Opening Keynote presentation

The Hon. Gary Goodyear

Minister of State, Science & Technology and Federal Economic Development Agency for Southern Ontario

Goodyear was introduced by Janet Walden, Acting President of NSERC, which was a Gold Partner of the conference. Walden referred to her organization's consultations with business organizations across the country, asking them about their innovation needs. "In 2009, we embarked on a process to help companies realize greater value from their investments in R&D. A key part of this includes helping students acquire the business focus skills that they're going to need to increase their impact and marketability. In three years, we have successfully increased by 60% the number of companies that are working with NSERC." The results have yielded more than 5,400 academic-industry partnerships and direct support for some 10,000 students working collaboratively with companies. She pointed to the leader guiding this strategy as Goodyear, who has held the Science and Technology portfolio since 2008. "Since his appointment he's become a tireless champion for growing Canada's science and technology agenda, a commitment we saw again reflected in budget 2013."

Goodyear began by recounting the high esteem he has heard for members of Canada's research and development community from stakeholders from around the world. For example, on occasions such as an EU meeting in Brussels, he has seen that many international participants want to know this community better, and work more closely with Canadian researchers and entrepreneurs.

"What I have seen in many of my travels is that the world wants to know, and is becoming more and more interested, in Canada's story."— Hon. Gary Goodyear, Minister of State, Science & Technology and Federal Economic Development Agency for Southern Ontario

Despite the many economic challenges that have confronted the current government, from domestic and well as international causes, Goodyear insisted that the commitment to matters of research and development has remained unwavering. "We have never missed the opportunity to fund science and technology," he said, referring to measures in the latest budget as the next step in this process. Citing statistics about job creation and economic expansion, he credited the ingenuity and determination of Canadians as the driving force. "These in fact are the unsung heroes of our economic recovery," he said. "And looking forward, Canada's ongoing success will depend on our willingness to nurture the highly skilled individuals and new ideas that will help our businesses innovate more, secure markets, and of course create more, better, and higher paying jobs."

Goodyear credited this progress to both short and long term stimulus investments, such as buildings or equipment to improve research capacity. "We understand that this is necessary. We understood it in 2006, and we've understood it all the way along and we still get it." In this context he reviewed specific aspects of the budget, such as research council funding to support collaborations between post-secondary institutions and industry. He went on to list other budget highlights, including support for cutting-edge work in genomics, efforts by the not-for-profit research body Mitacs to attract students from all over the world to Canadian universities, and support to maintain Ontario's Chalk River nuclear laboratories and research elsewhere to secure the country's supply of medical radioisotopes. All told, he concluded, since 2006 the federal government has invested more than $9 billion into science and technology and other activities to promote the growth of innovative enterprises.

"Guided by the science and technology strategy, we are in fact redefining the way governments and business people band together, work together to move all of this knowledge out of the laboratory, onto our factory floors, providing more work for Canadians, and of course selling this stuff to the hospitals and living rooms of the world."

With respect to more objective indicators that such a strategy is having the desired effect, Goodyear noted

OECD rankings and scientific citation statistics that place Canada at or near the top of most international assessments of research output. He emphasized that such status enables us to attract and retain students as well as working scientists into the country's research community.

Above all, he argued, the critical contribution of science and technology to an increasing standard of living has inspired the government's promotion of business-led innovation. He cautioned against regarding this approach as favouring applied research over basic research. "Those in science will know that there is no distinct border between the two," he said. "They're in fact a transition, and one leads to the other, or it should."

According to Goodyear, the recommendations of the Jenkins report have driven the new emphasis on business R&D activities, as well as more sweeping changes such as the transformation of the National Research Council. He promised that the impact of this institution's transformation will become even more evident in the near future, as will other measures to help businesses gain access to the research capacity that they require.

"There are two reasons why we do research. One is of course to create knowledge and gain knowledge. But the second is to gain social and economic benefit from that knowledge." — Hon. Gary Goodyear, Minister of State, Science & Technology and Federal Economic Development Agency for Southern Ontario

He added that the innovation landscape has changed in the last several decades, from one dominated by large firms that generated most of the new ideas and new products to a much more diverse collection of smaller enterprises that carry on this work. Where before many innovators might have been capable of "going it alone", this new environment places an unprecedented emphasis on collaborations and partnerships.

"It is member-based organizations such as RE$EARCH MONEY that are promoting information sharing and research connectedness, and by that I say they are helping advance our economics in this country."

Jeff Crelinsten asked a question based on Goodyear's comments on metrics at a recent meeting of the Alliance for Commercialization of Canadian Technologies. Goodyear replied that his primary concern is that "what we measure today is probably not as relevant to where we want to go as maybe it was 30 years ago. I think we can do a lot better. The easy thing to do is to say that we put this much money here and it created this many jobs. But that doesn't necessarily mean that we have improved competitiveness. And it certainly doesn't mean that it has improved productivity." He added that he has challenged the Science and Technology Innovation Council to come up with better measurements for these more elusive objectives, efforts that the OECD has credited Canada with leading.

Doug Barber later returned to the issue of metrics, singling out the notion that our significant research expenditures on health and medicine could well be assessed according to the number of productive years it adds to our lives. "It's very easy to think that if you're creating value for Canada you're either making a medical device or a molecule that does something," he said, insisting that productive longevity would make a far better measure. Goodyear agreed, and suggested that discoveries in fields such as genomics promise to make this kind of progress much clearer.

Peter Frise asked about intellectual property protection, a matter that Goodyear said was of universal concern, noting that "invention without protection is philanthropy". The real challenge will be determining what is protected, what is provided freely, and above all how to defend the distinction.

Ron Freedman asked about the role that research and innovation might be playing in discussions of free trade between Canada and the European Union. Goodyear replied that many of the points being raised echo those raised during NAFTA debates in the 1990s, many of which turned out to be very minor problems. With respect to science and technology, he suggested that the primary aim is a matter of collaboration, so that countries working together can accomplish more than they would have done independently. He offered the example of the International Space Station as a testament to this approach.

Freedman also asked about the prospect of changes to the government's science and technology policy, which prompted Goodyear to insist that changes need not be grounded in more money, but instead subtle cultural or behavioural shifts in support for these activities. "We are not the risk-taking nation that maybe we could be and should be," implying that some changes are bound to emerge from more sweeping consultations with his provincial counterparts.