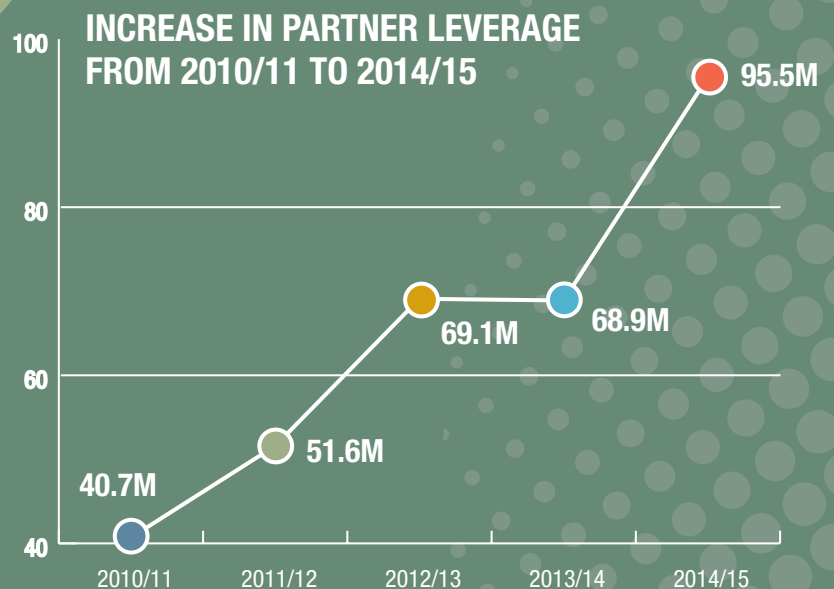


Average Leverage Ratio **2.9**

Through our industry and other partnerships, OCE almost tripled the amount invested in innovation in Ontario (76% of leverage came from industry and 73% was in the form of a cash contribution)

\$95.5M in funding leveraged from OCE's initial program investment of \$32.6M for a combined total of \$128.1M being invested in the innovation ecosystem.

The \$95.5M leverage consists of \$72.4M from industry and \$23.1M in federal and other funds.



## More ROI

**5,674\*\***

HQP whose knowledge and skills were enhanced

**1,082**

Introductions between industry and academia

**36**

New licences of OCE-funded IP

**21,595**

Attendees at OCE-hosted and supported events

**308**

Partnerships formed

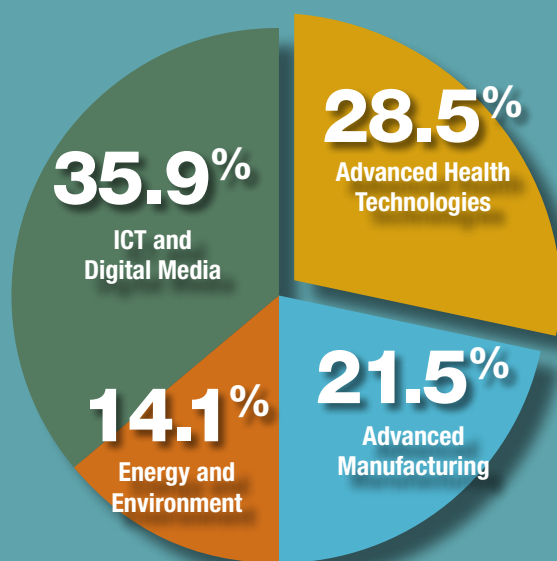
**47**

Innovation events hosted

*\*\*Researchers, students and private-sector employees whose knowledge and skills were enhanced through their work with OCE-supported projects*

# MEASURING SUCCESS

Percentage of OCE Investments by Sector



## Spotlight on cleantech over the past two years:

**243**

Total cleantech-related projects funded

**861**

Jobs created or retained

**\$23 MILLION**

Value of incremental sales

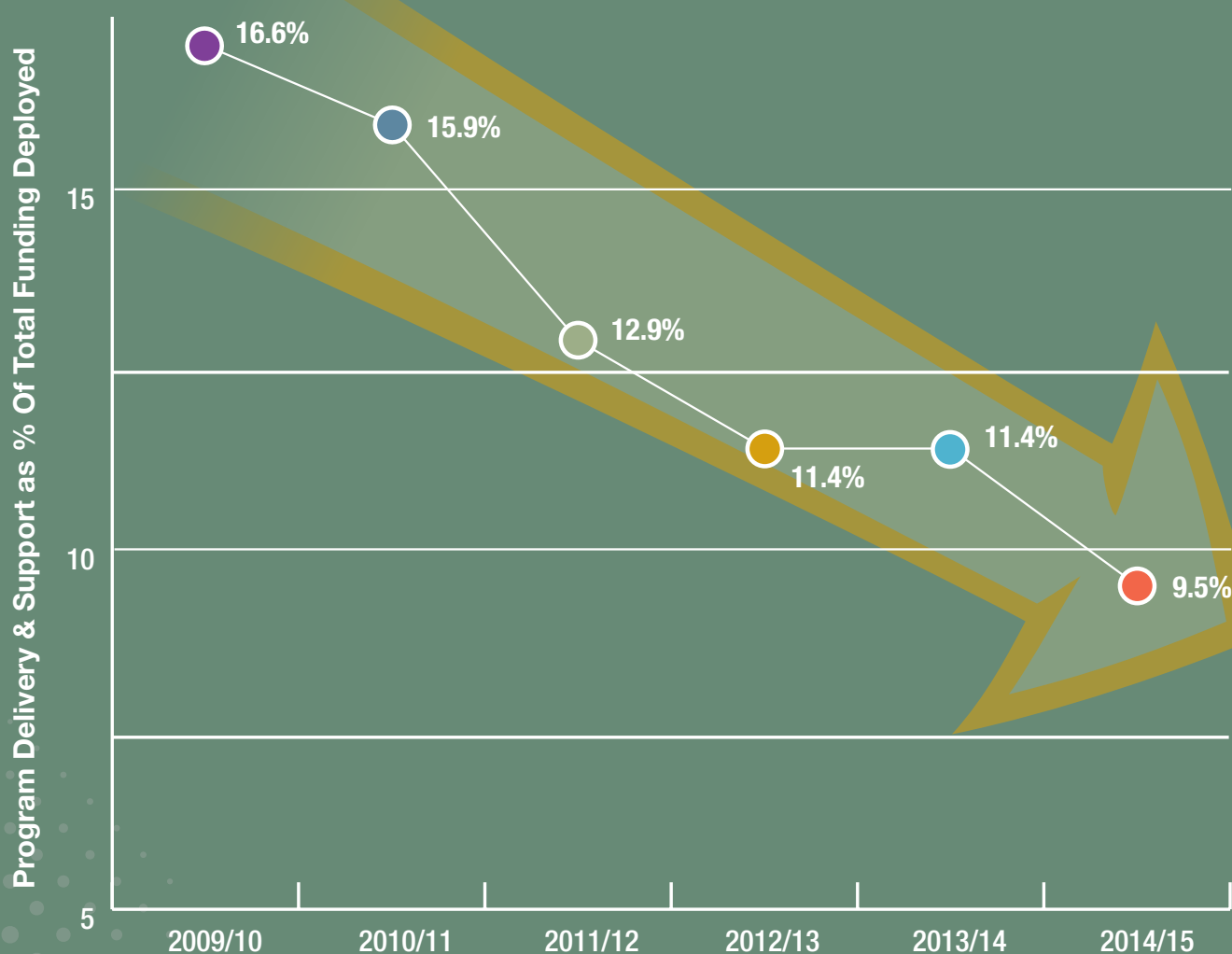
**\$52 MILLION**

Follow-on investment



## COSTS OF OPERATING CONTINUE TO DECLINE

Over the past six years, OCE has seen its costs for delivering programs as a percentage of total funding decrease. This is the result of an ongoing commitment to efficiency and streamlining measures.





# De-risking Business

OCE has strong expertise in de-risking innovation. This helps attract private investors and other funders to new ventures, increasing their chances of success. Many small and medium-sized companies typically overlooked by traditional investors have achieved market success through OCE support and seal of approval.



*"We're looking for companies that are investment-ready. This is hugely important because a lot of companies fail early. We rely on OCE to help us validate an early-stage company and act as a feeder system. There is some degree of curation that OCE does and that is a hugely important role."*

**Sandy Robertson,**  
Founder &  
Managing  
Director, Georgian  
Angel Network



*"OCE plays an important role for investors both providing a line of sight to some of the province's most exciting new companies and by putting companies through their paces to become customer and investor ready. This signals that they are well positioned to succeed, and OCE's seal of approval means something to an investor."*



**Brenda Hogan,**  
Investment &  
Portfolio Manager,  
Ontario Capital  
Growth Corporation

*"OCE regularly sees a very wide range of companies that they guide, finance and expose to their networks. There are all kinds of great investment opportunities that have gotten their start at OCE and/or have been effectively launched by OCE. The ability of OCE to bring these investment opportunities, and I mean decent opportunities, to the table early on is spectacular."*

**Scott MacCannell,**  
Chairman, York  
Angel Investors



# OCE PROGRAMS

OCE offers a comprehensive suite of programs designed to commercialize innovations that help create jobs, drive prosperity and equip the next generation of entrepreneurs to continue to build a globally competitive knowledge-based economy for Ontario.

## OUR PROGRAM SUITE COVERS THREE KEY AREAS:

### Industry-Academic R&D

**Collaboration** programs align institutional research capacity with industry demands, leveraging academic expertise to solve innovation and productivity challenges.

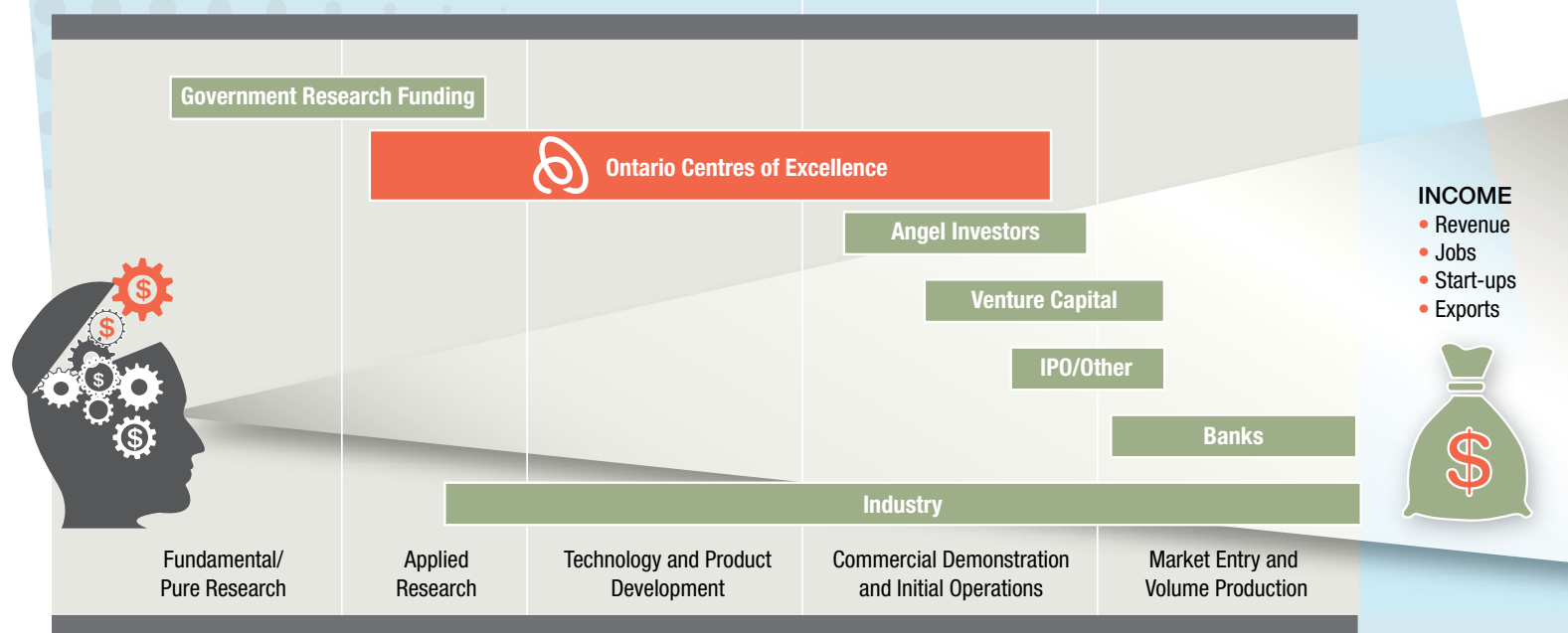
**Commercialization** programs help move innovative technologies from the lab into the global marketplace, accelerating time to market.

### Youth Entrepreneurship

programs provide seed financing and business support, improving the levels of success among young entrepreneurs.

OCE also has a number of **strategic initiatives** underway in areas that advance innovation and create a competitive edge for Ontario companies.

## Commercialization Continuum



OCE occupies a unique and critical spot in the commercialization continuum, helping bridge the funding gap between government-funded R&D and private investment, and helping companies complete the hard-fought journey from technology and product development through to commercial viability, scalability and market entry.

# Our Program Offerings



## INDUSTRY-ACADEMIC R&D COLLABORATION PROGRAMS

- Collaboration Voucher Program
  - Voucher for Industry Association R&D Challenge (VIA)
  - Voucher for Innovation and Productivity (VIP I & VIP II)
  - Voucher for E-Business (VEBTA)
- Alberta-Ontario Innovation Program
- Connected Vehicle/ Automated Vehicle (CVAV) Program
- TalentEdge Internship Program
- TalentEdge Fellowship Program
- Explore Program

Brings industry and academia together to solve industry's innovation challenges

## COMMERCIALIZATION PROGRAMS

- Market Readiness
  - Customer Creation
  - Company Building
- Advancing *Health* Program
- Mind to Market Award
- Medical Sciences Proof-of-Principle (MSc PoP)
- China Angels Mentorship Program (CAMP)\*

Takes research from labs to the marketplace

## YOUTH ENTREPRENEURSHIP PROGRAMS

- On-Campus Entrepreneurship Activities (OCEA)
- Campus-Linked Accelerators (CLAs)
- SmartStart Seed Fund
- Entrepreneurship Fellowships
  - David McFadden Energy Entrepreneur Challenge
  - Martin Walmsley Award
- Young Entrepreneurs, Make Your Pitch
- Ontario Social Impact Voucher (OSIV) Pilot Program\*

Supports entrepreneurial activities by students and youth across Ontario

## STRATEGIC INITIATIVES

- High Performance Computing
- Colleges Ontario Network for Industry Innovation
- Industrial & Technological Benefits Partnership\*
- Accessibility Innovation Showcase—Tech Pitch Competition\*
- OCE-UBI Global Partnership\*  
University Business Incubators (UBI)

Undertakes strategic initiatives designed to advance innovation and create a competitive edge for Ontario companies

\*New Programs or Initiatives



# INDUSTRY-ACADEMIC R&D



OCE fosters collaborations amongst large companies, start-ups, SMEs and Ontario's publicly funded academic research institutions (universities, colleges and research hospitals) to create economic impact for Ontario while helping youth gain real-world, on-the-job experience. This includes working across sectors and provinces.

## AUTOMOTIVE

### Making Ontario a leader in intelligent transportation

Businesses and academic institutions are being encouraged to develop and commercialize innovations in connected and automated vehicle technologies. With government funds and matching funds from industry partners, close to \$3 million has been invested in 15 projects aimed at making Ontario roads smarter and safer while improving traffic flow.

- A partnership between the Ministry of Transportation (MTO), the Ministry of Research and Innovation (MRI) and Ontario Centres of Excellence
- Connected and Automated Vehicle R&D Pilot Program
- The program has now been renewed for 2015/16 and 2016/17 with \$1 million from MTO and \$1 million from the Ministry of Economic Development, Employment and Infrastructure (MEDEI).



## AEROSPACE

### Increasing liftoff in innovation

Through its Voucher for Industry Association R&D Challenge, OCE is supporting collaborative R&D projects by Ontario industry and academic partners that are strategically important to the Ontario aerospace sector. This \$2-million challenge is being offered in partnership with the Ontario Aerospace Council (OAC), Consortium for Aerospace Research and Innovation in Canada (CARIC) and the Natural Sciences and Engineering Research Council (NSERC).

The federal government's CARIC has also opened up exciting new funding opportunities for industry-academic R&D collaborations in aerospace. OCE and the OAC have partnered with CARIC to become the deliverer of CARIC programs in Ontario and to raise awareness of the additional \$4 million over three years available for collaborative R&D.

- Partnering forum and challenge are being offered through OCE's Voucher for Industry Association (VIA) R&D Program

# Bringing industry and academic researchers together to address specific innovation challenges identified by industry

## ADVANCED HEALTH TECHNOLOGIES

### Revolutionizing the delivery of surgery and therapy through guided imagery

OCE has awarded \$500,000 and leveraged an additional \$2 million from five industry partners for investment in five industry-academic projects at Sunnybrook Health Sciences Centre.

Projects focus on a wide range of translational technologies, including extending the next generation of focused ultrasound technology for solid tumours for use within a magnetic resonance imaging (MRI) system; improving imagery used in craniofacial implants; the development of four-dimensional imagery for use in cardiology; further

development of wireless communication for an MRI suite; and automated scanning to aid non-invasive drug delivery.

The Sunnybrook Health Sciences-led consortium of partners includes industry partners Calavera Surgical Design Corp., FUS Instruments Inc., Harmonic Medical Inc., Innovere Medical Inc., Colibri Technologies Inc. as well as OCE and FedDev Ontario.

- **Under OCE's Voucher for Industry Association R&D program**

## CROSS-PROVINCIAL COLLABORATION

### Alberta-Ontario Collaboration

The Alberta-Ontario Innovation Program brings industry and academia together to develop research projects with a strong economic focus. The cross-provincial collaboration addresses challenges in both Ontario and Alberta that can be tackled through joint research and development.

The provinces of Ontario and Alberta are providing up to \$4 million to be matched up to \$4 million by industry partners in both provinces. Additional matching funds of up to \$4 million are available through the Natural Sciences and Engineering Research Council of Canada (NSERC).

Funded in Ontario by the Ministry of Research and Innovation, the program has been extended with an additional \$2-million investment.

- **Alberta-Ontario Innovation Program**

### CQDM – EXPLORE

**Accelerating drug discovery in the Ontario-Quebec Life Sciences corridor**

With a \$500,000 investment from OCE and another \$1 million in strategic partner leverage, OCE is supporting five projects focusing on early concept validation of cutting-edge technologies that address the most crucial needs in drug discovery and development.

CQDM's unique Explore program supports unconventional and highly innovative research. An extension of OCE's work with CQDM in the Ontario-Quebec Life Sciences Corridor, it fosters highly innovative and unconventional game-changing biopharmaceutical research and is now, for the first time, open to researchers in Ontario as well as in Quebec.

OCE's partnership with Explore has been renewed for another year with partners OCE and CQDM committing another \$500,000 each.

- **CQDM – Explore Program**



## TalentEdge equals competitive edge

Providing real-world industry experience to students and graduates

Under a \$10-million, two-year program, Ontario students and recent graduates from across all disciplines are being given a chance to apply their skills and expertise to solving industry problems. TalentEdge, a two-pronged program, enables university students and recent grads to work on collaborative industry-driven projects, and Ontario-based PhD graduates and postdoctoral fellows (PDFs) to work on industry driven research and development projects.

By equipping industry with highly skilled R&D personnel and helping build research and development capabilities, TalentEdge is creating jobs and stimulating economic growth in Ontario.

- OCE supported 375 internship units and 74 fellowship units in 2014/15.
- OCE's commitment of \$5.9 million for these internship and fellowship units has resulted in leverage of \$9.4 million from industry and the federal government.
- With 27 Ontario academic institutions and 133 companies participating in R&D projects, the program has already had a significant impact on the province.

## Performance Evaluation of Traffic and Security Monitoring Tool

*"Our TalentEdge intern's primary responsibility was to perform performance testing and benchmarking on two of our products. The primary benefit to Solana Networks is getting a well-trained engineer that can be part of the Engineering team. Typically, there is a gap with the academic training at university and skill requirements at industry. TalentEdge allows us to bridge the gap. The intern will continue to be part of the Solana team and contribute to future development and innovation. This program allows new graduates to be quickly trained and become part of the engineering workforce at Ontario industries."*

— Biswajit Nandy, Solana Networks

## Business Development in Hockey Analytics

*"The interns' projects ranged from back-end database improvements to creating new models for statistical analysis.*

*The five interns allowed Stathletes to increase productivity and create new models that were sold to five new hockey teams. In terms of employment, we were able*

*to hire 10 new staff members. For revenue, the interns' projects directly resulted in a 10 per cent growth rate. Overall benefit was the increase in client base, new staff and revenue that will allow for future growth in Southern Ontario. We kept the five interns full-time as they were a very positive impact on the company and helped drive growth in both revenue and employment."*

— Meghan Chayka, Stathletes



## Digital Pathology Software Platform

*"The outcome of this project was the development of a web portal for streaming large pathology images from the PathServe archive over modern browsers. The intern learned about many technologies as well as the inherent integration challenges related to combining various systems. The prototype system developed at the end of this project has been further refined by PathCore and will be commercially launched in Q2 of 2015. One undergraduate STEM student was trained and a new job was created in PathCore. Technologies developed will impact the delivery of pathology services and are suitable for export to other countries."*

— Dan Zadeh, PathCore



## Cloning talent

"If we could find five to 10 more 'Jims,' that would be ideal!"

Given that those words come from an expert in human genomics and DNA, the word "cloning" might come to mind.

But it's simply Marc Fiume, Founder and CEO of **DNASTack**, enthusing on the talents of Senior Engineer Jim Vlasblom, a biochemistry graduate he hired in August 2014 through OCE's TalentEdge Fellowship Program.

DNASTack, located in Toronto's Discovery District, is a massively scalable platform for genomic data management, sharing and analysis.

While part of the TalentEdge Program as a biochemistry graduate, Vlasblom helped the company improve on its search engine for genetic mutation or markers and "did a brilliant job," Fiume says.



"When we started with TalentEdge we wanted to create the best available search engine for genomics. Since then, we've joined forces with leading researchers and industry partners, including Google Genomics, to build a really robust concept for searching

genomes that's both informative and protects the participants' privacy. Jim's been instrumental in leading that discussion," he adds.

Now full-time at the company, Vlasblom is fully immersed in taking the technology to the next level.

## Bridging PhD and industry

Post-doctoral fellow and hydrologist Michael Callaghan left a lot of uncertainty about his future behind and gained some strong future prospects when landing a spot with a global, cutting-edge company in his field.

A fellow with OCE's TalentEdge Fellowship Program, he has been working with Steven Berg, President and CEO of **Aquanty** since April 2015.

Callaghan found the ideal opportunity with Aquanty, a hydrological science and research spin-off company from the University of Waterloo. Founded in 2012, the company has developed computer modelling software HydroGeoSphere that can be used to define water-related risks ranging from drought to flood at scales up to thousands of square kilometres.

"I've got a fairly varied background in both industry and academia, so I had been working prior to doing my PhD," says Callaghan. "But like a lot



of graduates in the sciences, bridging that gap between the PhD research and getting back into industry is a challenge, particularly in my field of environmental geoscience, where there is not a lot of opportunity for industry research."

Berg says TalentEdge also created a valuable opportunity for Aquanty.

"Michael has a broad skill set and background that fits very well with the people and type of research we do here and he brings a different perspective."

# COMMERCIALIZATION



OCE works with high-potential, early-stage entrepreneurs and innovative enterprises to help emerging businesses grow to the point where they can attract private investment and become sustainable, global competitors.

## ADVANCING HEALTH PROGRAM

### Transforming healthcare through advanced technology

Healthcare innovation in Ontario took a big step forward with the launch of the Mackenzie Innovation Institute at Mackenzie Richmond Hill Hospital.

Supported by \$350,000 from OCE's AdvancingHealth program, this state-of-the-art unit serves as a "living laboratory" for the development and evaluation of innovative healthcare technologies. A first in Canada, the Institute is part of Mackenzie's strategy to transform the delivery of care through advanced technology.

The Institute's first initiative is the design and implementation of a smart, secure mobile clinical messaging and

alert system for doctors and nurses in collaboration with technology partners BlackBerry, Cisco Canada and ThoughtWire.

AdvancingHealth aims to bolster innovation in Ontario's public healthcare sector by introducing new technologies that can improve patient experience and health.

The program supports collaborative technology demonstration projects between industry and public healthcare partners that can be scaled up to the system level.

Ten large-scale demonstration projects will be supported through this initiative.



Round 1 focused on ICT/Mobile applications in healthcare. Round 2, launched in April, focuses on virtual care and patient engagement.

## SCALING UP ONTARIO COMPANIES

OCE's Market Readiness Program includes both Customer Creation and Company Building components as defined by Lean Start-up principles. A start-up enters the Company Building phase when it has found a scalable, repeatable business model. OCE's Company Building stage investment is \$250,000, which must be fully matched by the company.

Over the past two years, OCE has supported 13 Company Building projects.

- Encycle Therapeutics
- EidoSearch
- Clear Blue Technologies
- SPARQ Systems
- GestureLogic
- Proteocycle Diagnostics Inc.
- Giatec Scientific
- ScarX
- Hydrostor
- EnerMotion Inc.
- Myndtec
- Char Technologies
- inMotive

*"We know that scale-up companies are a strong contributor to job creation and economic growth. This is why we want to do whatever we can to support them and create an innovation ecosystem in which they can succeed and grow in numbers. OCE is committed to helping these companies overcome any barriers to success and gain a national and global competitive edge."*

— Dr. Tom Corr, President and CEO, OCE



# Accelerating the commercialization of Intellectual Property (IP) originating in Ontario's academic and research institutions

## Building ties to the Chinese market

Under a new partnership with the China Canada Angels Alliance (CCAA), OCE aims to help start-ups that are seeking an international presence.

"Having direct business ties to the Chinese marketplace is more important than ever for Ontario start-ups seeking international presence," says OCE President Tom Corr.

OCE and CCAA are building a virtual incubation program called the China Angels Mentorship Program (CAMP), which enables approved Ontario start-up companies to be matched with investors, potential partners and mentors from Canada and China to educate and prepare the companies to enter the Chinese market.

*"CCAA has been working very hard in Ontario's early stage innovation ecosystem for almost two years. We know there are significant opportunities and we know technology companies appreciate the vital importance of embracing the Chinese market like never before."*

– Mr. Zhishuo (Peter) Liu, Founder and President, CCAA

### INTERNATIONAL COLLABORATION



## Partnering with Angels

### INTERNATIONAL COLLABORATION

OCE has solidified its relationship with a number of angel investment groups as a means of bolstering resources and services for start-ups and entrepreneurs.

This ensures that the province's angel investors are kept aware of the exciting and innovative new companies being supported by OCE. It also gives our companies greater visibility with potential investors as well as contact with experienced members of the innovation community who can offer critical advice and mentoring.

OCE has signed agreements with Angel One Network, Capital Angel Network, Georgian Angel Network, Golden Triangle Angel Network, Maple Leaf Angels and York Angel Investors. OCE also enjoys strong working relationships with both the Network of Angel Organizations – Ontario (NAO-Ontario) and the National Angel Capital Organization (NACO), Canada's association for angel investors.





# YOUTH ENTREPRENEURSHIP



This recently expanded portfolio of youth entrepreneurship programs covers a wide spectrum of entrepreneurship activities, including training and development support for students; seed capital funding for young entrepreneurs; and infrastructure support for academic institutions.

## Launching companies and careers

OCE offers a wide range of programs aimed at helping youth gain entrepreneurial skills or build their own companies to the point that they are investment and customer ready.

Over the past year, OCE has played a key role in helping to implement Ontario's Youth Jobs Strategy as the manager of some of its largest components:

- SmartStart Seed Fund
- Campus-Linked Accelerators
- On-Campus Entrepreneurship Activities
- Young Entrepreneurs, Make Your Pitch

## SmartStart

Seeding and growing Ontario's innovation economy



### Whole-of-government approach helps fill market gap for later-stage start-ups

More entrepreneurs in Ontario are getting the critical help they need to ensure their companies succeed under an exciting federal-provincial co-funding partnership. Under the four-year, \$18-million SmartStart Seed Fund, high-potential start-ups will get seed funding and help in scaling their companies to the point where they can attract customers and early investors.

The program was first piloted with FedDev Ontario funding in 2012 and renewed with Ontario Ministry of Research and Innovation funding in April 2014. In early 2015, FedDev Ontario announced a new \$9-million funding commitment to the program.

Through SmartStart, high-potential start-ups can access much-needed seed financing from both the provincial and federal governments through a single program. The result is greater cooperation and reduced duplication, creating an efficient marketplace for industry to access expertise and support.

SmartStart offers entrepreneurs between 18 and 29 years of age up to \$40,000 for technology or innovation-based Ontario companies to launch and grow their businesses. Since April 1, 2015, southern Ontario entrepreneurs between 18 and 29 years of age have been able to apply for up to \$70,000, while those 30 and older can apply for up to \$40,000.

OCE approved over a hundred SmartStart applications in 2014/15 and leveraged close to \$11.4 million from industry and other strategic partners.

# Fostering student entrepreneurship and supporting entrepreneurial activities by students and youth across Ontario

## SmartStart-supported companies



### Encircle

The global property and casualty insurance industry is struggling to keep pace with the ever-growing demands of the connected consumer. Encircle Inc. has created an integrated mobile and web SAAS (software as a service) platform that bridges the technology divide between insurers and consumers. It streamlines data flow, increases customer satisfaction, and significantly reduces policyholder support costs.

Encircle's suite of products create a connected ecosystem that leverages technology already in the hands of all parties to the underwriting and claims process. Real-time factual data captured in photos, videos, voice to text input and geo-location information seamlessly flows between the relevant parties, eliminating slow manual processes.

Encircle, with co-founders Ronuk Raval, Paul Donald and Christophe Biocca, received \$35,000 from OCE's SmartStart Seed Fund for the technology's pilot phase. The team is currently completing a Market Readiness Customer Creation project.

#### ROI:

- The Inventory product is the leading home inventory platform in Canada, U.S., U.K. and Australia
- Currently running a pilot project with one of the largest insurance claims adjusting firms in the world



### Magnusmode

Growing up with an autistic brother inspired Nadia Hamilton to develop an innovative mobile app that has the potential to help people with autism and other special needs all over the world.

Magnus Cards is an online and mobile app that uses a gamified approach to help people with cognitive special needs gain greater independence and confidence in a variety of life skills and activities. The app also features card decks by corporate and community partners that help people with autism gain greater access to services in society. So far, Nadia's company Magnusmode has partnered with museums, libraries and transit organizations in Kitchener-Waterloo and Toronto, and she's in talks with corporations in New York and across North America.

OCE is currently supporting Magnusmode through the SmartStart program, which is providing \$30,000 to help the company through the early commercialization stage.

#### ROI:

- Magnus Cards has users around the world and will be launching a pilot within a school system beginning in the fall of 2015
- Company received follow-on investment from the Golden Triangle Angel Network (GTAN)



### teaBOT

Engineering graduates Brian Lee and Rehman Merali co-founded teaBOT to bring fun, customized loose-leaf tea blends to on-the-go tea lovers. teaBOT allows customers to create their own blends using their smartphones or the kiosk's touch screen interface and brews a personalized cup of tea in under a minute.

teaBOT was founded in 2013 when the idea was accepted to the University of Toronto's Creative Destruction Lab. The start-up received SmartStart funding followed by support from OCE's Market Readiness Program, which helped build its product and hire core team members.

In summer 2015 Lee and Merali completed the prestigious Y Combinator program in Silicon Valley, which attracted major investments from venture capitalists in the U.S. and Canada. The company has partnered with a leading food service provider to bring teaBOT kiosks to campuses this fall.

#### ROI:

- Employs six full-time staff and one co-op student
- Recently closed a multimillion-dollar funding round

# YOUTH ENTREPRENEURSHIP

## CLAs/OCEAs

OCE is managing and delivering two significant programs that foster entrepreneurship at its earliest stages through a co-ordinated community-based approach.

The Campus-Linked Accelerators (CLA) and On-Campus Entrepreneurship Activities (OCEA) programs bring together 42 colleges and universities as well as local Regional Innovation Centres to deliver specialized guidance, advice and mentorship to post-secondary students and young entrepreneurs in 30 communities across Ontario.

Launched in the spring of 2014, the programs represent a \$25-million investment in young entrepreneurs and have four key objectives: outreach to local communities; extra-curricular education and experiential training for young entrepreneurs; acceleration services; and ensuring companies are connected to resources that will help them grow.

After only one year in operation, the two programs have met a pent-up demand from thousands of Ontario's budding entrepreneurs. From informal advice to networking events to mentoring opportunities, the CLAs and OCEAs exceeded expectations and targets for engagement with entrepreneurs.

In the second year of the CLA/OCEA programs, OCE is launching GlobalStart, which will bring together campus-based entrepreneurship centres from all over the world to share best practices, knowledge and resources amongst its network members. Another key component of the initiative, the GlobalStart Exchange Program, launches as a pilot program in 2015 with 15 young entrepreneurs receiving help to secure sales, investment or partnerships in global markets.



### OCEA:

- Guelph University
- Georgian College
- Northern College
- Humber College
- St. Clair College
- Laurentian University/Cambrian College/ Collège Boréal
- Conestoga College
- Lambton College
- Brock University
- Seneca College
- George Brown College
- Niagara College
- Mohawk College
- Algoma University/Sault College
- Loyalist College of Applied Arts and Technology
- York University
- Lakehead University/Confederation College
- La Cité Collegiale
- Canadore College/Nipissing University
- University of Ontario Institute of Technology/ Durham College/Trent University/Fleming College

### CLA:

- Ottawa: Carleton University, University of Ottawa, Algonquin College
- McMaster University
- Centennial College
- Western University/Fanshawe College
- OCAD University
- Queen's University
- Ryerson University
- University of Toronto
- University of Waterloo/Wilfred Laurier University
- University of Windsor



## Some examples of how the CLA and OCEA programs are helping Ontario's young entrepreneurs



**Velocity Foundry**  
University of Waterloo

Located within the heart of Kitchener-Waterloo's start-up ecosystem, Velocity Foundry is one of the largest hardware incubator spaces in North America providing entrepreneurs and start-ups with services and expertise in advanced materials, nanotechnology, mechatronics and mechanical and chemical engineering.



**DesignJam**  
OCAD University

DesignJam brings practical, hands-on learning experiences to help create businesses or make existing businesses more creative. DesignJam is a series of events, workshops and tools that provide creative business and design skills for cultural entrepreneurs and young start-ups. Its services and tools are co-creative, design-fueled and human-centred.



**ZoneStartups**  
Ryerson University

ZoneStartups is a global network that seeks to export the success and knowledge of Ryerson University's accelerator "zones." Each global ZoneStartups office offers a custom accelerator program for innovative technology companies, providing seed capital and access to an unmatched network, both locally and globally.



**HELIX**  
Seneca College

HELIX at Seneca College is helping young entrepreneurs solve real-world challenges with a particular focus on personal health products targeted at our aging population. Through sector-specific expert mentorship, HELIX entrepreneurs have access to a "Baby Boomer volunteer test group" with which to explore the design, function and commercial feasibility of their products and services.



**Entrepreneur Centre**  
Northern College

In conjunction with partners, the NCEC is building entrepreneurial awareness, self-employment and business start-up support for students, clients, community based students and alumni throughout the far northeast region. While Northern College has offered various entrepreneurship programs over the years, this is the first institution-wide program to work to systemically embed the concept of entrepreneurship.



**London Area CLA**  
Western University/Fanshawe College

The Campus-Linked Accelerator in London is represented by Propel at Western University and LEAP Junction at Fanshawe College. Each institution offers co-working space, mentorship, seed funding and connections to the broader entrepreneurial ecosystem. In the first year of operations, the CLA has assisted more than 200 start-up ventures, and its entrepreneurial programming and events have attracted more than 3,000 participants.



**EPICentre**  
University of Windsor

By providing access to funding, mentorship and a network of partners in Detroit and beyond, the University of Windsor's EPICentre Cross Border Entrepreneur Grants provide opportunities for young entrepreneurs in Windsor-Essex to expand their businesses into the United States and unlock additional potential for their company.



**Impact Centre**  
University of Toronto

The Impact Centre at the University of Toronto brings science to society with the goal of solving some of the world's most important problems and improving the quality of life for everyone. It has created a program of entrepreneurship training, mentorship and partnerships that help young scientific researchers and students create real products and industry solutions and bring them to market.



**Capital Entrepreneurs**  
Carleton University, uOttawa, Algonquin College

The goal of Capital Entrepreneurs is to make Ottawa the very best place to start and grow a business in Canada. Carleton, uOttawa and Algonquin join Invest Ottawa in this initiative and operate programs on each of their campuses and within the region to encourage and cultivate entrepreneurship amongst youth. The purpose is to create a common brand, educational norms, enhanced outreach, and continued acceleration of youth-led companies.

# OCE AWARDS

## Martin Walmsley Fellowship

Karl Martin won the 2014 Martin Walmsley Fellowship Award for **Nymi**, a bracelet that authenticates a user's identity through their heartbeat or electrocardiogram (ECG). Paired with Bluetooth connectivity, the identity can open doors, turn on home electronics or be used as a tap-and-pay device. The company has forged several partnerships to explore uses for the Nymi Band, including a wearable payment pilot project with MasterCard and major Canadian banks launched in summer 2015. The Nymi Band Discovery Kit is available for developers interested in creating applications for the Nymi Band.



### ROI:

- Currently employs 28 full-time people
- Raised \$14 million in Series A financing

## David McFadden Energy Entrepreneur Challenge



University of Windsor PhD candidate Kyle Bassett won \$25,000 in the 2014/2015 David McFadden Energy Entrepreneur Challenge for his portable wind turbine that allows remote communities to produce energy easily, reliably and at a low cost.

Bassett's design uses 3D-printed components that can be shipped compactly, or printed on site, and installed in minutes. The turbines can power low-voltage electronics such as cell phones and flashlights. They have already made a big difference in the lives of residents in Nicaragua as well as the remote community of Wekweètì, Northwest Territories.



Bassett founded **RMRD TECH** to commercialize the turbine. The award helped expand the team and purchase a 3D printer. Bassett will manufacture and donate 50 wind turbines to rural villages. RMRD has partnered with MatterHackers, a large online retailer of 3D printers and filament in the U.S., to sponsor the journey.

### ROI:

- Raised \$45,575 during a successful Kickstarter campaign in May 2015
- Currently manufacturing first production run of 300 turbines



ONTARIO CENTRES OF EXCELLENCE  
MINDTOMARKET  
AWARD 2014

## Mind to Market Award

OCE's 2014 Mind to Market Award went to **InteraXon** and the University of Toronto for the development and commercialization of the company's Muse headband. The Muse is a brain fitness tool that helps users learn to manage stress, stay calm and stay focused while improving physical, emotional and cognitive well-being. Ariel Garten, co-founder and CEO of InteraXon, received a \$25,000 award.

This award celebrates the best OCE-supported research collaboration between the business and research communities, resulting in effective commercialization of leading-edge ideas and solutions.

## Young Entrepreneurs, Make Your Pitch

Meet the six winners of the *Young Entrepreneurs, Make Your Pitch* high school competition, offered under the *Ontario Youth Jobs Strategy*. They were chosen from 20 finalists who presented their ideas in front of a judging panel at this year's Discovery, Canada's leading innovation-to-commercialization conference.



**DR. TOM CORR**, President and CEO, OCE; **MALINI HU**, Richmond Hill High School, Richmond Hill, Ontario, Grade 12, Project: Introducing the Urbin; **KHANSA HASAN**, Lester B. Pearson Collegiate Institute, Scarborough, Ontario, Grade 10, Project: C2TF-Academy; **JAKE D'GAMA**, St. Joan of Arc Catholic Secondary School, Mississauga, Ontario, Grade 12, Project: Xcel Tutoring Co.; **HON. BRAD DUGUID**, Minister of Economic Development, Employment and Infrastructure, Government of Ontario; **PATRICK CHONG**, St. Mary Catholic Secondary School, Dundas, Ontario, Grade 12, Project: LatchMyLanyard; **KATE VICKERY**, Loretto Abbey Catholic Secondary School, Toronto, Ontario, Grade 11, Project: The Doggie Bowl; **ASHUMI DOSHI**, R. H. King Academy, Scarborough, Ontario, Grade 9, Project: Classy Crafters; **MICHAEL NOBREGA**, Chair, Board of Directors, OCE (left to right)



# STRATEGIC INITIATIVES



Advancing innovation and creating a competitive advantage for Ontario's economy

OCE works with key industry leaders to support the development of leading-edge technologies that drive business innovation

## FINANCIAL SERVICES

### Seeking innovative solutions for the financial industry

More than 150 financial executives, researchers, academics and representatives of technology start-ups and incubators met earlier this year to explore opportunities to collaborate in finding innovative technology solutions to challenges facing the financial industry. The event stemmed from a new partnership between Ontario Centres of Excellence and the Toronto Financial Services Alliance (TFSA) that aims to connect companies in Canada's largest financial services cluster with Ontario's innovation ecosystem.

*"The Toronto region's financial services sector already ranks in the global top 10 and is an international leader in a number of financial sub-sectors. However, in an increasingly competitive global marketplace we want to ensure that the region's financial industry has access to the most innovative technologies. By effectively tapping into local solutions, Toronto's financial services sector will not only continue to grow as a world leader, but the financial technology ecosystem being created will attract businesses, jobs and investment into the region."*

– Janet Ecker, President and CEO of the TFSA



## INFORMATION, COMMUNICATIONS & DIGITAL MEDIA

### Helping companies become competitive through smart computing

More than 150 representatives from industry, academia and government attended the June launch of OCE's Smart Computing R&D Challenge, which will provide \$7.5 million over two years, with \$1.5 million from OCE, \$3 million from NSERC, and another \$3 million from industry in cash and in-kind.

The initiative stems from a new partnership between OCE and the Southern Ontario Smart Computing Innovation Platform (SOSCIP).

## OneEleven: Accelerating data-driven start-ups

Companies that are part of the big data community at Toronto's OneEleven can now harness the power of Canada's fastest supercomputer, the IBM Blue Gene/Q, to take their businesses to the next level.

OneEleven is Canada's first accelerator created to address the technical needs of successful, visionary entrepreneurs who will benefit from access to the power of high performance computing. Under a new agreement between OneEleven and the Southern Ontario Smart Computing Innovation Platform (SOSCIP), select OneEleven companies are gaining access to the IBM supercomputer.

OneEleven is home to Canada's most promising high-growth technology start-ups. Since being founded in November 2013, OneEleven has worked with 21 companies and generated 106 new jobs and \$69.4 million in follow-on financing.





## SUCCESS STORY

INFORMATION,  
COMMUNICATIONS  
& DIGITAL MEDIA



### RETURN ON INNOVATION

ROI

- Currently employs 30 full-time team members
- Projects hiring 30 more employees in the next two years
- Attracted \$10.5 million in seed and Series A financing
- OCE investment: \$157,500

OCE programs: SmartStart, Market Readiness and SOSCIP

# Meta (formerly Sciencescape)



As a cancer researcher at the Ontario Cancer Institute at Princess Margaret Hospital, Sam Molyneux experienced firsthand how daunting it can be to stay abreast of burgeoning scientific research. Between 2,000 and 4,000 scholarly articles are published daily in biomedicine alone. To help filter the material, he co-founded Meta, an extraordinary tool enabling scientists, clinicians, educators and students to stay on top of breaking research papers, explore historical scientific breakthroughs and incorporate new ideas, findings, methods and technologies into their work.

Using the Southern Ontario Smart Computing Innovation Platform (SOSCIP) systems, Meta is able to analyze more than 25 million papers from the PubMed database, as well as through full-text partnerships with dozens of publishers. Users can subscribe to the fields, researchers, journals and labs/institutions that they want to follow, as well as discover the papers most relevant to their research using Meta's powerful search capabilities. The platform sorts and organizes articles in real time using Eigenfactor algorithms, which determine a paper's influence by tracking both the number of citations and quality of the sources. Meta also provides a visual of the data in charts that allow users to explore the history of research on any given topic and identify the most influential papers over time.

The Meta team received SmartStart funding as part of OCE's partnership with Extreme Startups and gained further support through OCE's Market Readiness Program. Its literature discovery platform is currently used by over 34,000 users with a focus on research topics in biomedicine. The team is now working on the next generation of its platform and services, scheduled for commercial launch this fall.



**Sam Molyneux,**  
*CEO &  
Co-Founder,  
Meta*



**Amy Molyneux,**  
*CTO &  
Co-Founder,  
Meta*



**Matthew Johnson,**  
*Senior Business  
Development  
Manager, OCE*



## SUCCESS STORY

ADVANCED  
HEALTH  
TECHNOLOGIES



### RETURN ON INNOVATION

ROI

- Technology is projected to triple the utilization of donated lungs, saving thousands of lives per year
- Potential to establish Ontario as a leader in a \$2.5-billion global market
- OCE investment: \$250,000

OCE programs: Voucher for Commercialization, MSc PoP and Market Readiness

# XOR Labs



More than 700,000 people worldwide are in critical need of a lung transplant. But fewer than 1 per cent receive one due to the limited availability of quality lungs. Currently, only about 20 out of every 100 donated lungs are suitable for transplant. Toronto-based XOR Labs aims to dramatically increase this number with its Ex Vivo Lung Perfusion (EVLP) technology.

The EVLP process keeps lungs nourished and alive outside the body for up to 12 hours. This gives lungs which would have been discarded, time to be assessed, and transplanted if they perform well. Moreover, injured lungs can be rehabilitated instead of discarded, and if sufficiently recovered, can be transplanted. Toronto's world-leading University Health Network (UHN) has developed the gold standard in EVLP systems. After six years of use, UHN has seen the number of donated lungs that are transplanted double. This breakthrough in patient care is only made possible through a homemade, stationary solution that requires a significant amount of training to operate and a dedicated OR. Co-founded by a team of leading thoracic surgeons from UHN who helped develop the original system, XOR Labs is commercializing a standardized and mobile version of the system which will bring this groundbreaking Ontario-made technology to patients around the world. The system simplifies the EVLP process and drastically cuts hospital costs for lung transplants. Its mobility makes it uniquely suited for out-of-hospital use, opening up opportunities to use the EVLP process during the transportation of donated organs.

OCE first supported XOR Labs through the Voucher for Commercialization and MSc PoP programs to work with its partner, medical devices innovation and engineering firm Kangaroo Group, on product definition, design and development. A follow-up Market Readiness project helped the company secure a major investment from Xenios AG.

XOR Labs is currently preparing for a late 2016 launch of its EVLP system in Canada, followed by release in Europe and the U.S. The technology has future potential for revolutionizing the transplantation of other organs such as the liver and heart.



Dr. Tom Waddell,  
*CEO, XOR Labs*



Dr. Shaf Keshavjee,  
*CMO (Chief Medical Officer), XOR Labs*



Dr. Laura Yu,  
*Business Development Manager, OCE*



## RETURN ON INNOVATION

**ROI**

- Employs 25 people across Canada
- Projects hiring 1-2 more engineers for this product
- OCE investment: \$304,286

OCE program: Voucher for Innovation and Productivity II (VIP II)

# Hitachi High-Technologies Canada



As components of electronic chips continue to shrink, it's becoming increasingly difficult to manipulate them. The features of today's leading Integrated Circuit (IC) chips are just 14 nanometers (a sheet of paper is about 100,000 nanometers thick) and getting even smaller, creating a multi-billion-dollar market need for tools that can precisely target, probe and test them.

The current process for manipulating nanoelectronic structures is time-consuming, has poor repeatability and requires a highly skilled technician. Hitachi High-Technologies Canada, an affiliate of Hitachi High Technologies, Inc., an international leader in manufacturing electron microscopes, has teamed up with the University of Toronto to develop an automated alternative. Their innovative solution couples Hitachi's powerful microscope technology with a robotic "hand" about half the size of a human's. Designed in Canada, the system is a first of its kind with unmatched sophistication. It is capable of probing areas on a chip that are just nanometers in size and will enable fault analysis and material testing that was previously unachievable.

The system is the culmination of four years of collaboration between Hitachi and U of T. OCE initially supported the effort in 2010 through a Collaborative Research project that resulted in a first-generation prototype, which was granted a patent. A two-year Voucher for Innovation and Productivity II (VIP II) project that is currently underway focuses on refining the technology in preparation for commercialization.

The system is now entering the production stage. Hitachi is in talks with potential customers and expects to sell three of the systems in the next year.



**Ian Cotton,**  
*President,  
Hitachi High-  
Technologies  
Canada*



**Professor  
Sun Yu,**  
*PI, University  
of Toronto*



**Dr. Laura Yu,**  
*Business  
Development  
Manager, OCE*





## RETURN ON INNOVATION

**ROI**

- Currently employs 8 full-time people
- Projects hiring 40 employees in the next two years
- OCE investment: \$155,000

OCE programs: SmartStart and Market Readiness

# Optimimity (formerly myHealthSphere)



Numerous studies warn against the dangers of stress and a sedentary lifestyle, which can negatively affect employee health and translate to higher costs for employers. Organizations are now devoting more and more resources towards encouraging employees to incorporate healthy behaviours into their workday routine, and Toronto-based Optimimity's suite of software can help.

Optimimity offers customizable workplace wellness software solutions that help build powerful habits for professionals. Its flagship app Dooo reminds employees to complete small tasks throughout the day such as drinking water, stretching, meditating, or eating a healthy snack. The platform also awards points for completed tasks that employees can redeem for rewards.

Optimimity got its start in MaRS Discovery District and is now a part of Ryerson University's Digital Media Zone. An effective and simple way for employees to proactively take control of their mental and physical well-being, Dooo is catching the attention of HR departments. Since securing its first customer in October 2014, Optimimity has generated over \$70,000 in revenue and now serves 15 firms across four different cities with 650 active paid users. And its workplace wellness tool is already achieving long-term habit-forming results.

With 10 minutes a day, Dooo has helped over 50 per cent of users to establish "powerful habits" as defined by their CEOs. Three clients have even reported decreases in sick days for two straight quarters. Case studies are showing that employees feel more connected and energized at work.

OCE initially supported Optimimity through the SmartStart Seed Fund, which helped the team build its Minimum Viable Product and make its first sale. The start-up recently completed a Market Readiness Customer Creation project and is continuing to work with OCE.



**Jane Wang,**  
*CEO,*  
*Optimimity*



**Derrik Leach,**  
*Business*  
*Development*  
*Manager, OCE*





## RETURN ON INNOVATION

**ROI**

- Projects hiring 4-6 full-time employees over the next two years
- Potential to establish Ontario as a leading exporter of safe, year-round greens
- OCE investment: \$19,962

OCE program: Voucher for Innovation and Productivity (VIP)

# Durham Foods



Spinach is a notoriously finicky field crop. Canada's tumultuous climate only allows growers to yield 1-2 crops per year, resulting in the need to import over \$100 million of the leafy vegetable. Traditionally, spinach has been unsuitable for indoor growing because of its susceptibility to fungus. But an innovative Durham-based company has engineered a way to avoid this by growing spinach in water, and without using any pesticides or fungicides.

Durham Foods is the only company commercially growing hydroponic spinach in North America. By creating an optimal environment to grow indoors, the company's spinach tastes even better than field-grown. But its next challenge was to increase the volume of spinach produced. To speed up the production process, the company collaborated with Durham College on an OCE Voucher for Innovation and Productivity (VIP) project to develop an automated spinach harvester.

The project outcome was a spinach harvester that gets 30 per cent more spinach off the pond in a fraction of the normal time. Because they never touch human hands, crops are protected from contaminants such as E. coli, ensuring food safety for consumers. The harvester allows Durham Foods to yield 18 or more crops per year, up to three times more than field growers in California, a leading exporter of spinach.

Durham Foods markets its hydroponic spinach at Metro, Loblaws and Sobeys locations in the Durham and North York regions, where its superior taste has created a high demand by customers. The family-run business is continuing to work with Durham College and OCE to refine the harvester and develop other supportive technologies for growing hydroponic spinach.



**Jim Sheehan,**  
*President,  
Durham Foods*



**Professor  
Rob Braithwaite,**  
*PI, Durham  
College School  
of Science &  
Engineering  
Technology*



**Rebecca Tran,**  
*Business  
Development  
Manager, OCE*



## SUCCESS STORY

ENERGY AND ENVIRONMENT



# GestureLogic



Athletes are increasingly turning to wearable tech products to help improve performance, but the information collected has tended to be limited. LEO, from Ottawa-based GestureLogic, is a game-changer in wearable fitness devices.

Based on electromyography (EMG), a diagnostic technique that measures electrical activity in muscle tissue, the LEO leg band has sensors and conductive fibers that analyze muscle function to improve performance and prevent injury. LEO is able to detect muscle fatigue, monitor hydration and lactic acid buildup, identify which muscles are being used, and analyze technique. Data is collected and analyzed in real time and sent to the wearer's smartphone. LEO will first be marketed to avid cyclists, as it is uniquely able to improve cycling skills and performance. But runners and soccer players too will benefit from using LEO. The technology also has additional applications in the medical field.

LEO originated in a research project at Carleton University's Faculty of Engineering led by Professor Leonard MacEachern, who co-founded GestureLogic with Mark Klibanov, former student and current Chief Product Officer. OCE supported GestureLogic at the development stage through the MSc PoP Program. A \$250,000 Market Readiness project followed, allowing the company to hire key personnel and providing a catalyst to secure multiple large investments. GestureLogic also participated in OCE's TalentEdge Program.

OCE continues to support GestureLogic through the Voucher for Innovation and Productivity (VIP) Program. The team is preparing for LEO's commercial launch in 2016, and buzz around the innovative product is steadily building. World-renowned training coaches have signed on as technical advisers to create cycling training programs using LEO. The start-up is also discussing potential opportunities with major players in the sports industry.

## RETURN ON INNOVATION

# ROI

- Currently employs 13 full-time team members
- Projects doubling the team in the next 18 months
- OCE investment: \$330,000

OCE programs: MSc PoP, Market Readiness and TalentEdge



**Leonard MacEachern,**  
*Co-Founder  
& CEO,  
GestureLogic*



**Chris Ritchie,**  
*Business  
Development  
Manager, OCE*



## SUCCESS STORY

INFORMATION,  
COMMUNICATIONS  
& DIGITAL MEDIA



**AUTOMATICALLY  
TRACK YOUR WORKOUT**

### RETURN ON INNOVATION

**ROI**

- Currently employs 35 full-time team members
- Projects hiring 50+ staff in the next two years
- Raised \$2.5 million in follow-on investment
- OCE investment: \$95,000

OCE programs: SmartStart  
and TalentEdge

# Gymtrack

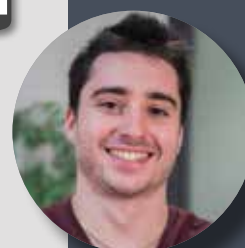


Keeping track of workouts is critical for making progress and seeing results at the gym, but ways to do this have evolved little from old paper-and-pen methods. Ottawa start-up Gymtrack wants to improve the experience of gym-goers everywhere with its workout tracking technology.

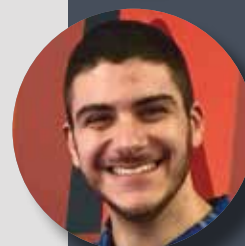
Benefitting both gym owners and their clients, Gymtrack's technology consists of sensors for gym equipment, a wearable device for members, and an app. For gyms, the platform serves as a way to differentiate themselves in a competitive market. With Gymtrack, gyms can provide virtual personal training services and increase member retention by keeping clients motivated and engaged. Members can easily keep track of their workouts, saving information like the amount of weight lifted, repetitions, sets, and distance run or biked on their smartphone. It also tracks calories burned in real time.

OCE first supported Gymtrack with \$30,000 from the SmartStart Seed Fund, which co-CEO Pablo Srugo says came at a critical time in the start-up's early stages of development. The team is now working on a TalentEdge Fellowship project that will help create proprietary connected devices that are installed onto gym equipment to track weight lifted, count repetitions, and identify equipment. The Fellow's research will help improve the accuracy and reliability of all three devices.

Gymtrack's platform is currently being used in beta form at Algonquin College, and later this year the team is launching the first commercial version at a major international gym chain with thousands of locations.



**Pablo Srugo,**  
*Co-Founder  
& Co-CEO,  
Gymtrack*



**Lee Silverstone,**  
*Co-Founder  
& Co-CEO,  
Gymtrack*



**Chris Ritchie,**  
*Business  
Development  
Manager, OCE*





## RETURN ON INNOVATION

**ROI**

- Significant social and economic impacts including improved food security and creating local jobs
- Projects hiring 50+ employees in the next three years
- Hired three Cambrian graduates from the project to full-time positions
- OCE investment: \$19,030

OCE program: Voucher for Innovation and Productivity (VIP)

# Greenhouses Canada



Growing local food is a challenge in Ontario's northern climate due to a short growing season. As a result, fresh healthy produce can be scarce and expensive for communities. Greenhouses offer the potential for prolonged indoor growing, but high heating costs during extremely cold winters are a barrier for many northern growers.

Sudbury-based Greenhouses Canada (GHC), in collaboration with Cambrian College, has developed an innovative, energy efficient greenhouse solution. Cambrian researchers found that most of a greenhouse's heat is lost through its glass walls. By replacing some of the glass walls with insulated material and incorporating an angled roof shape, they were able to design a greenhouse that reduces heating costs by 85 per cent, allowing for year-round growing. The system uses water-based growing techniques such as hydroponics and aquaponics, which produce a higher yield at a faster pace than conventional soil-based growing. Also, water-based techniques conserve water.

A two-year Ontario Centres of Excellence Voucher for Innovation and Productivity (VIP) project allowed GHC and Cambrian to build a demonstration system in Espanola, Ontario. Now fully operational, the greenhouse is growing lettuce, peas, kale, cucumbers, tomatoes and peppers.

GHC has secured contracts to build greenhouse systems in other communities in Northern Ontario and Saskatchewan, with plans to expand to other remote locations in Canada and beyond. The company is now working with Cambrian on geothermal systems for the greenhouse, which upon proof of concept, would make it completely off-grid.



**Jeff Scharf,**  
*President,  
Greenhouses  
Canada*



**Professor  
Kameal Mina,**  
*PI, Energy  
Systems,  
Cambrian  
College*



**Samira Afrand,**  
*Business  
Development  
Manager, OCE*





## RETURN ON INNOVATION

**ROI**

- Currently employs 38 full-time people
- Secured \$25 million in venture capital
- OCE investment: \$85,000

OCE programs: Voucher for Innovation and Productivity II (VIP II), Technical Problem Solving and TalentEdge

# Solantro Semiconductor Corp.

Solar photovoltaic (PV) systems offer a clean energy alternative to fossil fuels, but they need to be economically viable to compete.

DC to AC power conversion, performed by inverters, can represent up to 15 per cent of the overall cost of PV systems. An inverter sized to handle the combined power from a typical residential PV installation is roughly the size of a cooler. Smaller, more cost-effective inverters will increase the adoption of clean PV energy, including in remote locations that lack power infrastructure and must rely on diesel generators. However, shrinking the size of inverters is a major technical challenge, which led Google to launch the Little Box Challenge in 2014 with a \$1,000,000 prize going to the team who creates the smallest, most efficient inverter.

Ottawa-based Solantro Semiconductor Corp. designs semiconductor chipsets for distributed and scalable renewable power systems. In response to the Google Little Box Challenge, Solantro expanded the scope of its relationship with the University of Toronto to design a high-density, high-efficiency inverter platform. Using Solantro's chipsets and Gallium Nitride (GaN) devices, the multi-disciplinary team from U of T is developing a prototype that is at least 10 times smaller than today's state-of-the-art inverters. The project is supported by OCE's Voucher for Innovation and Productivity II (VIP II) Program. OCE also supported the Solantro-U of T collaboration through a 2013 Technical Problem Solving project to demonstrate efficient and lightweight power converters for renewable energy, using a novel form of integrated storage which mitigates the impact of intermittent solar energy throughout the day.

Upon completion of the VIP II project in 2016, Solantro plans to expand its product offering and disrupt the industry with its highly integrated inverter platform. The company is currently participating in OCE's TalentEdge Internship Program which is providing funding for a U of T PhD student.



**Antoine Paquin,**  
*Founder, CEO  
& President,  
Solantro  
Semiconductor  
Corp.*



**Professor Olivier  
Trescases,**  
*PI, Electrical  
Engineering,  
University of  
Toronto*



**Samira Afrand,**  
*Business  
Development  
Manager, OCE*





## RETURN ON INNOVATION

**ROI**

- Team has grown by 10 employees in the last year, bringing the total to 80
- Projects 15-20% of additional growth in staff over the next two years
- OCE investment: \$95,562

OCE program: Voucher for Innovation and Productivity II (VIP II)

# Hudson Boat Works



A fraction of a second can make all the difference for rowing teams competing for Olympic gold. Few understand this better than London-based Hudson Boat Works, one of the world's three top manufacturers of custom racing shells for elite rowing programs. Since 1984, Hudson boats have won 80 Olympic and World Rowing Championship medals. But now Hudson wants customers to know its boats are the best before they even hit the water.

Hudson is currently the only manufacturer of its kind dedicated to providing customers with quantitative data on the quality of its handcrafted boats from the beginning of the manufacturing process. To do this, the company is developing technologies that measure key indicators of a boat's performance. One important indicator is stiffness. For top performance, rowing shells must be as stiff as possible because flexibility wastes the crew's energy.

In collaboration with Fanshawe College's Centre for Research and Innovation, Hudson has developed a first-of-its-kind test stand to measure the stiffness of each boat manufactured. Fanshawe faculty and students began designing the test stand in late 2013. Construction was made possible with \$95,500 from Ontario Centres of Excellence's Voucher for Innovation and Productivity II (VIP II) Program.

Recently completed, the 40-foot aluminum stand goes into use starting January 2016. The test stand, which enables Hudson to eliminate variance and improve the quality of its boats, will be integral to Hudson's system for delivering key performance metrics to customers. The company continues to work with Fanshawe on additional technologies.



**Glen Burston,**  
*Operations  
Manager,  
Hudson Boat  
Works*



**Martin Volkening,**  
*PI, Project  
Integration  
Coordinator,  
Fanshawe  
College*



**Alison Empey,**  
*Business  
Development  
Manager, OCE*



# EVENT HIGHLIGHTS



## ADVANCING HEALTH

180 health officials and health technology companies attended an Advancing Health partnering forum to explore avenues for matching healthcare needs with innovative products and services.



**AEROSPACE** – Ontario aerospace companies and academic researchers participated in three industry-academic information sessions in Toronto, North Bay and Ottawa. Hosted by Ontario Centres of Excellence (OCE) in partnership with the Ontario Aerospace Council (OAC) and the Consortium for Aerospace Research and Innovation in Canada (CARIC).



**TORONTO FINANCIAL SERVICES ALLIANCE AND OCE** – 150 attendees joined the first Fin-Tech partnering forum sponsored by TFSA and OCE to discuss potential areas of innovation in Fin-Tech.





Canada's leading innovation-to-commercialization conference, showcasing leading-edge technologies, best practices and research in Ontario.

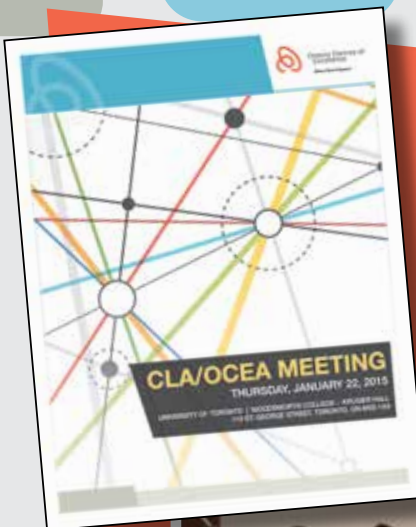


SAVE  
THE  
DATE

May 9-10, 2016



**OCE'S ANNUAL GENERAL MEETING** in October brought together over 300 attendees from industry, academia, investment, government and media. Dozens of companies were invited to showcase, and the Martin Walmsley and Mind to Market Awards were presented during the evening.



**CLA AND OCEA** – The inaugural CLA/OCEA meeting in June 2014 and the subsequent event in January 2015 brought together representatives from all 30 Ontario Campus-Linked Accelerators (CLA) and On-Campus Entrepreneurship Activities (OCEA) programs.





# AWARD-WINNING COMPANIES

Ontario Centres of Excellence is proud to have worked with and supported this year's record number of award-winning companies

<b>360pi</b>	<ul style="list-style-type: none"> <li>• 2014 Named one of the Top 10 Employers, Employees' Choice Awards, Ottawa Business Journal (OBJ) and Ottawa Chamber of Commerce</li> <li>• 2014 Fastest Growing Companies, #5, Ottawa Business Journal (OBJ)</li> <li>• 2014 12 top 10 rankings, RIS Software LeaderBoard</li> </ul>	<b>EcoSynthetix Inc</b>	<ul style="list-style-type: none"> <li>• 2014 Business Excellence Award, Burlington Chamber of Commerce</li> </ul>
<b>Aeryon Labs</b>	<ul style="list-style-type: none"> <li>• 2014 Ontario Exporter of the Year Award, Canadian Manufacturers &amp; Exporters (CME) and Glacier Media</li> <li>• 2014 Named one of Canada's 50 Fastest Growing Technology Companies, Deloitte</li> </ul>	<b>Edusight</b>	<ul style="list-style-type: none"> <li>• 2014 Winner, GTAN I START!</li> <li>• 2014 Winner, ASCent Social Enterprise Competition</li> </ul>
<b>Applied Brain Research</b>	<ul style="list-style-type: none"> <li>• 2015 R&amp;D100 Awards finalist</li> <li>• 2015 Silicon Valley Technology Innovation Awards Top 30</li> </ul>	<b>Eion Wireless</b>	<ul style="list-style-type: none"> <li>• 2014 Mobility Tech Zone Wireless Backhaul Distinction Award</li> </ul>
<b>BLiNQ Networks</b>	<ul style="list-style-type: none"> <li>• 2014 Outstanding Information and Communications Technology Award, IEEE Ottawa Section Awards</li> </ul>	<b>Every1Games</b>	<ul style="list-style-type: none"> <li>• 2015 Winner, Philanthropitch</li> </ul>
<b>BTI Photonics Systems Inc.</b>	<ul style="list-style-type: none"> <li>• 2014 Fierce Telecom Innovation Award</li> </ul>	<b>Flybits Inc.</b>	<ul style="list-style-type: none"> <li>• 2014 Top 100 North America Winner, Red Herring</li> </ul>
<b>Cast ConneX</b>	<ul style="list-style-type: none"> <li>• 2015 Engineering Award of Excellence, Regional Steel Design Awards</li> </ul>	<b>FreePoint Technologies</b>	<ul style="list-style-type: none"> <li>• 2015 Techcellence Innovation Award, TechAlliance</li> </ul>
<b>C-COM Satellite Systems</b>	<ul style="list-style-type: none"> <li>• 2015 Innovation Award, Yahclick Service Partner Conference</li> </ul>	<b>Granify</b>	<ul style="list-style-type: none"> <li>• 2014 Best in Ecommerce Solutions and Best Digital Startup, Digital Alberta Awards</li> </ul>
<b>Chalk.com</b>	<ul style="list-style-type: none"> <li>• 2015 William Zhou named one of 12 most impressive young entrepreneurs, Forbes.com</li> <li>• 2014 Named one of 50 Emerging Global Entrepreneurs to Watch, Inc.com</li> </ul>	<b>Grantek Systems Integration Inc.</b>	<ul style="list-style-type: none"> <li>• 2015 Best Small and Medium Employers in Canada, Aon Hewitt</li> </ul>
<b>Chematria (Atomwise)</b>	<ul style="list-style-type: none"> <li>• Named one of five must-watch startups for 2015, Yonge Street Media</li> </ul>	<b>Greyter Water Systems</b>	<ul style="list-style-type: none"> <li>• Jeff Winter named on 2014 Engineering Leaders Under 40, Plant Engineering</li> </ul>
<b>Chipsetter</b>	<ul style="list-style-type: none"> <li>• 2014 Best Business Idea, Innovation Factory</li> </ul>	<b>Grobo Inc.</b>	<ul style="list-style-type: none"> <li>• 2014 Norman Esch Enterprise Co-op Award, Conrad Business, Entrepreneurship, and Technology Centre</li> </ul>
<b>Clear Blue Technologies</b>	<ul style="list-style-type: none"> <li>• 2014 Las Vegas M2M Evolution Business Impact Award</li> </ul>	<b>HandyMetrics Corp</b>	<ul style="list-style-type: none"> <li>• 2014 Most Promising Start-Up, Technology Leadership Awards, TechConnex</li> </ul>
<b>Clearpath Robotics Inc.</b>	<ul style="list-style-type: none"> <li>• Co-founders named on 40 Under 40: People To Watch In 2015, Business Insider</li> <li>• 2014 Canada's Passion Capitalist Award</li> <li>• Named one of Canada's Top Small &amp; Medium Employers 2015</li> <li>• Named one of the Top 50 companies to watch in 2015, Robotics Business Reviews</li> <li>• 2014 People's Choice Award, Favorite Company, Manufacturing, International Business Awards</li> <li>• 2014 Edison Award silver medal - industrial design</li> <li>• 2014 Silver Stevie Award for Company of the Year</li> <li>• Named one of the 15 Most Innovative Canadian Companies of 2015, Canadian Business</li> </ul>	<b>Intelligent Mechatronic Systems (IMS)</b>	<ul style="list-style-type: none"> <li>• 2015 IOT Innovation winner</li> <li>• 2014 Ernest C. Manning Award Nominee</li> <li>• 2015 Ingenious Award finalist</li> </ul>
<b>Dynaplas Ltd.</b>	<ul style="list-style-type: none"> <li>• 2014 GM Supplier Quality Excellence Award</li> </ul>	<b>InteraXon</b>	<ul style="list-style-type: none"> <li>• 2015 6 Best Gadgets at Wearables World</li> <li>• 2014 Winner OCE Mind to Market Award</li> <li>• 2014 CES Innovations 2014 Design and Engineering Award for 'Tech For A Better World'</li> </ul>
		<b>InVivo Communications</b>	<ul style="list-style-type: none"> <li>• 2015 MM&amp;M Top 100</li> <li>• 2015 Winner of The Most Valuable Patient Initiative: Novartis and InVivo Communications</li> <li>• 2014 Web Health award winner</li> </ul>
		<b>Kahoots</b>	<ul style="list-style-type: none"> <li>• 2015 Winner Microsoft Ventures Pitch</li> </ul>
		<b>Karibu Solar Power</b>	<ul style="list-style-type: none"> <li>• 2014 Cornerstone Award</li> </ul>
		<b>Komodo OpenLab</b>	<ul style="list-style-type: none"> <li>• 2014 Pioneers for Change Awards: Skills for Change Jorge Silva</li> </ul>
		<b>Legworks</b>	<ul style="list-style-type: none"> <li>• 2015 Winner Accessibility Tech Pitch Competition</li> </ul>
		<b>MappedIn</b>	<ul style="list-style-type: none"> <li>• 2014 Employer recognition award – Conestoga College</li> </ul>
		<b>MDDT Inc.</b>	<ul style="list-style-type: none"> <li>• 2014 TechAlliance Techcellence Award – Innovation</li> </ul>

<b>Medella Health</b>	<ul style="list-style-type: none"> <li>• 2014 E Co-op Award Winner</li> </ul>
<b>Meta (formerly Sciencescape)</b>	<ul style="list-style-type: none"> <li>• 2014 The Scientist's annual "Top 10 Innovations"</li> <li>• 2014 Accelerator Graduate of the Year, runner-up</li> </ul>
<b>Miovision Technologies Inc.</b>	<ul style="list-style-type: none"> <li>• 2014 Deloitte Fast 50 tech companies</li> <li>• 2014 one of Waterloo Area's Top Employers</li> </ul>
<b>Noble Purification</b>	<ul style="list-style-type: none"> <li>• 2014 Peterborough Business Excellence Award: Entrepreneurial Spirit</li> <li>• 2014 Peterborough Business Excellence Award: Innovation/R&amp;D Award</li> <li>• 2015 One of Canada's Clean50</li> <li>• 2014 Youth in Motion Top 20 Under 20</li> </ul>
<b>nTerop Corporation</b>	<ul style="list-style-type: none"> <li>• 2014 Motorola Award for Public Safety Technology</li> </ul>
<b>Nulogy</b>	<ul style="list-style-type: none"> <li>• 2014 Food Logistics FL100 Award</li> <li>• 2014 Aon Hewitt's Best Employer Award</li> </ul>
<b>Nuraleve</b>	<ul style="list-style-type: none"> <li>• 2014 OCE Mind to Market Award finalist</li> </ul>
<b>Nymi (formerly Bionym)</b>	<ul style="list-style-type: none"> <li>• 2014 OCE Martin Walmsley Fellowship Award</li> <li>• 2014 Bluetooth Breakthrough Awards: Prototype and Overall Winner</li> <li>• 2014 SXSW Wearables finalist</li> <li>• 2014 Best International Startup Award, Wearable Technology Show in London</li> </ul>
<b>Oculys Health Informatics</b>	<ul style="list-style-type: none"> <li>• 2015 Branham Group Canada's Top 25 Up &amp; Coming</li> <li>• 2014 Ingenious Award Winner</li> </ul>
<b>Payso</b>	<ul style="list-style-type: none"> <li>• 2015 Winner OCE Discovery FinTech Pitch Competition</li> </ul>
<b>PeCOD</b>	<ul style="list-style-type: none"> <li>• 2015 Water's Next Wastewater Technology Award</li> </ul>
<b>Pelmorex Media</b>	<ul style="list-style-type: none"> <li>• 2015 Business Icon Award at the Oakville Chamber of Commerce's Awards for Business Excellence</li> </ul>
<b>PetroPredict</b>	<ul style="list-style-type: none"> <li>• 2014 David McFadden Energy Entrepreneur Challenge winner</li> <li>• 2014 OCE Discovery Elevator Pitch competition winner</li> <li>• 2014 Best Startup and People's Choice Velocity Funds finalist</li> <li>• 2014 Canada's future leaders under 25 in Maclean's</li> </ul>
<b>ProLab Diagnostics</b>	<ul style="list-style-type: none"> <li>• 2015 Mayor's Award at 2015 Richmond Hill Chamber of Commerce Awards.</li> </ul>
<b>QoC Health</b>	<ul style="list-style-type: none"> <li>• 2015 Winner OCE Discovery Investor Pitch Competition</li> </ul>
<b>Quantum Dental Technologies Inc.</b>	<ul style="list-style-type: none"> <li>• 2014 Winner Killam Prize for research</li> </ul>

<b>Redtree Robotics</b>	<ul style="list-style-type: none"> <li>• 2014 Winner University of Guelph Startup Royale</li> </ul>
<b>Rescraft</b>	<ul style="list-style-type: none"> <li>• 2014 Salute to Business Award for Innovation</li> </ul>
<b>Revel Cider (part of Guelph OCEA)</b>	<ul style="list-style-type: none"> <li>• 2015 Bronze at Great Lakes International Cider and Perry Competition</li> </ul>
<b>Revelo Bikes</b>	<ul style="list-style-type: none"> <li>• 2014 One of Business Insider's "21 Coolest Small Businesses In Toronto"</li> </ul>
<b>RMRD TECH</b>	<ul style="list-style-type: none"> <li>• 2015 Winner OCE's David McFadden Energy Entrepreneur Challenge</li> </ul>
<b>Rubikloud</b>	<ul style="list-style-type: none"> <li>• 2015 TechConnex Technology Leadership Award finalist</li> </ul>
<b>Sensorsuite</b>	<ul style="list-style-type: none"> <li>• 2015 Innovation Award, WaveFront IOT Summit</li> </ul>
<b>Soapbox</b>	<ul style="list-style-type: none"> <li>• 2015 Young Entrepreneur of the Year for Ontario</li> </ul>
<b>Synaptive Medical</b>	<ul style="list-style-type: none"> <li>• 2014 Innovation Showcase feature at CNS</li> </ul>
<b>teaBOT</b>	<ul style="list-style-type: none"> <li>• 2014 KPMG Start Me Up Competition – 1st Prize</li> <li>• 2014 Canadian Entrepreneurs in New England: Voted "Most Likely to Raise Investment"</li> <li>• 2015 Toronto TIEQUEST: 1st Place Winner</li> <li>• 2015 winner Canon Get Started Program</li> </ul>
<b>Teknically Inc.</b>	<ul style="list-style-type: none"> <li>• 2014 Winner Canadian Business Model Competition</li> </ul>
<b>The Sampler App Inc.</b>	<ul style="list-style-type: none"> <li>• 2014 Winner of the Toronto NEXT preaccelerator program</li> </ul>
<b>Thoughtwire</b>	<ul style="list-style-type: none"> <li>• 2014 Deloitte Fast50 company to watch</li> <li>• 2014 PWC Vision to Reality Award 10 to Watch</li> <li>• 2014 Branham 300 list of top IT companies in Canada</li> </ul>
<b>True Phantom Solutions Inc.</b>	<ul style="list-style-type: none"> <li>• 2014 Winner OBI Entrepreneurs Program</li> </ul>
<b>Tyco Electronics (TE)</b>	<ul style="list-style-type: none"> <li>• 2015 Annual Corporate Social Responsibility (CSR) Awards, American Chamber of Commerce in Shanghai</li> <li>• 2015 Global ACE Awards for Creative Excellence</li> <li>• 2015 Named World's Most Ethical Company by the Ethisphere Institute</li> </ul>
<b>Vertex Environmental Inc.</b>	<ul style="list-style-type: none"> <li>• 2015 Federation of Canadian Municipalities Brownfield Remediation Award (City of Kingston)</li> </ul>
<b>Voltera</b>	<ul style="list-style-type: none"> <li>• 2015 Winner TechCrunch Hardware Battlefield Competition</li> </ul>
<b>Whirlscape Inc</b>	<ul style="list-style-type: none"> <li>• 2014 University of Toronto Inventors of the Year</li> </ul>
<b>XYZ Interactive</b>	<ul style="list-style-type: none"> <li>• 2014 Best of the CES</li> </ul>



# BOARD OF DIRECTORS

## Ontario Centres of Excellence Inc. Governance



### Board of Directors 2014/15

**Michael J. Nobrega**  
Corporate Director  
**CHAIR OF THE BOARD**  
**EXECUTIVE COMMITTEE (CHAIR)**

**Brian Armstrong, Q.C.**  
Corporate Director  
**VICE-CHAIR AND SECRETARY**  
**EXECUTIVE COMMITTEE**  
**GOVERNANCE COMMITTEE (CHAIR)**  
**NOMINATING COMMITTEE**

**Andrew Abouchar**  
Partner  
Tech Capital Partners Inc.  
**EXECUTIVE COMMITTEE**  
**FINANCE & AUDIT COMMITTEE**  
**STRATEGIC PLANNING COMMITTEE (CHAIR)**

**Dr. Tom Corr**  
(ex-officio)  
President and CEO  
Ontario Centres of Excellence

**Dr. D. George Dixon**  
Vice-President, University Research  
University of Waterloo  
**FINANCE & AUDIT COMMITTEE**  
**STRATEGIC PLANNING COMMITTEE**

**Dr. Mo Elbestawi**  
Vice-President, Research  
and International Affairs  
McMaster University  
**GOVERNANCE COMMITTEE**  
**NOMINATING COMMITTEE**

**Colin Kelleher**  
Partner,  
Caliber Structures Limited  
**NOMINATING COMMITTEE**  
**STRATEGIC PLANNING COMMITTEE**

**William J. McClean**  
Corporate Director  
**HR & COMPENSATION COMMITTEE**  
**STRATEGIC PLANNING COMMITTEE**

**Dr. Dan Patterson**  
President  
Niagara College  
**FINANCE & AUDIT COMMITTEE**  
**HR & COMPENSATION COMMITTEE**

**Bob Richardson**  
Executive Vice President  
& National Practice Lead  
Public Affairs - Canada  
Edelman  
**EXECUTIVE COMMITTEE**  
**HR & COMPENSATION COMMITTEE**  
**NOMINATING COMMITTEE (CHAIR)**

### Observers (Board of Directors)

**Giles Gherson**  
Deputy Minister  
Ministry of Economic Development,  
Employment and Infrastructure/  
Ministry of Research and  
Innovation

**Dr. Molly S. Shoichet**  
Professor, Chemical Engineering  
and Applied Chemistry  
University of Toronto  
**NOMINATING COMMITTEE**  
**STRATEGIC PLANNING COMMITTEE**

**Michael Silagadze**  
Founder  
Top Hat  
**GOVERNANCE COMMITTEE**  
**STRATEGIC PLANNING COMMITTEE**

**Bill Mantel**  
Assistant Deputy Minister  
Research, Commercialization and  
Entrepreneurship Division,  
Ministry of Economic Development,  
Employment and Infrastructure/  
Ministry of Research and  
Innovation

**Caroline Somers**  
Co-CEO, Cassidy Bay Group  
& Chair, Capital Angel Network  
**EXECUTIVE COMMITTEE**  
**HR & COMPENSATION COMMITTEE (CHAIR)**  
**NOMINATING COMMITTEE**

**Barbara Wilkes**  
President  
Management Initiatives Inc.  
**EXECUTIVE COMMITTEE**  
**FINANCE & AUDIT COMMITTEE (CHAIR)**  
**GOVERNANCE COMMITTEE**

**George Cadete**  
Director, Commercialization Branch  
Ministry of Economic Development,  
Employment and Infrastructure/  
Ministry of Research and  
Innovation

### Executive Team

**Dr. Tom Corr**  
President and CEO

**Bob Civak**  
Senior Vice President, Business  
Development and Commercialization

**Narinder Dehal**  
Vice President, Finance,  
Programs and Administration

**Sharon Jobity**  
Vice President, Human Resources  
and Talent Acquisition

**Dr. Claudia Krywiak**  
Vice President, Corporate  
Development, Planning and Strategic  
Initiatives

**Anne Wettlaufer**  
Vice President, Marketing,  
Communications and Public Affairs

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



**Editor** ..... **Anne Kershaw**, Senior Manager, Strategic Communications, OCE  
**Success Stories Writer/Contributor** ..... **Ariel Visconti**, Digital and Communications Coordinator, OCE  
..... **Stuart Green**, Manager, Media Relations, OCE  
**Photography Editor** ..... **Gianpaolo Andreis**, Manager Marketing and Social Media, OCE  
**Designer & Project Manager** ..... **Deanna Tosto**, RGD, Graphic Design & Production Specialist, OCE  
**Photography** ..... **Courtney Lee Photography**



Thanks to **Ben Shannon** for his creative depiction of the commercialization process for start-ups. Ben is an award winning illustrator and animator. A Sheridan College alumnus, Ben's clients include *National Geographic*, *Rolling Stone*, *The Globe & Mail*, *The Wall Street Journal*, Nike, Universal Music, and DC Comics. His awards include a nomination for a Canadian Screen Award in 2014.

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



# OCE AT A GLANCE

- Ontario Centres of Excellence's (OCE) **not-for-profit program** was formally established in 1987 with seven independent centres that evolved and amalgamated into Ontario Centres of Excellence Inc. in 2004.
- In partnership with industry and academia, OCE **co-invests to commercialize innovation** originating in the province's colleges, universities and research hospitals.
- OCE provides real-world commercialization experiences for **Ontario's next generation of innovators and entrepreneurs**.
- OCE **connects the dots between industry and academia**, while providing and identifying additional sources for funding and support to ensure the best ideas receive the support they need to get to market.
- In deploying experienced teams of Business Development Managers to all corners of the province, OCE has a **province-wide footprint** with offices in Toronto, Mississauga, Waterloo, Ottawa, Windsor, London, Hamilton, Markham and Oshawa.
- OCE has significant expertise in "**de-risking**" innovation; Small and medium-sized companies typically overlooked by traditional investors have achieved market success through OCE support and subsequent financing from angel investors and venture capitalists.
- OCE is a member of the **Ontario Network of Entrepreneurs (ONE)**, Ontario's client-focused, province-wide innovation network.
- OCE's expanding network of partnerships within the innovation ecosystem drives commercialization, knowledge mobilization and the development of highly qualified personnel.
- OCE efforts converge on **four key sector areas** – advanced manufacturing; advanced health technologies; energy and environment; and information, communications and digital media, including high performance computing.
- Over the past two years, OCE has funded 243 projects in **cleantech**, creating or retaining 861 jobs and attracting \$52 million in follow-on funding.
- In 2014/15, OCE invested **\$32.6 million** in 614 active research, commercialization and talent projects and **leveraged \$95.5 million** from industry and other partners in further investments. OCE enhanced the knowledge and skills of **5,674 HQP**.
- OCE excels at attracting industry and other stakeholder funding to **almost triple** the amount of investment made by OCE. This year's **average leverage ratio was 2.9**.
- **Seventy six per cent of additional investment leveraged by OCE comes from industry**.
- OCE continues to **reduce its operating costs** through efficiency and streamlining measures, dropping from 15.9 per cent in 2010/11 to 9.5 per cent in 2014/15.
- **In 2014/15, 5,471 jobs** were created or retained in industry as a direct result of OCE-funded projects and **1,194 start-up** companies were established.
- This past year, **68** OCE-supported companies were recognized with **national or international awards**.
- Our expanded young entrepreneur programs and talent offerings give students and recent graduates the opportunity to learn by doing and turning ideas into companies.
- OCE's annual multiple award-winning Discovery conference, which celebrated its tenth anniversary in 2015, is Canada's premiere innovation-to-commercialization event showcasing leading-edge technologies and research. **More than 3,200 attendees and close to 500 exhibitors** attended this year's Discovery conference. **Premier Kathleen Wynne** provided opening remarks and was followed by keynote speaker **Eric Ries**, pioneer of the lean startup movement and featured keynote **Chad Hurley**, co-founder of YouTube. Panel and showcase themes included aerospace, advanced health, the future of computing, disruptive technology, advanced manufacturing, agri-food, water and a focus on **OCE's young entrepreneurs**, including more than 150 companies showcasing from OCE's Campus-Linked Accelerators and On-Campus Entrepreneurship Activities programs.

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



Ontario Centres of  
Excellence

Where Next Happens

TORONTO | MISSISSAUGA | OTTAWA | WATERLOO | WINDSOR | LONDON | HAMILTON | MARKHAM | OSHAWA  
[www.oce-ontario.org](http://www.oce-ontario.org) | [info@oce-ontario.org](mailto:info@oce-ontario.org) | Toll Free: 1.866.759.6014

Ontario Centres of Excellence is a member of  
**ONE**  
Ontario Network of Entrepreneurs





