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House of Commons Standing Committee on Industry, Science and Technology

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Good Afternoon Mr. Chairman and members of the committee.

Thank you for inviting me to appear today.

I am the Executive Director of Polytechnics Canada, an alliance of Canada's 8 leading public polytechnic institutions, which collectively train annually over half a million Canadian skilled workers essential to sustaining the mid-level infrastructure which supports the innovation, research and productivity fundamental to Canada's competitiveness.

Located in the regions that drive the Canadian economy and which reflect our country's workforce diversity, they offer a critical mass of educational, training and research resources focused on resolving industry problems.

Polytechnics are positioned to respond quickly to industry needs for new or modified programs and curricula, and applied research.

For example, our member, Conestoga College, and Toyota developed the "Multi Skill Maintenance Program" which is designed to train Toyota's technical staff in the skills required to keep state of the art automated assembly lines operating effectively and efficiently.

The applied research conducted at Polytechnics assists manufacturers in improving products and processes to ensure their competitiveness. This research is focused on current opportunities and problems and completed quickly with results which can be immediately implemented.

Canada's manufacturers have identified skills shortages and the need to enhance productivity as key challenges for the sector.

For example, in *2006-2007 Management Issues Survey* conducted by the Canadian Manufacturers and Exporters, respondents identified limited resources and the lack of qualified personnel as key factors limiting business performance and inhibiting innovation.



The *2006 World Intellectual Property Office (WIPO) Annual Report* provides more recent evidence of the weak performance of Canada's research investment.

Since 1995, there has been a significant increase in the number of patent applications by residents of developing countries, including the Republic of Korea, China, India and Brazil. Canada is not in the top 15 patent offices for patent filings by residents.

Canada ranks 30th in the world in the number of patent filings by Canadian residents per \$1 million of R&D spending, putting us at the bottom of all industrialized countries, slightly ahead of Israel, Mexico, Turkey and Belgium.

Several emerging economies and countries in transition have high rates of filings per GDP, particularly those that have embraced polytechnic education. Canada ranks 26th in the number of filings by Canadians per billion dollars of GDP with a rate of 4.3.

Clearly, past investments in post-secondary education, skills training and pure research are not resolving Canada's current skills shortages or adequately enhancing the country's productivity. Polytechnics Canada recommends that the following actions be taken to enhance the productivity of Canadian manufacturers and strengthen the Canadian economy:

- 1. Implement a national people and skills strategy overseen by a high-level council with representatives from business, government, polytechnics, colleges and universities that is responsible for establishing short- and long-term goals to ensure that we have the requisite workforce in place, monitor progress and report national results.**
- 2. Develop and implement a national credit transfer system to serve the mobile population, and prior learning and recognition standards to enable adult learners to fast track their learning requirements and their credential opportunities.**
- 3. Enhance Canada's e-learning capacity, both in delivery and content to allow access for adult learners.**
- 4. Maximize and leverage the cross-jurisdictional critical mass of applied education, training and research available through the Polytechnic alliance to produce the skilled workers necessary to diffuse technology and enhance the productivity of Canada's manufacturers.**

The recent announcement by our member NAIT, Shell Canada and the provincial government to launch a campaign for the construction of the Centres for Applied Technologies and thereby increasing its apprenticeship training capacity is an excellent example of what we need to be doing.



5. Invest in more applied research by supporting those institutions that have both the ability to work with industry and provide solutions to industry problems while equipping students with the requisite technological skills.

While a solid foundation has been established for basic research in Canada, we have not invested enough in applied projects leading to improved quality and productivity in manufacturing using students and faculty of Polytechnics as resources.

An example of what I am talking about is the Integrated Manufacturing Centre recently established by our member Humber College. The centre combines all the labs and technologies relating to design through manufacturing processes to the customer in a single integrated location, which also acts as an integrated learning platform for technology learners.

Thank you.