

The Mitacs logo features the word "Mitacs" in a bold, white, sans-serif font. The letter "i" is lowercase and has a white dot above it. The letters "t", "a", and "c" are lowercase and have a white horizontal bar through their middle. The letters "m", "i", and "s" are lowercase and have a white dot above them. The logo is set against a blue background with abstract, overlapping geometric shapes in various shades of blue.

*Inspiring innovation
Inspirer l'innovation*

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

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Introduction

The economy of tomorrow is built upon ideas, harnessing insight and principles from practically every discipline of human knowledge. Countries that best nurture, develop and commercialize ideas will be those best positioned for leadership in an economy that is increasingly driven by innovation.

As Canada marks 150 years since confederation, there is a great deal of optimism for the future. Canada is projected to lead the G7 in economic growth in 2017,¹ and its top-rated cities boast thriving startup ecosystems which contribute to a vibrant and diversified economy. With a highly educated population, a reputation for openness and diversity, and globally competitive universities,² Canada is well-positioned for success in an interconnected, knowledge-based economy.

These are exciting times for Canada that will lead to increased prosperity if we are willing to take advantage of the window of opportunity we now have. For competitiveness in an increasingly fast-paced economy, Canada requires a coordinated and responsive innovation ecosystem that will allow us to attract and develop top talent, invest in fundamental or investigator-led research, create fertile conditions for startups and company growth, and connect academic talent to companies.

Recent initiatives of the federal government, such as the Innovation Superclusters Initiative, the Strategic Innovation Fund, the Foreign Direct Investment (FDI) Hub, and the Global Skills Strategy represent important steps towards tackling many of the challenges that hamper Canada's innovation performance. The Budget 2017 investment in Mitacs programming is a key component of the Government's Innovation and Skills Agenda that will support 10,000 innovation internships per year. This investment will not only stimulate innovation through building strong research collaborations between universities and the private sector, it will also ensure that graduate students are provided with critical work-integrated learning opportunities that help build their skills and improve their employability upon graduation.

The Mitacs internship experience has shown that companies benefit from having access to a broad pool of highly qualified personnel, and that collaborations with researchers and students from different backgrounds lead to creative, innovative solutions that may not have otherwise been possible. We know that 10% of industry partner companies surveyed indicated that they invested more than \$500,000 in new R&D as a result of their participation in the program, while 30% invested between \$100,000 and \$500,000, further stimulating innovation and creating jobs for Canada's researchers.

To continue this trend, substantial and sustained investment in the research ecosystem is crucial.

¹ International Monetary Fund. (2017). [World Economic Update](#).

² Times Higher Education (2017). [World University Rankings](#).

To effectively deploy our best and brightest minds, we must provide sustained support across the research and innovation spectrum.

As one of the most highly educated countries in the world, and as home to several universities ranking in the global top-fifty, Canada boasts outstanding research talent and infrastructure that is recognized internationally.³ Given Canada's strong reputation and the uncertainty currently faced by scientists and researchers in some other leading jurisdictions, Canada has a unique window of opportunity to build on our strengths to become a world leader in research and innovation.

A strong and innovative economy is rooted in a strong foundation of fundamental research. The findings of the Advisory Panel for the Review of Federal Support for Fundamental Science recognize this link and provide an important roadmap to strengthening Canada's research ecosystem. As it considers how best to allocate funds for Budget 2018, Mitacs encourages the Government of Canada to support the key recommendations of the Report.

In particular, Mitacs supports recommendations to grow Canada's research ecosystem through increased investments in Canada's granting councils to support investigator-led research, through core competitive programs as well as international research collaboration, multidisciplinary work, high-risk research and projects requiring a rapid response.

Mitacs is proud to work collaboratively with the Natural Sciences and Engineering Research Council of Canada (NSERC), the Social Sciences and Humanities Research Council (SSHRC) and the Canadian Institutes of Health Research (CIHR), having signed agreements with each for integration and alignment to avoid duplication of efforts. Increased support for fundamental research will ensure that researchers have the ability to pursue their ideas and interests in Canada, while signaling to the world that Canada is a research destination.

To effectively attract, develop and deploy the best and brightest minds, Canada must provide its researchers with opportunities to access support at all stages of their careers. Currently, early and mid-career researchers often struggle to obtain the support they need to pursue their research interests. For many, missed opportunities to undertake meaningful research projects may impact their future career prospects and prevent them from fully applying their knowledge and ideas. The Advisory Panel's report has recommended that special attention be paid to early career researchers, through a close examination of best practices and public reporting on outcomes.

This focus on early career researchers is further supported by work-integrated learning opportunities for graduate students, which allow young researchers to test their ideas and apply their skills to solve research challenges faced by businesses and not-for-profits. Doing so not only deploys our research talent into the workforce, but also provides individuals with experience and networks that will strengthen their career competitiveness. At the same time, access to research talent provides Canadian businesses and not-for-profits with new ideas and perspectives that will help them innovate and grow.

The Advisory Panel has also recognized the importance of Indigenous research, and recommends the development of long-term support for Indigenous research that can help reduce economic and health outcome gaps of Indigenous Peoples. Mitacs strongly supports this recommendation.

Support for fundamental science is as important today as it has ever been. Fundamental research often leads to unanticipated discoveries with tremendous commercial or societal value. In order for Canada to

³ BBC. (2017). [How Canada became an education superpower.](#)



assert itself as a global innovation and research leader, we must provide sustained support across the research spectrum, from basic research to commercialization. It is important to emphasize that breakthroughs are based on new ideas and their successful development and implementation.

To strengthen Canada's innovation ecosystem, we must link and leverage new and existing innovation initiatives.

The federal government has demonstrated its commitment to boosting Canada's innovation performance through the establishment of new programs and initiatives such as the Innovation Superclusters Initiative, the Strategic Innovation Fund, The Foreign Direct Investment Hub and the Global Skills Strategy. Through these efforts, Canada is asserting itself as an innovation leader, and is strengthening its ability to compete in a fast-changing global economy.

As these new initiatives are implemented, Mitacs recommends that existing programs supporting innovation in Canada be fully linked and leveraged to support emerging priorities. As Mitacs scales its programs over the next five years, we are committed to coordinating our efforts as new federal initiatives are implemented. By utilizing our national and international network of businesses, not-for-profits, professors, and students to support new federal initiatives, Mitacs sees itself as an important asset to the Canadian innovation ecosystem, and is eager to work collaboratively with partners.

Technological trends towards automation and disruption will require increasingly rapid and coordinated responses to emerging challenges. Mitacs employs an approach to program development that emphasizes responsiveness, encouraging new and unique approaches to support Canadian research and innovation. Our programs are developed through an iterative process that allows us to conceive and test pilot programs prior to a full-scale launch. Through this approach, we are able to respond quickly to emerging issues and pressing priorities with actionable solutions.

For example, Mitacs strongly supports the recommendations of the Truth and Reconciliation Commission report, which include a call to action to focus on the role of educational institutions and businesses to ensure that Indigenous peoples have access to education, training and job opportunities. Mitacs also recognizes the recommendation of the Advisory Panel for the Review of Federal Support for Fundamental Science to better support Indigenous research and build Indigenous research capacity. With these recommendations in mind, the Indigenous Community Engagement (ICE) pilot is a Mitacs pilot program that engages directly with Indigenous communities to work collaboratively on research projects that address issues of priority identified by the partner Indigenous community.

A number of ICE pilot projects have been approved and are in various stages of implementation, covering a range of issues from natural resource management to food security to housing and homelessness. Many of these projects will share their outcomes with other Indigenous communities, thereby amplifying the impact of their work. Engaging with Indigenous communities on shared research priorities will also help build the capacity of Indigenous researchers and non-Indigenous researchers alike, and can help unlock new and innovative ideas.

As another example, the Mitacs Converge pilot program seeks to grow small to medium enterprises (SMEs) in Canada by connecting them with multinational enterprises and talented researchers at Canadian universities to collaborate on industrial research challenges of shared interest. Multinational enterprises gain access to specialized research and commercialization taking place at Canadian SMEs, complemented by the expertise of talented academic researchers. In return, the SMEs are able to



leverage their resources and develop increased R&D capacity, while identifying new global partners and customers. Meanwhile, academic researchers gain training and employment opportunities for students and postdocs across all disciplines, while growing their networks by connecting with Canadian and international companies.

The Converge program has demonstrated significant success in attracting large multi-national enterprises — including the likes of Unilever, IBM, Honda, Ciena and others — into partnerships with Canadian SMEs, thereby consolidating their research operations in Canada and attracting their research dollars into the Canadian system. Converge can serve as an important tool to support the role of the FDI Hub, as well as to support the formation and growth of industrial clusters and superclusters.

As new federal initiatives and programs are established, Mitacs, and others actively working to promote research and innovation in Canada, have valuable roles to play in complementing new efforts. By linking with and leveraging new and existing programs and initiatives, Canada can develop a highly coordinated and responsive innovation ecosystem.

Conclusion

Canadians in 2017 enjoy the highest quality of life in the world,⁴ and not surprisingly, the world is beginning to take notice. Many expatriate Canadian researchers and entrepreneurs are eager to return to Canada,⁵ just as Canadian universities are reporting surging numbers of applications from international students.⁶ In the global competition for talent, Canada is establishing itself as a highly desirable destination. At the same time, the federal government is taking bold steps to strengthen Canada's innovation ecosystem, ensuring that Canadians have the resources they will need to thrive in an idea-driven economy.

By ensuring that fundamental research is well supported, and that new initiatives are effectively coordinated with proven programs to support innovation, there is much reason to be optimistic for Canada's innovation and research future.

⁴ US News. (2017). [Best Countries Rankings](#).

⁵ Lorinc, John. (2017). [Maclean's: Silicon Valley is looking to Canada](#).

⁶ Chiose, Simona. (2017). [Globe and Mail: Canadian universities see surge of international students](#).

