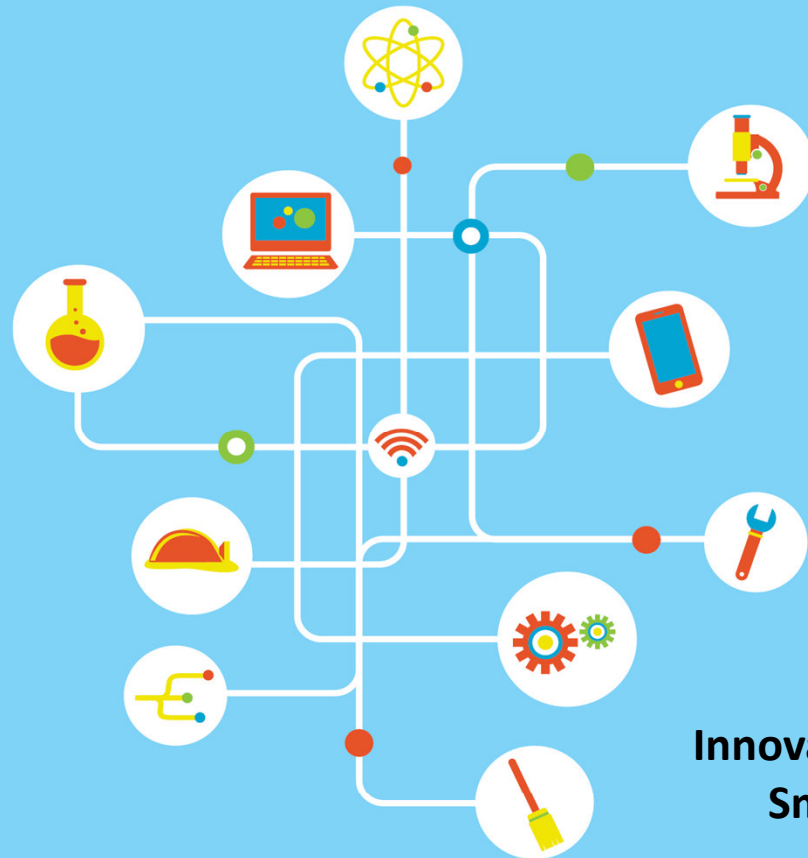


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# 2016 ADB International Skills Forum Innovative Practices in Skills Development

19–21 September 2016 • ADB Headquarters, Manila, Philippines

**Innovative Practices in Skills Development for  
Small- and Medium-Sized Enterprises:  
A Canadian Innovation**

**Paul Brennan, Vice-President, International Partnerships**

**20 September 2016**

# Paul Brennan, Vice-President, International Partnerships

*Innovative Practices in Skills Development for  
Small- and Medium-Sized Enterprises:  
A Canadian Innovation*

*Session 7*



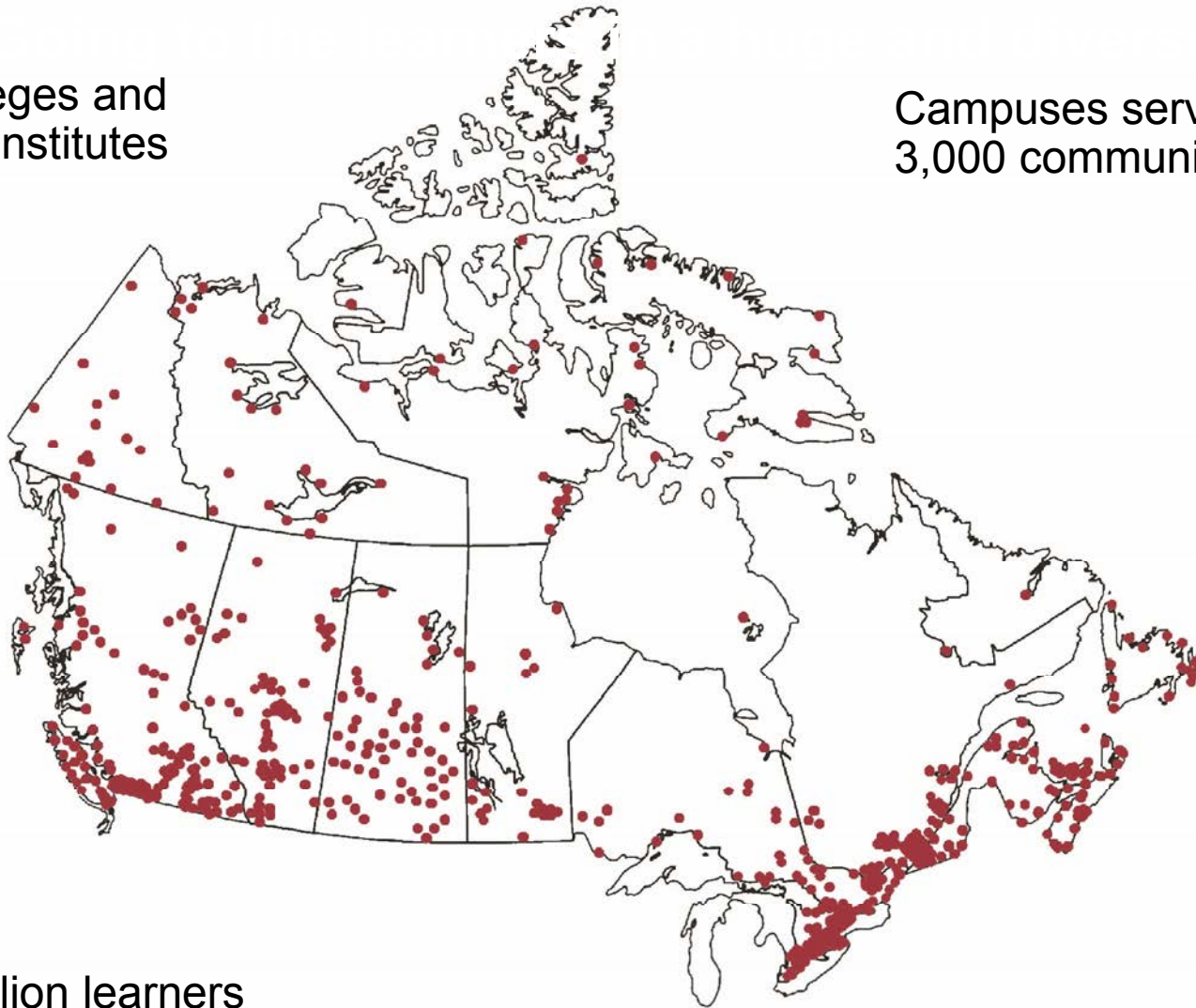
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130+ colleges and  
technical institutes

Campuses serving over  
3,000 communities



1.5 million learners

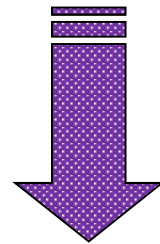
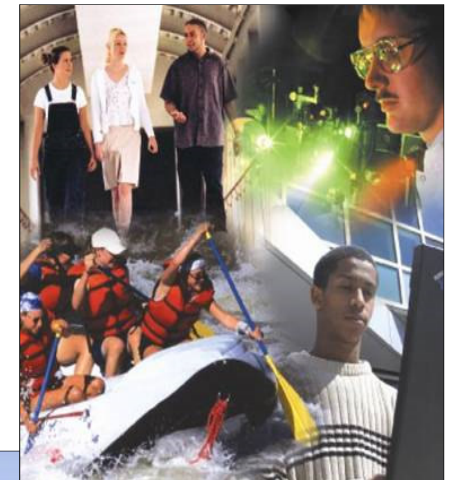


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1. Each college must reflect the diversity of the community it serves
2. Must be accessible to all who want to learn
3. Are focused on learners and their success (employment & citizenship)
4. Closely connected to employers' needs
5. Applied learning and applied research for innovation
6. Entrepreneurial & Open to the world



## *Advanced Skills for Employment*



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# Employer-College Collaboration



*Via National HR Sector Councils, Provincial Ministries & Councils,  
College Boards & Program Advisory Committees*



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# Origins of Applied Research

- Already working with employers on their training and HR issues
- SMEs come to us re their innovation needs
- Put together some of best faculty and students for the specific issue at hand with directors and employees of the firm
- Use college laboratories to experiment, to simulate the improvement desired, assess results and modify again, apply in firm
- Set up Applied Research and Technology Transfer Centres to take on this work, with some autonomy, yet connected to the college



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# Importance of SMEs for Canada

- Of the 1.17 million businesses, 1.14 million are Small Businesses
- Small businesses employ 8.2 million Canadians (70%)\*
- Medium sized employ 2.3 million Canadians (19.8%)\*
- Large firms employ 1.1 million Canadians (9.7%)\*
  - \* % are all of the private sector labour force, as per Industry Canada Statistics
- Small Businesses are responsible for;
  - **87% of net employment change over the past ten years**
  - **27% of Research and Development Expenditures**
  - **25 % of Exports**
  - **30% of GDP**
- But higher birth and death rates of small businesses



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# Applied Research in Practice

- Provide access, at a very reasonable cost, to expertise, to laboratories, to experimentation, and to training
- Quick turn around solutions & the Intellectual Property remains with the SME, not the college



- Students engaged in applied research solve real world problems & work with potential employers, gaining unique skills for employability
- Stimulating our SMEs to become more productive and innovative faced with stiffer competition



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# Examples of Results

- How to use the leftover fruit pulp when making juice as nutritious feed for animals
- Centre for Alternative Wastewater Treatment, using new organisms to clean toxic effluents in river water via bio-filtration
- Helping SMEs develop the right packaging solutions for their products and exports
- Helping to create an Electric powered School Bus to reduce GHG emissions of 8,000 buses



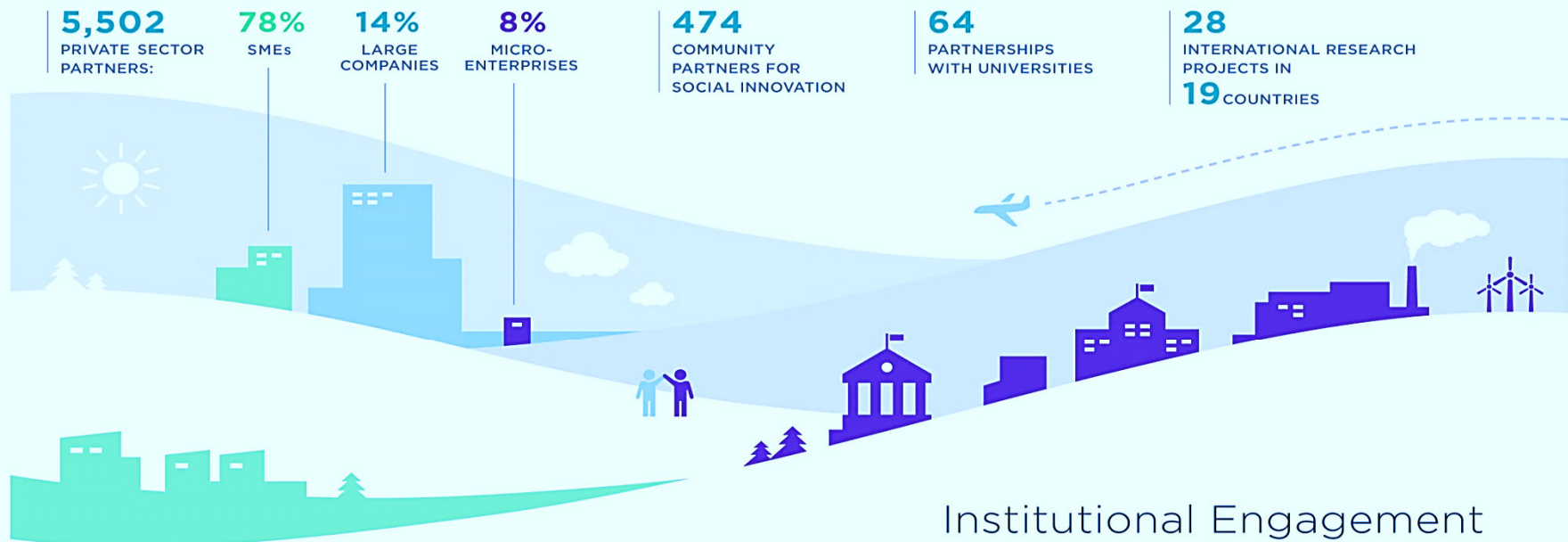
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# College and Institute Innovation: 2014-15 Applied Research Survey

## Partnerships



## Institutional Engagement

### Student Involvement

**31,346**

STUDENTS ENGAGED IN APPLIED RESEARCH

REPRESENTING APPROXIMATELY **3%** OF STUDENTS AT COLLEGES AND INSTITUTES ACROSS CANADA

**10,101**

STUDENTS RECEIVED SUPPORT TO PURSUE AN ENTREPRENEURIAL IDEA

**84%**

OF COLLEGES AND INSTITUTES SUPPORTED STUDENT ENTREPRENEURSHIP

**2,585**

FACULTY AND STAFF, INCLUDING INDUSTRIAL EXPERTS AND TECHNICIANS, ENGAGED IN APPLIED RESEARCH

**105**

INSTITUTIONS HAVE A DEDICATED APPLIED RESEARCH OFFICE

APPROXIMATELY **5%** OF FACULTY EMPLOYED AT RESPONDENT INSTITUTIONS ARE INVOLVED IN APPLIED RESEARCH



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# A TRIPARTITE PARTNERSHIP FOR SUCCESS: INSTITUTION, PRIVATE SECTOR & GOVERNMENTS

## Institutional Investment



## External Funding



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# Evolution of College Applied Research in Canada

Timeframe	2000 → 2006	2007 → 2012	2013 → Present
<b>Stage</b>	Start-up	Rapid Growth	Maturity
<b>Colleges eligible for Federal Government funding</b>	0 → 13	13 → 96	102 → 108
<b>Budget</b>	\$0 → \$2m	\$2m → \$35m	\$46m → \$75m
<b>Institutional responsibility for applied research</b>	Low priority add-on for VPs of Bus. Dev, delegated to Deans	VP Business Development and Partnerships → VP Academic	VP Academic → VP Research and Innovation
<b>Institutional motivation</b>	Chasing government and private sector dollars	Establishing the Research Offices, engaging students	Collaborations and Referrals



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# Benefits for our Learners

- Learn the basics of a scientific approach to challenges, big AND small
- Learn about the soft skills needed in the workplace in order to succeed
- Project-based learning with faculty and owner/employees
- Learn about SMEs and micro-enterprises (Why not me?)
- Often get offered jobs after the project, or develop their own micro-enterprise idea



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# Collaborating Internationally

- **Vision:** Colleges and Institutes around the world collaborating together, with employers, to accelerate innovation in SMEs and to train youth to be innovators
- Missions from China, Indonesia, Australia, Brazil and others to Canada to explore, try back home and set up partnerships to grow their capacity and undertake joint applied research
- Exchanges of researchers, faculty and students in priority applied research sectors of common interest
- Seeking funding from our own government to make some facilitative funding available



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# For more information

- Please visit our Inventory of Applied Research and Innovation Projects at our web site:  
<http://www.collegesinstitutes.ca/our-members/applied-research/>
- Christine Trauttmansdorff, VP responsible for Applied Research ([ctrautt@collegesinstitutes.ca](mailto:ctrautt@collegesinstitutes.ca) )
- Paul Brennan, VP responsible for International Partnerships ([pbrennan@collegesinstitutes.ca](mailto:pbrennan@collegesinstitutes.ca) )



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# **Thank You**

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