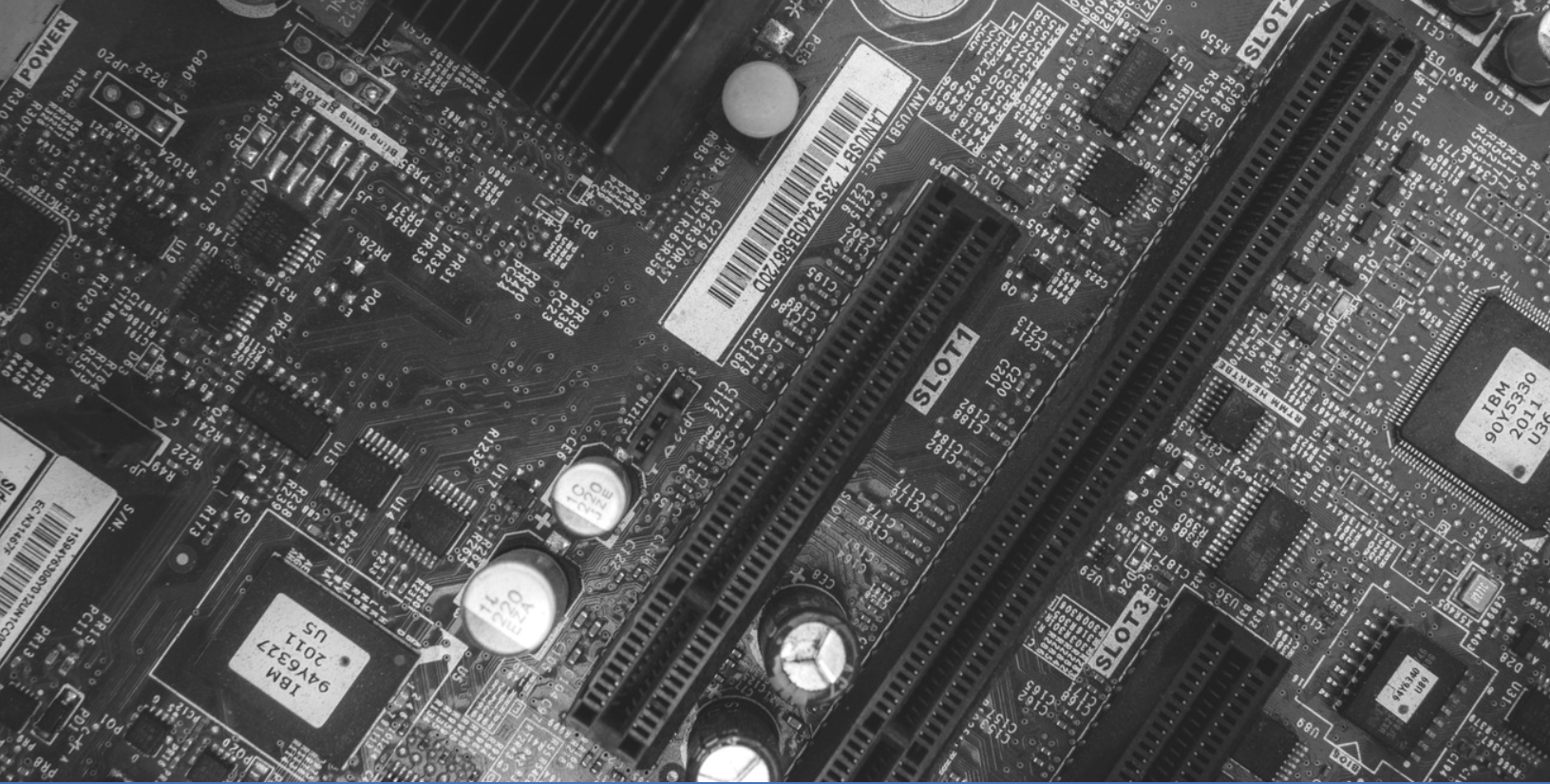


Building the future workforce and creating inclusive growth for the 21st century economy

Pre-budget Submission to the House of Commons
Standing Committee on Finance

Recommendations

- 1 | Fund the design and deployment of a pilot skills in-demand survey
- 2 | Facilitate and incentivize connections between post-secondary education institutions and employers
- 3 | Strengthen the dissemination of existing labour market information
- 4 | Establish sectoral skills consortia in key sectors
- 5 | Increase the Research Support Fund by \$40 million per year
- 6 | Support the creation of a national asset map



Time of transformative change

Canada's economic landscape is changing and the changes we face aren't inconsequential – they're disruptive, transformative and wide-reaching, affecting all sectors of the economy. These changes pose significant challenges and, if harnessed effectively, immense opportunity. The challenge over the next decade will be to create the skilled workforce needed today, while ensuring workers and their employers are prepared for the future.

The federal government has policy levers that can be used to encourage Canadians and their businesses to grow the economy and make all Canadians more resilient and productive. Our submission highlights federal levers that stand to promote growth, innovation and competitiveness, while setting the stage for inclusive workforce development. As disruptive technology changes the skills needed to succeed and re-shapes the business environment, the solutions on offer by Canada's polytechnics* address two critical pressure points that hinder growth potential – human capital development and business innovation.

For Canada to keep pace as a leader in the 21st century global economy, policy solutions to the challenges that currently seize us need to be as creative and disruptive as the economy in which we operate. That means using our publicly-funded institutions to their fullest capability and breaking decades-old logic that growth and innovation are driven only by those who hold advanced degrees. Rather, we must adopt a perspective that recognizes growth and innovation are team sports, requiring a broad spectrum of multidisciplinary talent. To take an inclusive perspective on growth, we need an equally inclusive perspective on talent. A 21st century workforce includes the technician, technologist and skilled tradesperson to the same degree it values the engineer, architect and PhD. This value proposition needs to be reflected in federal policies and programs.

*"Polytechnics" refers to publicly-funded colleges, institutes of technology and applied learning, and polytechnic institutes.

How polytechnics lead Canada's workforce development potential

The polytechnic role is not one of a traditional post-secondary education institution; polytechnics deliver **applied** and **outcomes-based education** to all segments of the working-age population. They are **innovation intermediaries**, enabling businesses to bridge the commercialization gap. Just as polytechnics are leaders in education, they are also economic enablers, growing businesses and communities through workforce development and access to innovation-enabling services.

Canada's polytechnics invest heavily in developing the workforce of the future in three ways: delivering education and training to individuals at all entry and exit points of the labour market; building deep connections with employers in high-growth and priority sectors, and; providing a significant portion of their learner population with work-integrated learning experiences.

Full-spectrum education and training:

Canada's polytechnics offer education and training options to individuals at all stages of their career – those looking to enter the labour market for the first time, those looking to upgrade skills at mid-career and those seeking to re-enter after being displaced. Not only does polytechnic education build resilience by providing in-demand, transferable and future-forward skill sets, it also offers a multitude of flexible entry and exit points. The availability of **lifelong learning** opportunities, with **flexible** entry points, becomes increasingly relevant as the potential for technology to disrupt the labour markets grows – workforce development must now also include **workforce transition**.

Polytechnics offer a diverse selection of credentials, delivered across a range of timelines – four-year bachelor's degrees to one-year graduate certificates and everything in between, including apprenticeships in the skilled trades.

Connecting to employers:

Polytechnic education offers the differentiated advantage of being outcome-based and industry-aligned. The goal of polytechnic education is employment and, therefore, there are built-in levers to ensure strong employment outcomes. Deep employer connections smooth labour market transitions by creating an efficient institution-to-industry pipeline. These labour transitions are critical to productivity as they ensure that human capital is activated quickly.

Work-integrated learning (WIL):

Polytechnic education provides a broad spectrum of WIL opportunities, including field experience and internships – experiences that extend beyond the traditional co-op model and are delivered in-study so as not to extend time in school. Polytechnic education also makes WIL available across disciplines and credentials, ensuring that regardless of what field students are pursuing, there are opportunities for the types of hands-on experiences that support successful school-to-work transitions.



Policy solutions: delivering a future-focused workforce for a 21st century economy

Emerging technologies like intelligent automation are being heralded for their productivity-enhancing potential, but they simultaneously induce anxiety about possible labour displacement. As technologies are adopted, the workplace as we know it is changing. Some tasks are being delegated to machines, requiring people to work side-by-side with advanced technology, while other jobs are completely displaced.

The impact of this technology shift is two-fold: the skills needed to succeed in the workplace are evolving quickly, demanding an ability to work fluently in digital- and technology-enabled environments, while those individuals without 21st century skills are increasingly at risk. Targeted policy solutions must enable the creation and ongoing renewal of a future-forward workforce to insulate and expand our economic growth potential and to minimize the skills polarization that promotes inequality. **We recommend that the federal government:**

1 | Fund the design and deployment of a skills in-demand survey

As technology replaces tasks and jobs, knowing the specific skills and competencies currently and projected to be in-demand is a necessary step to aligning the supply and demand sides of the labour market.

Better articulating the skills required by industry will support an adaptable and inclusive workforce capable of meeting labour market demands now and in the future. **A critical first step is establishing a common skills lexicon.**

2 | Facilitate and incentivize connections between post-secondary education institutions and employers to better align learning outcomes with industry demand.

Canada's polytechnics know the importance of providing students hands-on experience in the workplace and this is why work-integrated learning (WIL) is built into the DNA of all polytechnic institutions. We support the adoption of recommendations put forth in the Business Higher Education Roundtable's pre-budget submission, specifically:

- i. Increase federal WIL funding, with a focus on SMEs and not-for-profits
- ii. Include WIL in existing federal programs, such as the Innovation Superclusters Initiative, and further leverage federal procurement policy to reward companies that participate in WIL

3 | Strengthen the dissemination of existing labour market information (LMI) to ensure individuals have free, accessible and reliable information on which to make decisions about education and training.

A more concerted effort is needed to articulate clear, concise and user-friendly information to those who are pursuing education, training and employment in an era of prospective disruption and change. Strengthening the dissemination of existing LMI will:

- Provide necessary information to individuals to access higher-wage employment, improve their standard of living and drive social mobility
- Enable inclusive growth by enhancing the accessibility of information

4 | Establish sectoral skills consortia in key sectors to de-risk upskilling and reskilling among mid-career workers.

Sectoral workforce planning ensures individuals at risk of displacement and those who have been displaced are connected to the information and services they need to reskill, upskill and access lifelong learning opportunities. Establishing funding for sectoral consortia will provide a space to organize the public and private sector, and match the supply and demand sides of the labour market to employment and retraining opportunities.





How polytechnics lead Canada's business innovation potential

Polytechnics are innovation intermediaries – connecting employers to innovation-enabled talent and equipment to help them scale. Operating at the near-to-market end of the innovation continuum, polytechnics assist industry with experimental development, business validation, technology access and adoption, and last-mile pre-market product and process testing.

Polytechnics also make available physical equipment (such as 3D printers), to assist firms to test capital-intensive components of the product development process. Polytechnic solutions at this end of the innovation spectrum contribute significantly to innovation-led growth in Canada.

The innovation services offered by polytechnics have the further benefit of providing real-world innovation experience to students. Often, when companies partner with a polytechnic, students will be involved in the applied research, building their innovation literacy and readiness.

Since 2008, Polytechnics Canada's members:

- Serviced 13,000 Canadian companies
- Conducted 12,900 applied research projects
- Engaged 11,500 staff and faculty in applied research activity
- Involved 80,300 students in applied research projects
- Developed 5,100 prototypes for industry

Policy Solutions: delivering business innovation for a 21st-century economy

Near-to-market innovation is an area on the innovation spectrum in which polytechnics hold a comparative advantage. This advantage is particularly important for innovation-led growth when considering that almost 98 per cent of all businesses in Canada are SMEs, with an average of 6 to 7 employees and annual revenue under \$50 million.

These businesses employ more than 70 per cent of the private sector labour force, so targeting the innovation potential of SMEs can yield significant inclusive economic benefits to Canada. Though Canada's polytechnics partner with firms of all sizes, the contribution they make to SME productivity is key to inclusive growth. Most firms of this size do not have in-house laboratories or equipment, often have not invested in staff who perform R&D and find the innovation process costly. Polytechnics are helping Canada's middle class grow, scale and enhance their global competitiveness by de-risking innovation – but we can do more.

To enhance Canada's business innovation and growth potential, **we recommend the federal government:**

1 | Increase the Research Support Fund (RSF) by \$40 million per year to better enable polytechnics to service industry innovation needs.

Polytechnics are limited in their ability to serve industry partners with research support due to current federal program design. Specifically, indirect costs of research incurred by institutions that deliver projects through the College and Community Innovation Program (CCIP) are not eligible for the RSF. Eligibility would enhance capacity to generate business innovation and provide industry a more predictable path to commercialization.

2 | Support the creation of a national asset map to provide SMEs information on existing innovation resources and supports.

Navigation to innovation supports is a perpetual challenge for SMEs in Canada. As such, the federal government should support the creation of an open-source asset map of R&D facilities in Canada. An asset map should include innovation-enabled equipment and institutions that can be utilized by industry for innovation and R&D needs. An asset map stands to help Canadian SMEs make better decisions by giving them insights into the people, physical structures, organizations and institutions that can be utilized to create exponential innovation impact.



Conclusion

Inclusive economic growth depends on investments in Canada's people and businesses. Polytechnics are intimately tied to both, offering workforce development solutions that reduce skills polarization and insulate the economy from the effects of disruptive technology. Polytechnics connect businesses of all sizes to the talent and equipment they need to grow, scale and innovate.

Remedying Canada's growth challenge doesn't just mean expanding our GDP – it means creating an economic system that works for everyone. If this is the challenge, then it is imperative that Canada's polytechnics are an integrated part of the solution.

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