



EUREKA 

innovation across borders

National Research Council of Canada (NRC)

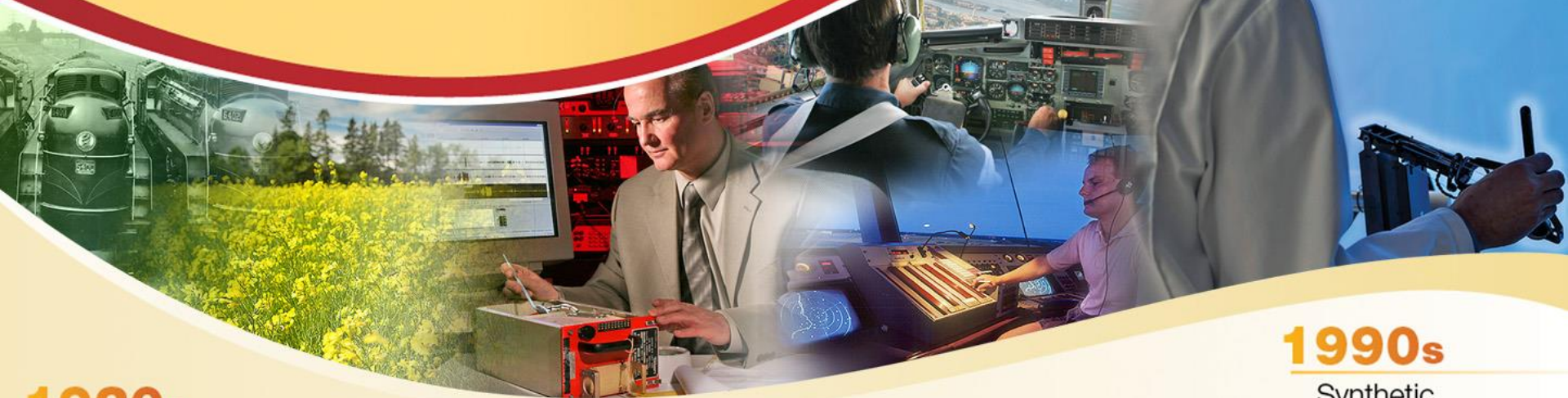
Celtic Plus Project Preparation Day
March 16, 2016, Madrid

Working with clients and partners, we provide innovation support, strategic research, scientific and technical services to develop and deploy solutions to meet Canada's current and future industrial and societal needs.

NRC-IRAP MISSION

Accelerate the growth of SMEs by providing them with a comprehensive suite of innovative services and funding

NRC – a century of innovation to benefit the world



1920s

Concrete for a harsh climate

1930s

Redesigned steam locomotive

1940s

Wartime innovations: radar, atomic energy

1950s

Pacemaker, electric wheelchair

1960s

Crash position indicator

1970s

Anti-counterfeiting technology

1980s

Canadian Astronaut Program, Canadarm

1990s

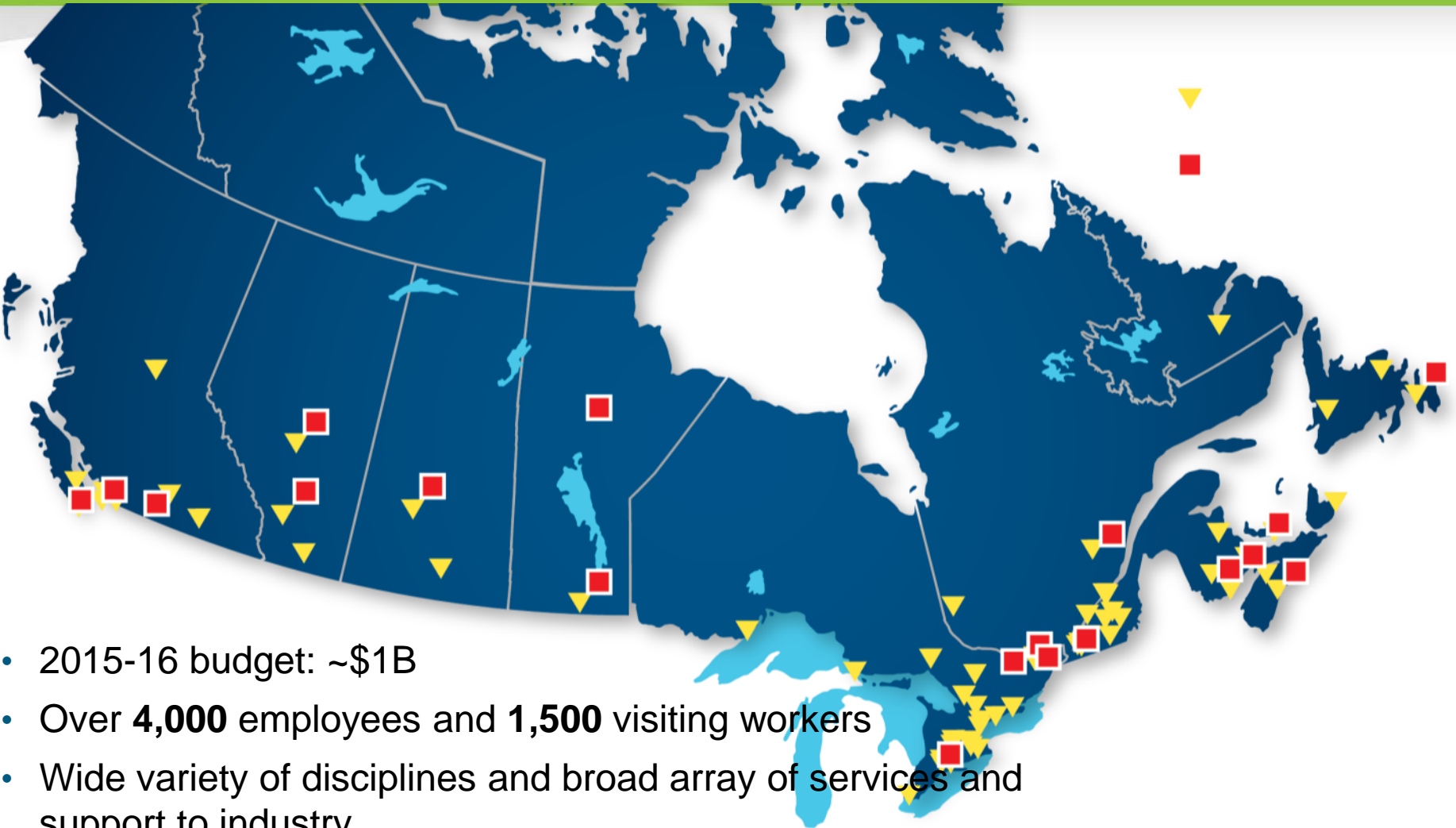
Synthetic meningitis C vaccine

2000s

Simulated brain surgery



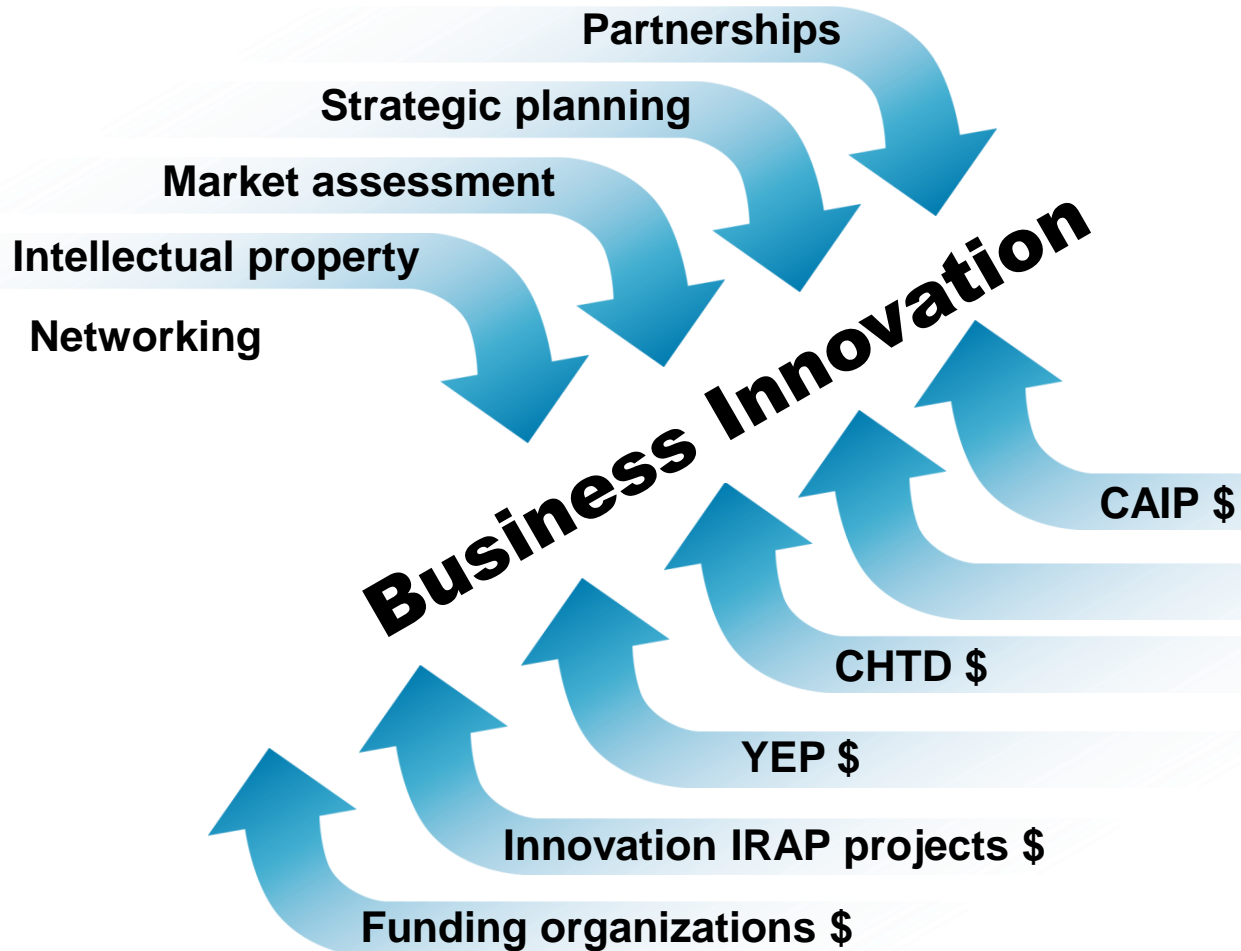
NRC Overview



- 2015-16 budget: ~\$1B
- Over **4,000** employees and **1,500** visiting workers
- Wide variety of disciplines and broad array of services and support to industry.
- *IRAP is Delivered by a network of over 400 professionals located in more than 100 communities*

- Advisory Services
- Networking and Linkages
- Funding – grants up to 80%



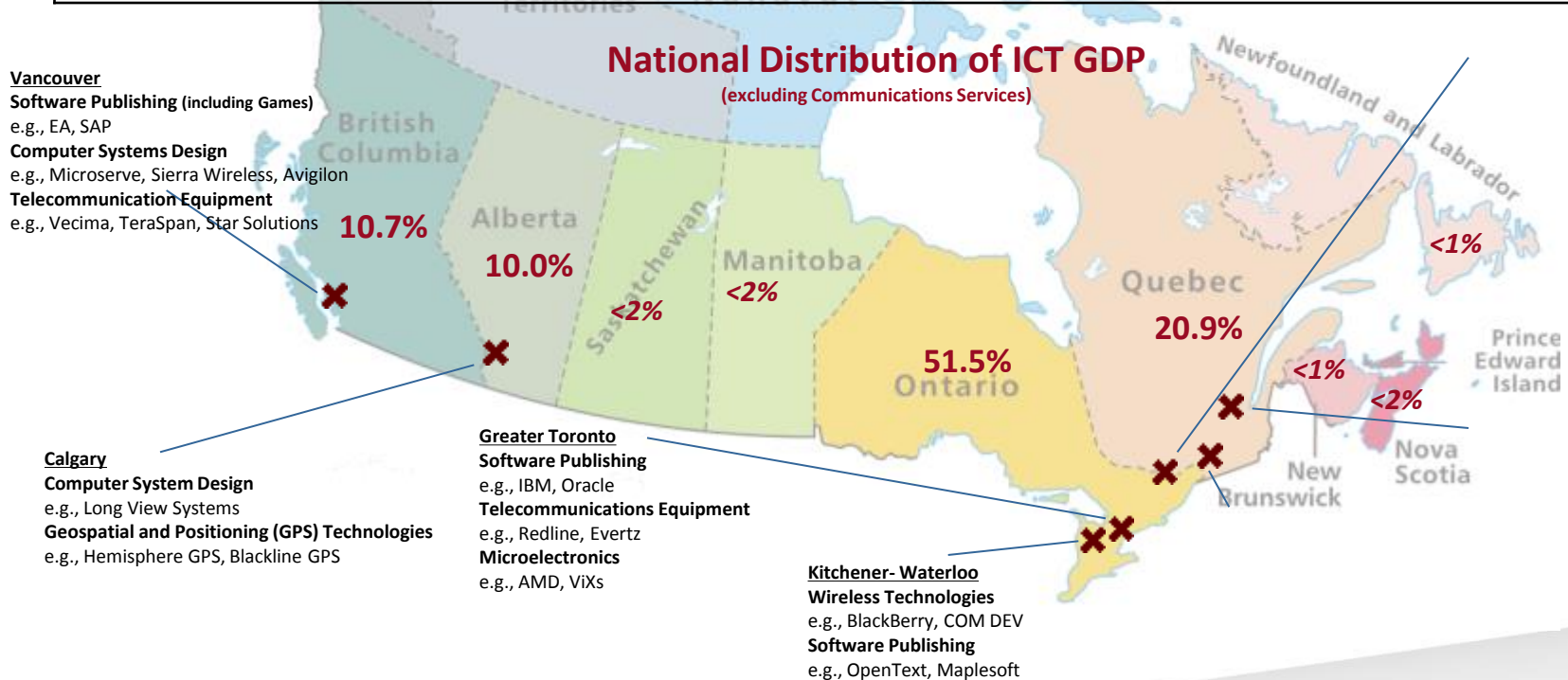


Canada's Clusters

Employment Distribution - ICT Industries (Share of Canadian Total), 2013

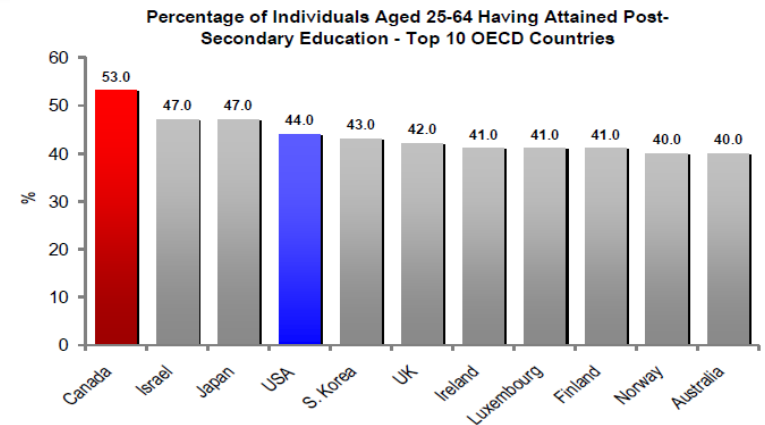
	Ontario	Quebec	BC	Alberta	Rest of Canada
Computer System Design/Data Processing i.e., <i>CGI, IBM, Accenture</i>	47%	27%	11%	9%	6%
Wholesaling i.e., <i>Apple, Dell, IBM</i>	60%	19%	8%	9%	5%
Software Publishing i.e., <i>EA, Ubisoft, Open Text</i>	35%	31%	21%	8%	4%
Telecommunications Equipment i.e., <i>BlackBerry, COM DEV, Mitel, Ericsson</i>	66%	21%	6%	2%	5%
Microelectronics Manufacturing i.e., <i>IBM, Teledyne DALSA, Matrox</i>	51%	33%	10%	4%	2%
Total ICT Sector (excluding Communications Services)	49%	26%	11%	8%	6%

Source: Statistics Canada (SEPH, unadjusted for seasonal variation, by NAICS, annual (persons)).



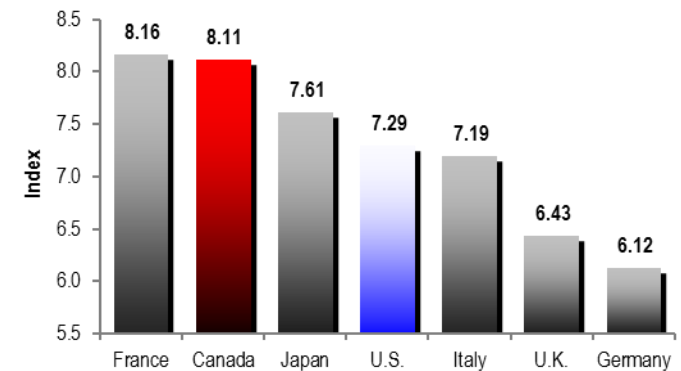
Canada: high quality ICT talent

- Highest % of individuals achieving at least college or university education in OECD
- #2 in the G7 in terms of availability of qualified engineers in workforce*
- Canada generates about 4% of global academic publications, although it represents only 1% of the global population
- 75% of ICT MNEs said that the most important factor which led to an investment decision was the availability of a highly-skilled talent pool
- 55% of Canada's doctorate graduates are in STEM fields
- Canada is ranked #1 in the G7 and 5th in the OECD countries in the share of STEM PhD graduates
- World-class universities and colleges produce high quality, work-ready graduates



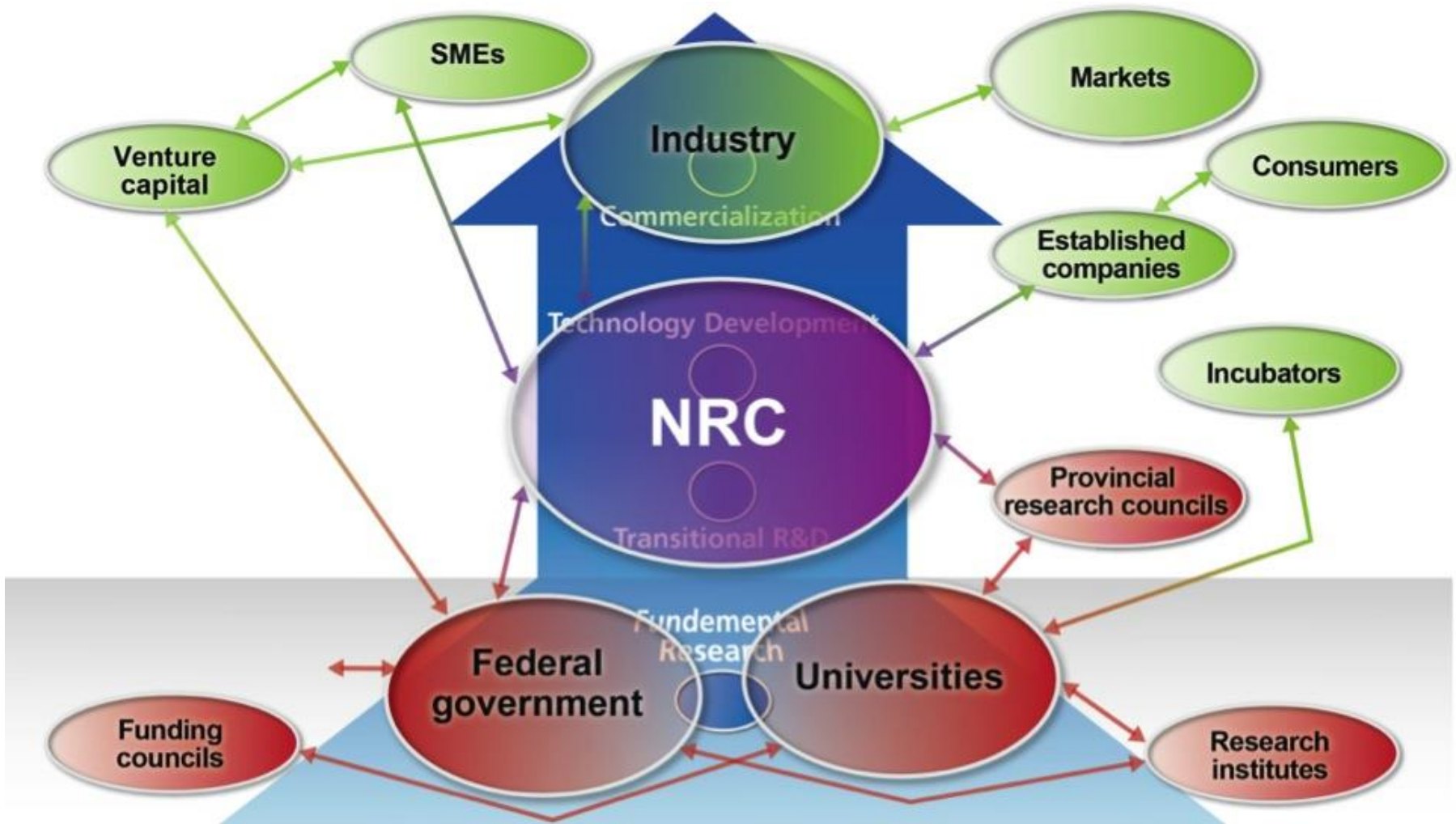
Source: OECD, Education at a Glance, Interim Report, January 2015

Qualified Engineers Availability Index



Source: IMD, Rank among 60 economies considered in the World Competitiveness Yearbook 2014.

Canada's innovation "ecosystem"



Innovation Before Internet (BI)

BI

Innovation After Internet (AI)



AI

What IRAP Tool to Use?



Venture Life Cycle

Stage:

Product Validation	Market Validation	Market Penetration	Market Expansion
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Focus:

Idea	Idea Validation	Market Testing	Market Selection	Whole Product	First Segment	Add-on Products	Adjacent Segments
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Company Makeup:

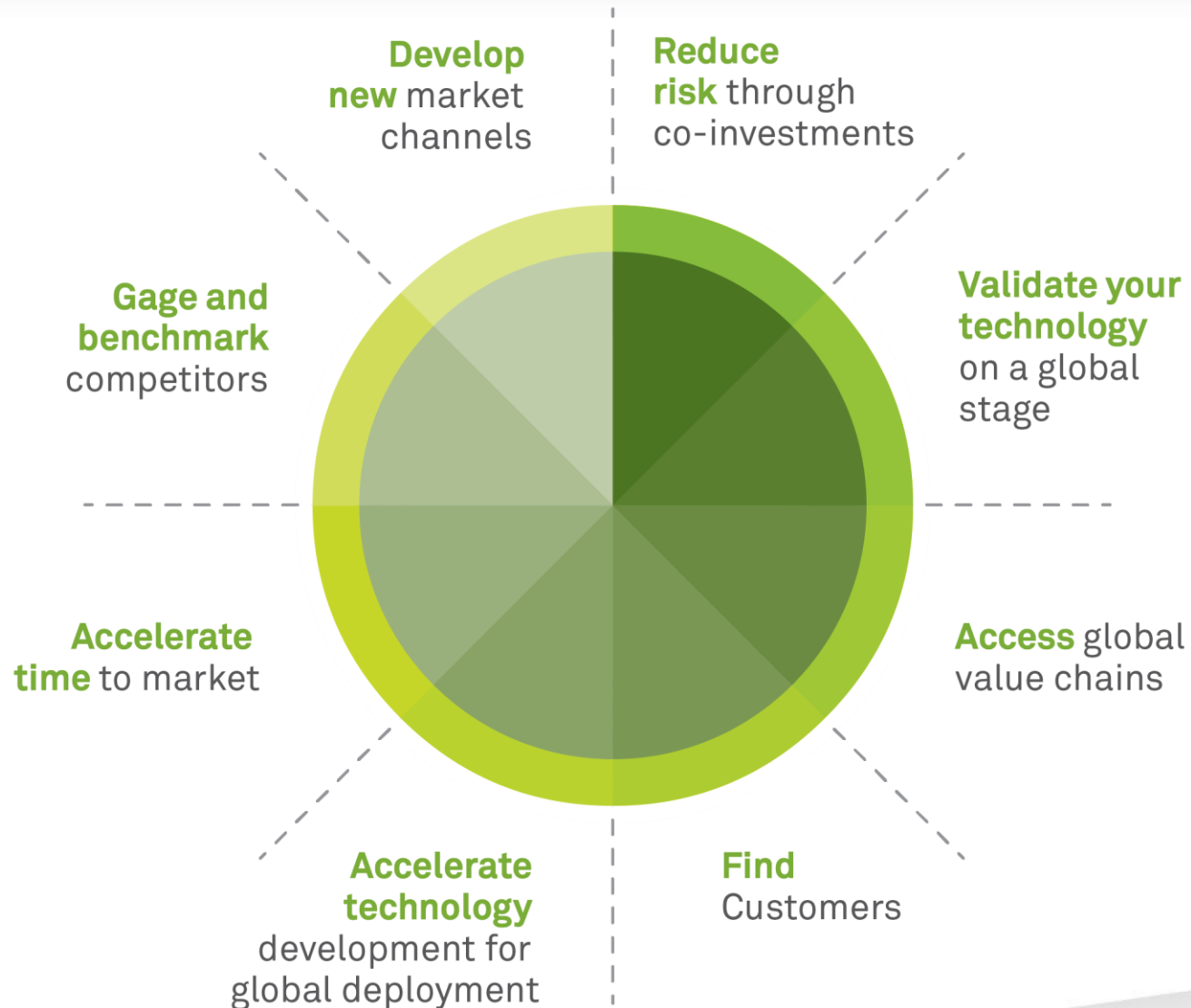
People with a product idea	Tech company founders and CEOs with an early version of their product	Tech company CEOs with customers live with their product	Tech company CEOs who have a stable but not rapidly growing business
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Corporate Objective:

To learn how to quickly determine if the product idea is worth pursuing	To find and close early adopter customers	To get to cash flow break-even generated from product sales before they run out of money	To ramp up their sales and are unsure of how to do it
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Start with Corporate Objectives

Importance of Co-innovation





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Gracias!