



**RIGHT-SIZE, RE-BALANCE, RE-TOOL THE POLYTECHNIC  
CONTRIBUTION TO PRODUCTIVITY AND COMPETITIVENESS**

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

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*Text conforms to word limits established by the Standing Committee on Finance.*

## Executive Summary

Canada's polytechnics<sup>1</sup> have significant untapped innovation and skills development potential that is key to remedying persistent productivity and competitiveness challenges. Investing in, and scaling the existing capabilities of polytechnics can yield valuable benefits to the Canadian economy.

Polytechnics Canada, the national association of research-intensive polytechnics, colleges and institutes of technology, presents a suite of recommendations that right-size, re-balance and re-tool federal supports, enhancing productivity and competitiveness:

- Grow support to polytechnic and college applied research and innovation.
- Improve business access to polytechnic innovation capability.
- Create a regional commercialization voucher program.
- Invest in new labour market information tools.
- Scale federal work-integrated learning supports.
- Invest in prior learning recognition supports for mid-career workers.

Costing details for each of our recommendations are available.

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Labour productivity and business competitiveness are long standing challenges for Canada. While income inequality, and regional economic disparity compound these problems, the changing nature of work due to automation, global technological change, and looming retirements increase economic uncertainty. Sharply targeted and efficient policies and programs to enhance productivity and competitiveness are critical to address these trends, especially in a period of deficit spending. Perpetuating the status quo will not lead to effective or inclusive growth.

Polytechnic institutions are one important economic development lever to address these persistent challenges, but are highly under-utilized and under-leveraged in federal policy and programs.

Polytechnics deliver outcomes across multiple overlapping fronts that make workers more productive and businesses more competitive. Enhancing productive capacity through training Canada's multidisciplinary workforce of the future, polytechnics simultaneously offer innovation and commercialization solutions to Canadian businesses, making them more competitive in domestic and global markets.

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<sup>1</sup> For reasons of space, "polytechnics" refers to publicly funded colleges, institutes of technology and applied learning, as well as polytechnic institutes, depending upon each provincial designation. "Polytechnics" are differentiated from universities and community colleges by their degree-granting status, and by their alignment with industry and employer needs for skills and innovation outcomes. Members of Polytechnics Canada are the leading, large, research-intensive polytechnic institutions of applied education in the country.

Polytechnics are committed to outcomes-based, demand-driven education, training, and innovation – this is the core motivation that differentiates them from the discovery research focus of universities.

Despite the contributions polytechnics make to the Canadian economy, significant systemic barriers continue to constrain their impact:

- Research is often incorrectly viewed as a mutually exclusive choice between basic and applied. This unnecessarily creates a counter-productive tension in programs that should be supportive of both.
- Science and innovation are treated as one and the same; they are not.
- There is a hyper concentration of funding for university-driven, basic, discovery research. In contrast, the entire college sector, including Canada's leading polytechnics is eligible for only 1.7% of over \$3 billion in annual federal funding for higher education R&D.
- The highly oversubscribed College and Community Innovation Program (CCIP), administered by NSERC, is the only research granting council program that supports the polytechnic model of collaborative industry applied research and innovation.
- Federal talent programs designed to support the innovation skills needs of business do not harness the full spectrum of talent, including skilled tradespeople, technicians, and technologists.
- Persistent biases create a false hierarchy in higher education credentials.

The Government's 2017 [Innovation and Skills Plan](#) correctly sets out a range of initiatives to meet the nation's aspirations for jobs and growth. However, Canadians still need specific, targeted action for both innovation and talent to directly impact these persistent challenges and barriers. The next federal budget should right size, re-balance and re-tool federal programs to harness and scale the contributions of polytechnics to our economy.

### **The polytechnic contribution to applied research and innovation**

Polytechnics stimulate business innovation by providing expertise in experimental development, business validation, technology adoption and access, and last mile pre-market product and process testing. They also make available physical equipment to assist firms in the capital-intensive components of the product development process.

Polytechnics ensure firms, large and small, and across all industry sectors innovate and bridge the commercialization gap. In the last five years, 75% of our members' industry innovation collaboration was with small and medium-sized enterprises (SMEs) that would otherwise lack the capacity and capital to innovate.

In 2016 alone, our members:

- Collaborated with 2,250 companies.
- Co-developed 1,150 prototypes.
- Saw a 37% increase in applied research revenues from industry partners.

## **Improving business dynamism: right-size and re-balance investment in polytechnic applied research**

Virtually all of the support for industry applied research collaboration with polytechnics comes from CCIP:

- CCIP supports over 110 colleges and polytechnics with an envelope of \$53 million per year.
- Funding for CCIP has allowed colleges and polytechnics to establish capability to purchase equipment, establish research offices, fund research personnel, and develop collaborative industry-led research partnerships.
- CCIP has received no federal increase in the past two budgets, and due to its many multiyear commitments, no new competitions can be launched.

When small business dynamism should be a key priority for the country, now is the time to ramp up investment in effective innovation collaboration by taking the following steps:

### **1. Grow support to polytechnic and college applied research and innovation activity**

To meet demand for innovation, the Government should significantly grow CCIP's funding by doubling current commitments. There is clear demand for polytechnic-industry innovation that is demonstrated by the 2,815 unique firms supported by CCIP in the last year alone; current funding levels cannot effectively meet this demand.

Further, CCIP's framework should be expanded to meet the demand for innovation in society as a whole, and include the health sector, which is today unable to harness the innovation capabilities of polytechnics.

### **2. Improve business access to polytechnic innovation capabilities**

To increase industry innovation through use of polytechnic applied research capabilities and to create the efficiencies sought by the ongoing horizontal review of innovation programs (announced in Budget 2017), CCIP should be consolidated within Innovation Canada (IC), the new platform at ISED for business innovation.

Housing CCIP at IC will allow the dual Budget 2017 goals of simplification and better client focus to be more easily achieved by offering firms seeking to innovate a single point-of-entry to federal innovation programs and will additionally improve the efficiency of R&D support to SMEs.

### **3. Create a regional commercialization voucher program**

To stimulate regional innovation, and deepen industry-academic ties, a national post-secondary commercialization voucher initiative should be delivered by Innovation Canada working with the regional economic development agencies. The voucher would enable the rapid scale-up of SME expertise in marketing, sales strategies, and business models to accelerate export market development.

This voucher program will provide an essential complement to the current supercluster funding commitment, strengthening innovation ecosystems across Canada.

## The polytechnic contribution to skills

The polytechnic model of publicly funded applied, advanced education enhances Canada's productive capacity by building a multidisciplinary workforce, equipped with 21<sup>st</sup> century skills. This is achieved by:

- Offering technical, industry-aligned, and hands-on education across all credentials – four-year bachelor's degrees<sup>2</sup>, diplomas and advanced diplomas, certificates, and apprenticeships in the skilled trades.
- Providing students real-world experience through access to significant work-integrated learning opportunities.
- Including employers in curriculum development, ensuring students are equipped with in-demand skills for in-demand sectors.
- Maintaining support for the skilled trades and their contributions to the economy.

In 2015/16, with over 212,000 full time students, 95,000 part-time, 280,000 continuing education registrations, and 46,000 apprentices, the thirteen members of Polytechnics Canada represent a significant portion of Canada's learning population.

Polytechnics offer skills training solutions to individuals in all stages of the labour market: those looking to enter, those who are currently employed but need up-skilling, and those seeking to re-enter after being displaced. We recognize that good labour market policy that targets productivity must be just as much about getting people to jobs, as it is about keeping people in jobs.

## Improving worker productivity: re-tool and re-train

An ever-present challenge is getting the right people, with the right skills, to the right jobs. Canada's productive capacity suffers when the skills individuals possess are poorly aligned with the jobs they take. Policies that improve the efficiency of skills matching in labour markets are essential. Canada must do a better job of navigating individuals through both the labour market and post-secondary education.

In implementing the Government's [Innovation and Skills Plan](#), the Government should make it easier for people to respond to labour market trends and improve the economic opportunities for all workers in all sectors. This includes supporting Canada's need for certified tradespeople, technicians, and technologists, using the unprecedented opportunity of the \$190 billion that has been dedicated to infrastructure. The impact of these funds can be multiplied if they are leveraged to ensure that our next cadre of skilled workers are getting the experience they need to both build and maintain our next generation infrastructure.

All forms of post-secondary education and training should be on an equal footing, and much more can be done to let Canadians know that there are excellent publicly funded training solutions beyond a university degree. In order to most effectively navigate individuals to jobs and keep individuals in jobs, we urge the Committee to support these four recommendations:

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<sup>2</sup> BCIT also offers Masters degrees.

## **1. Invest in new data to fill critical gaps:**

### **i. Invest in a new Skills-in-Demand survey**

Equipping individuals with in-demand skills requires first identifying and forecasting the skills necessary for a rapidly evolving labour market. Currently, there does not exist an employer survey *with a specific focus on skills*.

The Government's new skills organization should prioritize creating a survey that can inform learners and educators, ultimately creating better labour market alignment between job seekers and employers.

### **ii. Invest in the creation of a Nationally Registered Apprenticeship Number**

Canada lacks accurate, timely and relevant data about our apprentice population and specifically, the reasons for the low rates of trades certification.

The federal government should allocate funds to Statistics Canada to implement a Nationally Registered Apprenticeship Number (NRAN). An NRAN would allow the federal government to track apprentices, from their earliest point of entry, and build a more complete picture of how they move through the trades training process, and where the barriers to completion rates exist.

## **2. Scale existing federal work-integrated learning (WIL) supports**

Work-integrated learning is an integral tool that boosts the ability of students to succeed in, and attach to, the labour market. Newly created WIL programs at ESDC and ISED should be scaled to meet employer demand and the scope of available placements broadened across industry sectors.

## **3. Invest in national prior learning recognition supports for mid-career workers**

Government action is needed to make it easier for employers to identify which skills jobseekers already have and reduce the friction of matching people to jobs.

Prior learning assessment and recognition, the identification and validation of formal and informal learning, allows individuals to establish and market existing skill sets. Recognizing the existing stock of skills individuals possess, eases labour market redeployment and further allows for upskilling opportunities to be more easily identified.

Polytechnics and colleges already have core expertise in conducting prior learning assessment. Federal investments to enhance these capabilities can address the issue of job displacement due to automation by more effectively identifying re-training needs. This will further improve uptake of the student loans and grants made available to adult learners in Budget 2017

## Conclusion

The Government's ambition to improve productivity and competitiveness, while reducing income inequality and growing Canada's middle class, requires smarter use of higher education's contribution to the economy and society.

Now is the time to harness the full capabilities of Canada's polytechnics. In Budget 2018, the federal government should:

- Right-size the investment in polytechnic and college applied research.
- Re-balance the disparity in its contribution to higher education R&D.
- Re-tool and modernize its supports for learners and employers.

We look forward to working with the Committee to ensure that as our economy shifts, every Canadian is an active and productive contributor.

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