Future Skills Centre | Centre des Compétences futures

Project Insights Report

Bridging the AI Skills Gap in Small and Medium-Sized Organizations in Canada

PARTNERS

Diversity Institute

Magnet

LOCATIONS

Across Canada

PUBLISHED

June 2026

CONTRIBUTORS

Report Authors:
Wendy Cukier – Founder and Academic Director, Diversity Institute, Ted Rogers School of Management; Professor, Entrepreneurship and Innovation, Toronto Metropolitan University
Mark Patterson – Executive Director, Magnet, Toronto Metropolitan University
Simon Blanchette – Senior Research Associate, Diversity Institute; Visiting scholar and Lecturer, McGill University

Report Contributors:
Katlynn Sverko – Director, Research – Special Projects, Diversity Institute
Valentina Sitnik – Program Assistant, Diversity Institute
Kevin Wu – Research Assistant, Diversity Institute

Executive Summary

Canada faces an AI paradox: despite world-class research and investment, AI adoption among small and medium-sized enterprises (SME) is widespread but uneven, ranging anywhere from 12.2% (Statistics Canada, measuring AI in production and service delivery) to 71% (Microsoft, capturing broader AI and generative AI tools). A 2024 BDC survey found 39% of SMEs reported using AI, but this jumped to 66% when examples were provided, underscoring how definitional differences and underreporting shape adoption figures.

This project examined drivers and barriers to SME adoption and highlighted how AI can be harnessed across the entire value chain, from logistics and operations to marketing, customer service, procurement, HR, and infrastructure. Up to 40% of SMEs may already be using AI unknowingly, through tools embedded in everyday business software.

The promise is substantial: generative AI could generate up to $100B in annual economic value for SMEs by 2030, contributing to an estimated $187B boost to Canada's overall economy and an 8% increase in national labour productivity. Worker surveys show that 78% of employees using AI report productivity gains, and 66% say it enhances their creativity. For SMEs operating with tight margins, these gains could be transformative.

Our findings show that adoption is not only a technical challenge but also a skills and confidence challenge. Many employees already use AI informally without training or policy guidance, creating risks alongside opportunities. Nearly half of employees using AI tools receive no training, while more than one-third report only minimal guidance from employers. All the while, demand for AI-related competencies is rising quickly.

Equity dimensions are also critical: 57% of women are employed in roles at higher risk of disruption compared to 43% of men; older workers report much lower familiarity with AI (only 5% of those 55+ are "very familiar," compared to 39% of 18–24-year-olds). Without targeted and inclusive strategies to build AI literacy, applied adoption skills, and pathways to advanced expertise, SMEs risk falling further behind in both competitiveness and workforce development.

Closing the adoption gap could unlock transformative economic and social value for SMEs, while ensuring that Canada's position at the forefront of AI remains and its workforce is prepared for the future of work.

KEY INSIGHTS

1. Canada's AI paradox is real but also hard to measure accurately: despite being one of the leaders in research and innovation, SME use varies widely across studies due to different definitions and scopes.

2. SMEs face distinct barriers: limited resources, lack of training, mistrust of "black box" systems, and uneven access to infrastructure and expertise constrain adoption.

3. AI delivers measurable benefits: Nearly 4 in 5 workers using AI report higher productivity, and two-thirds say it boosts their creativity, evidence that adoption can improve both performance and job quality.

4. Equity must be central: Women, older workers, and equity-deserving groups face disproportionate risks and barriers, underscoring the need for inclusive adoption strategies that build trust, confidence, and skills.

5. Skills are the decisive lever: Fewer than 1 in 10 SMEs report access to formal AI training, nearly half of employees using AI tools receive no training, and demand for AI-related competencies is rising quickly, creating wage premiums (up to 56%) and widening SME disadvantages.

The Issue

Canada is a global leader in artificial intelligence (AI) research, with billions invested in cutting-edge startups, world-class academic expertise, and international recognition for innovation. Yet adoption across the broader economy lags behind. Estimates of SME adoption rates range widely, 12.2% (Statistics Canada), 39%–66% (BDC), and 71% (Microsoft), depending on survey methodology and definitions. This variation highlights widespread underreporting, since many SMEs use AI embedded in standard tools without recognizing it as such.

Canada also lags on infrastructure readiness, including last among G7 in supercomputer access and near-last in internet speed, which raises adoption costs for SMEs.

SMEs face steep barriers that larger firms can more easily overcome. Limited financial and human resources make it difficult to experiment with new technologies. SMEs also cite challenges around regulatory uncertainty (60% of Canadian companies identify regulatory compliance as a key obstacle), cybersecurity, privacy, interoperability with legacy systems, and mistrust of “black box” AI tools. Many leaders are aware of AI’s potential, but struggle to see how it applies to their own operations.

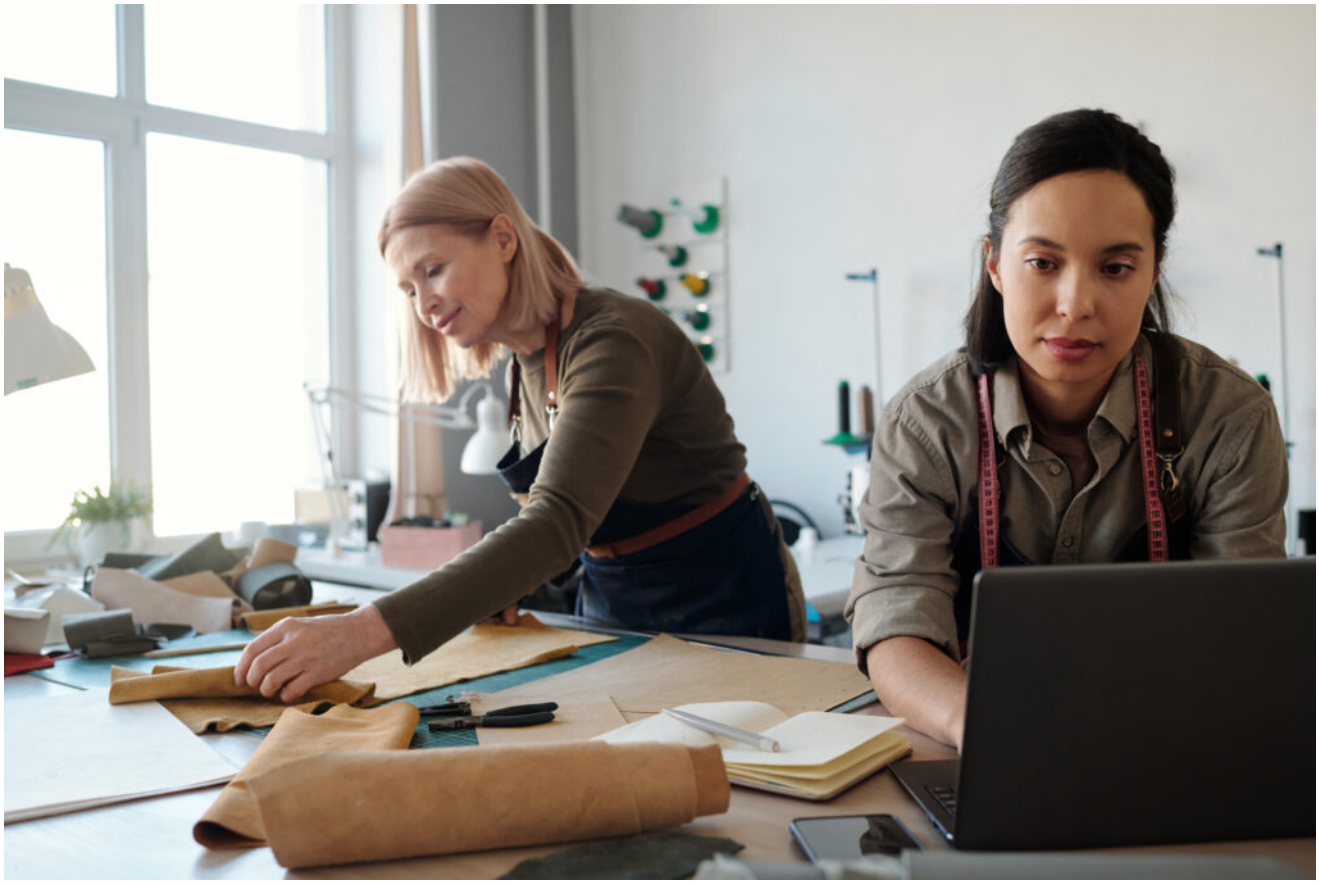
SMEs incur significant costs for integration, training, and change management, making AI investments hard to justify for smaller firms already operating on thin margins under inflationary pressure.

Recent data from the forthcoming Diversity Institute and Memorial University 2025 National Survey on Skill Demands and Employment Practices crystallizes this issue. Among non-adopting SMEs, the most common explanation is not cost or complexity, but simply a “lack of perceived need.” This highlights the importance of educating SMEs on the tangible benefits of AI. Moreover, while SMEs identified digital, communication, and adaptability skills as the most in-demand over the next three years, only 31% could clearly articulate the specific skills required.

These barriers are not evenly felt. Women are more likely than men to hold jobs at risk of disruption from AI, while older workers report far lower familiarity with AI tools than younger workers. Without deliberate action, adoption could widen economic and social divides for some equity-deserving groups.

The rationale for this project was to diagnose and better understand Canada's AI adoption gap, particularly among SMEs, so that solutions can be designed and targeted effectively. By identifying the drivers, barriers, and concrete use cases of AI across the value chain, this work provides the evidence base needed to move from awareness to action.

The issue is clear: SMEs are at the heart of Canada's economy, but without targeted supports, they risk being left behind in the AI transition. Addressing adoption gaps is not only about technology, it is also about building skills, confidence, resilience and equity into the future of work.



What We Investigated

We set out to diagnose Canada's AI adoption gap, particularly among SMEs, and to better understand the disconnect between potential and practice. Because adoption estimates vary widely across definitions and methods (e.g., 12.2%–71%), it is difficult to know the true rate of SME AI use, and this variation can also lead to underreporting.

At the same time, many employees are already experimenting with AI tools in their daily work, often without training or policy guidance. This grassroots uptake signals opportunity, but also exposes risks around security, equity, and efficiency.

SMEs, which are more vulnerable to resource constraints and administrative burdens, face the steepest barriers. They often lack access to expertise, infrastructure, and trusted information that would allow them to implement AI responsibly. The goal of this project was to investigate these barriers and enablers, while also showcasing the concrete ways AI can be applied across the SME value chain to improve logistics, operations, marketing, customer service, procurement, HR, and infrastructure.

Specifically, this project investigated:

- **Drivers and barriers**: What are the main factors enabling or preventing SMEs from adopting AI?
- **Skills and confidence**: To what extent do SMEs and their employees have the knowledge, skills, training, and confidence to use AI effectively?
- **Sectoral and workforce impacts**: How does AI adoption vary across industries, and what are the impacts across different groups of workers (e.g., by gender, age, occupation)?
- **Equity implications**: Which groups face disproportionate risks or barriers?
- **Ecosystem conditions**: What role do infrastructure, financing, and regulation play in shaping SME adoption?
- **Value chain applications**: Where are the most concrete opportunities for SMEs to apply AI across their operations (e.g., logistics, marketing, HR, customer service)?

We also examined how uneven training access, generational divides in familiarity, and rising demand for AI-related competencies are shaping adoption and employment outcomes.

Through this dual approach, diagnosing barriers and mapping opportunities, the project not only highlighted the systemic challenges SMEs face but also demonstrated that adoption is possible and beneficial, if supported by the right skills, tools, and ecosystem conditions.

✔ What We're Learning

Our research confirmed that Canada's AI adoption gap is not simply about access to technology. It is shaped by skills, confidence, trust, and systemic barriers that uniquely affect SMEs. While many employees and firms are experimenting with AI, adoption remains uneven, informal, and often unsupported. This creates both opportunities and risks: productivity and creativity gains are real, but so are vulnerabilities around security, equity, and responsible use.

By mapping adoption drivers and barriers, and examining concrete use cases across the SME value chain, several key learnings emerged.

- **Adoption is uneven and often unstructured**
  Many SMEs are already using AI that is embedded in everyday software without realizing it, while employees experiment with generative AI on their own without formal policies or training. Among microbusinesses, 72% rely on existing staff for AI implementation and only 12% hire specialized talent.

- **Adoption rates are hard to assess accurately**
  Reported figures differ because studies use different definitions, methods, and scopes. For

example, Statistics Canada reports 12.2% when measuring AI used “in the production of goods or delivery of services” over the prior 12 months; the Business Development Bank of Canada (BDC) found 39% initially said they used AI, which rose to 66% when respondents were given definitions and examples; Microsoft’s 2025 SMB report found 71% using AI or generative AI. These differences make the true rate hard to pin down and can contribute to underreporting.

- **Skills and confidence are central barriers**
  Nearly half of employees using AI report receiving no training, while over one-third had only minimal guidance. Familiarity also skews young: 39% of 18–24-year-olds report being “very familiar” with AI tools, compared to just 5% among those 55+, highlighting age-related adoption gaps.

- **Trust remains a challenge**
  Both workers and leaders express mistrust of AI’s “black box” decision-making, privacy implications, and monitoring applications. For example, 81% of employees subject to AI surveillance report feeling inappropriately watched. Responsible, transparent adoption is critical to building confidence.

- **Equity gaps are significant**
  Women are overrepresented in jobs most vulnerable to automation, older workers report much lower familiarity with AI tools, and rural or equity-deserving SMEs face compounded barriers. Without deliberate inclusion strategies, adoption risks widening divides.

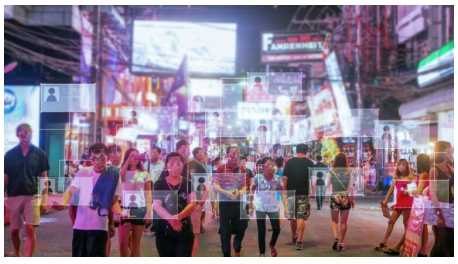
- **The promise is tangible**
  Workers using AI tools overwhelmingly report benefits. However, the decisive lever is skills: structured, employment-aligned upskilling and reskilling, paired with clear policies and supports, are essential to convert experimentation into responsible, scalable adoption.

- **Concrete opportunities exist across the value chain**
  AI is transforming inbound logistics, operations, outbound logistics, marketing, customer service, procurement, HR, and firm infrastructure. The value chain lens helps SMEs see where adoption can start small and scale gradually.

Together, these findings underscore that while adoption is already underway in many SMEs, Canada continues to lag behind. Sustained and scalable adoption will only be possible if skills, confidence, equity and wraparound supports are prioritized.

Why It Matters

Artificial intelligence is becoming a foundational driver of competitiveness, productivity, and resilience. Yet Canada’s SMEs remain at risk of being left behind.



The economic potential is substantial at both SME and national levels: generative AI could generate up to $100B in annual value for SMEs by 2030 and inject up to $187B into Canada's economy overall, with an estimated 8% uplift in national labour productivity.

Early evidence is encouraging: nearly 4 in 5 workers using AI report productivity gains, while two-thirds say it enhances their creativity. For SMEs operating with thin margins, these improvements can be transformative.

This is a workforce transition as much as a technology transition. Demand for core/deep AI skills has risen 37% (2018–2023), and workers with AI competencies command a 56% wage premium, intensifying competition and magnifying SME disadvantages.

But adoption must also be responsible and inclusive. Without deliberate supports, AI risks widening divides. For instance, the head of one of Canada's leading AI firms, Cohere, has warned that adoption could exacerbate income inequality and lead to the proliferation of low-quality, precarious jobs.

State of Skills: Unleashing AI into the Skills Development Ecosystem

FSC-supported AI tools have bolstered outcomes in skills matching, career development guidance, and recruitment. The overall effectiveness of these tools was underpinned by recognizing and mitigating the inherent bias and discrimination embedded into these technologies.

Read Thematic Report

Women are more concentrated in jobs vulnerable to automation, older workers report far lower familiarity with AI tools, and equity-deserving or rural SMEs face compounded barriers.

AI surveillance and "black box" systems also erode trust, with many employees reporting stress and discomfort when AI is used without transparency or safeguards. Embedding equity, safety, and human-in-the-loop guardrails into training and deployment is essential to sustain confidence and impact.

Given the heightened barriers faced by SMEs, they require more resources and targeted wraparound supports.

The implications are clear: Achieving AI's productivity potential requires coordinated, employment-focused skill building, including AI literacy for all, applied adoption skills across functions, and pathways to deeper expertise, delivered through accessible, modular, and workplace-based learning with embedded supports. At the same time, SMEs need systemic barriers to be addressed, such as limited training access, resource constraints, and uneven digital infrastructure, so that skill development and adoption can advance together, including for equity-deserving groups.

What's Next

This project provided the evidence base to understand Canada's AI adoption gap among SMEs, but diagnosis is only the first step. Immediate next steps include:

Knowledge Mobilization Bulletin on SME AI use cases
A practical spotlight showcasing how SMEs across sectors are already applying AI throughout their value chain. This bulletin will serve as a tool to inspire adoption by showing concrete, accessible examples.

Forthcoming AI Competency Framework
A forthcoming AI Competency Framework will provide structured pathways for AI literacy, adoption skills, and advanced competencies, with a focus on accessible training formats, modular learning, and supports for equity-deserving groups.

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
Diversity Institute (2026) Project Insights Report: Bridging the AI Skills Gap in Small and Medium-Sized Organizations in Canada. Toronto: Future Skills Centre. https://fsc-ccf.ca/research/bridging-ai-skills-gap/

Funded by the Government of Canada's Future Skills Program

Canada

Bridging the AI Skills Gap in Small and Medium-Sized Organizations in Canada 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.