



## TALENT AS CANADA'S COMPARATIVE ADVANTAGE

# Digital Talent Strategy: Road to 2020 and Beyond

Ottawa | March 9<sup>th</sup> 2016

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## CONSULTATIONS & ACKNOWLEDGEMENT

- Canada wide targeted consultations with over 500 industry members, associations, academic institutions, and policy makers
- Broad engagement with 2000+ stakeholders across Canada
- Review of a broad range of published research (nationally & internationally)



## MAIN FOCUS

### Industrial growth & competitiveness

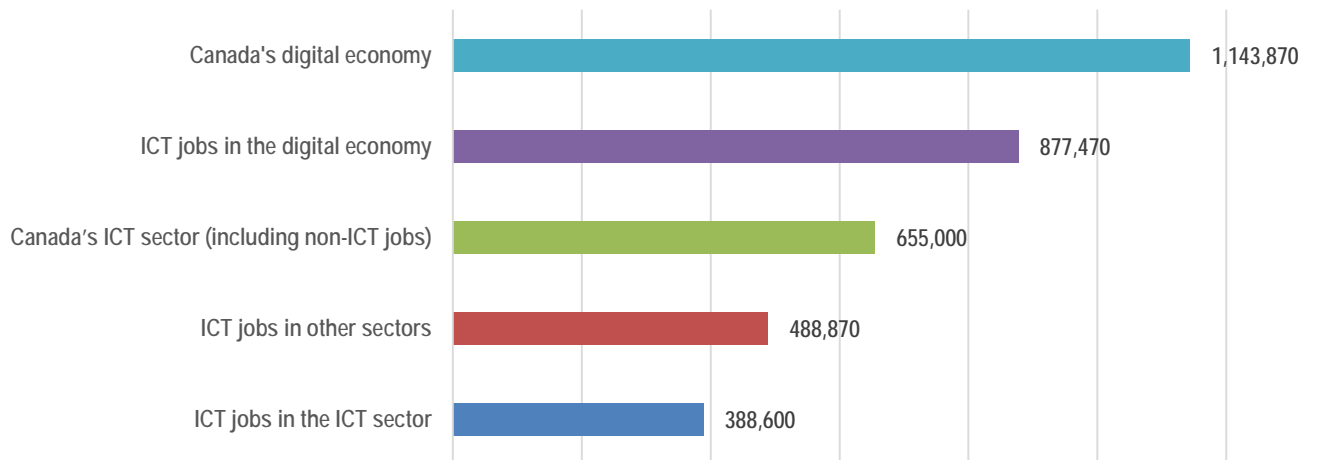
- Develop skilled digital workers to fuel Canada's economy
- Nurture digital entrepreneurship to create future industries

### Canadians in a digital world

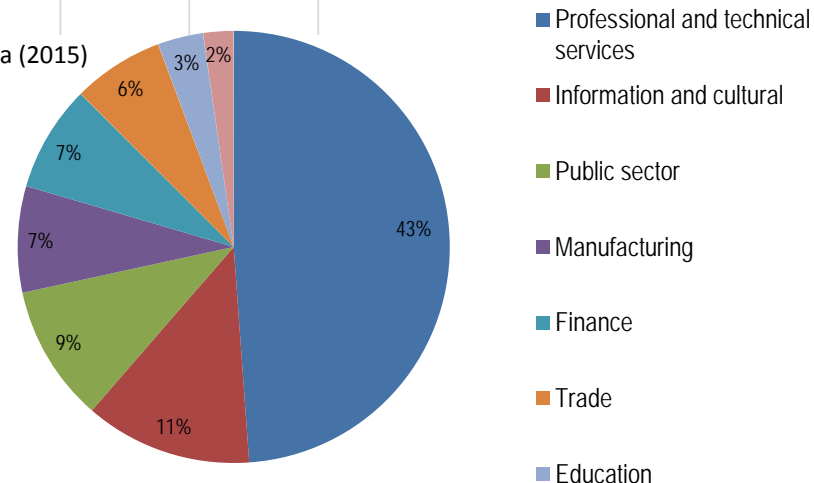
- Enhance essential digital skills to enable Canadians to better participate as consumers & citizens



## CANADA'S DIGITAL ECONOMY



Source: ICTC; Statistics Canada (2015)

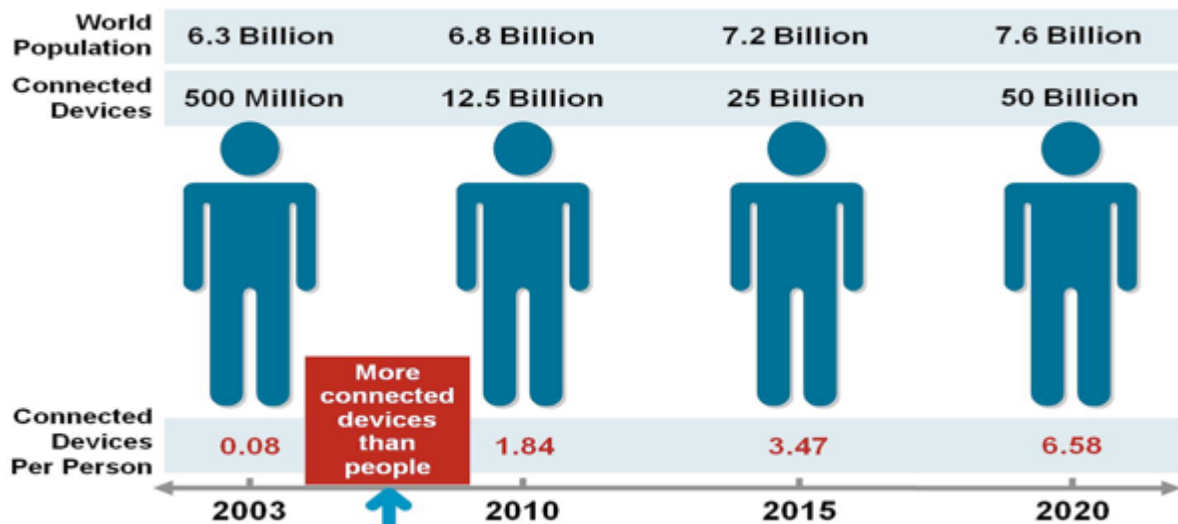


### FACTS & FIGURES

- Digital economy contributes \$74 billion Canada's output or 5% of GDP
- Job growth in ICTs outpaced the overall economy by 4 to 1
- Low jobless rate at 2.6%

## TECHNOLOGY ENABLERS & ECONOMICS

Source: Cisco IBSG



### ECONOMIC BENEFITS

- A 1% in labour productivity improvement resulting from the adoption of advanced mobile services yields \$2.5 billion to the Canadian economy
- A 20% increase in ICT adoption yields a 1% in GDP growth or \$16.5 billion to Canada's output

Mobile



Apps & services



Cloud



Data analytics



## GROWTH SECTORS & TALENT DEMAND

Financial services



Entertainment & gaming



Advanced manufacturing & robotics



Intelligent retail



Cyber security



Clean Tech



Biotechnology



Connected transportation



eHealth



### HIGHLIGHTS

We face a growing gap between the demand for, versus supply of, ICT talent and skills. Hiring requirements in Canada are expected to reach:

# 182,000 by 2019

5 occupations will be in strong demand.

- Information System Analysts & Consultants
- Computer Programmers & Interactive Media Developers
- Computer & Information Systems Managers
- Software Engineers & Designers
- Graphic Designers & Illustrators

The demand-supply imbalance will affect all provinces, and could reach over:

76,300	Ontario
49,600	Quebec
20,900	British Columbia
17,300	Alberta
4,000	Manitoba
3,900	Saskatchewan
3,800	Newfoundland and Labrador
3,200	Nova Scotia
2,200	New Brunswick
1,500	Prince Edward Island

## KEY THEMES



## **TALENT SUPPLY (SUMMARY RECOMMENDATIONS)**

### **Computer science as part of the K-12 curriculum (Education, Industry, Government)**

- Enhance computational thinking
- Introduce coding for intermediate grades
- Enable experiential learning
- Actively promote careers in ICTs

### **Improved alignment between education & industry needs**

- Closely align educational programs to improve student employment outcomes

### **On-the-job training for young graduates (Government)**

- Increase wage subsidies to support SMEs hiring young graduates





## HARNESSING ALL HUMAN CAPITAL (SUMMARY RECOMMENDATIONS)

### Share industry best practices to support diversity & inclusion (Industry)

- Staffing and retention (women, indigenous peoples, immigrants & persons with disabilities)
- Particular focus on SME capacity building
- Establish targets and measure progress

### Develop and promote targeted learning opportunities to attract underrepresented groups (Education, Government, Industry)

- Focused industry-driven awareness & community programs
- Targeted scholarships to attract underrepresented groups



## INDUSTRIAL GROWTH & COMPETITIVENESS (SUMMARY RECOMMENDATIONS)

### Workforce up-skilling (Government)

- Lower the financial burden for SMEs to train employees through subsidies & tax credits
- Extend Employment Insurance (EI) for displaced workers and assist Micro & SMEs to support employee training

### Accelerate digital adoption (Government)

- Reintroduce programs such as the Digital Technology Adoption Pilot Program (DTAPP) - NRC
- Governments (Federal & Provincial) should allocate a percentage their ICT procurement to Canadian SMEs



## THE QUEST FOR GLOBAL TALENT (SUMMARY RECOMMENDATIONS)

### Attracting critical global talent (Government, Industry)

- Enable targeted campaigns to brand Canada as the destination for high skilled digital talent

### Expedited processes (Government)

- Reinstate the expedited visa stream to fill high demand occupations
- Reevaluate the Express Entry program to facilitate the path to permanent residence
- Regularly update the labour market information used by immigration & workforce development staff to reflect emerging occupations



## CANADIANS IN A DIGITAL WORLD (SUMMARY RECOMMENDATIONS)

### **Strengthening digital literacy** (Government, Industry, Education)

- Develop and expand the availability of free online technology guidance and resources (such as cyber-security) for SMEs and individual citizens to engage with confidence in the digital economy and improve the foundational digital skills for employment

### **Encourage digital services adoptions by citizens** (Government)

- Encourage greater digital literacy and adoption through government online & mobile service delivery



## THE INNOVATION FACTOR (SUMMARY RECOMMENDATIONS)

### **Fostering digital entrepreneurship** (Education, Government)

- Incentivize the commercialization of applied research in educational institutions
- Link Scientific Research and Experimental Development (SR&ED) to commercialization

### **Increase the pool of funding available for R&D** (Government)

- Promote Canada as the destination for early stage technology R&D to attract Foreign Direct Investment (FDI)



## RESPONDING TO A CHANGING ECONOMY (SUMMARY RECOMMENDATIONS)

### **Build labour mobility pathways** (Industry, Governments, Education)

- Create guidelines and tools for mapping transferable skills into high demand jobs
- Enable short duration training programs
- Extend Employment Insurance (EI) to support training and offset the cost to workers and employers





**FROM STRATEGY TO RESULTS**



**THREE TASK FORCES** (industry, education, and policy makers)

- **Education & Skills**
- **Industry Growth**
- **Diversity & Inclusion**



# Q & As

<http://www.ictc-ctic.ca/digital-talent-strategy/>

For more information, visit:

[www.ictc-ctic.ca](http://www.ictc-ctic.ca)



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