ANNUAL REPORT

2021–2022

ICTC CTIC

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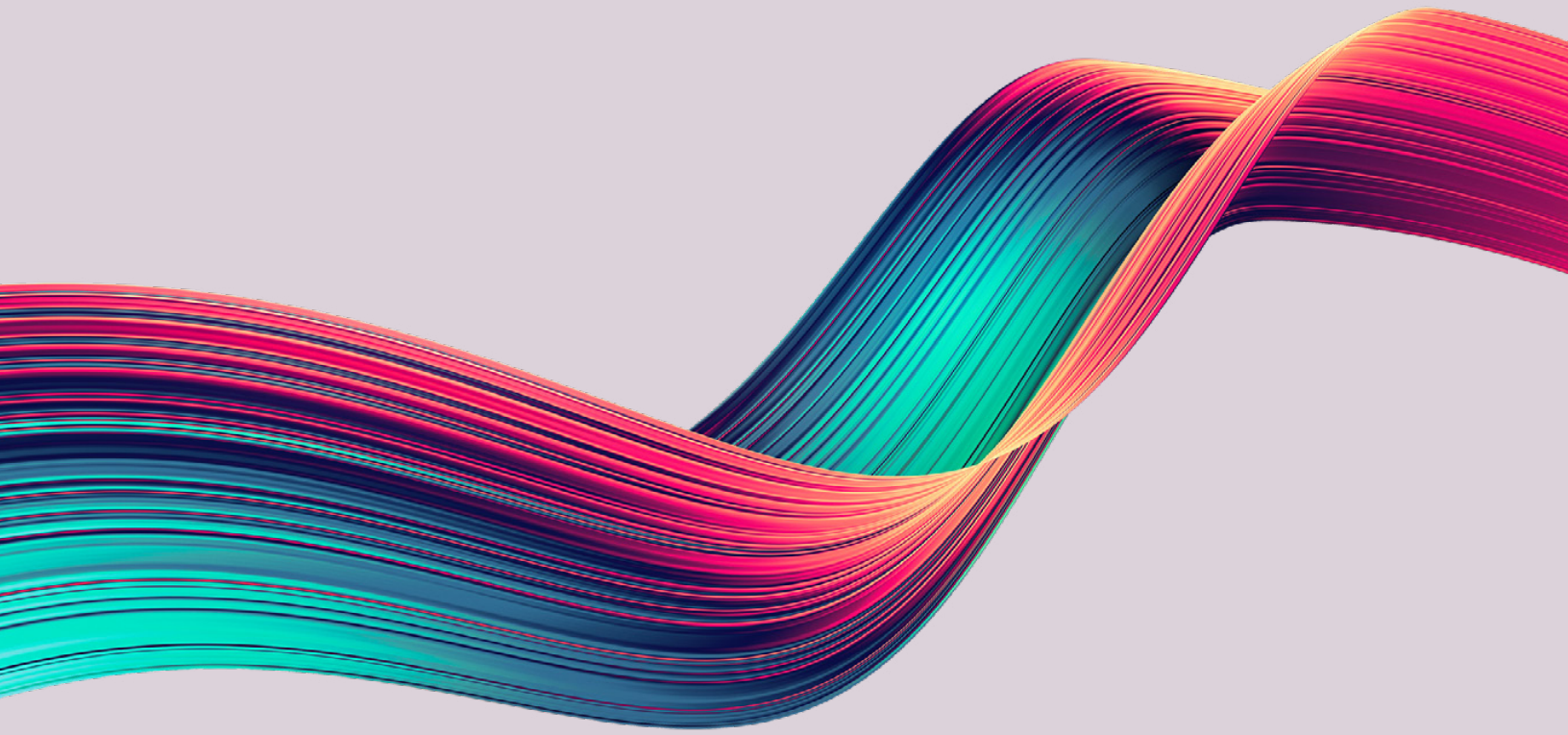


Dr. Thomas P. Keenan

Canada boasted a period of economic rebound in 2021 despite continued overall slack in the labour market and the disproportionate impact on vulnerable workers. Persistent supply constraints in food and durable goods coupled with increasing energy prices also pushed inflation above the 2% target set by the Bank of Canada. Global GDP growth for the year also ended up at around 6%, supported by pent-up demand and stimulus policies.

The global economy, however, faced headwinds at the beginning of 2022. Rising geopolitical conflicts, commodity prices soaring to an all-time high, environmental concerns, and persistent inflationary trends overshadowed pandemic fears.

While businesses in Canada continued their fervour for digital platforms, the heightened digitalization of the economy witnessed a surge in cyberattacks amid rising consumer concerns. As firms in Canada evolve their digital value chains, emphasis on strengthening protocols, practices, and staff training will be vital in enabling the desired cyber resiliency.

In fiscal 2021-2022, ICTC was at the forefront of Canada's digital-led recovery. Our programs helped Canadians from all backgrounds regain the job market while guiding the industry to new digital opportunities. We also created many forward-looking research studies, policy papers, and participated as speakers and influencers in leading national and international conferences and key discussion circles. ICTC also executed on a large number of national and provincial capacity building programs that inspired a shared digital future for Canada.

The beginning of 2022 also marked ICTC's inaugural Horizon—Digital Future Summit, which garnered more than 90 key speakers and over 1800 online participants worldwide. This conference set the stage for critical conversations to address economic growth opportunities, talent and skills needs, trade and investment, climate solutions, cyber resiliency, and many other themes.

Finally, as a neutral advisor for the digital economy, ICTC endeavours to continue to inspire a strong digital agenda that heightens Canada's digital advantage in a global economy. I wish to conclude by thanking all ICTC board members, partners, stakeholders, and staff for their support and commitment to ICTC's mission and for collectively advancing a shared digital future for Canada.

We look forward to a great and rewarding year ahead.

Dr. Thomas P. Keenan

FCIPS, I.S.P., ITCP Professor, School of Architecture,
Planning and Landscape, University of Calgary, ICTC Board Chair

Namir Anani

MESSAGE FROM THE PRESIDENT AND CEO

We live in an era of rapid disruption where global forces are now demanding our full attention.

Emerging economies, geopolitical inflections, health risks, cyber threats, and changing employment prospects are now top of mind. Against this backdrop are digital technologies that are accelerating innovation and transforming industries faster than economies can adjust.

Climate change remains, however, the most pressing endeavour of our time, posing potentially profound socioeconomic impacts in the coming years. Currently, the world collectively emits around 50 billion tonnes of carbon dioxide equivalents (CO_2e) each year, a rise of 40% compared to 1990. Such alarming trends are expected to have far-ranging environmental, economic, and health effects, changing the lives and livelihoods of many citizens around the world. Vulnerable populations are expected to be the hardest hit in this environment, further exasperating inequities and economic disparity.

Last year, the industrial landscape of Canada's economy witnessed a positive trend toward sustained growth for environmental-related sectors. Our recent research for the report *Onward and Upward: Digital Talent Outlook 2025* projects a sizable increase in employment in Cleantech and Clean Resources by 2025, totalling around 352,000 and 185,000 workers, respectively. Agri-Food and Food Tech are also seen as growth sectors, given the heightened demand for upward of 49,000 workers in the next three years.

While such trends are encouraging, accelerating sustainable corporate transformation, as well as changing consumer behaviour, will require a significant shift in narrative that involves developing new business models, exploring an agenda of green research and development, adopting new fiscal and financial levers, and the elaboration of a robust regulatory framework. For Canada to be a leader in climate change action, an all-encompassing approach in government policies, business strategies, and consumer incentives and education will be necessary. Strategies to accelerate foreign direct investment (FDI) inflows that promote sustainable business growth and green jobs; developing fiscal and financial levers that influence corporate strategies and consumer behaviour toward environmentally conscious choices; advancing research and development in green tech, renewable energy, and carbon capture processes; and preparing Canada's talent for tomorrow's green economy will be critical.

In fiscal 2021-2022, ICTC continued to inspire a forward-looking digital agenda for Canada by leading a multitude of national and international discussions on the digital-based economy and society, publishing pioneering research and policy papers to guide and respond to national and international trends. ICTC further expanded its capacity building solutions to leverage the full potential of Canada's talent, from early schooling and post-secondary education to employment readiness, upskilling and reskilling Canada's digital workforce to respond to a changing economy, and fostering innovative immigration programs to support industry growth. We are also developing programs and tools to help businesses gauge their innovation and digital maturity while adopting transformative technology to heighten their competitive advantage in a global economy. Going forward, ICTC will continue to guide a vibrant, sustainable, and shared digital future for Canada.

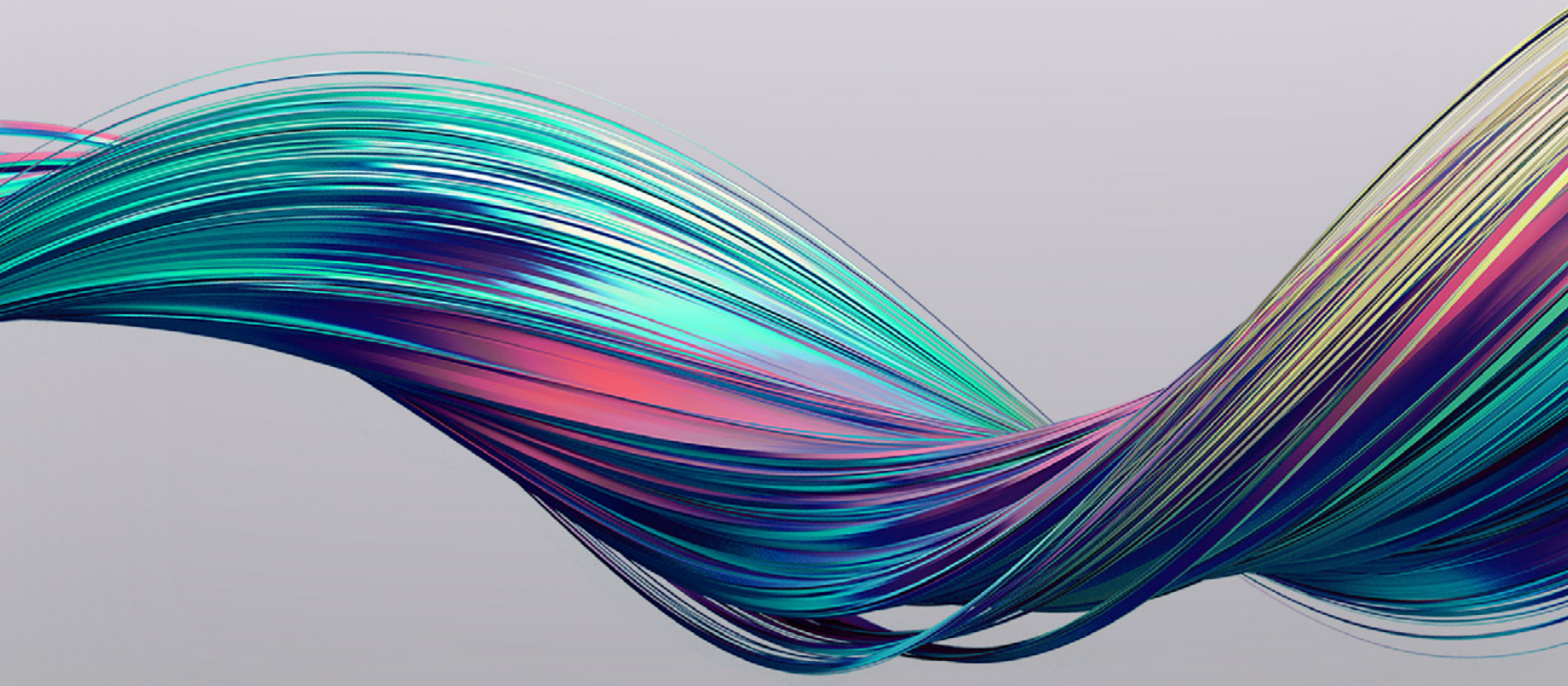
My special thanks to all our partners and stakeholders for their valuable support and trust in our mandate, to ICTC board members for their guidance, and to our very talented staff for their remarkable creativity and passion for advancing a critical digital agenda for Canada.

Namir Anani
P.Eng. ICTC President and CEO

Who We Are

ICTC is a neutral not-for-profit national centre of expertise with the mission of strengthening Canada's digital advantage in the global economy through trusted research, practical policy advice, and innovative capacity building programs. ICTC's unique value proposition is the ability to expand on its forward-looking research and policy advice to identify opportunities, construct creative workforce and enterprise solutions, and foster globally competitive industries empowered by a diverse and innovative workforce.

ICTC's multidisciplinary offerings rely on a diverse team of economists, researchers, policy analysts, data and social scientists, workforce development specialists, curriculum developers, certified teachers, coaches and trainers, instructional designers, and program managers. In partnership with a vast network of industry leaders, academics, and policymakers from across the country, ICTC is helping shape a vibrant discourse about the adoption of rapidly evolving technologies and the progress toward a more competitive, inclusive, and equitable digital economy.



ICTC at a Glance

99 staff members dedicated to advancing Canada's digital economy.

50/30 Challenge

In 2021, ICTC became one of the 1,650 Canadian employers to commit to advancing the representation of women and equity-deserving groups within its ranks.

1,800+ participants and **80+** speakers at ICTC's inaugural Horizon conference.

13 in depth and forward-looking research reports written on critical agendas for the digital economy, including electric vehicles, agri-food technologies, labour market forecasts, green jobs, digital health, smart cities, additive manufacturing, and others.

80 ICTC subject experts participated as speakers and panellists in over 80 key national and international conferences, summits, and leaders' roundtables.

15,000

post-secondary students secured placements with Canadian employers through our WIL Digital program.

7 policy briefs tackled key issues in building Canada's future AI, the future of work, accessibility and inclusivity, responsible innovation, and others.

6,000 people,

mostly newcomers, were provided access to upskilling opportunities through our Digital Equity and Employability Pathways (DEEP) program.

200 Alberta employers accessed our Talent Acquisition for the Digital Economy (TADE) program to better attract and retain talent.

123 new graduates secured internships with digital economy employers through our Youth Dividend program, and **96%** of the employers retained their students following the internship.

650 newcomers were supported in their job search through our GO Talent initiative.

800 students across Canada were trained in cybersecurity through our CyberTitan program.

Sustainability

Climate change and environmental damage are threatening the stability of our food systems, environment, and human life. Without clear and decisive action, harms may become irreversible.

Today, many environmental solutions are technologically driven, making the digital economy an important component of climate change, conservation, and biodiversity efforts. Sustainability has become an abiding theme for ICTC research reports and thought leadership. In *Thinking Green: Building a Sustainable Digital Economy for Canada*,[1] ICTC looks at five key dimensions of sustainability in the digital economy:

1. Digital infrastructure
2. The future of work
3. The social impacts of technology
4. Smart communities
5. Trade and investment

1 Cutean, A., Matthews, M., and O'Neill, K. April 2022. Thinking Green: Building a Sustainable Digital Economy for Canada. Information and Communications Technology Council (ICTC). Ottawa, Canada. https://www.digitalthinktankictc.com/reports/thinking-green

Population growth and more frequent climate events require a shift in existing agricultural practices and processes. At the same time, technology solutions mark a shift in labour and skill requirements. ICTC's Canadian *Agri-Food Technology: Sowing the Seeds for Tomorrow*[2] estimates that employment demand in the agri-food technology industry will reach approximately 49,000 additional workers by 2025. If filled, this will bring total employment in the industry to 683,000 workers by the end of 2025. Key roles include firmware and hardware developers, software developers, mobile app developers, web full stack developers, front-end developers, back-end developers, data scientists, business analysts, UI/UX designers, blockchain engineers, and machine learning experts.

Quebec's growing electric vehicle (EV) industry is seeing an increased demand for STEM- (science, technology, engineering, and mathematics) educated workers. Knowledge of software, electronics, and electrochemistry is critical. ICTC's *Recharging Quebec's Transportation Sector*[3] report focuses on Quebec's efforts to build a competitive EV industry by leveraging existing assets and assisting workers who may be negatively affected by this structural change toward the electrification of transportation. The study suggests that a multi-faceted focus on talent—sourcing new entrants and upskilling and retraining existing workers—will enable the province's EV industry to better compete, engage a more diverse talent pool, and entrench Quebec as a recognized player in the global EV ecosystem.

The ICTC Horizon summit featured 18 world-renowned speakers in its Green Economy track, which discussed climate migration, circular economy, sustainable agriculture, and enabling an equitable green transition. More than 40 experts on sustainability contributed to three ICTC reports on the topic.

2 Ivus., M., Matthews, M., Snider., N., Taillon, P., Watson, M. "Canadian Agri-food Technology: Sowing the Seeds for Tomorrow" September 2021. Information and Communications Technology Council (ICTC). Ottawa, Canada. https://www.digitalthinktankictc.com/reports/canadian-agri-food-technology

3 Cutean, A., Davidson, R., Felder, M., Hale, E., Oschinski, M., Watson, M., Xiao, B. "Recharging Quebec's Transportation Sector" January 2022. Information and Communications Technology Council (ICTC). Ottawa, Canada. https://www.digitalthinktankictc.com/reports/recharging-quebecs-transportation-sector

Cybersecurity

As Canadian organizations accelerate their digitization efforts and contributions to the global digital economy, cyber threats are more frequent and sophisticated. Businesses are striving to bolster their cyber defences but face a global shortage of cybersecurity talent. The International Information System Security Certification Consortium (ISC)2 reported that Canada was short 25,000 cybersecurity professionals in 2021. ICTC is actively designing and delivering programs to fill this talent gap. It is also conducting research to uncover innovative solutions to help build cybersecurity talent capacity for a resilient Canadian digital ecosystem.

ICTC's flagship national cybersecurity program, CyberTitan, provides experiential learning and cybersecurity training to middle and high school students (Grades 6-12). Students build, test, and sharpen their cybersecurity, teamwork, and leadership skills while learning about cybersecurity career paths. More than 800 students across Canada were engaged in CyberTitan in 2021, representing 133 teams. The top 11 teams competed at the finals in May 2021. This was the first year that two all-female teams (of 10 teams) and 195 females made it to the finals. More than 700 students were engaged in the CyberTitan V 2021-2022 season, representing 130 teams, including 15 all-female teams.

ICTC's innovative WIL Digital Cybersecurity course assists WIL Digital program students in developing critical cybersecurity skills. This course aims to enhance the next generation of cybersecurity talent. It incorporates experiential learning activities and a real-world case study that allows students to perform digital footprint analysis and cyber forensics. WIL Digital cybersecurity training was completed by 124 students.

Digital Transformation

The COVID-19 pandemic created an increasingly contact-free economy. The rise of financial technology, telehealth, industrial automation, and other innovations are the outcome of this transformation. To succeed in this new environment, businesses need to accelerate their digital adoption, which requires an innovation-ready workforce.

ICTC's WIL Digital provides Canadian post-secondary students on-the-job work experience while directly helping businesses with their digital transformation. More than 1,800 businesses across various industries participated ICTC's WIL Digital program by hiring students into digital, business, and creative roles. Access to digitally savvy students allowed many small and medium sized enterprises to remain competitive during the pandemic and emerge stronger.

To help businesses better attract and retain talent, ICTC launched the Talent Acquisition for the Digital Economy (TADE) program. Accessed by over 200 Alberta employers and viewed by more than 35,000 people, TADE offers free resources, including an HR toolkit, a webinar series, mini career fairs, a candidate assessment toolkit, and workshops on diversity, equity, and inclusion.

Healthcare heavily relies on artificial intelligence (AI) for its digital transformation journey. ICTC's report *Digital Transformation: The Next Big Leap in Healthcare*[4] delves into the labour market impact of incorporating AI and other transformative technologies in the healthcare sector. As AI becomes more common in healthcare administration and delivery (particularly during the COVID pandemic), healthcare workers will need stronger digital skills and an understanding of automated decision-making and its related privacy risks.

The COVID-19 pandemic pushed additive manufacturing into the public spotlight as some Canadian manufacturers pivoted to 3D printing for the production of personal protective equipment (masks predominantly). ICTC's report *Just Press "Print": Canada's Additive Manufacturing Ecosystem*[5] examines the Canadian additive manufacturing industry and the talent required to make Canada competitive in the emerging global additive manufacturing marketplace. As manufacturers embrace additive manufacturing, they are encountering skill shortages of production-level technicians. However, post-secondary academic institutions that offer additive manufacturing programs currently focus on producing PhDs.

British Columbia is considered a global centre for the digital creative industry and is specifically known for video games, animation, and visual effects (VFX). ICTC's *Benchmarking the Creative Technology Ecosystem in British Columbia*[6] maps B.C.'s digital creative industry and explores the talent strategies and policies necessary to scale and sustain this important sector for the province and Canada. Improved partnerships with post-secondary institutions to help overcome digital creative talent shortages were identified as an imperative for building a reliable local talent pool for this industry.

4 Hamoni, R.; Matthews, M.; and Watson, M. "Digital Transformation: The Next Big Leap in Healthcare," August 2021. Information and Communications Technology Council (ICTC). Ottawa, Canada. https://www.digitalthinktankictc.com/reports/digital-transformation

5 Herron, C.; Ivus, M.; Kotak, A. "Just Press 'Print': Canada's Additive Manufacturing Ecosystem," Information and Communications Technology Council (ICTC), March 2021, Ottawa, Canada. https://www.digitalthinktankictc.com/reports/just-press-print

6 Cutean, A., McLaughlin, R., O'Neill, K., Quan, T., Benchmarking the Creative Technology Ecosystem in British Columbia, Information and Communications Technology Council, DigiBC, (January 2021), Canada. https://www.digitalthinktankictc.com/reports/benchmarking-the-creative-technology-ecosystem-in-british-columbia

Equity, Diversity, and Inclusion

Employers increasingly want to attract, grow, and retain a diverse and inclusive talent base.

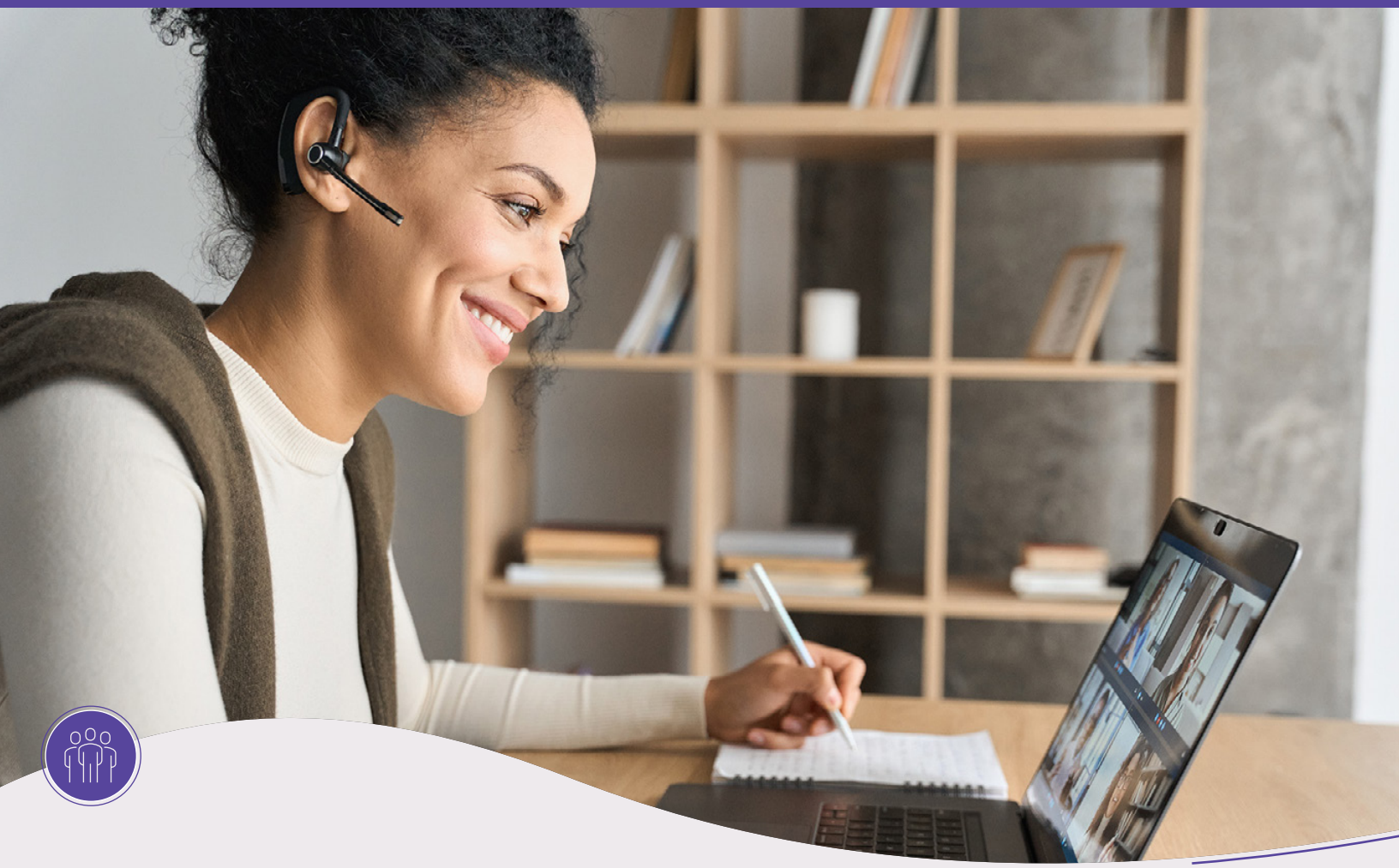
Yet, navigating this landscape often forces employers to seek additional information and resources. The report *Inclusivity and Accessibility at the Core: Pathways to Employment in the Digital Economy for Albertans*[7] finds that Alberta's digital economy employers want to hire people with disabilities but are unclear about their obligations in the process. Employers voiced uncertainty about handling accommodation requests, and many organizations are unaware of existing supports and resources. To bridge the information gap, ICTC offers resources for both employers and students.

7 Cutean, A., Martell, T., "Inclusivity and Accessibility at the Core: Pathways to Employment in the Digital Economy for Albertans with Disabilities" (March 2021), Information and Communications Technology Council (ICTC), Ottawa, Canada. https://www.digitalthinktankictc.com/reports/inclusivity-and-accessibility-at-the-core

To attract a diverse workforce, employers in ICTC's Youth Dividend program can access ICTC's Equity, Diversity, and Inclusion Tool. The tool allows organizations to better understand where they stand on the EDI spectrum and what they can do to advance their EDI goals. About 33% of employers that leveraged the tool in the last two years achieved the highest score: Gold Standard. WIL Digital e-Learning resources for students undertaking work placements include a course on accessibility. This course provides information on Canadian policy standards and practices for accessibility, self-advocacy, and methods of creating an inclusive workplace.

Information and knowledge sharing are also critical to boosting the engagement of women in the digital economy. To help increase the number of women in tech, ICTC launched two initiatives during the last two years: the Ambassador Program and the Feminist Response program. Focused on attracting women into entry and mid-level roles, the Ambassador Program engages employers across Canada in various subsectors to provide actionable solutions. From June 2021 to January 2022, ICTC engaged over 50 industry leaders in seven subsectors of the Canadian digital economy. The Feminist Response program takes a gender-based plus (GBA+) approach to advancing women's career progress and representation in leadership roles. Over the last two years, the program engaged more than 55 participants across six provinces.

ICTC is also advancing the representation of women and equity-deserving groups within the organization. In 2021, ICTC became one of 1,650 Canadian employers to commit to the 50/30 Challenge and addressed key participation barriers in its programs. For example, all-girl CyberTitan teams now register for free, and WIL Digital employers receive higher wage subsidies when hiring students from underrepresented groups. In the last two years, these and other measures have boosted female participation: 21 all-girl teams participated in CyberTitan, and more than 60% of ICTC's WIL Digital placements self-identified as coming from an underrepresented group.



Talent

Technology increasingly permeates all sectors of the economy, and the pandemic supercharged this trend. While employment in many sectors contracted, the digital economy thrived: in June 2022, Canadian digital economy employment was nearly 20% above pre-pandemic levels. Skilled workers undoubtedly power Canada's economic recovery, and keeping this workforce engine running requires understanding the changing nature of work. ICTC's report *Emergent Employment: Canadian Findings on the Future of Work*[8] investigates the intersection of the pandemic, remote work, and the gig economy. Remote work was a lifeline during the pandemic, but it is not without issues that need to be addressed, i.e., labour regulations, taxation policy, and equity challenges. ICTC continued this discussion in February 2022 at its inaugural ICTC Horizon conference. Among the conference's six core tracks, the Future of Work engaged speakers from around the world.

8 Leblanc, S., Mary, E., O'Neill, K., Quan, T. July 2021. Emergent Employment: Canadian Findings on the Future of Work. Information and Communications Technology Council (ICTC). Ottawa, Canada. https://www.digitalthinktankictc.com/reports/emergent-employment

The pandemic drove a surge in demand for digitally skilled talent. The latest in ICTC's flagship Outlook series, *Onwards and Upwards: Digital Talent Outlook 2025*,[9] identifies demand for an additional 250,000 workers in Canada's digital economy by 2025. Another ICTC report, *Work in Progress: Emerging Smart City Occupations*,[10] looks beyond 2025 to identify in-demand jobs in Canada's emerging smart cities. Showcasing over 100 unique employment pathways during the last two years, ICTC's eTalent dashboards informed more than 60,000 people about in-demand jobs and skills. ICTC's Skill Matching Tool helped many jobseekers identify their skill matches and gaps related to in-demand occupations, and eTalent employment programs helped workers build the skill sets for success.

However, long-term and sustainable investment in the labour market is essential to fill future demand. Building a resilient talent pipeline means starting early—at the K-12 and post-secondary levels. An essential element of a sustainable digital economy workforce is access to educational opportunities, learning resources, and tools. ICTC's Digital Development and Acceleration of Skills Hub (Digital DASH) engaged over 15,000 K-12 youth and 1,500 educators across Canada and helped them understand the various roles and opportunities in the digital economy. ICTC's *21st Century Digital Skills: Competencies, Innovations, and Curriculum in Canada*[11] finds that beyond technical skills, early training in essential human skills like critical thinking, active listening, and media literacy is critical. Human skills become even more important in an environment of remote learning. Released in December 2021, the ICTC report *Unchartered Waters: A World-Class Canadian E-learning Paradigm*[12] finds that some students and parents struggled with the pandemic-driven shift to online learning. Top challenges include socioeconomic issues, connectivity, and the lack of in-person human-to-human contact with peers and educators.

9 Ivus, M; Kotak, A. (August 2021). Onwards and Upwards - Digital Talent Outlook 2025. Information and Communications Technology Council (ICTC). Ottawa, Canada. https://www.digitalthinktankictc.com/reports/onwards-and-upwards

10 Kotak, A., O'Neill, K. "Work in Progress: Emerging Smart City Occupations" (April 2021), Information and Communications Technology Council (ICTC). Ottawa, Canada. https://www.digitalthinktankictc.com/reports/work-in-progress

11 Ivus, M., Quan, T., Snider, N., 21st Century Digital Skills: Competencies, Innovations and Curriculum in Canada (March 2021), Information and Communications Technology Council (ICTC). https://www.digitalthinktankictc.com/reports/21st-century-digital-skills

12 Ivus, M., Quan, T., Snider, N., Uncharted Waters: A World-class Canadian E-learning Paradigm, Information and Communications Technology Council, October 2021. https://www.digitalthinktankictc.com/reports/uncharted-waters

Once the K-12 pipeline is secured, retaining student interest in post-secondary education is the next step. Work-integrated learning provides real-life opportunities to put education to work. ICTC's WIL Digital work-integrated initiative specifically fits this purpose. In the last two years, 15,000 post-secondary students were placed with Canadian employers. ICTC formed numerous partnerships with regional organizations to boost participation. Some 37 core partnerships were formed in Quebec alone, yielding a 170% increase in placements in that province.

New graduates and career transitioners are additional pillars of a robust talent pool. ICTC's iAdvance solution is a unique take on workforce development. Research on in-demand jobs and skills is used to develop detailed skills mapping, which informs impactful short-duration training and valuable work-integrated learning opportunities. The process culminates in a certified "job ready" credential. Rooted in the iAdvance framework, ICTC's Youth Dividend placed 123 new graduates in internships with digital economy employers. About 96% of employers retained their students following the internship, and 91% of students felt the program gave them valuable upskilling opportunities, including the ability to build soft skills. Also, under the iAdvance framework, 2021 saw a $5.4 million government investment in Calgary's EDGE UP program. Led by Calgary Economic Development, in partnership with ICTC, phase two of EDGE UP is training 320 displaced energy workers for in-demand roles in the digital economy.

The attraction and retention of internationally trained professionals are also key to the success of the digital economy. ICTC's research finds that nearly half of all core digital jobs in Canada are held by immigrants. However, employment pathways for newcomers are not always clear, and in some cases, systemic barriers dampen inclusion efforts. ICTC's *Settling for More: Matching Newcomers to Alberta's Tech Sector*[13] finds that newcomers experience barriers related to a lack of soft skills, challenges with credential recognition, differences in Canadian work culture and employment practices, and a lack of Canadian experience.

13 Farmer, T., O'Neill, K., Toor, M., November 2021. Settling for More: Matching Newcomers to Alberta's Tech Sector. Information and Communications Technology Council (ICTC). Ottawa, Canada. https://www.digitalthinktankictc.com/reports/settling-for-more

ICTC runs numerous programs to break down barriers and pair skilled newcomers with employers seeking talent. ICTC's long-standing GO Talent initiative supported nearly 650 newcomers in their job search over the last two years. Moreover, ICTC's Digital Equity and Employability Pathways (DEEP) program entered its third year in 2021. Focusing on critical digital skills development, more than 6,000 people, mostly newcomers, were provided access to Microsoft upskilling opportunities in the last two years.

Across initiatives, ICTC is committed to empowering workers with critical digital skills and essential human skills. Launched in 2021, ICTC's Agile Industry Mindset (AIM) credential addresses the human skills training shortfall. As a hybrid instructor-led and student-driven course, this program cultivates interpersonal skills. AIM empowers agile teams working in digital environments by fostering social awareness, emotional intelligence, and active communication.

AI

Artificial intelligence is a transformational technology that continues to reshape our world. In June 2022, the Government of Canada launched the second phase of its Pan-Canadian AI Strategy, which is in line with recommendations highlighted in the ICTC brief *Maximizing Strengths and Spearheading Opportunity: Towards an Industrial Strategy for Canadian Artificial Intelligence.*[14] This paper includes key insights to accelerate AI commercialization, industrialization, and responsible AI. Through evidence-based skill development programs such as the WIL Digital program, ICTC is helping to build a robust, equitable, accountable, and data-centric talent pipeline that will be a key component of commercialization and good governance in the future.

Along with effective commercialization strategies, a sustainable and robust AI ecosystem depends on skilled talent. Reports like *Building Canada's Future AI Workforce in a Brave New (Post-Pandemic) World*[15] explore the supports needed to acquire AI skills for Canada's digital workforce, along with concrete recommendations for upskilling initiatives and strategic cross-training programs. From the findings in this study, ICTC proposed two new methods for training skills: targeted cross training between AI, business, and domain experts; and mentorship and support programs.

14 Brandusescu, A., Cutean, A., Dawson, P., Davidson, R., Matthews M., and O'Neill, K. "Maximizing Strengths and Spearheading Opportunity: An Industrial Strategy for Canadian AI" (September 2021), Information and Communications Technology Council (ICTC). https://www.digitalthinktankictc.com/policy-briefs/maximizing-strengths-and-spearheading-opportunity

15 Hamoni, R.; Lin, O.; Matthews, M. and Taillon, P. J. "Building Canada's Future AI Workforce: In the Brave New (Post-Pandemic) World." (March 2021). Information and Communications Technology Council (ICTC), Ottawa, Canada. https://www.digitalthinktankictc.com/reports/building-canadas-future-ai-workforce

More than 200 post-secondary students were engaged in eLearning courses through ICTC's WIL Digital program. These courses help develop the next generation of talent by introducing key concepts and current practices in AI and Big Data. The courses, developed with insight from industry and academia, conclude with case study projects inspired by real-life industry challenges.

From 2021 to 2022, ICTC published 11 reports on topics related to AI

ICTC signed a memorandum of understanding with 18 organizations and post-secondary institutions in Quebec to allocate roughly $6 million to Quebec employers and post-secondary institutions. Since the original signing in April 2021, an additional 21 partners have joined the partnership.

Trade and FDI

Trade, foreign investment, and intellectual property (IP) in the digital economy are essential to Canada's continued economic growth. These are central topics in ICTC's report *Context Matters: Strengthening the Impact of Foreign Investment on Domestic Innovation.*[16] This study investigates the relationship between FDI and IP development, retention, and commercialization, and offers strategies for IP retention in Canadian-owned companies in the context of tech ecosystem business density and maturity and long-term innovation potential.

The study presents the following opportunities for improving Canada as a place to scale-up technology companies:

- Improve access to and understanding of international venture capital among Canadian startups and scale-ups
- Improve new companies' understanding of scale-up business models, securing clients, and acquisition
- Help Canadian businesses integrate into global value chains

The premise of ICTC's paper *Thinking Green*[17] is that the "greening" of Canada's trade and investment will be important to sustainable economic growth and social wellbeing. Sustainability initiatives and environmental impact are increasingly factored into trade agreements and investment and consumer decisions.

16 Matthews, M. and Rice, F. "Context Matters: Strengthening the Impact of Foreign Investment on Domestic Innovation." March 2022. Information and Communications Technology Council (ICTC). Ottawa, Canada. https://www.digitalthinktankictc.com/reports/context-matters

17 Cutean, A., Matthews, M., and O'Neill, K. April 2022. Thinking Green: Building a Sustainable Digital Economy for Canada. Information and Communications Technology Council (ICTC). Ottawa, Canada. https://www.digitalthinktankictc.com/reports/thinking-green

Partners

A special thank you to all our partners who have collaborated with ICTC in the 2021-2022 year! We are grateful for your continued support and are looking forward to future endeavours.

ACCES Employment

Affaires mondiales Canada

Alberta Impact

Alberta IoT

Alberta Ministry of Labour and Immigration

Association des Entreprises pour le développement des technologies éducatives au Québec (Edteq)

Avenir NB

Bayview Yards

Bédard ressources humaines

Calgary Economic Development

CAVCOE

Cégep de Jonquière

Cégep de La Pocatière

Cégep de Lévis

Cégep de l'Outaouais

Cégep de Matane

Cégep de Sainte-Foy

Cégep de Saint-Félicien

Cégep de Saint-Jérôme

Cégep de Trois-Rivières

Cégep Édouard-Montpetit

Cégep Garneau

Cégep Limoilou

Centre de la sécurité des télécommunications (CST)

Centre des Compétences futures

Champlain Regional College

Chic Geek

Circular Economy Leadership Canada

Cisco Systems

Collège Ahuntsic

Collège Bow Valley

Collège de Cumberland

Collège de Maisonneuve

Collège Durham

Collège John Abbot

Collège Matrix

Collège Montmorency

Collège Niagara

Colors Inc.

Compétences mondiales – Centre d'emploi

Conseil de l'information sur le marché du travail (CIMT)

Conseil stratégique des DPI

CRIM (Centre de Recherche Informatique de Montréal)

Development Solutions Europe Ltd.

Développement économique de l'agglomération de Longueuil (DEL)

DigiBC

Digital Nova Scotia

École de technologie supérieure

École des sciences de la gestion

ECSEL Joint Undertaking

EMILI Canada

Emploi et Développement social Canada - EDSC

Evergreen Canada

FCT (Les femmes en communications et technologie)

Field Effect

Filtered AI

First Nations Technology Council

Hardt Hyperloop

Harvest Moon Consultants

IGNITE

IMD World Competitiveness centre

Immigrant Employment Council of BC (IECBC)

Immigrant Services Society of BC (ISSofBC)

Invest in Canada

Invest Ottawa

Innovation, Science et Développement économique Canada (ISDE)

Joint Economic Development Initiative (JEDI)

Kiwi Productions

Knowledge Adapters

KPMG

La Marche des dix sous du Canada

Loudmouth Security

Magnet

Microsoft

MILA

Ministère de l'Éducation postsecondaire, de la Formation et du Travail du Nouveau-Brunswick

MITT (Manitoba Institute of trades & Technology)

Nord Ouvert

Numana (anciennement TechnoMontréal)

Octopi Managed Services Inc.

Organisation internationale du Travail

Propulsion Québec

Qwasar Silicon Valley

REPAF (Réseau des entrepreneurs et Professionnels Africains)

Ressources naturelles Canada

Riipen

RSN Consulting Inc.

SAIT (Southern Alberta Institute of Technology)

Société de gestion du Fonds du patrimoine du Nord de l'Ontario

Sophos

Tech Adaptika Solutions Inc.

Tech Manitoba

TechConnex

TechnoMontréal (maintenant Numana)

The Grant Sherpa

TheFutureEconomy.ca

Transports Canada

Tribe

Trouve un stage

Université Acadia

Université Bishop's

Université Dalhousie

Université de Calgary (Formation continue)

Université de la Colombie-Britannique

Université de Sherbrooke

Université d'Ottawa

Université du Manitoba (Asper School of Business)

Université du Québec à Trois-Rivières (UQTR)

Université Laval

Université Memorial de Terre-Neuve

Université Mount Royal

Université Simon-Fraser

VentureLab

WES (World Education Services)

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Vice President, Capacity & Innovation Readiness

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Chief Research Officer

Elizabeth Mills
Associate Vice President, Skills Excellence

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Director, Data Science

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