



Canada Foundation for Innovation

Submission to the House of Commons
Standing Committee on Finance

2013 Pre-Budget Consultations

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BUILDING ON A SOLID FOUNDATION

Stabilized funding for Canada's research infrastructure

The Government of Canada's investments in cutting-edge research in our universities, colleges and research hospitals are generating the scientific excellence that is crucial for producing the new ideas, knowledge and highly qualified people necessary to drive the country's capacity to innovate in all sectors and improve the quality of life of all Canadians.

Today, the results of these investments speak for themselves. While Canadians make up only 0.5 percent of the world's population, Canada's researchers are producing almost 5 percent of the world's highly cited research papers. In a recent assessment conducted by the Council of Canadian Academies, Canadian research is now ranked 6th in the world for overall impact¹.

According to the Science, Technology and Innovation Council's (STIC) most recent report, fostering a strong national research and innovation system is crucial to Canada's long-term success in the 21st century². The Government of Canada — through its research organizations, and in conjunction with the provinces and territories, universities, colleges, health sciences centres, and their private and not-for-profit sector partners — supports the talent, knowledge and innovation that yields fundamentally important social, environmental, economic and health benefits for all Canadians. This support has, according to the Council of Canadian Academies, helped create a research community that is healthy, growing and contributing to the nation's capacity to innovate³. Clearly, significant investments over the last two decades have contributed to Canada's emergence as one of the world's most successful research- and knowledge-intensive societies.

Continuing to invest in a strong research ecosystem that covers all disciplines and the spectrum of research — from discovery to applied — will sustain and enhance Canadian research excellence and competitiveness. It will also maintain Canada's world-class research and training environment which provides the necessary infrastructure for top researchers and talented students to tackle the most challenging questions facing society.

It has become clear that, whether conducting work in genomics, medical imaging, ICT, materials research or big data management, today's researchers simply cannot do world-class research without having access to leading-edge research infrastructure.

¹ Council of Canadian Academies, *The State of Science and Technology in Canada, 2012*, p.49.

² Science, Technology and Innovation Council, *State of the Nation 2012, Canada's Science, Technology and Innovation System: Aspiring to Global Leadership*

³ Council of Canadian Academies, *The State of Science and Technology in Canada, 2012*, p.xii.

The CFI, therefore, recommends that:

1. the Government of Canada enhances its support for world-class research and technology development through the federal granting agencies. This support will further increase research excellence, promote more inter-sectoral partnerships and improve capacity for digitally-enabled research;
2. the Government of Canada provides the Canada Foundation for Innovation with stable, annual and predictable funding that will ensure Canada maintains and enhances its hard-won competitive advantage in higher education research and technology development.

A cornerstone of Canada's research landscape

For more than 15 years, the Canada Foundation for Innovation (CFI) has been enhancing Canada's capacity to conduct world-class research by investing in state-of-the-art research infrastructure.

As the only federal organization devoted to funding research tools, equipment, laboratories and other infrastructure, the CFI has become a critical element in the research funding landscape. CFI funding complements federal support for research provided through the federal granting agencies — NSERC, CIHR and SSHRC — and Genome Canada. And this system works.

Proven track record. Responsible investments.

Since its inception, the CFI has invested \$6 billion in state-of-the-art research facilities. Through its unique funding model, these investments have leveraged close to \$8 billion from its funding partners — provinces, institutions, private and non-profit sectors.



Not the time for complacency

The research community appreciates the investments made by the Government of Canada through the CFI and the federal research granting agencies in support of world-class research and research infrastructure. And as stated earlier, these investments are paying off.

But this success is fragile. Canada has benefitted from an impressive brain gain due to the creation of the CFI, the Canada Excellence Research Chairs, the Canada Research Chairs and other unique programs. We must keep in mind that we live in a globally competitive environment, where today's brain gain can become tomorrow's brain drain if we do not maintain our investments in research and innovation.

As highlighted in *Paradox Lost: Explaining Canada's Research Strength and Innovation Weakness* (Council of Canadian Academies, 2013), these investments are generating the scientific excellence that is crucial for:

- producing highly qualified people, trained at the leading edge of science and technology development and capable of driving the innovation capacity of Canadian business;
- providing Canadian researchers and their partners with access to the global pool of new knowledge and the latest technological breakthroughs; and
- making Canada a stronger magnet for business investment in knowledge-intensive industries where ready access to world-class talent and facilities is a prerequisite.

Now is the time to commit and plan for the future

Why now? Building world-class research infrastructure projects takes time: each project requires careful planning, is subject to a rigorous merit-review process, and because of CFI's funding framework, our investments involve multiple stakeholders — provinces, institutions and private and non-profit sectors. All of these stakeholders need time to plan their investments, which they could more effectively do with a longer term funding commitment.

It is also important to remember that CFI investments in research infrastructure will reach critically low levels starting in 2016, once current federal allocations have been awarded.

Stable, annual, predictable funding: Planning for a stronger future

The CFI is seeking a commitment in Budget 2014 for stable, annual predictable funding at a level required to support Canada's strong research accomplishments and ensure that Canada remains a global science and technology powerhouse.

This approach will help universities and colleges effectively implement research strategies, focus on priority areas and plan over the long term. Stability and predictability will also allow the Government of Canada, along with the provincial governments that provide partner funding to institutions, to better plan expenditures into the future. It will also help companies establish longer term collaborations and better calculate the potential returns on investments in R&D.

Going forward, the CFI has assessed research infrastructure requirements to be between \$400 million and \$450 million dollars per year. This is directly in line with historical investments made by the Government of Canada to the CFI over the last 15 years.

Our analysis further indicates that in the years ahead, the CFI should strive to balance capital infrastructure investments and operational support, particularly in relation to research facilities that serve a broad base of users across the country.

Meeting national fiscal objectives

The CFI recognizes the Government of Canada's fiscal priorities, and our proposal is well aligned with national fiscal objectives. Here is how:

- The CFI is seeking a \$2 billion commitment from the Government of Canada in Budget 2014.
- Funds announced in Budget 2014 would be awarded to institutions over 5 years starting in 2016.
- Funds would flow gradually to the CFI from the Government of Canada over 8 to 10 years starting in 2017, when the Government of Canada has returned to balanced budgets.

A broad mandate: Open for business

State-of-the-art facilities funded by the CFI are not only hotbeds of discovery research, but many are also open for business. An increasing number of companies are turning to universities and colleges in search of solutions to their business and manufacturing challenges. In fact, almost 300 facilities and research labs have volunteered to be part of a new online directory developed by the CFI, the Research Facilities Navigator, that will help business find research expertise at universities, colleges and research hospitals.

In these research facilities, and many others, companies are already finding new ideas that help them develop better technologies and processes that enhance business performance and lead to high-quality products. They access state-of-the-art equipment they would not otherwise be able to afford and work with graduate students who can apply their skills in business settings.

The CFI Navigator is scheduled to launch in fall/winter 2013. Developed as a tool to facilitate linkages between business and researchers, the site will help meet part of the CFI's mission — to enhance the capacity of Canada's universities, colleges, research hospitals and non-profit research organizations to support private-sector innovation and commercialization.

A foundation for the future

Adopting a sustainable, predictable approach to research infrastructure funding will better enhance our current capacity for research and innovation by continuing to provide universities and colleges the ability to attract and retain top research talent, and by promoting sound financial and scientific planning in support of the federal government's innovation agenda.

This kind of commitment to fund research infrastructure in Action Plan 2014 would send a strong message to Canadians that Canada is serious about becoming a competitive nation built on research and innovation.



Research builds communities

La recherche au service des collectivités

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