

Ontario Centres of
Excellence

BCCC 2nd IST Forum 2017

October 17, 2017

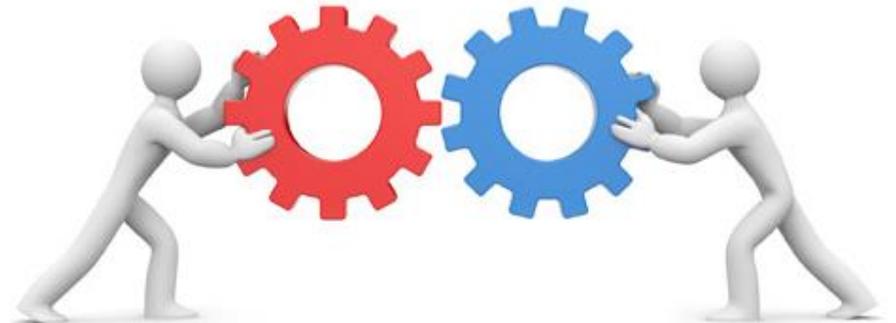
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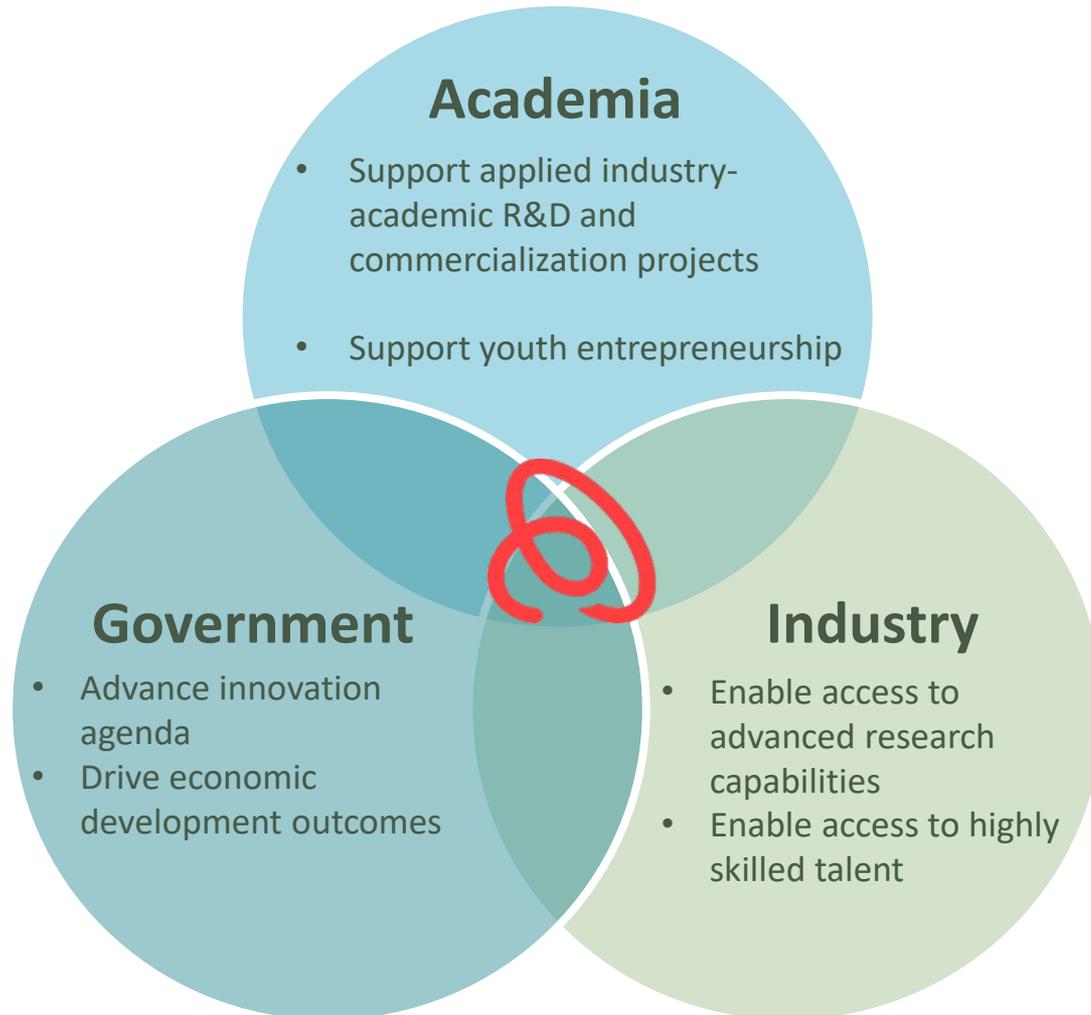


OUR MANDATE

OCE Accelerates Innovation

- Supports collaborative R&D between industry and academia
- Invests in early-stage commercialization of emerging technologies
- Fosters youth entrepreneurship
- Leads and develops networks around high-potential, business-led opportunities





OFFICE LOCATIONS



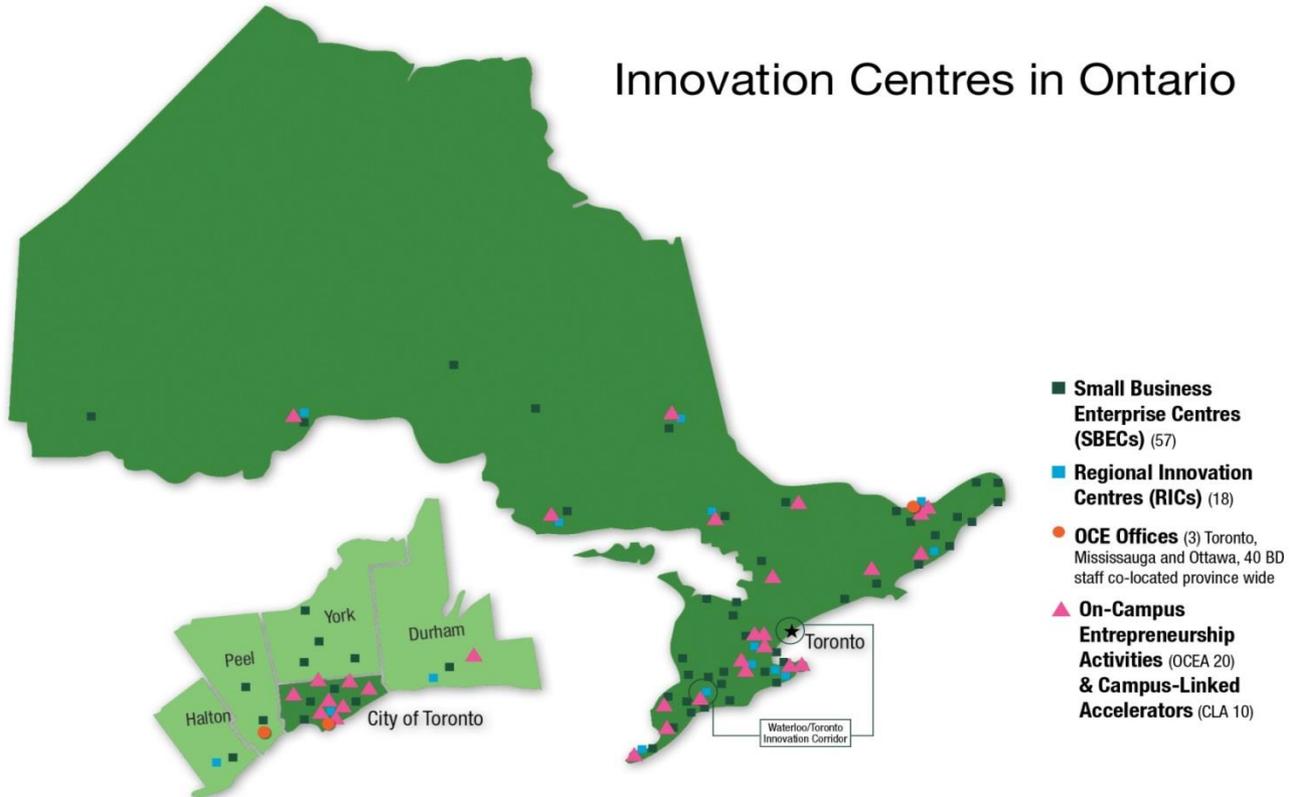
OCE has 11 offices across Ontario

Over 40 BD staff co-located province wide:

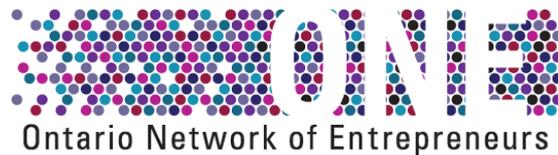
- **OCE Head Office**
Downtown Toronto
- **OCE Satellite Offices**
Mississauga, Ottawa, Kitchener, Waterloo, Windsor, London, Hamilton, Markham, Oshawa, Sudbury



Innovation Centres in Ontario



Ontario Centres of Excellence is a member of



OUR FOCUS INDUSTRIES



**Advanced
Manufacturing**



**Energy and
Environment**



**ICT and
Digital Media**



**Advanced
Health**

RETURN ON INNOVATION 2015-2016

Invested by OCE in Ontario's innovation ecosystem

\$44 Million

762 New R&D, commercialization and talent projects managed by OCE

Cash or in-kind contributions from our partners

\$91.5 Million

New or retained jobs directly attributed to OCE-funded projects, the highest in OCE history and an **11 per cent increase** over last year's 5,471 jobs.

6,071 Jobs



Committed almost 3X the provincial funding

The leverage that was attracted was 1.9 times the provincial funding received allowing us to commit almost **3 times** the provincial funding

Start-ups created or supported directly through OCE seed financing or indirectly through other OCE programs
31.2 per cent higher than last year

1,566

Incremental sales by client companies as a direct result of OCE-funded projects, the highest in OCE history and **almost four times** last year's \$42.4 million

\$165.2 Million

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



Increase in Follow-on Investment from 2010/11 to 2015/16



\$563 Million

Follow-on investment in client companies primarily from angel investors and venture capitalists, the highest in OCE history and a **54.5 per cent increase** over last year

2017-18 PROGRAM PORTFOLIO



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Where Next Happens

Industry-Academic R&D Collaboration

- Collaboration Voucher Program
- College Applied R&D Fund
- Colleges Ontario Network for Industry Innovation
- TalentEdge Internships and Fellowships
- Alberta-Ontario Innovation Program
- International Program



Entrepreneurship

- Campus-Linked Accelerators / On-Campus Entrepreneurship Activities
- SmartStart Seed Fund
- Ontario Social Impact Voucher
- Young Entrepreneurs, Make Your Pitch



Commercialization

- Market Readiness
- Automotive Supplier Competitiveness Improvement Program
- Small Business Innovation Challenge
 - Innovation Procurement
 - Advancing Education
 - Health Technology Fund
 - REACH



Strategic Initiatives

- TargetGHG
- IBM Innovation Incubator Project
- OneEleven
- Industrial and Technological Benefits
- Cybersecurity Fintech Innovation Pilot Program
- OCE-FinTech Sandbox Partnership
- China Angels Mentorship Program





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Where Next Happens

Thank you

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Ontario Centres of Excellence is a member of



INDUSTRY-ACADEMIC R&D COLLABORATION COLLABORATION VOUCHER PROGRAM



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Where Next Happens



Voucher for Innovation and Productivity (VIP)

- Helps companies develop, implement and commercialize technical innovations working in partnership with academia
- Co-funding partnerships with NSERC, NRC-IRAP, CARIC and BDC
 - VIP I - up to \$20,000
 - VIP II - up to \$150,000 over two years



Voucher for E-Business (VEB)

- Connects companies with the expertise and resources at Ontario colleges to help their business scale-up development, adoption and implementation of online tools and other technologies to drive innovation



Voucher for Industry Association R&D Challenge (VIA)

- Enables cross-sector partnerships between industry associations or consortia of companies and academia to address R&D challenges

INDUSTRY-ACADEMIC R&D COLLABORATION VOUCHER FOR INDUSTRY ASSOCIATION R&D CHALLENGE



- Connects industry associations or consortia with Ontario's publicly funded academic research institutions to address sector-wide research and development challenges
- Partnerships indirectly support start-ups, SMEs and large companies through projects with Ontario's publicly funded academic research institutions (universities, colleges, hospitals)
- Focus is on challenges identified by an industry sector where business solutions have demonstrable global market potential
- Project outcomes include commercialization and increased productivity with significant economic impact for Ontario

OCE's past VIA program initiatives	OCE's active VIA program initiatives
Ontario Aerospace R&TD Challenge 1.0	Smart Computing R&D Challenge
OCE-CQDM Life Sciences R&D Challenge	Aerospace R&D Challenge 2.0
"Made in Ontario" Advanced Manufacturing R&D Challenge	Agri-Based Industrial Bioproducts (ABIB) R&D Challenge
Ultra Deep Mining Network	Cybersecurity R&D Challenge
OCE-CENGN Next Generation Networks R&TD Challenge	ICT PROMPT Quebec
Image Guided Therapy	



TALENTEDGE

Enabling interns and postdoctoral fellows to apply their expertise and the latest tools to industry problems.

Gaining real-world experience and applying expertise to industry problems.

TalentEdge Internship Program

College and university students (undergrad and grad) and recent grads work on collaborative industry-driven projects

TalentEdge Fellowship Program

Ontario-based Postdoctoral Fellows (PDFs) work on industry-driven research and development projects

INDUSTRY-ACADEMIC R&D COLLABORATION PARTNERSHIPS: ONTARIO - ALBERTA



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Where Next Happens

 Alberta Innovates Technology Futures

 NSERC CASRG STARO

ALBERTA-ONTARIO INNOVATION PROGRAM

Industry and academia collaborate to solve industry challenges in both provinces.

- Supports cross-provincial collaborations between industry and academia to solve key industry challenges in both provinces
- Managed by Alberta Innovates (AI) and OCE. Industry-academic projects can also leverage existing NSERC programs
- Focuses on industry needs that can be tackled through R&D and have economic benefits for both provinces
- Connects industry to researchers who can provide innovative solutions to real-world challenges

INDUSTRY-ACADEMIC R&D COLLABORATION ONTARIO-CHINA RESEARCH AND INNOVATION FUND (OCRIF)



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Where Next Happens



THE ONTARIO-CHINA RESEARCH AND INNOVATION FUND (OCRIF)

- The Ontario-China Research and Innovation Fund (OCRIF) will support scientific and technological collaboration projects between China and Ontario. Offered through a partnership with Ontario's Ministry of Research, Innovation and Science (MRIS), the Ministry of Science and Technology (MOST) and Ontario Centres of Excellence (OCE), OCRIF will promote scientific, technological and industrial research and commercialization cooperation.
- OCE and MOST will jointly invest up to \$2 million (\$1 million each) to support strategic bilateral research collaborations.
- Ontario funds will be disbursed to successful Ontario applicants through (OCRIF), to be administered by OCE. Successful co-investigators from China will be funded separately by MOST.

INDUSTRY-ACADEMIC R&D COLLABORATION COLLEGES APPLIED RESEARCH AND DEVELOPMENT FUND (CARDF)



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Where Next Happens



CARDF is a \$20-million program that aims to:

- increase industry/post-secondary collaboration
- create an efficient marketplace for industry to access innovation, productivity and commercialization services from colleges
- provide experiential learning opportunities for college students;
- help develop new products, services and processes, facilitate productivity improvements, and generate new revenues and high-value jobs for Ontario

Supported by Ontario Ministry of Research, Innovation and Science and offered in partnership with Colleges Ontario

INDUSTRY-ACADEMIC R&D COLLABORATION ONTARIO-JIANGSU INDUSTRIAL RESEARCH AND DEVELOPMENT PROGRAM (OJIRD)



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Where Next Happens



- The Ontario-Jiangsu Industrial Research and Development Program (OJIRD) will support joint industrial R&D projects focusing on the development of products or processes that may lead to commercialization in global markets. A partnership of the Jiangsu Science and Technology Department (JSTD) and the Ontario Ministry of Research, Innovation and Science (MRIS), the OJIRD will support projects leading to commercial success and socio-economic benefits for both jurisdictions. Applicants can apply for up to \$150,000 in funding for joint bilateral R&D projects with terms not exceeding three years, involving at least one Jiangsu company and one Ontario organization (company, university or research institution).
- Ontario Centres of Excellence (OCE) will administer the OJIRD on behalf of MRIS.

ONTARIO-ISRAEL RESEARCH NETWORK PROGRAM - MAGNET



ONTARIO-ISRAEL RESEARCH NETWORK PROGRAM - MAGNET

Five-year partnership with Israel Innovation Authority:

- Customized bilateral program
- Supports consortia comprised of SMEs, large firms, and academic institutions to jointly develop innovative technologies
- Addresses challenges identified by multi-national enterprises (MNEs) in key sectors
- First area of focus is cybersecurity in the financial services sector, with five of Canada's largest financial institutions participating

COMMERCIALIZATION MARKET READINESS



The Market Readiness Program directly funds early-stage commercialization by start-ups, with the ultimate goal of growing these start-ups into scalable businesses

Market Readiness (Customer Creation)

- OCE invests \$100,000 to \$125,000
- Company must match OCE investment 1:1 (at least 50% cash)

Market Readiness (Company Building)

- OCE invests \$250,000
- Company must match OCE investment 1:1 (100% cash)



HEALTH TECHNOLOGIES FUND

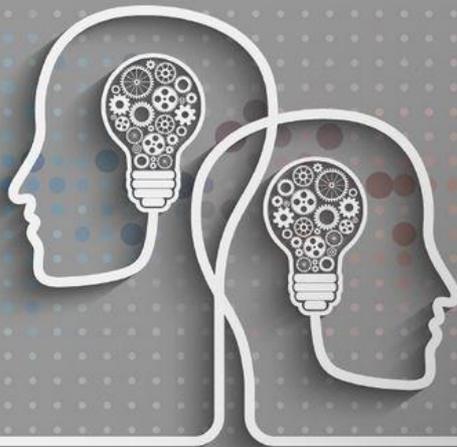
Demonstrating innovative products and services that target priority health-system challenges.

- The Health Technologies Fund (HTF) supports the development of made-in-Ontario health technologies by accelerating evaluation, procurement, adoption and diffusion in the Ontario health system.
- The fund is part of the Office of the Chief Health Innovation Strategist's mandate to strengthen Ontario's innovation ecosystem.
- The HTF fosters partnerships between publicly funded health care service providers, patients, academia and industry to drive collaboration that improves patient outcomes, adds value to the health system and creates jobs in Ontario.
- The first health priority area for the HTF is *Better Care Closer to Home*, which supports technologies that deliver better coordinated and integrated care in the community, closer to home.

REACH PROGRAM

Helping Ontario healthcare providers apply new methods to procure and more rapidly adopt innovative medical technologies.

- Designed to help Ontario healthcare providers apply new methods to procure and more rapidly adopt innovative medical technologies that can address high priority health system needs
- Focuses on later stage technologies, testing various procurement models and regional/province-wide scale-up adoption
- Improves patient care, access to care, health system cost effectiveness and related economic growth in the medical technology sector
- Managed by OCE on behalf of the Ministry of Government and Consumer Services



ADVANCING *EDUCATION* PROGRAM

Demonstrating innovative products and technologies in an education setting.

- Supporting Ministry of Education’s “Achieving Excellence” strategy for expanded use of technology in the classroom
- Further broadens the opportunity for public sector innovation procurement with potential for societal impact and industry sector development



AUTOMOTIVE SUPPLIER COMPETITIVENESS IMPROVEMENT PROGRAM (ASCIP)

- ASCIP encourages innovation and productivity to increase success in growing export markets.
- SME automotive suppliers, or large companies partnering with SMEs, can apply for to up to \$100,000 in project funding.

Funding must be matched 1:1 by industry cash and contribute to the adoption of industry leading IT.

CHINA ANGELS MENTORSHIP PROGRAM



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Where Next Happens



CHINA ANGELS MENTORSHIP PROGRAM (CAMP)

Helping start-ups gain access to Chinese markets.

- Joint initiative between OCE and the China Canada Angels Alliance (CCAA)
- Virtual incubation program designed to help start-ups prepare their businesses for the Chinese market
- Helping companies shape their business model to fit the Chinese market, enter the marketplace and begin to scale their business through mentorship, investment and direct business ties to the Chinese market
- Initial seed investments range from \$100,000 to \$200,000 from CCAA investors, with possible co-investment by OCE through the Market Readiness Program, subject to program eligibility and criteria

SMALL BUSINESS INNOVATION CHALLENGE



SMALL BUSINESS INNOVATION CHALLENGE (SBIC)

Supporting the growth of high-potential,
technology-driven SMEs

- Engage SMEs to solving pressing public sector challenges
- Provide SMEs with opportunity to develop, test, demonstrate their tech in real-world challenges
- Increase commercialization opportunities through direct funding
- Provide stronger foothold for SMEs to compete domestically and globally in public and private sectors
- Managed by OCE on behalf of the Ministry of Economic Development and Growth

PROBLEM STATEMENTS: Digital Identity and Vehicle Occupancy Detection

ONTARIO SOCIAL IMPACT VOUCHER PROGRAM



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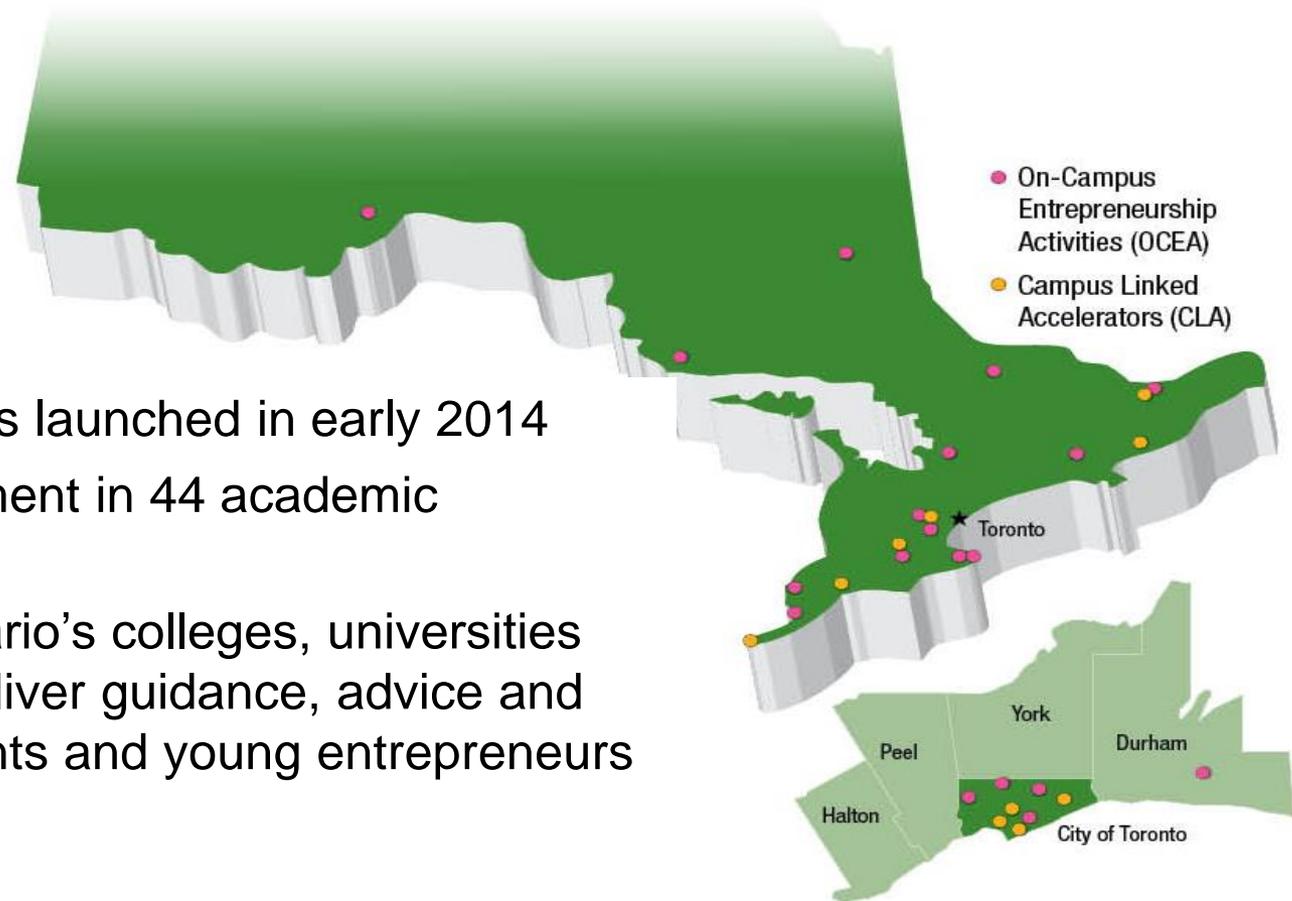
Where Next Happens

ONTARIO SOCIAL IMPACT VOUCHER (OSIV) PROGRAM

Providing supports and services to encourage the growth of Ontario's social entrepreneurs and enterprises

- Supports capacity building and growth of Ontario's social entrepreneurs and enterprises by providing access to relevant training programs
- 200 Social Impact Vouchers at a value of up to \$3,000 per voucher to be deployed to Ontario-based social enterprises/entrepreneurs
- Social enterprises/entrepreneurs to redeem the Social Impact Vouchers with selected Delivery Organizations

ENTREPRENEURSHIP CLA - OCEA



CLA-OCEA programs launched in early 2014
\$38.8 million investment in 44 academic
institutions

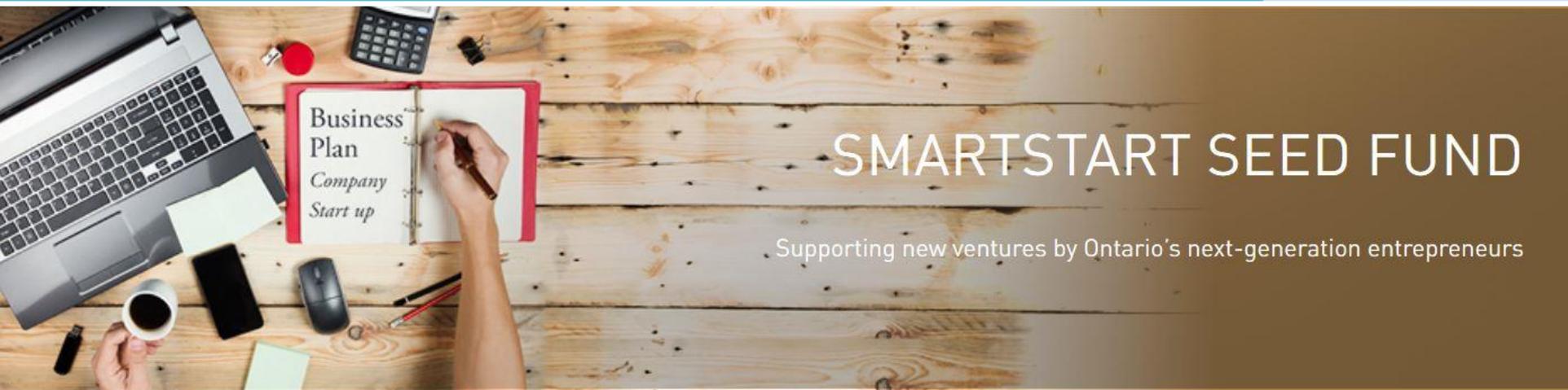
Brings together Ontario's colleges, universities
and local RICs to deliver guidance, advice and
mentorship to students and young entrepreneurs



Campus Linked Accelerators and On-Campus Entrepreneurship Activities

- Funding to post-secondary institutions to create a culture of entrepreneurship on campus and to integrate entrepreneurial activities with investors, industry, and other regional stakeholders
- Investments help Ontario accelerate the commercialization of ideas and inventions out of its world-class research institutions, develop the business leaders of tomorrow, and harness the power of its support networks to help build competitive regional innovation and entrepreneurship ecosystems

ENTREPRENEURSHIP SMARTSTART SEED FUND



- \$18 million provincial-federal co-funding partnership
- Supports new ventures led by Ontario's next generation of entrepreneurs
- Enables entrepreneurs to move their start-ups from product development to market entry and company building
- Provides seed financing (\$30-\$60K) and support for entrepreneurship skills training
- Open to:
 - Students and recent grads affiliated with CLAs and OCEA programs
 - Young entrepreneurs from across the province with technology or innovation based start-ups

GLOBALSTART VOUCHER PROGRAM



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Where Next Happens



GLOBALSTART VOUCHER PROGRAM

Helping Ontario-based, youth-led start-ups gain access to global markets.

GlobalStart Voucher Program is a nomination-based voucher program
Supports youth-led start-ups engaged with CLAs/OCEAs and RICs across Ontario

- Placements in selected global markets *outside of Canada and USA*
- Placement length approximately 3-6 months
- Max \$15K from OCE, matched 1:1 in cash
- Start up needs to be nominated by their CLA/OCEA or RIC
- Eligible to youth-led technology-based start-ups ranging from validation stage to early scale-up

ENTREPRENEURSHIP ENTREPRENEURSHIP AWARDS



MARTIN WALMSLEY AWARD FOR ENTREPRENEURSHIP

The Martin Walmsley Award for Entrepreneurship supports a graduate student's business founded on university-based research.

Martin Walmsley Award for Entrepreneurship

- Supports the development of an Ontario student in creating an innovative start-up that has an economic impact in Ontario (the innovation must address existing and emerging challenges in key sectors)
- The \$25,000 award gives a new entrepreneur the financial resources to focus on making their idea a viable business
- Honours the original vision of Dr. Martin Walmsley in developing new innovative institutional structures dedicated to stimulating advanced research and development leading to wealth creation in areas strategic to Ontario
- Dr. Walmsley was instrumental in founding OCE in 1987





Young Entrepreneurs, Make Your Pitch



High school students, you have
two minutes to pitch us your
creative business idea!

#makeyourpitch

- Challenges students in grades 9 to 12 to pitch business ideas in a two-minute video that goes to a vote by the public and expert judges
- Provides finalists with a trip to Toronto (including transportation and hotel for the finalists and their chaperones) to present their ideas before a judging panel at OCE's annual Discovery Conference
- Six winners awarded reserved entry into Summer Company to develop their business idea (worth up to \$3,000), along other awards donated by Ontario companies

STRATEGIC INITIATIVES TARGET GHG



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Where Next Happens

TARGETGHG

Helping to reduce greenhouse gases.

- Helping Ontario meet its greenhouse gas emission reduction targets by encouraging large industrial plants to adopt leading-edge technology and supporting Ontario's entrepreneurs in developing creative new solutions
- Supported by the Ontario government with \$74 million in funding from its Green Investment Fund
- Dedicated to projects that reduce GHG emissions, increase energy efficiency, support cleantech innovation and drive job creation and economic development
- Co-funding partnerships established with SDTC, NSERC and ERA



HIGH PERFORMANCE COMPUTING

High performance computing (HPC) is the next big thing in small business.
Learn how unprecedented access to this new technology can make your
business more competitive.

Southern Ontario Smart Computing Innovation Platform (SOSCIP)

- Consortium with IBM, Ontario university and college members and OCE

Industry-Academic Collaborative Research projects

- Leveraging four advanced computing platforms
- **Capabilities** and **support** you won't find anywhere else in Canada
- Direct research support through TalentEdge Fellowship grants

Growing through new engagement models

- Fee-for-service model for industry projects
- Developing partnerships with non-academic research institutions



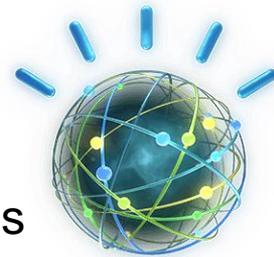
STRATEGIC INITIATIVES IBM INNOVATION INCUBATOR PROJECT

IBM INNOVATION INCUBATOR PROJECT

Helping Ontario companies grow through advanced computing.

A partnership between IBM and OCE

- Drive adoption of disruptive technologies like cognitive computing
- Provide Ontario SMEs access to IBM services and global supply chains
- Direct research support for SOSCIP
- Partnerships with regional innovation centres for specialized services to help SMEs scale-up



A \$54.5 million initiative supported by the Ontario government through its Jobs and Prosperity Fund – Strategic Partnerships Stream

STRATEGIC INITIATIVES CYBERSECURITY FINTECH INNOVATION PILOT PROGRAM



CYBERSECURITY FINTECH INNOVATION PILOT PROGRAM (CFIPP)

- \$4M pilot program to support adoption of new cybersecurity technologies by financial institutions in Ontario
 - Development/Demonstration Projects – partnerships between SMEs providing cybersecurity solutions and medium/large financial institutions
 - Talent Development – internships/fellowships at SMEs and/or financial institutions