

Barn Raising the Innovation Economy



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Of the many useful things I learned growing up in Saskatchewan, two in particular stand out as relevant to Canada's research and innovation ecosystem. The first is the importance of cooperation. The second is the weather.

Cooperation is the cornerstone of community building on the prairies, as anywhere really. I learned from a young age that when your neighbour is building a barn, everyone

pitches in to help. "Collaborating to compete together" has real meaning: working together we create vibrant communities and resilient regional economies that amplify complementary strengths and common goals.

This form of "coopetition" defines how various actors in the research and innovation ecosystem work together. Where once we might have seen these actors try to upstage each other in a scramble for money and attention, we now see cooperation to achieve increased academic and industrial innovation and productivity.

There can be little debate about the need to increase business investment in research and development (R&D). We have too little firm spending on R&D (and new equipment and training for that matter). This translates into poor industrial productivity and innovation capacity.

For academic productivity, we are excellent in our ability to perform basic science. We need to start focusing more on leveraging and translating our basic research into practical

applications for social and economic good. Successive expert panels have all identified a systematic failure in this country to capitalize on the basic research capacity of our world leading research institutions.

Countries like Canada, with economies dependent on resource extraction industries, need to start adding value to the raw resources we extract. Basic research with little or no focus on application or commercialization becomes just one more example of how Canada exports raw commodities (in this case ideas) without adding value (commercialization of these ideas).

Polytechnics and Colleges like George Brown work with many university scientists. We help them produce PhDs, patents, publications and products, just as easily as we work with industry to get new products and services to market. Here are some examples.

In 2012, the GBC Food Innovation & Research Studio (FIRSt) collaborated with scientists at Mount Sinai

Hospital / University of Toronto and Ryerson University to help test whether eating cheese fortified with Vitamin D could affect the levels of the vitamin in the body. Over the course of the study we recruited 120 students, staff, and faculty who volunteered to eat pizza – topped with Vitamin D fortified mozzarella – once a week for 8 weeks in a double-blind randomized trial. Our food scientists and chefs were able to design an optimal and delicious Italian style pizza and produce over 100 pizzas every week for 8 weeks. Leaving aside the difficulty we may or may not have had in recruiting volunteers, we were approached to participate in the study because we offered these scientists complementary expertise to help them test their hypothesis.

This project showcases a unique recipe that blended basic and applied research. The findings provide scientific support for commercialization of vitamin D fortified cheese, showing that Vitamin D3 is safe and metabolically available from

fortified mozzarella cheese, even after being cooked.

Applied research at George Brown supports firms in a range of industries from construction and Building Information Modeling through to prototyping and food product development. Companies often access more than one academic partner in their engagement with industry-academic partnerships. One such company is Clear Blue Technologies. Their "smart off-grid" street light uses solar panels and wind turbines to power street lights, networked through wireless technologies to provide cost effective and green power solutions for lights, traffic cameras and signs. The company received support from MaRS and Centennial College; at George Brown our Advanced Prototyping Lab helped take the product from prototype to production manufacturing. A graduate student from Ryerson University was also employed on the project. By working together and leveraging complementary strengths we have collectively helped propel the company from idea to invoice.

And so the weather.

Talking about the weather is a national past time, but it very nearly passes for religion on the prairies. Perhaps this is because so much of the growing season is determined by the whims of nature. Being able to talk about the weather is what is most important – predicting it, observing and commenting on it, lamenting it. The weather is something we all have in common. In this sense, weather talk is an important social lubricant, an expression of our commonality and shared experience in place.

And this is the point. Like the weather, innovation is a social activity. While innovation may involve a technical challenge, it requires us to recognize common goals and to socialize and realize we are stronger when we work together.

Place matters when it comes to innovation. By integrating the harmonizing strength of regional college, polytechnic, and university capacity, and linking this with industry, we can evolve the Canadian economy. Together we can ensure graduates from across the credential spectrum understand innovation, and can work together to stand up the innovation economy.