



Submission to the Department of Finance  
in advance of Budget 2023

## Recommendations

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- Enhance the capacity of Canada's innovation intermediaries to boost performance within small- and medium-sized companies by investing \$331 million over five years in the College and Community Innovation Program
- Renew support for experiential learning by making the Student Work Placement Program permanent and expanding eligibility to include post-secondary institutions and international students
- Strengthen awareness of and navigation to lifelong learning by ensuring Canadians have relevant labour market information and guidance to available training
- Invest in the research and learning infrastructure designed to develop a future ready workforce. Ensure all new infrastructure programs can be accessed by post-secondary institutions to make their campuses more sustainable, accessible and better equipped with the tools and technologies used by employers

## Introduction

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The Canadian economy and labour market are undergoing a period of extreme uncertainty. Inflation remains at its highest level in decades and the threat of a recession looms large. This has left many individuals vulnerable to future economic headwinds. Businesses are also feeling significant pressure, with chronic labour shortages and skills mismatches persistent across sectors.

Such conditions require federal action and represent an opportunity to chart a new path forward.

Our collective ability to find innovative solutions to complex problems like combatting climate change, expediting technology adoption and enabling business growth, will be key to weathering these uncertain times. Luckily, Canada has a network of leading institutions with the capacity to contribute pragmatic ideas and the necessary elbow grease to implement solutions.

Polytechnics have a proven record of supporting businesses trying to overcome innovation-related challenges and connect with workforce-ready talent. Modest investment has the potential to unlock exponential outcomes. Budget 2023 is an opportunity to advance an inclusive, innovative and sustainable future for Canada by activating this capacity.

Canada's polytechnics are leaders in the delivery of applied, industry-aligned post-secondary education with workplace experience built in. Institutions offer a breadth of credentials, including bachelor's degrees, diplomas, advanced diplomas, graduate certificates and apprenticeships in the skilled trades. Moreover, institutions support small- and medium-sized enterprises through collaborative applied research in areas like environmental science and advanced manufacturing.

As the federal government looks to address some of the country's most pressing challenges, Canada's polytechnics offer solutions in key areas by:

- Developing highly skilled graduates needed to mitigate labour shortages in priority and high-growth sectors like healthcare and clean-tech
- Providing lifelong learning opportunities to a diverse population looking to address skills mismatches and advance their careers
- Supporting companies, not-for-profit organizations and entrepreneurs as they seek to maximize their innovation potential through applied research

We are pleased to offer recommendations for how the federal government can best harness the capacity of polytechnics to build a more resilient workforce and innovative business community.



## Enhance the capacity of Canada's innovation intermediaries to boost performance within small- and medium-sized companies by investing \$331 million over five years in the College and Community Innovation Program

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Applied research refers to a wide range of innovation activities delivered through partnerships between polytechnics and private firms, not-for-profits and community organizations. Institutions offer facilities and equipment, faculty expertise and student talent to solve challenges for partners across sectors.

Activities include prototype development, process improvement, commercialization readiness and technology adoption. Intellectual property is largely retained by the business partner, ensuring those best positioned to drive economic value do so without barriers.

Funding for these activities is provided through NSERC's College & Community Innovation Program (CCIP).

While the CCIP was initially intended to build research capacity in the college sector, many institutions now have mature research enterprises delivering considerable value to businesses facing innovation, productivity and commercialization challenges impeding growth. The current envelope is insufficient, failing to capitalize on this capacity and leaving hundreds of prospective partners behind.

In 2020-21, the 13 members of Polytechnics Canada conducted more than 3,800 research projects, addressing the needs of 3,000 partners. These projects and partnerships involved 21,500 students and resulted in 5,300 prototypes being developed for firms of all sizes and across all sectors. In the last two years alone, more than 1,400 partnerships could not proceed due to lack of funding to the college community.

Despite significant benefit to Canada, funding constraints are inhibiting applied research activity:

- Between 2016 and 2020, the number of industry and community partners in CCIP applications has steadily increased, but funding has not kept up. In the last two years alone, **more than 1,400 partnerships could not be funded**
- The **number of institutions exhibiting research readiness grows each year**. There are currently 119 institutions eligible for funding through the CCIP, up from 112 in 2019
- **Budgetary constraints** within the program are evident across grant types and competitions:
  - A two-year funding boost announced in Budget 2021 elicited 153 applications valued at \$188 million for awards totalling \$44 million
  - Proposals for collaborative activities across three or more institutions generated nearly \$118 million in proposals, though only \$13 million in projects could be accommodated
  - In 2019 and 2020 Applied Research and Development grant competitions (valued between \$75,000 and \$150,000, with additional partner contributions), applications increased by almost 200 per cent
- Though grant values have not kept up with the cost of research, the **administrative burden on institutions has increased**, with new requirements associated with data management, equity and diversity, student involvement and an expectation of new research security measures
- **Competitions have been delayed or suspended** in some grant types to accommodate demand in others

Polytechnics Canada's members have the capacity to more than double innovation outputs within the next five years. At a minimum, this means providing close-to-market innovation support for more than 5,200 small- and mid-sized business partners every year, in addition to the thousands of other partners served

by the larger college sector. Applied research offices understand the unique challenges faced by local partners, whether related to technology, labour, transportation, market access or other obstacles.

We recommend a new five-year commitment that recognizes and secures the college sector’s capacity to deliver innovation, productivity and commercialization supports across Canada. This investment is designed to build on the current CCIP annual budget by enabling support in areas of identified weakness in the Canadian business ecosystem, including technology adoption and cybersecurity, environmental sustainability and climate resilience, advanced manufacturing, agriculture and agri-food innovation, and health and eldercare systems.

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|-------------------------------------|----------------------|
| Year 1                              | + \$50 million       |
| Year 2                              | + \$57 million       |
| Year 3                              | + \$65 million       |
| Year 4                              | + \$74 million       |
| Year 5                              | + \$85 million       |
| <b>New investment</b>               | <b>\$331 million</b> |
| <b>Annual investment thereafter</b> | <b>\$170 million</b> |

## Renew support for experiential learning by making the Student Work Placement Program permanent and expanding eligibility to include post-secondary institutions and international students

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Labour shortages and skills mismatches have become endemic within the Canadian economy due to an aging workforce, increased digitization and a transition toward sustainability. The federal government's ambitious new immigration targets are meant to ease these pressures by bringing in highly skilled individuals from around the world. But this is only one part of the solution. The ability of Canada's post-secondary institutions to prepare learners – including new arrivals and international students alike – for a seamless transition into the workforce is a critical piece of the puzzle.

A proven way to ease transitions from education to employment is work-integrated learning (WIL). WIL bridges traditional curricular learning with workplace experience, enabling students to build their employer network and put theory into practice. Canada's polytechnics are leaders in the delivery of outcomes-based and industry-aligned education, offering a breadth of WIL opportunities across programs and sectors.

The Student Work Placement Program (SWPP) provides post-secondary students across the country with paid work experience through employer wage subsidies. SWPP has helped thousands of students gain valuable experience while supporting employers looking to access new talent.

We recommend the federal government make the SWPP – which is scheduled to sunset in 2024 – a permanent program, enabling more students to benefit from workplace experience. Post-secondary institutions should be eligible employers under the program, taking full advantage of opportunities on campus and providing work experience to those who often have the hardest time accessing it. While their eligibility was temporarily extended during the pandemic, it proved to be a lifeline for students facing barriers and one that could easily be extended to groups that have traditionally struggled to find placements.

Further, current eligibility criteria states that students must be a “Canadian citizen, permanent resident or person with refugee protection given under the law.” This stipulation prevents international students from participating in the program, both depriving them of valuable learning experiences and precluding businesses from accessing a critical talent pool.

This exclusion is nonsensical. In 2021, 388,782 international students were enrolled in Canadian higher education. Most had ambitions of living and working in Canada after graduation. The ability to make connections within the Canadian labour market creates another talent pipeline for businesses in a time of intense labour shortage. In the longer term, the inclusion of international students would provide a viable cohort of people who have both a Canadian education and Canadian work experience, ensuring smoother integration into the labour market.

## Strengthen awareness of and navigation to lifelong learning by ensuring Canadians have relevant labour market information on skills in demand and guidance to available training

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Due to the many disruptions affecting Canada's labour market, lifelong learning is essential to a resilient workforce. A recent Leger survey found that more than 90 per cent of Canadian workers and employers believe skills development is important, with 78 per cent of employers and 72 per cent of workers saying that want more information about available training.

Canadians need reliable, timely and accessible labour market information on skills in demand, along with navigation to relevant training providers and courses. Better connecting supply- and demand-side data stands to ensure Canadians know what skills employers are seeking and where training is available, at what cost, duration and delivery method. The benefits of such investment will promote and ensure labour market resiliency and reduce evidence of skills shortage.

In the same Leger survey, 96 per cent of workers were unaware of federal funding intended to offset the cost of professional development. More should be done to ensure that federal initiatives such as the Canada Training Benefit are visible to the general population.

We recommend providing Canadians with a national platform – a one stop-shop – of labour market indicators including: occupations currently and projected to be in demand, wages, the skills and competencies in demand by employers, and related education and training opportunities.

Providing individuals with a centralized platform of indicators will no doubt increase the access of and participation in lifelong learning, improve the take-up of federal programs and strengthen the relevancy of training pursued by workers at all stages of their career.

## Invest in the research and learning infrastructure designed to develop a future ready workforce. Ensure all new infrastructure programs can be accessed by post-secondary institutions to make their campuses more sustainable, accessible and better equipped with the tools and technologies used by employers

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Canada's long-term growth and development requires world-class education and training infrastructure – the buildings, technologies and shared community spaces necessary to develop the workforce of the future.

To ensure the delivery of the highest quality, industry-aligned education, post-secondary institutions must continually invest in infrastructure that mirrors the technology and equipment used by employers. As Canada aims to shift to a more sustainable economy, institutions must invest in the necessary labs, equipment and technologies to prepare learners for this transition.

Five consecutive federal budgets have passed since investments have been explicitly earmarked to address the infrastructure gap on post-secondary campuses. Delaying support for the sector will only widen the chasm. This gap will continue to impact post-secondary research and innovation capacity and ultimately damage Canada's international competitiveness.

Support for post-secondary infrastructure would allow polytechnic institutions to:

- Invest in the hardware, software and cybersecurity needed to deliver industry-aligned education while supporting flexible and personalized learning models
- Support green transformations that both develop a green talent pipeline and inspire business adoption of new technologies and approaches
- Expedite retrofits and address deferred maintenance related to health and safety and sustainability targets
- Establish cultural and community hubs that improve social spaces and services
- Facilitate the decolonization and Indigenization of campuses through the (re)development of physical spaces
- Ensure institutions have the materials and equipment to provide high-quality training for a skilled, inclusive and productive workforce



## 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.