



Future Skills Centre

Centre des **Compétences futures**

Project Insights Report

Advancing Women in the Information and Communications Technology Workplace: A Review of Leading Practices



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LOCATIONS

Across Canada



INVESTMENT

\$277,286.39



PUBLISHED

February 2025



CONTRIBUTORS

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☰ Executive Summary

Canada is experiencing a rapid digital transformation, and this trend will continue to generate job opportunities for those with digital expertise. Despite increased demand for digital expertise and reports of skills shortages, women and other equity-deserving groups remain underrepresented. Women's representation within the information and communications technology (ICT) sector has been near 30% for over a decade, and representation drops to 21% if we consider only technical roles. Further, women face higher rates of microaggressions and discrimination within the ICT sector compared to men. Women in science, technology, engineering and math (STEM) are almost twice as likely to say they are considering leaving the workforce compared to women in other industries.

This report examines barriers faced by women in the ICT sector and devises strategies to improve representation, advancement and inclusion. The analysis is based on (1) a review of recent academic literature, Statistics Canada data and industry reports; (2) 20 in-depth interviews exploring equity, diversity and inclusion (EDI) practices across diverse ICT firms; and (3) a desk review of EDI best practices, examining publicly available corporate policies and actions, based on existing, readily available information.

The report proposes solutions that can be applied at the organizational level to shift the current trajectory; address the moral imperative for EDI; and realize the business benefits associated with improved representation, equity and inclusion.

KEY INSIGHTS

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Women hold 28% of management positions within the digital economy but only 15% of senior leadership positions.

- 2 ICT firms such as Bell Canada, Telus Corp., Rogers Communications Inc. and CGI Inc. are promoting a greater range of perspectives by incorporating EDI considerations within their board policies and selection processes, and by setting representation targets at the board and/or executive team level.
- 3 Leading companies are transforming their human resources (HR) practices to advance a diverse and engaged workforce; for example, Shopify Inc. is reconsidering credential requirements, focusing instead on competencies and opening doors for Indigenous workers and others who may have the skill but not the postsecondary education.

The Issue

Despite increased demand and reports of skills shortages, women and other equity-deserving groups remain underrepresented across the ICT sector. Women and other equity-deserving groups represent an important talent pool, and evidence shows that improving representation helps organizations serve more diverse markets; innovate; improve productivity; and mitigate legal, financial and reputational risks.

The underrepresentation of women in ICT is a function of societal, organizational and individual forces. At the societal level, government policies, programs, legislation and media representations can shape stereotypes and values, and influence who has access to ICT roles. Organizational-level policies and practices are also determinative. Organizations can create or foreclose on opportunities through, for example, their HR practices or labour force development activities. At the individual level, barriers may include attitudes, gender stereotypes and biases, family obligations and more. For example, research has shown that, at the same level, women are more likely than men to have their judgment questioned, to have their technical competence devalued, to be spoken over, and to be labelled “difficult” for displaying the same assertive behaviours encouraged in men. These microaggressions impede women’s confidence and career progression and increase women’s likelihood of leaving STEM professions.

At the organizational level, there is a need to examine the specific strategies companies are using to advance EDI and improve representation, and to understand which practices drive results.



What We Investigated

This exploratory study aims to provide an update on women in ICT, focusing on current representation and practices. Specifically, it asks the following questions:

- What is the current state of women’s representation in ICT in Canada, and what are the factors advancing and impeding the participation of women and equity-deserving groups?
- What specific strategies are organizations using to improve representation in terms of gender and diversity on their leadership teams and across all levels of their organizations?
- What evidence is there of the impact of these practices?

Between September 2022 and March 2023, 20 one-hour, semi-structured interviews were conducted with HR and EDI leaders from across Canada. A desk review of EDI best practices, which examined publicly available corporate policies and actions, was conducted in 2024. The analysis used a comprehensive framework derived from international research and standards, including recently developed Canadian guidelines. This framework focused on six aspects of organizations: (1) leadership, governance and strategy; (2) HR practices; (3) values and culture; (4) measurement and tracking of EDI; (5) gender equity and diversity across the value chain; and (6) outreach and expanding the pool.

What We’re Learning

Our findings across the six categories examined are as follows:

Governance, leadership and strategy: To advance EDI, best-practice organizations are incorporating EDI considerations into their board policies and selection processes, setting representation targets at the board and executive team levels and across all levels of their organizations. They hold leaders accountable for results by embedding EDI within their corporate goals, leadership competencies, performance measurements and compensation systems.

Human resources practices: Attention to job design, employee recruitment, selection, promotion, retention and attrition are requisite. Organizations have moved to privilege competencies over credentials; replaced an over-reliance on referrals with open candidate sourcing; engaged in outreach to seek diverse candidates; required a transparent, standardized interview process, requiring 50/50 gender balanced candidate short lists, and skills assessments (e.g., coding tests), as they are less prone to bias. Employee development, mentorship and particularly sponsorship programs were identified as essential to building a strong pipeline of women in leadership.

Values and culture: Most large ICT corporations have a suite of workplace policies to standardize expectations and provide behavioural guidance to employees. Increasingly, companies are providing flexible work options, family-friendly benefits, and enhanced benefits and training around mental health.

Measurement and tracking of EDI: To ensure that an organization's commitment to diversity translates into concrete action, senior leaders at best-practice firms have access to diversity data or dashboards to monitor EDI and representation indicators and inform specific actions. Employee anonymously self-identify in order to allow leaders to track these measurements.

Gender equity and diversity across the value chain: Supplier diversity programs have been employed, setting targets for engaging with businesses that are majority-owned by women, Indigenous Peoples and other equity-deserving groups. Advancements in inclusive design and product accessibility have been extended to incorporate inclusive AI. Applying a gender and diversity lens to product and service design is important to ensure products and services are safe, accessible and useful for all.

Outreach and expanding the pool: Leading organizations are investing in developing a diverse and inclusive future ICT labour force through program partnerships with universities, school programs to inspire girls to pursue STEM, and hackathons — intensive coding and problem-solving events — run exclusively for women. These programs are generating results.

★ Why It Matters

This report outlines a framework for creating a more inclusive and equitable ICT sector. Advancing EDI in the sector is not only a moral imperative but also a business necessity. The persistent underrepresentation of women and other equity-deserving groups requires sustained effort across all ecosystem levels. Organizations must leverage best practices, set clear goals and commit to ongoing evaluation and improvement to create a more inclusive and equitable digital economy. By doing so, they can unlock the full potential of their workforce, drive innovation and achieve long-term success in an increasingly competitive global market.



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► What's Next

While the report compiled examples of self-reported practices with respect to EDI by companies in the ICT sector, evidence to demonstrate their impact was limited. More research is needed to better understand the links between strategies, policies and practices, and impacts, such as representation, compensation, retention, promotion and inclusion of women in the workplace. Additionally, more research that brings an intersectional lens to the experience of women, particularly racialized women, in ICT is key.

Have questions about our work? Do you need access to a report in English or French? Please contact communications@fsc-ccf.ca.

How to Cite This Report

The Diversity Institute. (2024). Project Insights Report: Advancing Women in the Information and Communications Technology Workplace: A Review of Leading Practices, The Diversity Institute & University of Manitoba. Toronto: Future Skills Centre. <https://fsc-ccf.ca/research/advancing-women/>

Funded by the
Government of Canada's
Future Skills Program



Advancing Women in the Information and Communications Technology Workplace: A Review of Leading Practices is funded by the Government of Canada's Future Skills Program. The opinions and interpretations in this publication are those of the author and do not necessarily reflect those of the Government of Canada.

The Future Skills Centre acknowledges that the Anishinaabe, Mississaugas and Haudenosaunee share a special relationship to the 'Dish With One Spoon Territory,' where our office is located, bound to share and protect the land. As a pan-Canadian initiative, FSC operates on the traditional territory of many Indigenous nations across Turtle Island, the name given to the North American continent by some Indigenous peoples. We are grateful for the opportunity to work in this territory and commit ourselves to learning about our shared history and doing our part towards reconciliation.

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