

A “Hands-on” Approach to Science, Technology and Innovation Policy

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What is science, technology and innovation policy?

Science, technology and innovation (STI) policy in Canada, as a subject of study and an area of professional expertise, is relatively unseen, if for no other reason than despite many attempts, the federal government has been unable to form a national consensus on STI issues and policies. The result has been a *laissez-faire* approach to STI issues which has, over the past decades, severely damaged Canada's ability to establish its position in the global scientific community.

Under these circumstances why should we even study STI policy? There are several objectives:

- assist in formulating of STI policy, in support of economic and social objectives;
- provide advice to ministers and other senior officials;
- support, justify, and critique STI program expenditures;
- provide information on scientific activities for elected officials, journalists and other stakeholders; and,
- analyse the national system of innovation

The Centre for Policy Research on Science and Technology (CPROST) is one of the few academic centres in Canada specifically devoted to these subjects.

What is CPROST?

CPROST was established in 1988 as an independent institute within the Faculty of Applied Science at Simon Fraser University (SFU) to carry out research on the relationship between public policy and technology. CPROST brings together practitioners and scholars to study the interaction of advances in STI, their implementation in the marketplace, and their impacts on community and individual interests.

The CPROST mandate is to:

- to improve public policy and private decision-making processes by increasing public participation and promoting sound methodologies for the implementation of technological change;

- to promote an understanding of the relationship between public and private sectors as they stimulate, monitor and control the process of technological innovation;
- to develop and retain researchers skilled in advanced quantitative and quantitative research techniques;
- to enhance the effectiveness and global competitiveness of client organizations by creating and refining tools for the management of innovation

CPROST is self-supporting; operating costs are met from funds from research grants and contracts. A percentage of all contracts is paid to the university to cover overheads costs. For the most part, research assistants are hired from among graduate students enrolled in the School of Communication at Simon Fraser University. The School of Communication provides administrative support to CPROST.

Currently CPROST activities fall into the following major areas:

- analysis of current and proposed government innovation policies and programs
- studies into the factors affecting innovation in regional systems of innovation
- studies on indicators of scientific, technological and innovation performance
- research into telecommunications policy as it affects disaster mitigation
- studies on the effects of technologies and policies affecting the multimedia industry
- an on-going probe into the user “experience” of new media technologies
- studies on the policies and implementation of the Scientific Research and Experimental development tax credit program

As examples some of our current projects include:

- participation in the SSHRC-sponsored Innovation Systems Research Network (ISRN). CPROST hosts the activities of the region sub-network of ISRN, InnoCom.
- A study on the interaction between commercial technologies and the new, increased, standards for drinking water
- A large team of research assistants and post-doctoral fellows engaged in a novel form of technology roadmapping, focused on user experience;
- development of wireless Internet devices for use in hostile environments , such as those found during disaster mitigation activities
- provision of support to the book editor for the journal *Science and Public Policy*
- development of a proposal for a quantum-computation laboratory in Vancouver
- a study on potential gender biases in innovation studies

CPROST has, at this time, six tenured faculty and four adjunct faculty, along with a number of associated researchers at other institutions. At any given time at least a dozen graduate and undergraduate students are employed as part-time research assistants. Throughout the year, CPROST hosts visiting scholars from a number of countries.

CPROST currently occupies nine closed offices and four open offices, along with a multipurpose equipment and data storage area.

CPROST offers a certificate to graduate students who complete a specific course of studies in the SFU School of Communication and practical research and teaching activities showing that they have completed training in both the theory and practice of S&T policy analysis.

Why would students want to study STI policy?

Even though the field is narrow, and even though both federal and provincial governments have been downsizing their policy-making activities over the past few years, The profession of “policy analyst” these days generally requires a post-graduate degree in some related discipline, though not necessarily a PhD, even though an academic career usually requires a doctorate and peer-reviewed publications.

CPROST graduates have generally found employment in areas directly related to their studies. Recent graduates are employed by government departments and agencies, not-for-profit think tanks and consulting firms. The key element in starting their career has been the development, while they were at CPROST, of a number of skills that not only cover the academic subjects on which policy analysis is built but also the “life skills” of preparing and presenting project proposals, communicating research findings and providing clear and concise advice to senior managers who are not specialists in the field.

Students are always involved in the ongoing research work of the faculty. This work usually falls into two areas: basic research funded by research granting councils and more applied policy studies funded by a wide variety of public and private agencies. We believe there appears to be no substitute for “hands-on” learning. Someone who wishes to enter the world of policy analysis has to learn that no study is ever perfect and that there are always trade-offs among schedule, subject matter, and the depth to which a particular issue can be researched.

Managers of both public and private enterprises are beginning to realize that informed policy and program management decisions can only be made with adequate information on both the economic and social factors affecting the project. Time is always a constraint. Information cannot be biased by specific economic or social schools of thought – the advisor has to be able to provide information on factors covering the spectrum of political views. At CPROST we hope that we can foster a professionalism in STI and innovation studies that will assist Canada and Canadians in making the successful economic and social decisions in the twenty-first century.

For more information, CPROST maintains a website <www.sfu.ca/cprost/>, or address enquiries to:

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