

Canadian Science and Technology Healthy and Growing

Thu, 2012-09-27 15:10 -- Reni Barlow

As executive director of Canada's leading organization engaging youth in inquiry and investigation through science and technology, I was pleased to read in today's report from the Council of Canadian Academies that Canada's scientific enterprise is ranked fourth in the world, after the USA, UK, and Germany, by leading international scientists.

This mirrors recent performances of Team Canada [1] members at international youth science events, such as the 2012 Intel International Science and Engineering Fair [2] (ISEF), where the team of 18 members won 30 awards, including four First Place Grand Awards, three of the 17 Best in Category Awards, and one of the three top awards. Earlier this week, Adam Noble won the International Cooperation Award at the 2012 European Union Contest for Young Scientists [3] (EUCYS) against top projects from guest countries China, New Zealand, South Korea, and the USA.

Canadian youth science is also world-class.

Engaging young Canadians in the investigation of challenging questions and the development of innovations to solve important problems develops a remarkably broad set of skills and opens the door to the real world of science and engineering, rich with passion and opportunity - in stark contrast to many students' school science experience.

This is an occasion to celebrate Canada's success, but also to ensure that work to engage young Canadians in science and technology is supported and recognized across the public and private sectors, and at the highest possible levels. We salute the sponsors that support our work in this endeavour and encourage others to join us [4] in helping to maintain, or even increase Canada's science and technology performance through the development of the country's most precious resource - its youth.

The following is today's release from the Council of Canadian Academies:

Ottawa (September 27th, 2012) - An authoritative, evidence-based assessment of the state of science and technology in Canada has found that Canadian science and technology is healthy and growing in both output and impact. Over the past five years, real improvements have occurred in the magnitude and quality of Canadian science and technology.

A newly released report by the Council of Canadian Academies entitled, *The State of Science and Technology in Canada, 2012* provides a thorough analysis of the scientific disciplines and technological applications where Canada excels in a global context. In 2010, Industry Canada via the Minister of Industry, asked the Council of Canadian Academies to assess the state of science and technology in Canada and to consider all fields in which research is conducted. As such, the Council assembled an 18-member expert panel from Canada and around the world to conduct this in-depth assessment. In particular, the panel focused on research performed in the higher education sector, as well as in the not-for-profit and government sectors.

"There is much for Canadians to be proud of as Canada's international reputation is strong, science and technology research is robust across the country, and globally we are considered to have world-leading research infrastructure and programs," said Panel Chair Dr. Eliot Phillipson. "The Panel's findings are comprehensive and represent one of the most in-depth examinations of Canadian science and technology ever undertaken."

Key findings within the report include:

- The six research fields in which Canada excels are: clinical medicine, historical studies, information and communication technologies (ICT), physics and astronomy, psychology and cognitive sciences, and visual and performing arts.
- Canadian science and technology is healthy and growing in both output and impact. With less than 0.5 per cent of the world's population, Canada produces 4.1 per cent of the world's research papers and nearly 5 per cent of the world's most frequently cited papers.
- In a survey of over 5,000 leading international scientists, Canada's scientific research enterprise was ranked fourth highest in the world, after the United States, United Kingdom, and Germany.
- Canada is part of a network of international science and technology collaboration that includes the most scientifically advanced countries in the world. Canada is also attracting high-quality researchers from abroad, such that over the past decade there has been a net migration of researchers into the country.
- Ontario, Quebec, British Columbia and Alberta are the powerhouses of Canadian science and technology, together accounting for 97 per cent of total Canadian output in terms of research papers. These provinces also have the best

performance in patent-related measures and the highest per capita numbers of doctoral students, accounting for more than 90 per cent of doctoral graduates in Canada in 2009.

- Several fields of specialization were identified in other provinces, such as: agriculture, fisheries, and forestry in Prince Edward Island and Manitoba; historical studies in New Brunswick; biology in Saskatchewan; as well as earth and environmental sciences in Newfoundland and Labrador and Nova Scotia.

Elizabeth Dowdeswell, President of the Council of Canadian Academies noted, "In 2006, the Council published its first report on the state of science and technology in Canada. It provided a solid evidence base from which policy decisions could be made." She added, "The Council's 2012 report builds upon, updates, and expands on the 2006 assessment. The current Expert Panel used a suite of complimentary measures to capture information about different aspects of the Canadian research system. As a result, this report provides considerable data for further exploring and understanding Canadian strengths, trends, and emerging areas of science and technology."

The Panel's mandate excluded an examination of science and technology performed in the private sector, as this area is being assessed by the Council's Expert Panel on the State of Industrial Research and Development. Combined these two reports will provide a comprehensive overview of Canada's science and technology enterprise.

To view the full report visit: [The State of Science and Technology in Canada, 2012](#) [5].

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Links

[1] <http://tc.youthscience.ca>

[2] <http://www.societyforscience.org/isef/>

[3] <http://www.eucys2012.eu>

[4] <http://main.youthscience.ca/contact>

[5] http://r20.rs6.net/tn.jsp?e=001flpBnLnQBOSwMmfieCmLkrGwzZ3Gk_vpry-g8raBGGG0e9_kP8Er_VSS7pRfs18GKggZV_B-TAsS0N518DOzzgqEBO7wox3r45XJ661NarqhroTx9eF3ROTCwoPnmpbt7wqEKB0at8Zw89g5F2HI0vBjkrO_Y5rp9W_Jg8KFyOpDI_5YOerPAf1z4hqqQ8jlDuSbglsAK8qPmK9zGjO5kyQdP3rcZ_KwFSfRMOgXy-utpAJ1q91F9XoaqnwJerWFGq5d9AH11IOD0sJJP6QzXM8VKtRIAt3G-EGNnNrcYGZYBJLrLPK9YHktPGt8E2KPS__P3U9SRH4eA0zsPLeeWMfap8TXchQdJpZySsJS5crXKVmSDHoSJAPi1m3JmjN7jUHS8Utv3