



Canada Foundation for Innovation
Fondation canadienne pour l'innovation

Notes for a presentation

by

Dr. Eliot A. Phillipson
President and CEO

to the

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Science and Technology**

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Check Against Delivery

Thank you for the opportunity of addressing the Senate Committee on Social Affairs, Science and Technology. I have been asked to provide the views of the Canada Foundation for Innovation (CFI) regarding the impact of the Science and Technology Strategy on research performed in the public sector. I am pleased to do so, but will limit my comments to the public, *non-government sector*, in accordance with the mandate of CFI.

Canada's prosperity in the knowledge economy of the 21st century will depend increasingly on our ability to innovate – to generate knowledge and ideas from which are derived new products, services, and policies that create economic wealth, enhance social foundations, sustain the environment, and improve quality of life. These concepts are central to the Government of Canada's S&T Strategy – *Mobilizing Science and Technology to Canada's Advantage*.

The Canada Foundation for Innovation (CFI) is a key player in the S&T Strategy. CFI was created in 1997 as an independent corporation by the Budget Implementation Act, with a mandate to invest in research infrastructure in Canadian universities, colleges, research hospitals, and non-profit research institutions, and thereby strengthen their capacity to carry out world-class research and technology development that benefits Canadians.

The CFI funds up to 40% of a project's infrastructure costs. The institutions then leverage this funding to attract the remainder from partners in the public, private, and non-profit sectors. Since its creation, and including the two most recent budgets, the CFI has been entrusted with an investment of \$4.24 billion by the Government of Canada. By 2010, it is estimated that the total capital investment by the CFI, the research institutions, and their other funding partners, will exceed \$11 billion.

CFI's investments in equipment and infrastructure complement those made in people and in the direct and indirect costs of research by the three federal research funding agencies, the Canada Research Chairs Program, Genome Canada, and other federal programs. Together these investments have had a profound transformative impact on Canada's R&D enterprise.

However, the global S&T landscape continues to evolve rapidly and international competition has become evermore intense. The S&T Strategy is therefore very timely in providing an articulation of the federal Government's priorities and policies in promoting S&T in Canada; and its clear commitment to sustain and promote Canada's competitiveness through investments in higher education R&D.

In addition to creating Knowledge, People, and Entrepreneurial Advantages for Canada through specific policies, the Strategy also identifies four core principles that will guide all Government S&T initiatives:

- Promoting world-class *excellence* through an environment of healthy competition to ensure that funding supports the best ideas.
- Focusing on strategic *priorities* that reflect Canadian strengths.
- Encouraging *partnerships* between academia, industry, and government to accelerate the pace of discovery, innovation, and commercialization.
- Enhancing *accountability* in demonstrating to Canadians the benefits of investments in S&T.

These core principles provide a useful framework for analysis of the potential impact of the S&T Strategy on research performed in the higher education sector. The impacts include both benefits and risks, of which only a few will be highlighted in this brief overview.

Promoting Excellence

Promoting and supporting excellence is a fundamental requirement for success in a highly competitive global environment. In today's economy, being good is not good enough. The term excellence means that research dollars are invested in institutions, groups, and individuals whose work has been evaluated as being of the highest quality, using international benchmarks. The challenge will be to ensure that the most rigorous, appropriate, and transparent criteria of excellence are used as a basis for the investment of resources, a process that requires the type of specialized expertise that exists in the Tri-Council funding agencies and the CFI. In fact, CFI's current competition for \$520 million is a demonstration of excellence in action – the identification of innovative and transformative projects that will lead to advantages for Canadians.

Focus on Priorities

Focusing resources in areas of Canadian strength and opportunity, as outlined in the S&T Strategy, will enhance Canada's global competitiveness, particularly as other advanced economies undertake a similar process. Therefore, such an approach is to be commended and will help to ensure that resources are used to build on Canadian strengths. However, by their nature, strategic priorities are most easily defined in the domains of applied research and technology development. There is therefore a risk that a strategic approach that is too restrictive and narrow in scope could overlook support for basic, discovery research, which history has demonstrated repeatedly is the foundation of the most innovative ideas and technologies. It will therefore be important to ensure significant involvement of the Canadian academic research community in defining research priorities.

Partnerships to Accelerate Innovation

The evolving world-wide S&T landscape clearly requires new and closer working relationships between academia, industry, and government in order to facilitate knowledge translation, technology development, innovation, and commercialization. The S&T Strategy includes several new initiatives that will foster such relationships, including Centres of Excellence in Commercialization and Research, and the College and Community Innovation Program. However, there is a risk that too great an emphasis on immediate payoffs of academic research will excessively skew the research enterprise to narrow industry needs, to the detriment of basic, discovery research; and to the detriment of disciplines such as the social sciences and humanities which are critical to the type of creativity, communication, moral and ethical reasoning, and business and management skills required for successful entrepreneurship. Thus it will be important to ensure that the drive for short-term gains does not undermine the long-term capacity of universities for research across all disciplines.

Accountability in Demonstrating the Benefits of Research

The S&T Strategy appropriately challenges the research community to demonstrate and communicate the results of public investments in R&D, and the benefits of such investments to Canadians. This principle of accountability for the use of public funds is welcomed by the academic community. It is important; however, that Government not adopt a time horizon that is too short for the demonstration of benefits, many of which will take years to materialize. In this respect, investing in research is analogous to investing in childhood education – the economic and social benefits may become evident only years later, and often cannot be predicted in advance.

Summary

In summary, from the viewpoint of the Canada Foundation for Innovation, the Science and Technology Strategy is a welcomed document that will have a positive impact on research and development performed in Canada's research institutions. The strategy builds on the strong research foundation that has been established in the last ten years, and will ensure that Canada continues to innovate and to prosper by focusing on its advantages.