

CA*net3 is Canada's research and education backbone

CA*net 3 is its name, and gigaspeed is its game. A national state-of-the-art R&D optical network, CA*net3 is designed to reach speeds of 40 gigabits per second, allowing a two-hour movie to be downloaded in less than half a second. More importantly, it is Canada's research and education backbone, connecting individual universities, federal and provincial government labs, and research institutes through provincially based Regional Advanced Networks, or RANs. An excellent example of Canada's expertise in communications, CA*net3 allows developers to explore new communication technologies in a more hands-on way and could also ultimately reduce the cost of basic Internet delivery for everyone. A generation ahead of competitors, the network is the result of a partnership with the federal government; the not-for-profit industry consortium CANARIE (the Canadian Network for the Advancement of Research, Industry and Education); and a Bell Canada consortium. **Web site:** www.canet3.net

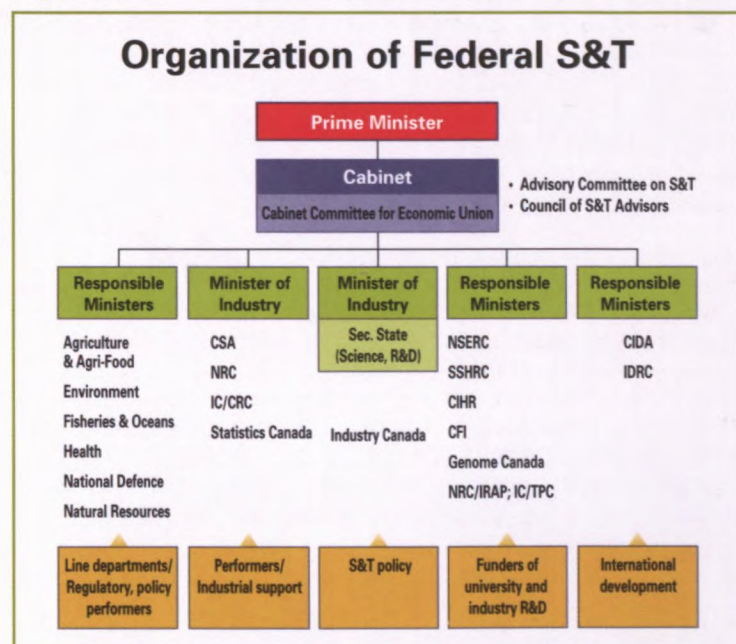
The federal government relies on S&T advice from two independent bodies that report directly to the federal Cabinet of Ministers and the Prime Minister: The Advisory Committee on Science and Technology advises the Government on national S&T issues; and the Council of Science and Technology Advisors advises the Government on S&T issues internal to the federal government (Figure 6).

excellence

The Provinces and their municipalities

At the provincial level, governments actively seek national and international partnerships and investment in science, research and technology. The provinces provide most of the basic physical infrastructure and operating costs for education and for research in universities and teaching hospitals across the country. Some provinces also perform and fund research in ways similar to the federal government. This federal-provincial relationship ensures that Canadian researchers have the facilities and funds necessary to conduct world-class research and train the highly skilled people necessary for the knowledge-based economy.

Figure 6



Universities and colleges

While university researchers advance knowledge through basic research, over 100 Canadian universities and colleges collaborate extensively with national and international industry partners on research and technology questions of commercial interest. At the same time, they offer students the best possible educational and technological experience in regular, co-operative and professional training programs.

New innovative infrastructure support

The programs created by the federal government in the last five years are among our most innovative—programs like the Canada Foundation for Innovation, the Canadian Institutes of Health Research, Genome Canada, and for the 21st century, Canada Research Chairs. Several provinces have also created a number of innovative programs to support S&T development. Another growing source of research support is the voluntary sector, where organizations raise money for specific fields of research in, for example, the life-sciences sector.

A good place for international collaboration

In Canada, the pursuit of collaborative research at a distance is much less of a problem than anywhere else in the world, thanks to CA*net3, the world's longest and fastest R&D Internet. With this well-developed, mature communication system in place, Canada has created a favourable S&T climate, built a strong research infrastructure and put together an inviting atmosphere for international collaboration.