



Recommendations for Budget 2025

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1. Make the Budget 2023 investment in the College and Community Innovation Program permanent
2. Establish a \$46-million Polytechnic & College Research Growth Fund to propel applied research solutions to Canada's major challenges
3. Invest \$50 million over five years in cybersecurity at Canada's polytechnics and colleges
4. Provide sustained funding to support work-integrated learning for post-secondary students and enable upskilling for mid-career workers
5. Establish a Canadian Work Experience Pilot to encourage international students to study in priority fields
6. Prioritize the retention and completion of apprentices in high-demand trades

Introduction

Canada is at a crossroads: productivity continues to lag our G7 counterparts, the capacity to build affordable housing is insufficient to the need, our workforce requires consistent skills upgrading to stay ahead of new technologies and emerging sectors. Canadians sense they are falling behind and are looking to policymakers for innovative approaches to persistent challenges. Addressing these challenges should be the driving ambition for Budget 2025.

We are convinced that polytechnic institutions offer important solutions in these areas. Beyond training youth for entry into the labour market, polytechnics offer pragmatic mid-career upskilling. They deliver industry-responsive technical training in the skilled trades and other occupations essential to Canada's construction industry. Applied research centres help businesses address obstacles to growth, derisking technology adoption and creating new jobs.

Canada's polytechnics:

- Develop highly skilled graduates in priority and high-growth sectors, including the skilled trades
- Empower mid-career workers with the skills they need to drive technology adoption and increase productivity
- Support companies, not-for-profit organizations and entrepreneurs as they pursue innovative solutions to real-world challenges

We are pleased to offer recommendations designed to harness the power of Canada's polytechnic institutions to drive productivity, better positioning them to boost business R&D activity and arm Canadians with workforce-relevant skills.

Derisking Innovation

Polytechnic applied research addresses the barriers to business innovation, solving real-world challenges, improving performance and streamlining processes. A recent report suggests applied research at Canada's polytechnics generates an economic return between \$8.09 and \$18.49 for every dollar invested.¹ Despite its impact, however, it remains chronically underfunded. In 2022-23, total annual investments in academic research by the Tri-Councils were \$3.7 billion. The College and Community Innovation Program, the only purpose-driven program supporting polytechnic applied research, was valued at \$108 million that year, meaning 121 eligible institutions shared less than 3 per cent of the total investment in academic research.

Make the Budget 2023 investment in the College and Community Innovation Program permanent

Over the last 20 years, polytechnics have become important partners for Canadian businesses and non-profits looking to adopt new technology, build and test prototypes or solve complex challenges. Polytechnic applied research derisks innovation activity among partners large and small, helping them overcome hurdles to growth.

In Budget 2023, the government provided a time-limited, diminishing investment in college applied

¹ Prism Economics and Analysis, "The Economic Impact of Applied Research at Canada's Polytechnics." (2024) Polytechnics Canada

research. Polytechnics have illustrated the tremendous impacts of that investment, making the case for sustained funding thousands of times over. In 2023-24, Polytechnics Canada members conducted 5,609 partner-driven research projects, addressing the needs of 3,051 firms and community organizations. This represents 66 per cent more projects in collaboration with 25 per cent more partners in the first year that new funding was available.

A continuing investment of \$39 million per year in the College and Community Innovation Program stands to bring total annual funding to \$124 million, ensuring impact is sustained.

This investment also begins to respond to appreciable disparities within the academic research ecosystem. Polytechnics and colleges are not operationally funded for risk management, research security, equity and diversity concerns or other evolving administrative requirements. Recent investments to shore up Canada's research community have sidelined polytechnics by failing to recognize system-level barriers.

For example, current research security funding requires institutions to have received at least \$2 million in research support funding. The College and Community Innovation Program – still the primary source of government funding for polytechnic applied research – is ineligible for the Research Support Fund. We estimate the sector requires at least \$5 million annually to build and support a research security framework appropriate to the partner-driven nature of their research collaborations.

Establish a \$46-million Polytechnic & College Research Growth Fund to propel applied research solutions to Canada's major challenges

Applied research funding structures have not evolved to realize the full benefits of industry-institution R&D collaborations. The College and Community Innovation Program remains primarily focused on building capacity rather than putting it to work to address pressing national issues such as the net-zero transition, the slow adoption of new technology, the housing crisis and an aging population. In the current program, polytechnics have no support to establish or undertake research in collaboration with international partners.

With new recognition of the need for mission-driven research, polytechnics will be important contributors. By solving practical problems, they support productivity gains by applying technical and theoretical advances to specific problems.

We recommend the federal government establish a Polytechnic & College Research Growth Fund to empower our sector to activate their facilities, equipment, expertise and networks to solve pressing challenges. Polytechnics are ideally positioned to attract private sector partners able to implement and commercialize solutions. An annual allocation of \$46 million would be distinct from current programs by building on existing capacity, facilitating proactive engagement and ensuring good ideas are mobilized by those best suited to drive them forward.

Invest \$50 million over five years in cybersecurity at Canada's polytechnics and colleges

Cybercrime has steadily increased over the last few years, with higher education institutions becoming prime targets for bad actors seeking sensitive data. Data breaches and ransomware attacks tarnish an institution's reputation, compromise research and put student data at risk. Despite significant new investments in artificial intelligence, the related requirement for robust cybersecurity has been largely overlooked.

² Cybersecurity Ventures, 2022 Official Cybercrime Report

In 2023, cyberattacks cost roughly \$8 trillion globally² and occurred, on average, every 39 seconds. It takes organizations ~49 days to identify a cyberattack before beginning to recover from a data breach. Forty per cent of universities and colleges took over a month to recover.³

Funding of \$50 million over five years stands to increase cyber resilience and enable polytechnics and colleges to undertake costly early infrastructure projects. A modest ongoing investment is required to address cyber threats as they evolve.

Developing Workforce Skills

New research by the Conference Board of Canada suggests that polytechnic education is well-positioned to address the dual challenges of labour shortage and projected job growth in high-demand occupations. Despite cooling in the job market, robust hiring demand persists for people trained in advanced technical and hands-on roles. Whether in healthcare, information technology or the skilled trades, a polytechnic education bridges the skills gap.

Provide sustained funding to support work-integrated learning for post-secondary students and enable upskilling for mid-career workers

Polytechnic education is built around strategic workforce development, preparing students for smooth entry into the labour market and supporting those at mid-career as their skill needs evolve. The labour market is dynamic, with new occupations emerging as others are displaced or irrevocably changed by new technology and shifting consumer preferences. Students require opportunities to apply their classroom learning and, equally, today's workers need support as they adjust to the pace of change.

Despite the tremendous benefits of work-integrated learning for both students and their future employers, the current funding model has been characterized by short-term renewals. One-year extensions to the Student Work Placement Program (SWPP) generate uncertainty and make it difficult to offer work-integrated learning placements in every program, to every student.

In a recent study on the value created by SWPP, ICTC estimated a return of approximately \$13.33 million for employers within a 4-month period.⁴ Additional benefits accrue to students, including both financial gains and career confidence. This program is driving behaviour – encouraging thousands of additional employers to hire youth and enabling students to gain relevant workplace skills. Given the positive impacts of this program, we recommend future investments be longer term in nature.

We foresee opportunities to likewise encourage and support lifelong learning among those at mid-career, many of whom are facing rapidly changing workplaces and the threat of skill obsolescence. In 2022, Leger undertook a survey with employers and mid-career Canadians to assess attitudes to lifelong learning. Among employers, 93 per cent agreed upskilling was critical to their operations, most requiring external partners to deliver the training. More than 70 per cent of mid-career Canadians reported relying on their employers to identify emerging skill needs and organize related training.

The Canada Training Benefit has not made significant inroads nor changed behaviours regarding lifelong learning. Delivered through the tax system, it simply fails to incent skill upgrading. It makes no effort to

³ Packetlabs, Cybersecurity Statistics 2023

⁴ Alexandra Cutean, Letitia Henville and Faun Rice. "The Impact of Work-Integrated Learning on Student Success and the Canadian Economy: A Case Study of Canada's Student Work Placement Program (SWPP)" Ottawa ON: Information and Communications Technology Council (ICTC), August 2023

address skills in high demand nor does it connect to employer training needs. We recommend this program be reoriented to provide upfront subsidies for continuing education and professional development, ideally making training more affordable for and accessible to employers and workers with upskilling needs.

Establish a Canadian Work Experience Pilot to encourage international students to study in priority fields

In 2022, international students contributed more than \$30 billion to Canada's GDP.⁵ Many of these students aspired to stay in Canada after graduation, adding the value of their new credentials to the Canadian labour market.

Recent adjustments to international study permits have taken a toll on Canada's reputation as a premier destination for students. While efforts are underway to reduce the number of temporary residents in Canada, demographics dictate a continuing need to attract permanent residents with critical labour market skills. International study remains one of the most efficient pathways for immigration, offering newcomers a chance to develop skills recognized by the Canadian labour market while building personal and professional networks. These are the ingredients for long-term immigration success.

We recommend a Canadian Work Experience Pilot for international students studying in priority sectors be established. This stands to both enable international students to work in fields related to their studies and ease their transition into the Canadian job market should they stay after graduation. Meanwhile, this move reconfirms Canada's reputation as a welcoming destination for students and immigrants alike.

Prioritize the retention and completion of apprentices in high-demand trades

The Canadian Apprenticeship Service is almost exclusively focused on attracting more apprentices to the skilled trades and subsidizing employers to train them in Year 1. There is little to support progression and success, despite the fact that roughly 50 per cent of apprentices fail to become certified as journeypersons.

Given the urgency of housing and infrastructure challenges in Canada, the ability of apprentices to persevere to the point of certification is of paramount importance. Wraparound supports to encourage and support completion are critical. In the residential housing sector, where few apprentices are trained, this is particularly important.

In *Apprentice Nation*, author Ryan Craig posits that employer engagement in apprenticeship is a challenge best overcome by active intervention. After examining systems in Germany, Australia and the UK, he points to the success of systems that use intermediaries to organize, operate and actively sell apprenticeship to employers. The government's primary role is to ensure there are organizations – post-secondary institutions, unions or other non-profits – to usher apprentices toward certification. This is a strategy that, combined with wage subsidies, has the potential to move the needle on apprentice completion.

⁵ Roslyn Kunin & Associates, "Economic Impact of International Education in Canada – An Update of 2022 Impact." (Nov 2023) Global Affairs Canada

Our Members



About Us

Polytechnics Canada is a non-profit association representing 13 leading research-intensive, public polytechnics and institutes of technology. We advocate for federal action in areas where polytechnics provide solutions for a more innovative, productive and globally competitive country.