# Canada's Next Generation of Digital Economy Workers

Presented by: Diana Barbosa – Director, Education & Standards
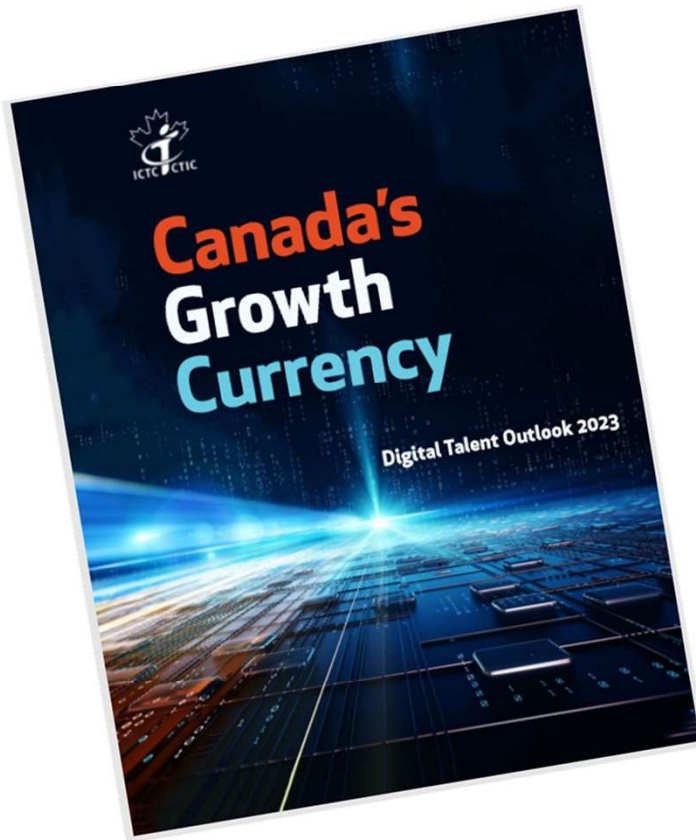Elizabet Mills – Sr. Director, Skills Development

About ICTC

- An independent and neutral policy advisor to business and governments across Canada.

- An authoritative source of technology, economic, and labour market research.

- A leader in capacity building programs and solutions for the digital economy.

- A creative and responsive team.
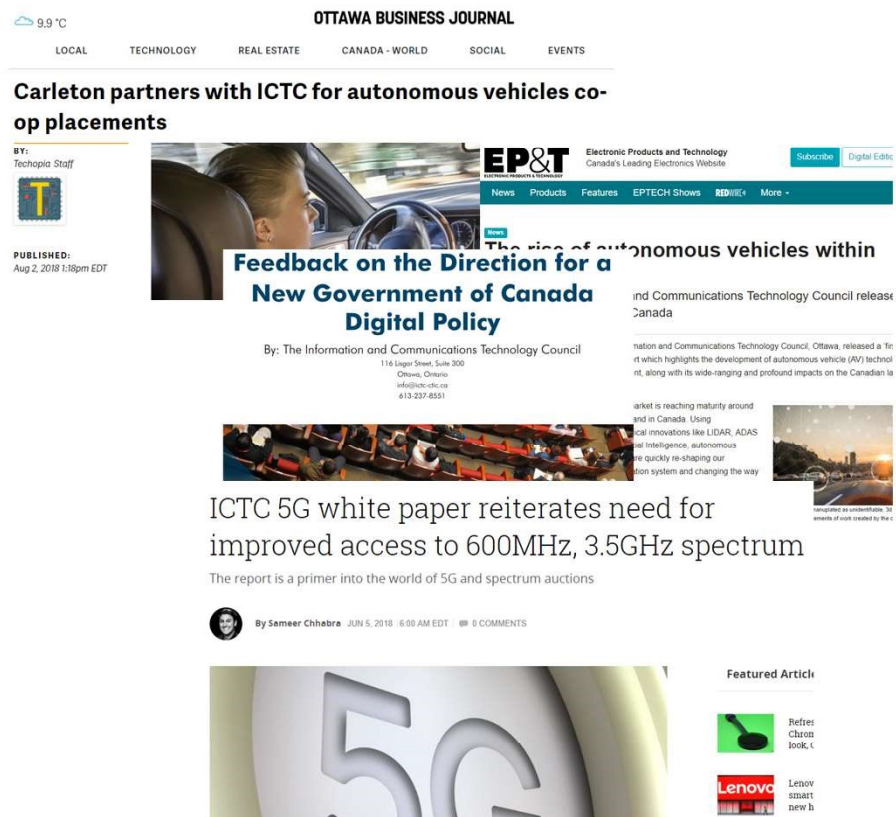
ICTC fosters globally competitive and inclusive digital economy empowered by innovative digital solutions

Partnerships
- Industry, Education, Government

Research
- Labour Market, Technology, Economics

Talent Programs
- Inclusive, Innovative, & Entrepreneurial

Policy Advice
- Evidence Based

Online Tools
- E-Talent Canada, Competencies, HR Portal

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Canada's Growth Currency

Digital Talent Outlook 2023

www.ictc-ctic.ca

Financial services FinTech

Advanced manufacturing & robotics

Intelligent retail

Entertainment & gaming

Connected transportation

Biotechnology

Clean Tech

eHealth

- Approx. **90% of jobs in Canada require** some level of **technology**.

- Canadian digital economy **employs approx. 1.4 million people**

- **305,000** digital workers will be in demand across all Canadian industries by 2023.

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Cyber security is the backbone

- Global cybersecurity workforce shortage is projected to increase to **3.5 million by 2021** (Cybersecurity Ventures)

- Canada requires around **40-53K cybersecurity practitioners** by 2023(ICTC)

Technology & Science

Here's what we know about the ransomware that hit 3 Ontario hospitals

Woodstock, police service hit by cyber-attack
From CTV Kitchener's Jeff Pickel: The City of Woodstock and its police force are investigating after both were hit by cyber-attacks.

Ontario municipalities hit hardest by cyber attacks, says OPP investigator
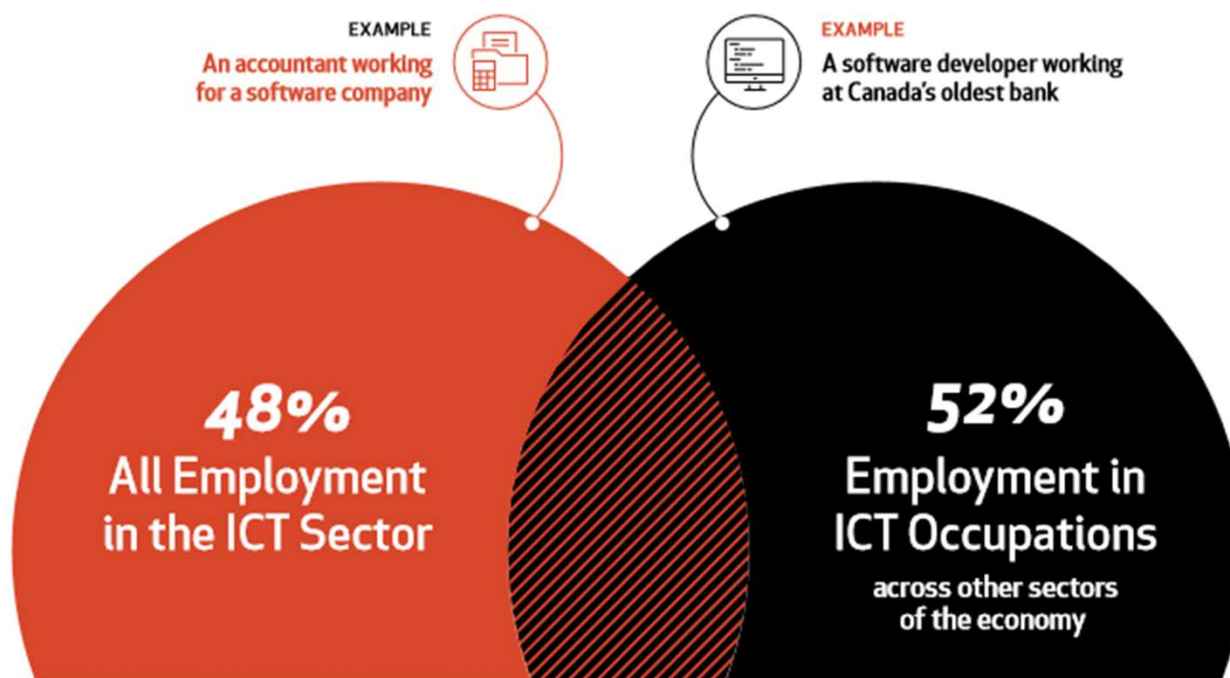
One in five businesses have been hit by cybercrime

NEWS   Jan 24, 2019   by Gisele Winton Sarvis ✉   Midland Mirror

ICT Sector Vs. Digital Economy

Over the last 10 years, the ICT sector's total share of digital economy employment dropped by nearly 4%, going from more than 52% in 2009 to less than 48% in 2019.

EXAMPLE
An accountant working for a software company

EXAMPLE
A software developer working at Canada's oldest bank

48%
All Employment in the ICT Sector

52%
Employment in ICT Occupations
across other sectors of the economy

Cutean, A., Hamoni, R., McLaughlin, R., Ye, Z. (October 2019). Canada's Growth Currency: Digital Talent Outlook 2023. Information and Communications Technology Council (ICTC). Ottawa, Canada

Canada's 6 Key Innovation Areas

Interactive Digital Media

95,000 workers by 2023

Cleantech

25,500 workers by 2023

Agri-foods & Food-tech

20,000 workers by 2023

Clean Resources

10,500 workers by 2023

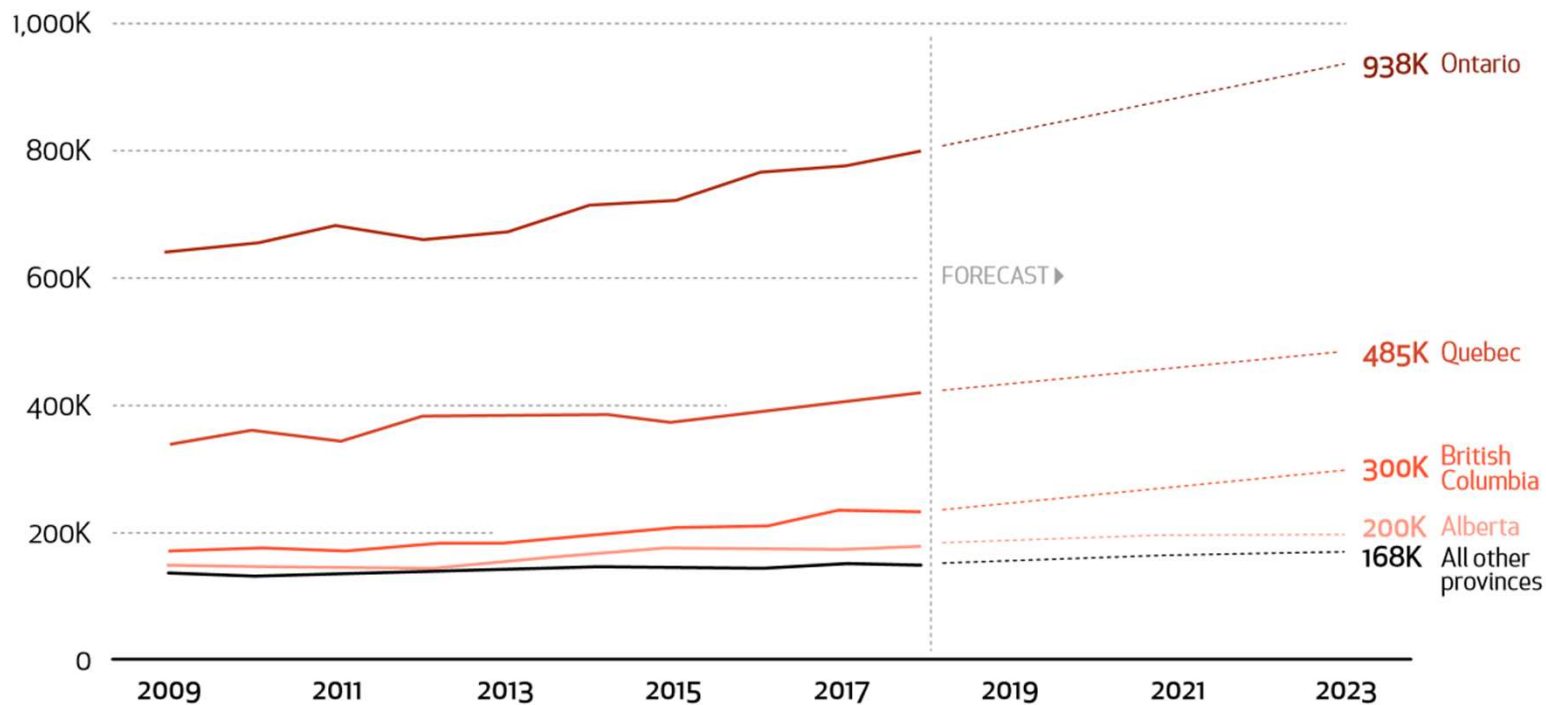**Health & Biotech**

9,000 workers by 2023

Advanced Manufacturing

8,000 workers by 2023

Cutean, A., Hamoni, R., McLaughlin, R., Ye, Z. (October 2019). Canada's Growth Currency: Digital Talent Outlook 2023. Information and Communications Technology Council (ICTC). Ottawa, Canada
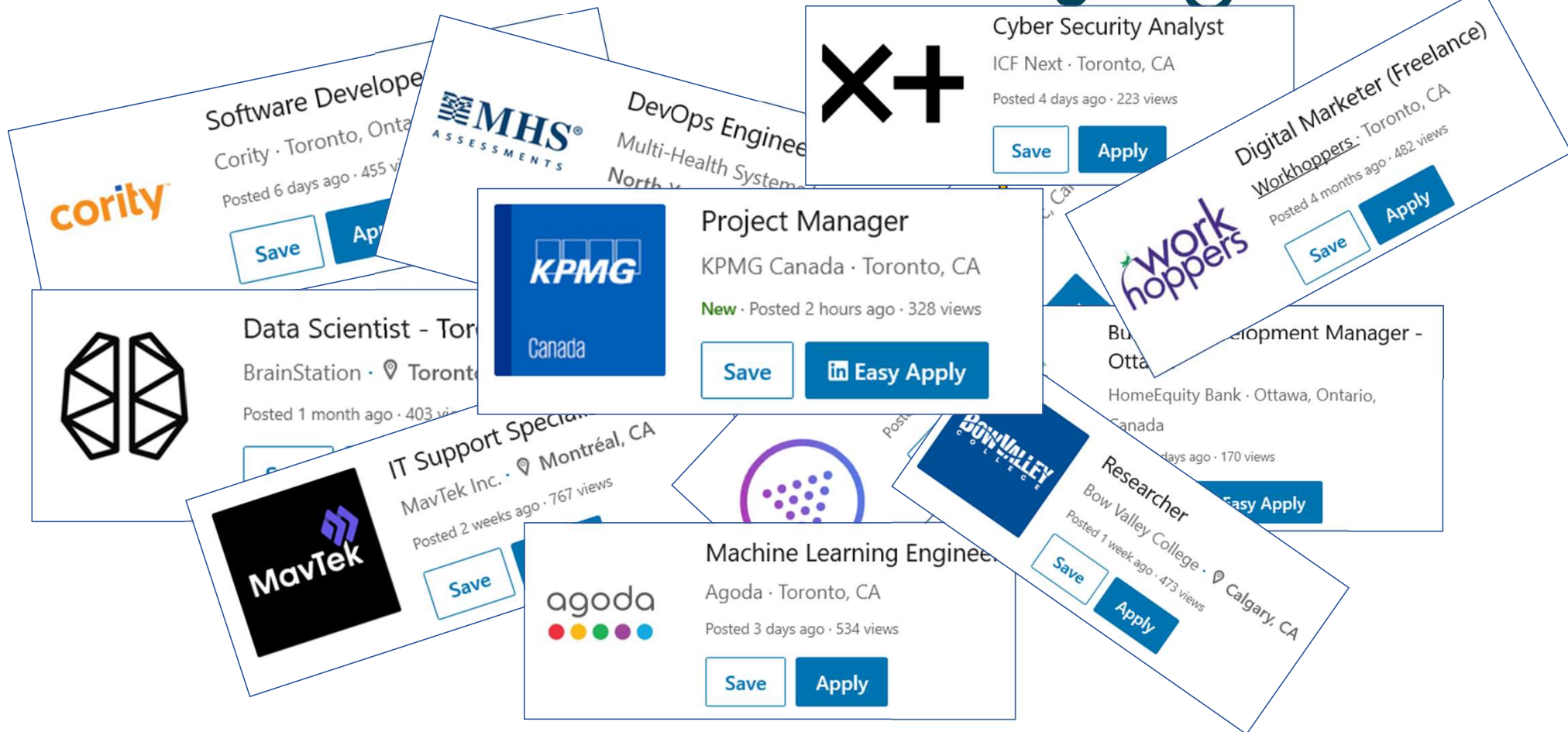
Digital Economy Forecast 2018-2023: Moderate Growth Scenario

- **938K** Ontario
- **485K** Quebec
- **300K** British Columbia
- **200K** Alberta
- **168K** All other provinces

FORECAST ▶

Source: Statistics Canada Labour Force Survey and ICTC Forecast

Top occupations across the Canadian digital economy

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Software Developer
Cority · Toronto, Onta...
Posted 6 days ago · 455 vi...
Save   Ap...

MHS ASSESSMENTS
DevOps Engineer
Multi-Health System...
North V...

X+
Cyber Security Analyst
ICF Next · Toronto, CA
Posted 4 days ago · 223 views
Save   Apply

Digital Marketer (Freelance)
Workhoppers · Toronto, CA
Posted 4 months ago · 482 views
Save   Apply
work hoppers

Data Scientist - Tor...
BrainStation · Toronto...
Posted 1 month ago · 403 vi...

Project Manager
KPMG Canada · Toronto, CA
New · Posted 2 hours ago · 328 views
Save   in Easy Apply
KPMG Canada

Bu...elopment Manager - Otta...
HomeEquity Bank · Ottawa, Ontario, Canada
...days ago · 170 views
...asy Apply

IT Support Specialist
MavTek Inc. · Montréal, CA
Posted 2 weeks ago · 767 views
Save
MavTek

Researcher
Bow Valley College · Calgary, CA
Posted 1 week ago · 473 views
Save   Apply
BOW VALLEY COLLEGE

Machine Learning Engineer
Agoda · Toronto, CA
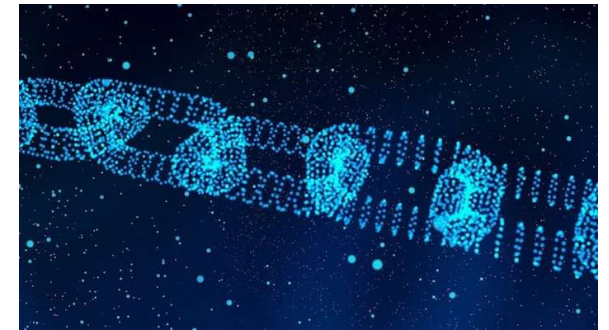Posted 3 days ago · 534 views
Save   Apply
agoda

Changing Nature of Employment that Driver Will Shape our Digital Economy

Growing Automation

Non-Traditional Education and Work

Broadening of the Digital Value Chain

Demographic Shift& The Diversity Dividend

Filling Industry Demand

Women	**Internationally Trained Professionals**	**Career Transitioners**
Indigenous Communities	**People with Disabilities**	**Youth & New Grads**

STEM Enrolments by Institution
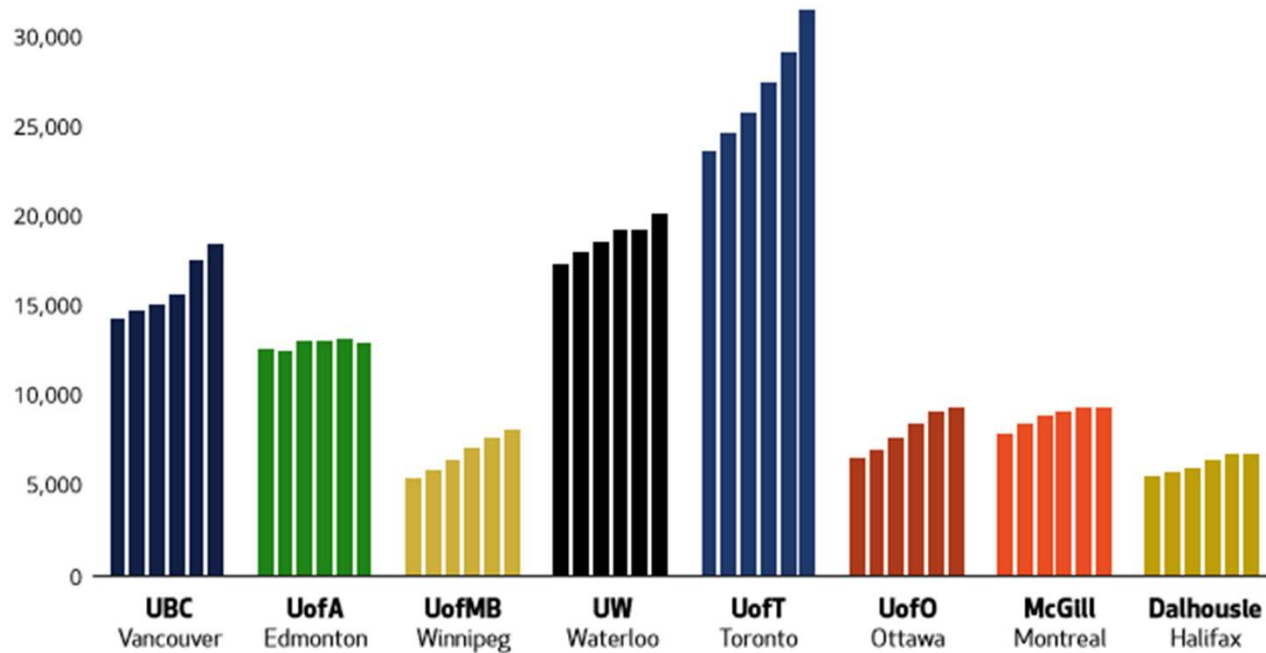
Source: Universities Canada, 2016

At BCIT, the school of Health Sciences recently developed the SIM Lab, a place where students can learn and attempt medical procedures with the Microsoft Hololens headset.

Lethbridge college has recently become the first in Canada to offer a Virtual and Augmented Reality certificate.
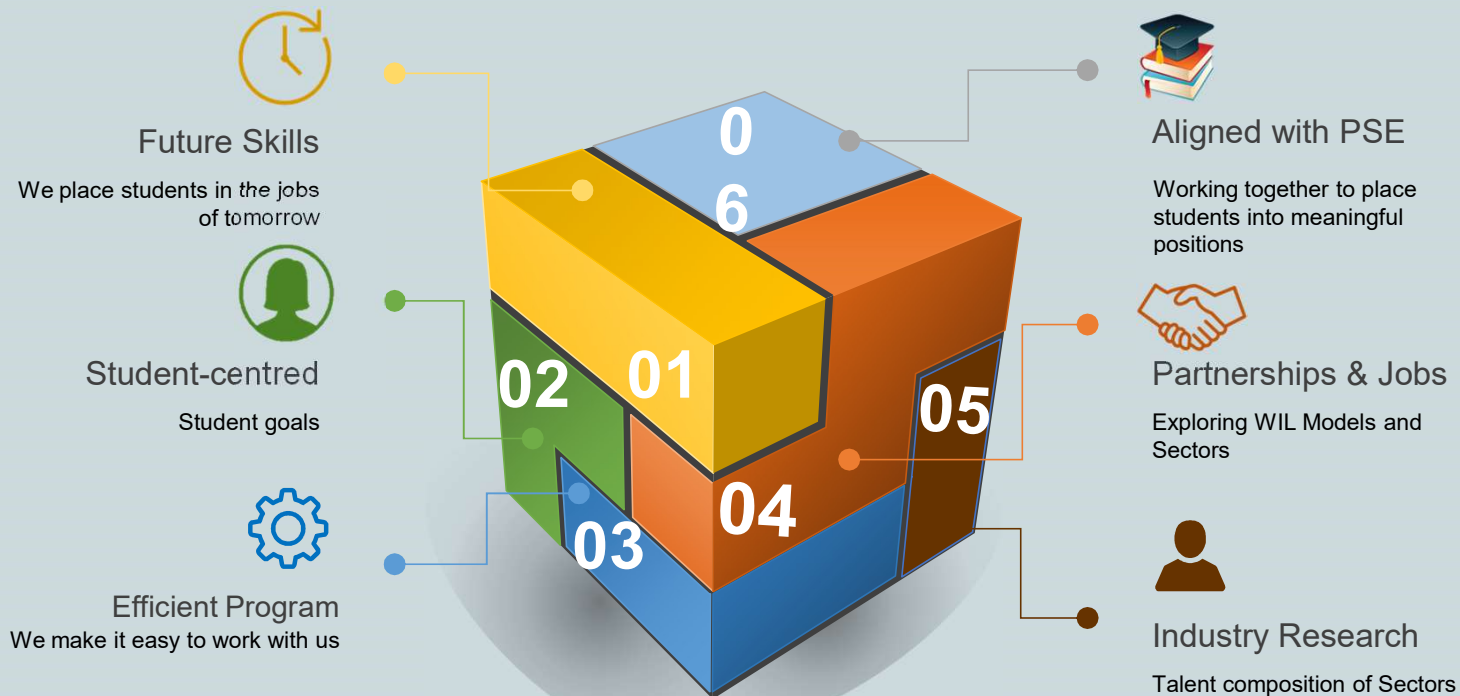
Work Integrated Learning (WIL) Digital Program

Presenter:

Elizabeth Mills
Senior Director – Skills Development

WIL Digital Program

Future Skills
We place students in *the jobs* of tomorrow

Student-centred
Student goals

Efficient Program
We make it easy to work with us

Aligned with PSE
Working together to place students into meaningful positions

Partnerships & Jobs
Exploring WIL Models and Sectors

Industry Research
Talent composition of Sectors

06

01

02

03

04

05

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WIL Digital

The objective of the Student Work Placement Program is to drive systemic change in the skills development system at the post-secondary education level, to effectively align technical, foundational and "work-ready" skills of PSE students with the skills required by Canadian employers.

This will be demonstrated by:

- an increase in new, sustainable work-integrated learning (WIL) opportunities for students across all disciplines; and

- continuation of collaborative partnerships between employers and the PSE system established under the program upon sunsetting.

WIL Digital Subsidy

Employers are eligible to receive:

- Up to 50% of wages or up to $5,000;

- Up to 70% of wages or up to $7,000 for hiring a student from one of the following under-represented groups:

  - Women in science, technology, engineering and mathematics (STEM);
  - Indigenous students;
  - Recent immigrants (last 5 years);
  - Students with disabilities; and
  - First-year students.

WIL Digital – Company and Position Eligibility

Company must:

- Be registered in Canada

- Provide a safe workplace

- Have general liability insurance

- Hire Student as an employee on payroll and not as a contractor.

Position must be:

- NET New

- IT or an IT-related

- Out of the employer`s office, not remote

- Provide learning opportunities, that will improve student`s employability in the future.

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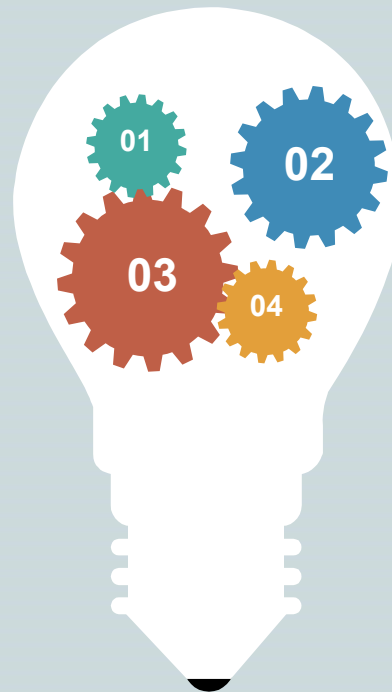# WIL Digital – Student Eligibility Criteria

Students must be:

- Enrolled/ registered full-time or part-time at a publicly funded PSE Institution and be able to provide a proof of registration/ enrollment for the placement period;

- Canadian citizens, Permanent Residents or protected as defined by the Immigration and Refugee Protection Act and be able to provide supporting documents;

- Legally entitled to work in Canada.

Employer Application Submission Steps

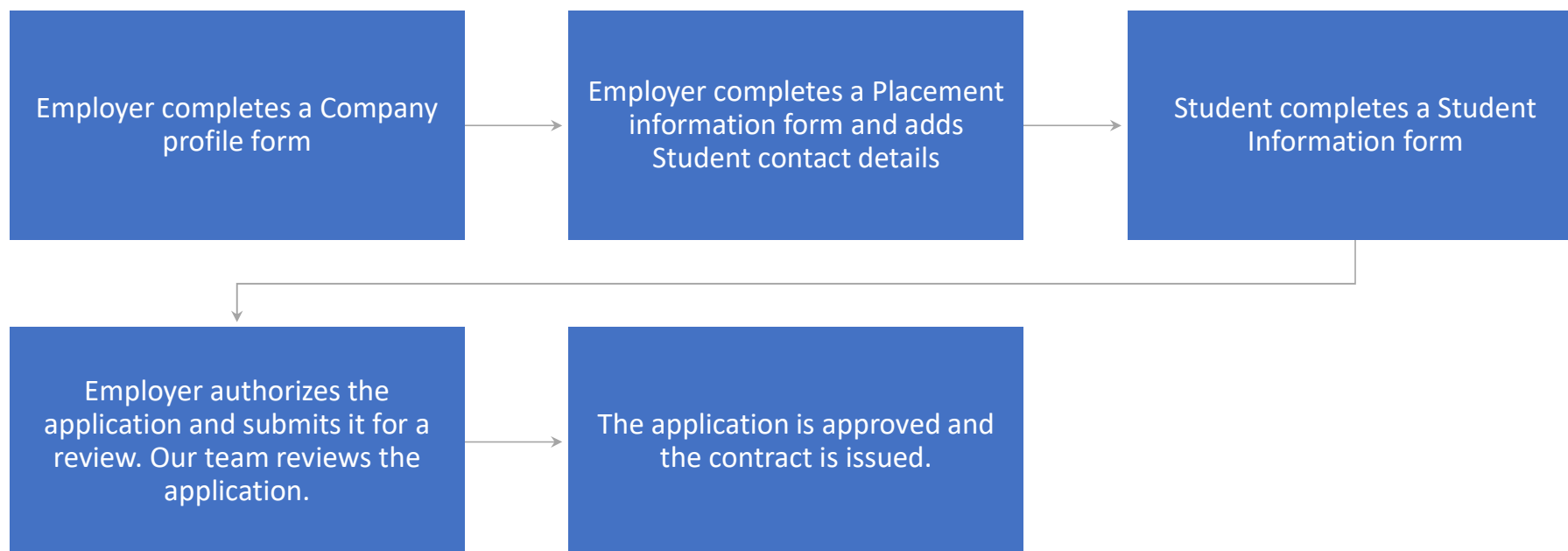CHECK ELIGIBILITY & CREATE PROFILE

EMPLOYER & STUDENT COMPLETE APPLICATION

01

02

03

04

RECRUIT ELIGIBLE STUDENT

FOLLOW UP IF NECESSARY

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Application Submission Process

Employer completes a Company profile form

→

Employer completes a Placement information form and adds Student contact details

→

Student completes a Student Information form

Employer authorizes the application and submits it for a review. Our team reviews the application.

→

The application is approved and the contract is issued.

Funded by the Government of Canada Student Work Placement Program

Most Common Reasons for Declining

- Student has already started work

- Student was hired as a contractor not a company employee

- International student

- Student was studying at a private career college

- Position didn't qualify, not an IT or IT-related position

- Potential participant is not enrolled or registered in a PSE during the placement

- The student is employer`s direct family member.

WIL Digital – Models

ICTC's WIL Digital Program commitment is to develop 5 models specifically in FinTech, Intelligent Retail, Advanced Manufacturing, Artificial Intelligence and Cybersecurity.

FinTech Collaborative: Launched in May 2019

The Work Integrated Learning Digital Program's- FinTech Collaborative, offers students the opportunity to expand their knowledge and skills in the FinTech landscape; this Collaborative consists of a group of companies that are invested in providing the opportunity for knowledge expansion for post- secondary students, and providing ICTC feedback on skills needed for the industry, while shaping future talent in FinTech.

Current feedback:

Companies and students are very satisfied and are advocating for the FinTech 101 course through video testimonials.

Intelligent Retail Model: Launch April 2020

STATUS – Design Thinking phase with development partners. The model will be piloted in Quebec first.

Advanced Manufacturing Model (IoT in a box): Launch April 2020

STATUS – Currently in content development phase with development partners. The model will be piloted in Ontario first.
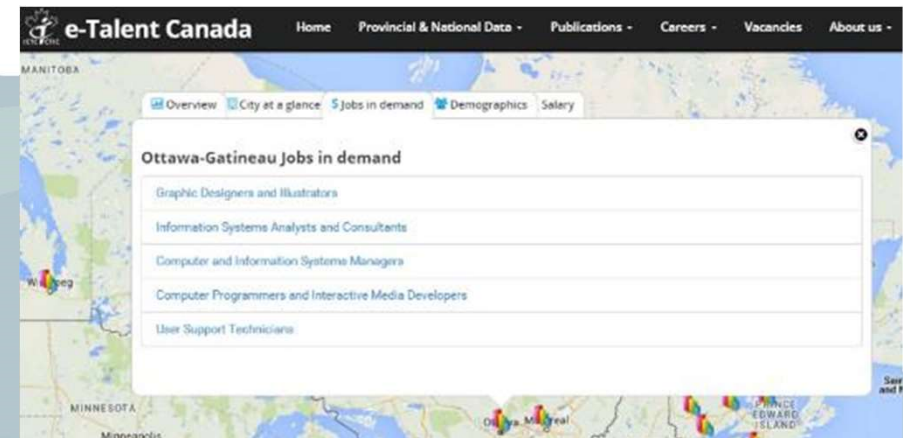
AI Model: Launch TBD

STATUS – Currently in the design thinking phase

Cybersecurity Model: Launch TBD

STATUS – Currently in the design thinking phase

e-Talent Portal

- Provides ICT job trends & tools pertinent to all sectors

- Highlights in-demand jobs

- Provides important data from national, provincial and municipal level

- Provides you with resources to find talent.

For more information visit
www.etalentcanada.ca

Thank you!

For any questions please contact us:

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You can find us on:

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DigitalEconomyPulse

Information and Communications
Technology Council