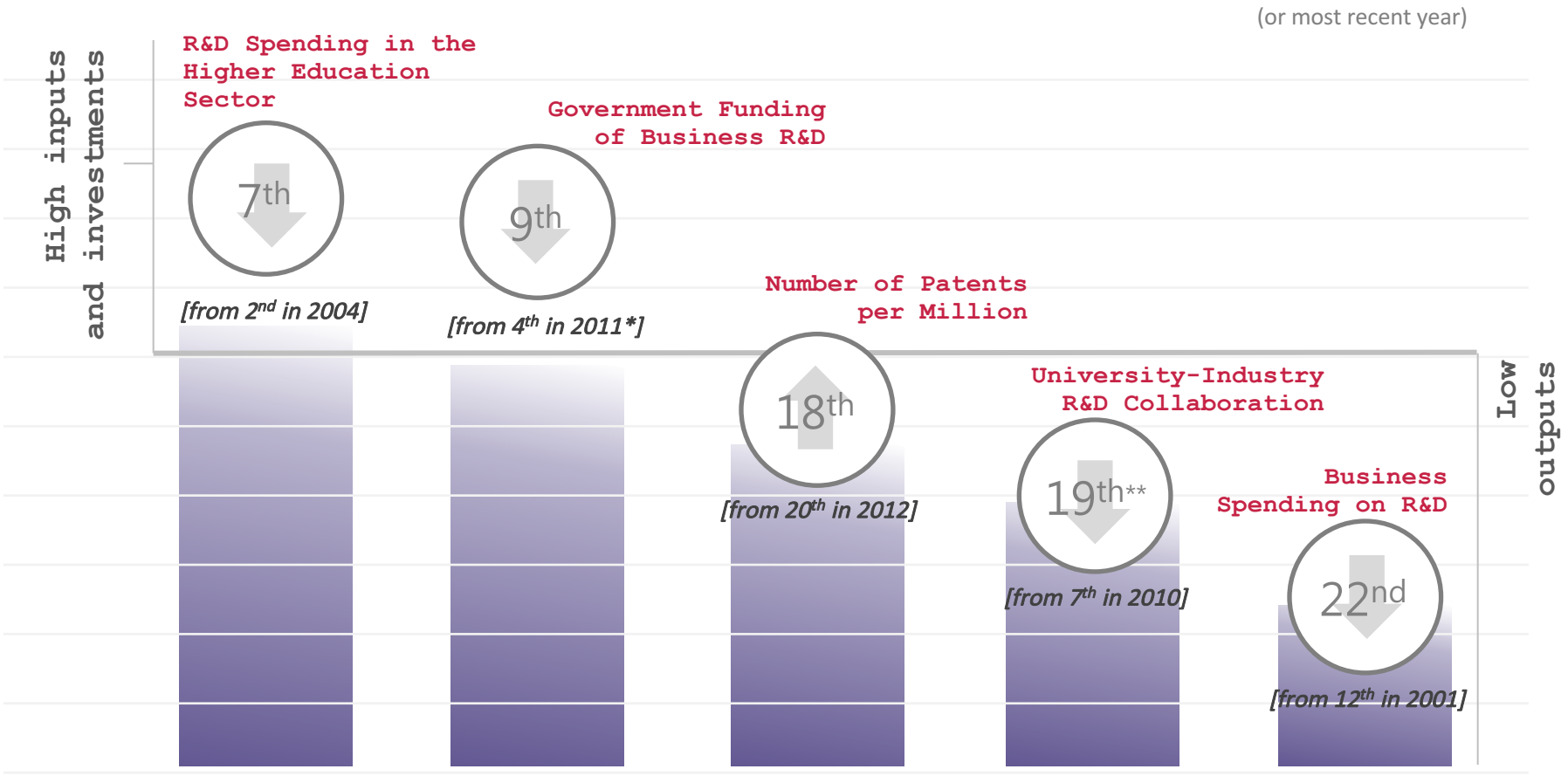
QCC TIP Forum 2018

IBM Canada: Perspectives on an Innovation Ecosystem

April 2018

CANADA NEEDS BETTER OUTCOMES

Canada's Ranking on Innovation Indicators Among 34 OECD Countries, 2015



*Includes direct and indirect funding. Data only available back to 2011.

Source: OECD Main Science and Technology Indicators; OECD Science, Technology and Industry Scoreboard 2015; World Economic Forum, Global Competitiveness Report 2015.

**Based on WEF Global Competitiveness Report, which includes non-OECD countries

The Canadian Economic Climate

Canadian Chamber of Commerce

TOP 10
Barriers to Competitiveness
2016

1. Public policies block small companies from becoming bigger
   Canada has tax barriers and policies in place that keep its small businesses from growing into big businesses with more resources to hire, invest and innovate.
2. Canada is vulnerable to cyber crime
   Canada loses $3.12 billion to cyber crime per year, and nearly half of all small businesses have been the victim of a cyber attack because they

7. Canada is not ready for cl
   Canada must keep pace to … tiveness as a location for investment and a sourc…
8. Internal barriers to trade c… s and restrict investment
   The Canadian economy re… ivide… ficial barriers to trade and labour mobility that frus… business… stment and cost

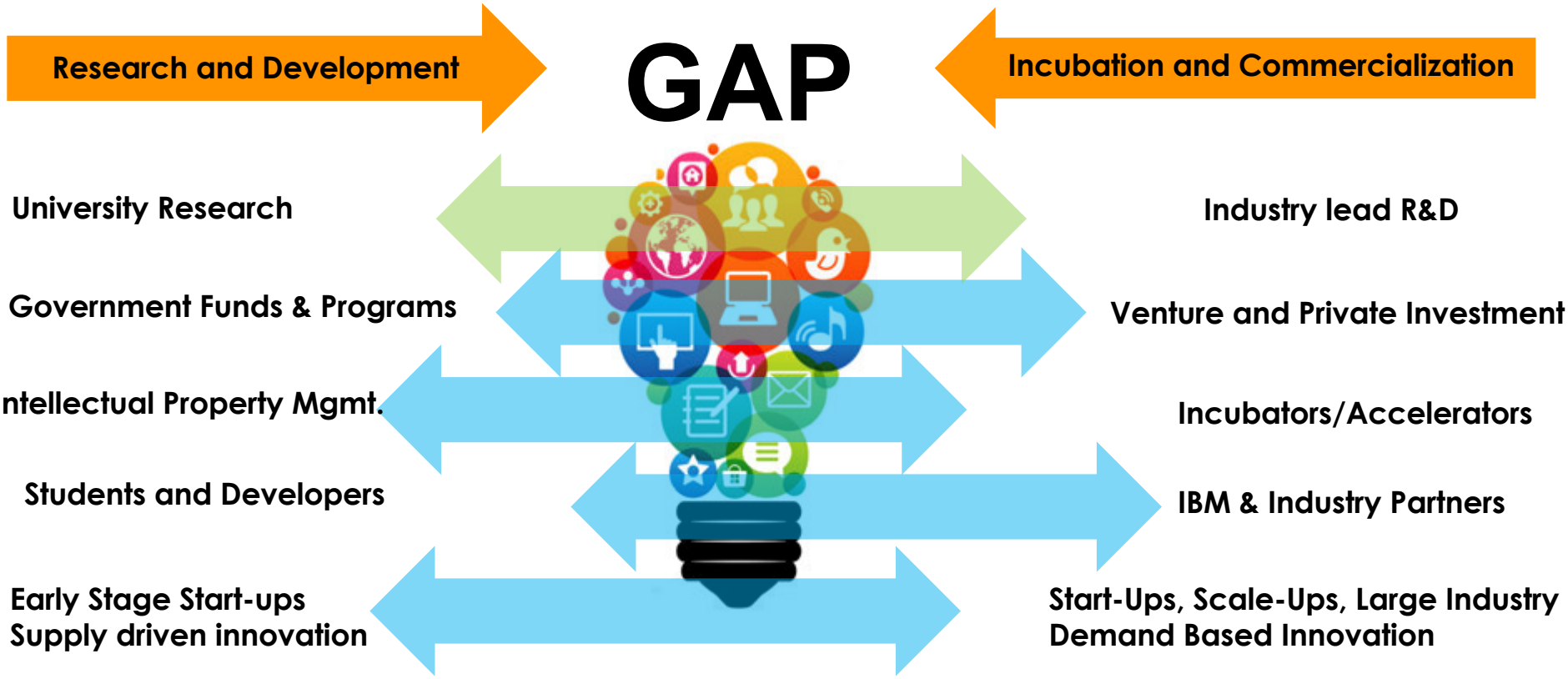
3. Canada needs a more aggressive and effective innovation strategy
Canada needs to reinvest in an innovation ecosystem that supports the capability of business to rapidly respond to change.

the past few years but its businesses continue to face substantial barriers expanding abroad, and Canadian exporters are falling behind in key markets like China.

5. Canadian resources cannot get to world markets
   Canada's trade and foreign investment flows depend on natural resources and its future economic prosperity depends upon its ability to provide reliable infrastructure to allow Canadian energy resources to fuel Asian economic growth at world market prices.
6. Poor literacy, numeracy and digital skills are limiting productivity in segments of Canada's workforce
   Half of Canadians do not have the levels of literacy, numeracy and digital problem solving skills they need to compete in today's economy.

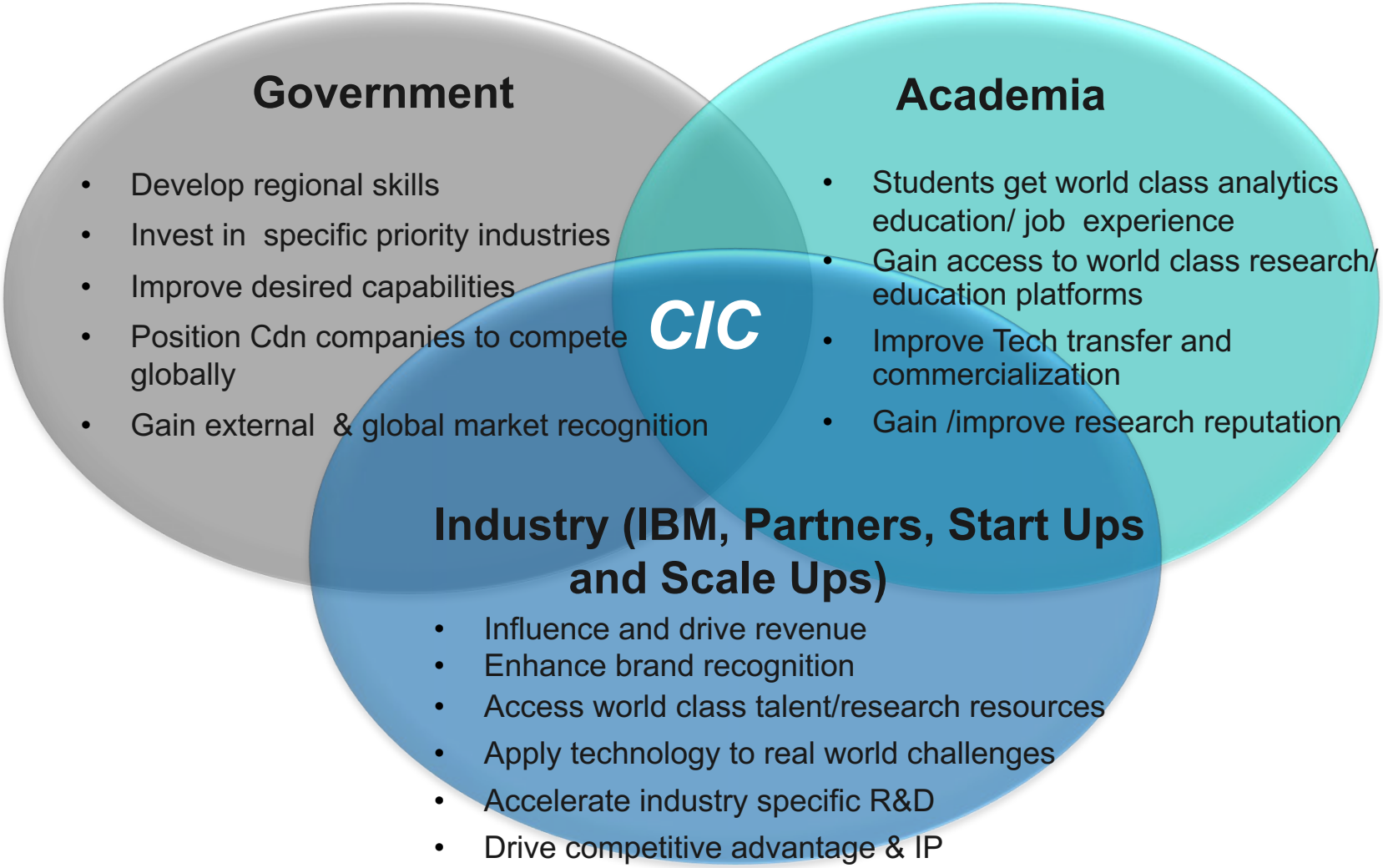
support Canada's tourism industry.

IBM's Unique Approach to Innovation



Collaborate → Innovate → Incubate → Commercialize

Collaborative Innovation Centres (CIC)



IBM Canada Innovation Priorities

Addressing Canadian challenges while aligning to IBM Strategy

VISION
position IBM as **essential and relevant to our clients and collaborators**

MISSION
collaborate
accelerate
incubate
commercialize

Is the initiative one that relies on a Collaborative Innovation Model

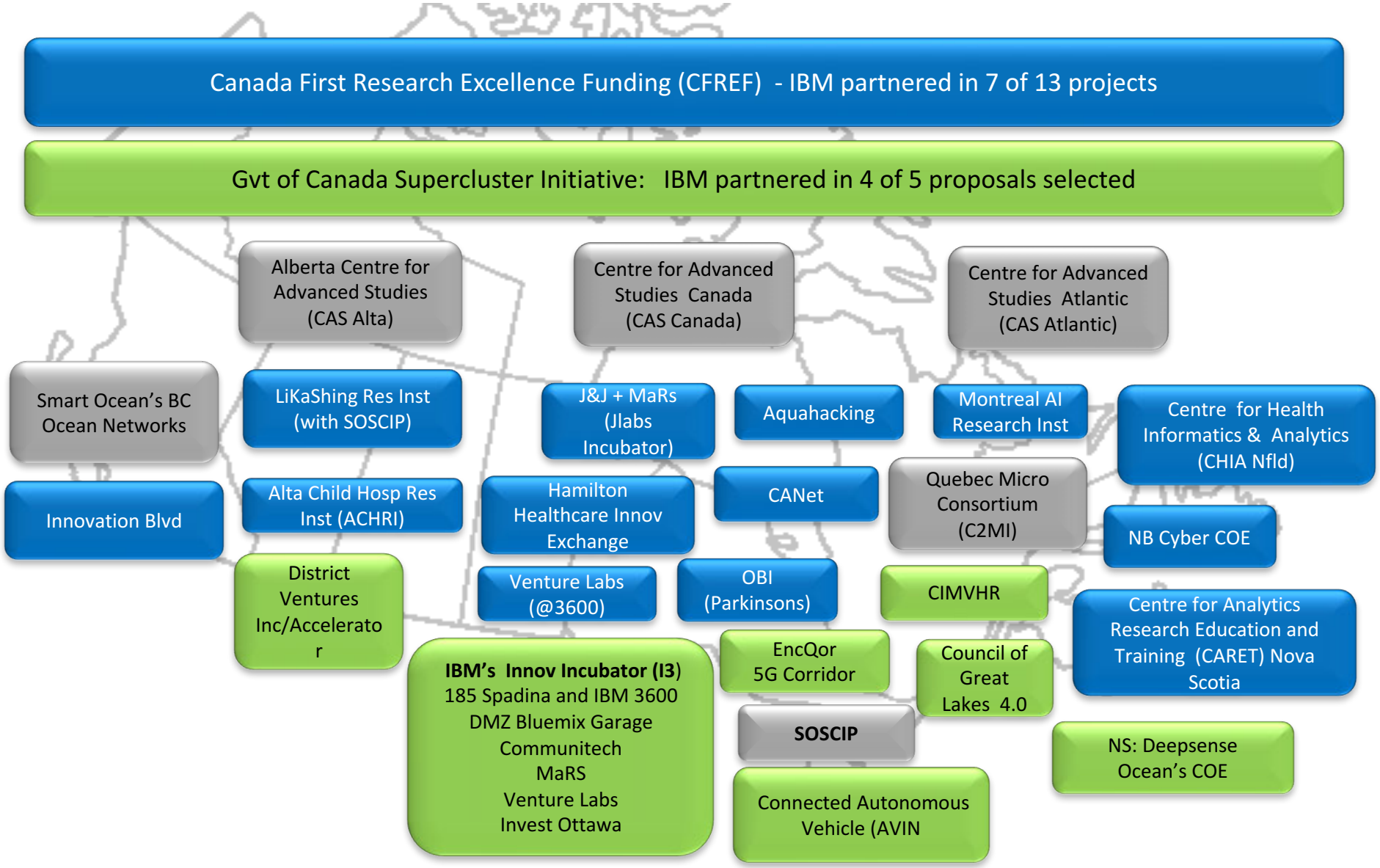
Will the initiative Expand and Accelerate IBM and Partner Research

Will the initiative accelerate commercialization of "Made in Canada"

Will the initiative Attract partners and Investment

Collaborate → **Innovate** → **Incubate** → **Commercialize**

IBM Canada Innovation Initiatives at a glance



Case : SOSCIP Research Consortium

Based in Ontario, SOSCIP is unique as Canada's only R&D consortium using advanced computing to drive industry innovation through ecosystem engagement

- **"Phase 1" on April 10, 2012"Phase 2" on April 28, 2015**
- **Collaboration is foundational and key to success**
  - 7 initial and now 15+ major university/college partners
  - Federal and provincial Governments key stakeholders
  - Large industry through IBM and its partners
  - SME engagement via Ontario Centres of Excellence
- **$300M Investments in Ontario over last three years**
  - Fed $40M, Prov $36.5M, IBM $250M
- **5 original, now 9 Focus areas that bolster Ontario and Canada skills/capacity and innovation**
  - Healthcare, Energy, Water, City Infrastructure, Agile Computing, Mining, Digital Media, Cybersecurity, Advanced Manufacturing
  -
- **5 Distinguished High Performance Computing Platforms**
  - Supercomputer, Cloud, FPGA, GPU, Cognitive, Large Memory
- **107 Projects Supported (80+ current and ongoing)**
  - 2 year path from research to commercialization
  - SME on every project

Collaborative Initiative Assets

Advanced Analytics Platforms

Infrastructure, tools and analytics to accelerate new applications and discoveries

Simulate Real World
Complex data and system modeling
Fast design and prototyping
Real time and predictive analysis/response

Ecosystem and engagement to translate these discoveries into application

Academic Leaders

IBM

Innovation Outcomes

Gvt Priority Sectors and Themes

Start-ups Scale-ups Industry Partners

High value cross disciplinary data and analytics skills

Campus Canada

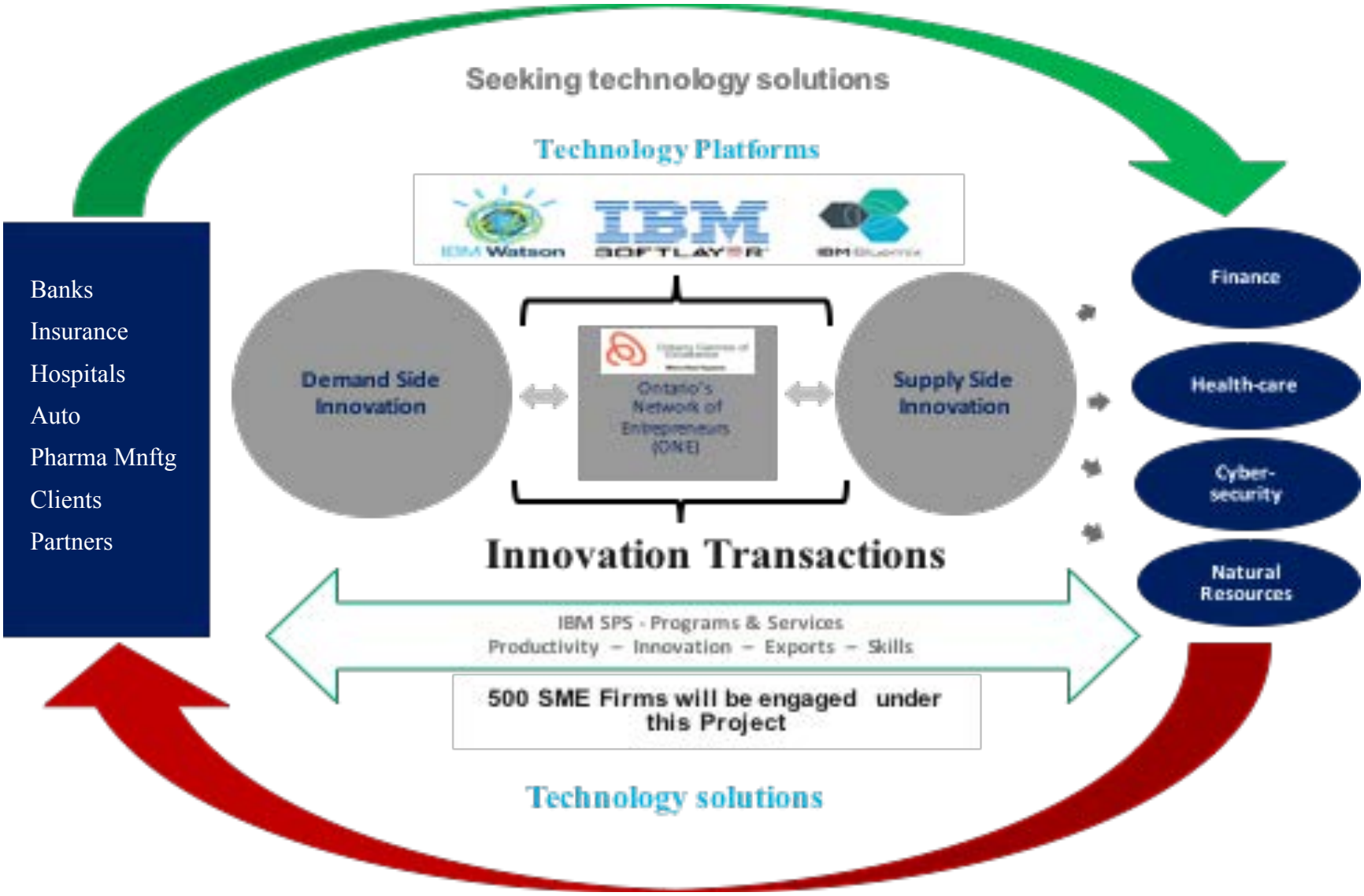
Analytics Curriculum Assets

Job Related Training Opportunities

Governance and Cross Team Support

Open IP Foundational Agreements
Outcome based Governance models
Scientific Advisory Oversight
Agreements and Frameworks
Cross Team Collaboration

Scale Up Challenge: an Open Innovation Marketplace



Ontario Partnership Announcement – Feb 24, 2016

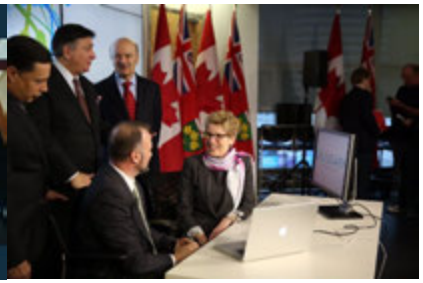
IBM Innovation Incubator Initiative

TORONTO, ON – February 24, 2016: …. government and IBM's investment in a new innovation initiative designed to **help up to 500 small and medium-sized enterprises (SMEs)** create jobs, embrace next-generation technologies and compete in the global marketplace. The government is contributing up to $22.75 million in the Ontario Incubator Initiative. IBM is contributing another $24.75 million of in-kind cognitive and cloud technologies and related expertise

Ontario Centres of Excellence

IBM

Ontario



IBM Innovation Incubator Initiative - Objectives

This I^3 initiative delivers 18 programs under 4 execution priorities:

Stream 1: I3 Customer Demonstration Program

Demand-based innovation aims to demonstrate the value of innovation with a strategic customer/receptor by matching market leaders and market disruptors

Stream 2: I3 Talent Edge Data Analytics Internships

Build skills related to advanced analytics, data science and emerging technologies to allow start-ups and scale-ups to uncover patterns and pursue breakthrough ideas

Stream 3: SOSCIP Post-Doctoral Fellowship Program

Resourcing PDFs at companies or institutions to smooth the path from research to innovation to commercialization by leveraging advanced computing, infrastructure

Stream 4: Establish a "hub and spoke" Innovation Infrastructure with OCE and the ONE

Launch and support a min of 6 incubators and/or accelerators and as many as 14 Regional Innovation Centres providing SMEs ;

- world-class technology and computing capabilities
- business advice and mentoring
- support services to help businesses develop scale-up strategies and plans