POLICY BRIEFING NOTE

Building Canada's Early Warning and Response System for AI Job Displacement

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Author: Rod Moshtagi, Harvard Kennedy School

Prepared for: Mila - Quebec Artificial Intelligence Institute

Purpose: This policy briefing note is a companion document to the full report. It provides a summary of the report's analytical framework, data architecture, and policy recommendations.

Executive Summary

Evidence is emerging that generative AI is producing localized labour market disruptions among specific groups of younger workers, even as aggregate Canadian employment remains stable. A January 2026 Statistics Canada report found that employment for 15- to 29-year-olds in highly exposed, coding-intensive professions remained stagnant between late 2022 and late 2025, while employment for workers aged 30 to 49 in the same occupations grew.[1] A November 2025 study by researchers at Stanford's Digital Economy Lab, using ADP payroll microdata combined with Anthropic's AI usage statistics, found a 16% relative employment decline among U.S. workers aged 22 to 25 in occupations where AI was being used to automate tasks.[2]

These disruptions fall below the detection threshold of Canada's standard government surveys. The Labour Force Survey lacks the cell sizes to slice by occupation, age, and province simultaneously, and the Census runs on a five-year cycle. Canada's labour market institutions were built to detect shocks after they appear in aggregate data and they have no capacity to detect an entry-level hiring freeze in a narrow occupational cohort before it becomes a national problem.

In April 2025, Mark Carney's Liberal platform promised to track the labour market impacts of AI. Budget 2025 backed that promise by allocating $25 million for TechStat, a new program at Statistics Canada with the mandate to measure how AI is affecting the Canadian labour force.[3] As of April 2026, TechStat has no formal tracking framework in operation.[4] This report proposes that the Government of Canada build an early warning and response system for AI-driven job displacement, housed within TechStat, and sets out what the system should measure, how Canada can obtain the data, and how the federal government and the provinces should prepare to act on the signals it produces. The report is written for Mila, which is well positioned to shape this system during the narrow window before TechStat's first-year work plan is finalized.

Who is at risk:

Mapping the Stanford study's findings onto Canadian occupational classifications produces a cohort of approximately 66,705 workers aged 20 to 24 across seven occupations. Customer service representatives, software developers and engineers, and financial customer service representatives together account for roughly 78% of the cohort. Ontario hosts 43.4% of these workers (28,980), and Quebec accounts for 23.6% (15,740).[5] This cohort represents approximately 1% of the 6 million Canadians that Statistics Canada

[1] Tahsin Mehdi and Marc Frenette, "Canadian Employment Trends in the Era of Generative Artificial Intelligence: Early Evidence," Economic and Social Reports, Statistics Canada Catalogue no. 36-28-0001 (January 28, 2026), https://www150.statcan.gc.ca/n1/pub/36-28-0001/2026001/article/00003-eng.htm.

[2] Erik Brynjolfsson, Bharat Chandar, and Ruyu Chen, "Canaries in the Coal Mine? Six Facts about the Recent Employment Effects of Artificial Intelligence" (working paper, Stanford Digital Economy Lab, November 2025), https://digitaleconomy.stanford.edu/app/uploads/2025/11/CanariesintheCoalMine_Nov25.pdf.

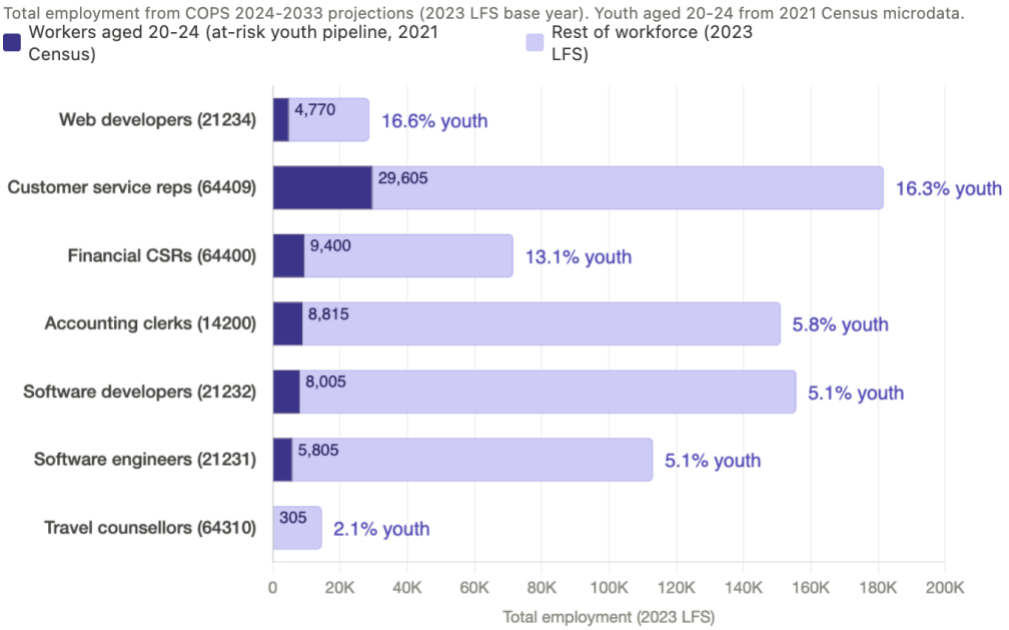
[3] Liberal Party of Canada, "Canada Strong: Unite. Secure. Protect. Build" (2025 federal election platform), April 2025, https://liberal.ca/wp-content/uploads/sites/292/2025/04/Canada-Strong.pdf.

[4] Build Canada, "Track AI Labor Market Impacts to Rapidly Adjust Federal Training Programs," Build Canada Outcomes Tracker, accessed April 7, 2026, https://www.buildcanada.com/tracker/commitments/2524.

[5] Statistics Canada, "Class of Worker by Occupation Unit Group, Labour Force Status, Age and Gender: Canada, Provinces and Territories, Census Metropolitan Areas and Census Agglomerations with Parts," Table 98-10-0593-01, 2021 Census of Population, https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=9810059301.

estimates work in occupations with high AI exposure and low complementarity.[6] The cohort is small, but it reveals the gap between where the risk of displacement is most likely to appear and what Canada's statistical infrastructure can detect.

Canada's At-Risk Occupations: Workers Aged 20-24



Source: Statistics Canada, Table 98-10-0593-01, 2021 Census (25% sample). Youth counts are employed persons aged 20-24.

Provincial Distribution of the Youth Canary Cohort

Source: Statistics Canada, Table 98-10-0593-01, 2021 Census of Population (25% sample). Employed persons aged 20-24 in seven canary NOC codes. Provincial totals sum to 66,695 due to rounding.

Ontario	43.4%	28,980
Quebec	23.6%	15,740
British Columbia	12.5%	8,305
Alberta	7.0%	4,655
Manitoba	5.1%	3,395
Nova Scotia	2.7%	1,815
New Brunswick	2.3%	1,520
Saskatchewan	1.5%	1,020
NL	0.9%	
PEI	0.8%	
Territories	0.1%	

Ontario + Quebec

67.0%

Two provinces hold two-thirds of the at-risk youth cohort

Quebec's largest groups

Customer service reps: 7,840
Financial CSRs: 2,985
Accounting clerks: 1,800
Software dev/eng: 1,820

Ontario's largest groups

Customer service reps: 11,055
Software developers: 4,390
Accounting clerks: 3,905
Financial CSRs: 3,735

[6]Tahsin Mehdi and Marc Frenette, "Exposure to Artificial Intelligence in Canadian Jobs: Experimental Estimates," Economic and Social Reports, Statistics Canada Catalogue no. 36-28-0001 (September 25, 2024), https://www150.statcan.gc.ca/n1/pub/36-28-0001/2024009/article/00004-eng.htm.

What to measure:

Four data streams show promise in closing this gap. AI usage statistics from frontier labs provide near-real-time visibility into how models are being used to automate or augment specific work tasks. Task exposure metrics assess how susceptible each occupation is to AI automation as model capabilities change, and can be produced internally by TechStat with no external data agreements required.[7] High-frequency administrative payroll data from commercial providers like ADP Canada and Dayforce confirms whether displacement has reached actual workers at the occupation-by-age-by-province granularity the LFS cannot produce.[8] The Stanford study by Brynjolfsson et al. (2025) combined Anthropic's automation-augmentation usage data with theoretical exposure scores, and showed a correlation with observed employment declines among early-career workers while controlling for confounding variables including firm-level shocks, post-pandemic labour adjustments, and the fallout from the 2021-2022 tech hiring boom across 3.5 to 5 million payroll records.[9] Firm-level AI adoption surveys help attribute observed employment changes to AI rather than to other economic forces.[10]

Early Warning System Architecture: Data Streams by Dependency Level

INTERNATIONAL COOPERATION

Anthropic - Publishes Economic Index
OpenAI - Publishes Signals data
Other labs - No public data yet
Forward-looking signal: where automation pressure is building.

Plugs into / Validates

DOMESTIC PARTNERSHIPS

Payroll data - ADP Canada, Dayforce
Confirms actual displacement (hiring freezes, separations). Requires negotiation with private sector.

Plugs into / Validates

SYSTEM BACKBONE (within government control)

LFS supplement - Needs quarterly frequency
Task-exposure metrics - Dynamic, re-scored regularly using Eloundou et al.'s method of using LLMs as a primary annotator.
Firm-level AI surveys - CSBC replacement needed
Accessible through existing Statistics Canada instruments.

> *TechStat should build this system to operate without frontier lab data, and create standardized plug-in points that labs can connect to on their own terms.*

How to get the data:

Each stream carries distinct acquisition challenges. AI usage statistics are the highest-value signal but the slowest to arrive. Only Anthropic and OpenAI currently publish usage data, and the international standardization effort is unlikely to produce a formal data-sharing commitment before early 2027.[11] Open-weight models account for an estimated 20 to 30% of total AI usage, and when users run these models on their own hardware, no usage statistics are generated.[12] Given these constraints, TechStat should build the system on domestic data streams first and treat lab telemetry as a plug-in upgrade, while accounting for the skew in the available AI usage data.[13] Payroll data partnerships with ADP Canada and Dayforce should be structured as

[7]Tyna Eloundou, Sam Manning, Pamela Mishkin, and Daniel Rock, "GPTs Are GPTs: An Early Look at the Labor Market Impact Potential of Large Language Models," arXiv preprint arXiv:2303.10130, March 2023, https://arxiv.org/abs/2303.10130.
[8]Brynjolfsson, Chandar, and Chen, "Canaries in the Coal Mine?"
[9]Ibid
[10]Statistics Canada, "The Daily: Canadian Survey on Business Conditions, First Quarter 2026," February 27, 2026, https://www150.statcan.gc.ca/n1/daily-quotidien/260227/dq260227c-eng.htm.
[11]OpenAI, OpenAI Signals: Measuring AI Adoption, Protecting Privacy, and Empowering Decisions (Global Affairs, February 2026), https://cdn.openai.com/signals/openai-signals-global-report.pdf; Anthropic, "Anthropic Economic Index Report: Economic Primitives," January 15, 2026, https://www.anthropic.com/research/anthropic-economic-index-january-2026-report; Sam Manning and Ketana Krishna, interview by Rod Moshtagi, March 2026.
[12]Malika Aubakirov et al., "State of AI: An Empirical 100 Trillion Token Study with OpenRouter," arXiv:2601.10088, December 2025, https://arxiv.org/html/2601.10088v1; Hugging Face, "State of Open Source on Hugging Face: Spring 2026," Hugging Face Blog, 2026, https://huggingface.co/blog/huggingface/state-of-os-hf-spring-2026.
[13]Eloundou et al., "GPTs Are GPTs."

voluntary agreements; Statistics Canada's 2018 attempt to compel financial data under Section 13 of the Statistics Act triggered public backlash and a Privacy Commissioner investigation.[14] The Canadian Survey on Business Conditions, Canada's only high-frequency source of firm-level AI adoption data, has its final collection cycle scheduled for August 2026; if TechStat does not absorb the AI module before it sunsets, this data stream disappears with no replacement in place.[15]

Preparing the response:

Canada's COVID-19 experience demonstrated three structural vulnerabilities that could resurface in an AI displacement scenario. ESDC's legacy benefits infrastructure, built on COBOL mainframes, could not process the surge in claims or adapt to new eligibility criteria; the government bypassed ESDC entirely and routed CERB through CRA.[16] The inability to verify employment status in real time (CRA's most recent income data at the time of launch was from the 2018 tax year) contributed to $4.6 billion in confirmed overpayments and at least $27.4 billion in payments flagged for further investigation.[17] CERB payments also triggered automatic claw-backs against provincial social assistance in several provinces because there was no time to negotiate exemptions with 13 provincial and territorial social services ministries before launch.[18] Recent efforts by the Forecasting Research Institute, Windfall Trust, and the Partnership on AI have begun identifying suitable policy responses, but none of these efforts have been translated into Canada's specific institutional context.[19]

Recommendations for Mila

1. Brief TechStat on the indicator framework in this report and advocate for the data streams it will need, engaging in Q2 2026 before TechStat's first-year work plan is finalized.

2. Convene a Canadian AI labour displacement scenario exercise in October or November 2026 that produces a working document mapping plausible scenarios to candidate policy responses.

3. Consult provinces through bilateral outreach to Ontario and Quebec and a joint technical briefing with the Labour Market Information Council and communicate Canada's data requirements to the international AI usage data standard effort.

Recommendations for the Government of Canada

4. TechStat should secure three domestic data streams in 2026: an LFS digital platform supplement at quarterly frequency, absorption of the CSBC AI adoption module before its August 2026 sunset, and voluntary data-sharing partnerships with ADP Canada and Dayforce.

5. TechStat and ESDC's Labour Market Information Directorate should begin quarterly calibration sessions in mid-2026 to develop shared signal interpretation, escalation thresholds, and signal-to-response mapping.

6. ESDC should table two sequenced items at the FLMM's Changing Nature of Work and Skills Working Group: an awareness agenda item in late 2026 and a structured working session on means-testing treatment of future AI displacement benefits in mid-2027.

[14]Peter Zimonjic, "Privacy Commissioner Launches Probe into StatsCan Over Collection of Financial Data," CBC News, October 31, 2018, https://www.cbc.ca/news/politics/personal-financial-information-statistics-canada-1.4885945; Office of the Privacy Commissioner of Canada, "Statistics Canada: Invasive Data Initiatives Should Be Redesigned with Privacy in Mind" (PA-20191209-SC, December 9, 2019), https://www.priv.gc.ca/en/opc-actions-and-decisions/investigations/investigations-into-federal-institutions/2018-19/pa_20191209_sc/.

[15]Statistics Canada, "Canadian Survey on Business Conditions, First Quarter 2026."

[16]Office of the Auditor General of Canada, "Report 6: Canada Emergency Response Benefit," in 2021 Reports of the Auditor General of Canada to the Parliament of Canada (Ottawa: OAG, March 2021), https://www.canada.ca/en/auditor-general/our-work/audit-reports/parl-oag-202103-01-e.html.

[17]Office of the Auditor General of Canada, "Report 10: Specific COVID-19 Benefits," in 2022 Reports of the Auditor General of Canada to the Parliament of Canada (Ottawa: Office of the Auditor General, December 2022), https://www.canada.ca/en/auditor-general/our-work/audit-reports/parl-oag-202212-10-e.html.

[18]Cann v. Director, Fort Garry/River Heights, 2020 MBCA 101, at paras. 8–10 (Man. C.A.) (Mainella, J.A.), https://www.canlii.org/en/mb/mbca/doc/2020/2020mbca101/2020mbca101.html

[19]Forecasting Research Institute, "Forecasting the Economic Effects of AI," FRI Substack, March 2026, https://forecastingresearch.substack.com/p/forecasting-the-economic-effects-of-ai; Danny Buerkli and Brandon Jackson, "When the Economy Meets AI: What Happens Next?" Windfall Trust Scenarios, n.d., accessed April 12, 2026, https://windfalltrust.org/scenarios/when-the-economy-meets-ai-what-happens-next; Partnership on AI, "Partnership on AI Launches Expert Advisory Group for New Initiative Shaping Economic Futures in the AI Era" (news release, March 30, 2026), https://partnershiponai.org/partnership-on-ai-launches-expert-advisory-group-for-new-initiative-shaping-economic-futures-in-the-ai-era/.