

FOCUS ON COLLEGE RESEARCH

COLLEGES AND SMEs Getting Innovations Out the Door



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Stimulating innovation in Canada's small and medium enterprises (SMEs) will do more than any other measure to improve productivity and create jobs. SMEs constitute 98% of Canadian companies and employ 60% of working Canadians, but they often lack the expertise and resources needed to innovate and compete in the global marketplace.

They turn to their local college, institute of technology, cégep and polytechnic for support. These institutions have the expertise, the equipment and the eager young minds to help with product and process innovation, technological improvements, marketing, business planning and growing the pool of highly skilled professionals SMEs need. With

1000 campuses, colleges are accessible in all parts of Canada. In 2010-11, 4,444 private companies, primarily SMEs, partnered with colleges on applied research projects.

According to the OECD Economic Surveys: Canada 2012, "colleges are becoming proactive in directly meeting the needs of small businesses in areas of problem solving, process innovation and technical skills, even though they benefit from little taxpayer support via the granting councils".¹

The Government of Canada has begun to recognize the contribution of colleges to Canada's innovation eco-system. The College and Community Innovation Program administered by the National Sciences and Engineering Research Council provides funding for college based applied research partnerships, and the Canada Foundation for Innovation provides resources for scientific and industrial equipment, both on a competitive basis.

These investments generate powerful outcomes, but constitute only 1.25% of the \$2.9 billion invested annually by the Government of Canada in research carried out institutions of higher education. Further investment to support college-industry partnerships, increasing this amount over time to 5%, would enhance Canada's productivity and competitiveness while creating new jobs.

According to the Canadian Chamber of Commerce, skills and human resource

shortages comprise the single largest factor constraining the business growth. The Canadian Federation of Independent Business reports that where there are skills shortages, four college graduates are required for every university graduate. Applied research is a critical component of education in colleges. Students work with employers to find solutions to real-world challenges. These hands-on experiences produce graduates with highly valued problem solving and innovation skills.

Colleges are growing institutional research infrastructure to create more opportunities for faculty and students, to strengthen partnerships with industry and community organizations, and to build research networks at the regional and national levels.

SMEs report that research partnerships with colleges have stimulated new and improved products and services, enhanced their company's profile and generated market opportunities.

SMEs gain access to state of the art equipment, facilities and highly skilled faculty and students that they could not otherwise afford. Increased revenue resulting from these partnerships enables SMEs to create jobs and to stimulate local and regional economies.

¹ OECD Economic Surveys: Canada 2012, Organization for Economic Co-Operation and Development, page 79

What our partners are saying about us...

"Manitoba winter conditions can be problematic for many conventional vehicles. (...) The novel nature of plug-in hybrid electric vehicles (PHEVs) made cold-weather operation and cabin warmth a specific concern. (...) The cold-weather improvements undertaken at Red River College turned out to be a critical success factor for the Manitoba PHEV demonstration. Without these modifications, vehicle failures and reduced performance would have resulted".

Centre for Emerging Renewable Energy, Inc., Manitoba

"The resources at Durham College's disposal are invaluable to a business of our type. Without... the wonderful staff... we would have been greatly hampered in our efforts to take this product to market. It is a great feeling knowing that the resources are out there and others are genuinely concerned and driven to help develop a greener future."

Hotwash Inc., Ontario

"The opportunity to work with the bright students in Sheridan's applied research program was a natural fit for us. We firmly believe that industry has a vested interest in shaping the future workforce. By leveraging the fresh

insight from a younger generation, like those at Sheridan College, PharmaTrust can continue to produce innovative technology, and maintain leadership in patient-focused healthcare."

Patient Care Automation Services, parent company of **PharmaTrust**, Ontario

"We have a great working relationship! The staff at the Office of Applied Research at the College of North Atlantic took a high interest in our project, showing enthusiasm and helping to enhance our process for creating our new product, the Fresh Fry™. (...) They were very accommodating to supply needed equipment, and understood our requirements for product development."

Humber Valley Potato Company, Newfoundland and Labrador

"Lakeland College was a phenomenal partner (...) providing resources, man-hours, equipment, technical support and exposure. They also added credibility to the project. Our town, the community, our businesses and families have all benefited from the partnership..."

Town of Elk Point, Alberta