

Innovation Management: From Talk to Action

by Susan Abbott, of Abbott Research & Consulting for Schulich Executive Education Centre, Schulich School of Business, York University. Roundtable discussion moderated by Alan Kay of the Glasgow Group and Rick Wolfe of PostStone.

This is one of a continuing research series that has been bringing senior managers and executives from diverse sectors together to uncover the best practices in managing innovation.

Executive Summary

This most recent discussion in support of the Schulich Executive Education Centre Innovation Project considered a number of systemic and structural issues related to the commercialization of innovative research. The panel was well equipped for this topic, with a combination of public sector and private sector innovators, including several scientists.

Governments have been willing to fund research, but have been less successful at linking the funding to commercialization. Our start-up enterprises aspire to the goal of selling to, rather than competing with, major US firms. To address this tendency, public funding of research should be accompanied by funding of sales and marketing support, which will result in more focus on, and success in, commercialization.

Universities are a critical leverage point in fostering innovation, but they need to be part of a vibrant public-private network. More teachers with business experience are needed, who can provide guidance to students about commercialization. More universities should follow the lead of Waterloo and others in placing the ownership of intellectual property in the hands of the researcher. Where this has happened, these crucial public-private networks have formed, and the dialogue between business and academic research has resulted in much greater success.

Our Canadians values lean strongly towards a comfortable lifestyle, but Canadians may not fully realize the need to be successful with innovation in order to maintain that lifestyle for the future.

Dreams of Security & Retirement: Addressing Canadian Culture Barriers to Innovation

Some panelists wondered whether Canadians as a collective aspire to less, what some have called *tall poppy syndrome*. The history of the Hudson

"If we look at innovation in terms of patents applied for on a per capita basis, Canada has not left the top 5 in the world for 20 years. Our problem is not with technology, but with commercialization."

“Canada has talented and entrepreneurial people but they stop being entrepreneurial at age 35 and retire and go to the cottage. That is a fundamental issue.”

Bay Company was pointed to as an example of “the only monopoly in history that failed.” Another participant suggested that the Canadian dream is to make enough money from a business to retire to the cottage, not create a large enterprise.

Only grow it big enough to sell

Canadian software developers, encouraged by their investors, aspire to grow the enterprise large enough to sell to a major foreign firm, instead of aspiring to compete on a global stage. We limit ourselves by setting our aspirations too low.

Recent research conducted by one of the participant’s organizations to compare the software industries in Canada and the United States looked at the top 100 companies in both countries.

One key difference was that the US companies spent a massive 13% more of their revenues on sales and marketing than the Canadian firms, each taken as a group.

Founders and business leaders in collaboration

A second key finding of the software research was that Canadian companies tended not to appreciate the vision of the founder, and believed the founder was “too flaky or eccentric” to be in charge. Most of the Canadian firms had pushed the founder aside, whereas in the US, the founders were still running the company.

Research in Motion (RIM) was cited as an obvious exception to this pattern. RIM’s leadership is a combination of a strong visionary and a strong business person, a combination that also served Microsoft well. Participants noted that we cannot build a national innovation strategy that relies on such exceptional individuals to come along. We can, however, nurture the public-private networks that lead to this type of collaboration.

Canada Should Lead in Services Innovation

Canada should have a natural strength in services innovation, since we cover such a large geography. The services industry tends to be dominated by a few very large, relatively comfortable banking and telecommunications firms that have little pressure on them to innovate.

Participants noted that Canadian banks have innovated more than telecommunications firms, from a technology standpoint, and are among the leading users of banking technology in the world. They are not seen as leaders in service delivery innovation, outside technology.

"I would guess that 20 - 25% of academic researchers in university are targeted on commercialization. The rest are not yet. Change is coming, but there needs to be more."

Process, Patience and Persistence

Organizations that foster a climate where people are willing to be creative and take some risks are more successful at sustaining innovation, according to our participants. A delicate balance must be maintained between pushing people to strive for higher performance, but not punishing them for mistakes.

Consistently successful organizations have clear processes around innovation. Without these clear processes, new ideas meet too many roadblocks. These processes can only be maintained where leaders have clarity about the reason innovation is essential for the survival of the business; without that clarity, innovation and the processes that support it will gradually fall away.

Our executives also noted the challenges of being a public company, forced by the marketplace to manage against quarterly results instead of long-term value creation. This context tends to favor innovation in private, not public enterprises.

Winning in a Flat World With Porous Borders

Canada has brought in substantial talent with our immigration policies, and by embracing foreign students. Faced with the choice of where to build their enterprise, participants see an emerging trend where many now choose to return home.

Students from China and India see the opportunities to commercialize their business being better in their home country than they are in Canada. We could be providing global opportunities for this talent in Canada, if we became more skilled at leveraging global resources.

To encourage foreign students to pursue success here, we also need to provide mentorship about how they can use their skills, and get them plugged in to networks.

Changing How We Teach

The Internet has become such a strong medium for the dissemination of facts and information that the role of post-secondary teaching needs to change from one of imparting information to one of nurturing and coaching talent. As one participant said, "We need to teach the teachers".

Conference Board research referenced by one panelist has suggested that a key condition for innovation is having university professors with business experience. When there are too few, students tend to absorb the academic

“Waterloo: talk about venture capital university!”

bias of pure research, rather than a bias toward research as the starting point to the creation of something real in the world.

Even the business schools came in for criticism as undervaluing the role sales in commercial success.

Creating the student innovation office

One of our participants recounted the story of obtaining his first patent, which he did on the encouragement of a professor. These small encouragements are critical: young people need role models and examples and help. Another said we offer more help to find an apartment than we do to succeed in a new enterprise:

“We have the student housing office on every campus that tells you how to find a place to live; why don't we have the student innovation office, that tells you how to get a patent?”

Changing the Framework for Intellectual Property Ownership

Universities with the best track record of transferring research knowledge into the commercial sector are also the ones with the most liberal approach to intellectual property ownership.

Stanford University was cited as a leader in this area, where the university not only fostered the commercialization of concepts developed there, but also fostered the creation of business parks and networks around itself.

Waterloo, Queen's and Carleton have been the Canadian leaders in conveying ownership of intellectual property to the professors and researchers who created it. This one change has moved commercialization out of the realm of academic bureaucracy and enabled successful experiments in commercialization:

“...where you get innovation and connection with the network without the bureaucracy of the academic structure”.

Other universities need to adopt this approach much more rapidly. By bureaucratizing the process of IP transfer, universities are standing in the way of commercialization.

Network Formation Crucial to Fostering Dialogue

The formation of networks is a key enabler for effective commercialization of research. The networks foster dialogue between

“The only way I can describe this business is – a billion dollar company managed as \$10 million private research institute. [The entrepreneur] hasn’t figured out that he can sell it; put it in a box and put it on a shelf and have it equate to a billion dollars.”

business people and marketing people. The business people understand financing, business plans, and how to bring a new product to market. They are constantly scanning for opportunities and unmet customer needs. The researchers bring ideas in development, and solutions to market problems they haven’t yet heard about. Both groups benefit from the interaction.

Research - meet marketing

Commercial success in innovation can only be achieved when the new idea meets a customer and a market. Our expert panel felt that the key linkage missing for many researchers is an understanding of fundamental concepts of marketing. Many academic researchers have little respect for these disciplines, and little opportunity to meet practitioners who can educate them:

“Typically, they are technologists with no business skills”

Networks create a place for an ongoing dialogue between business and research, and thereby foster commercialization. One of the most useful steps anyone could take in Canada to support innovation is creating more opportunities for these networks to emerge.

What about incubators?

Few incubators have worked well, according to our panel, with BrightSpark as a notable exception. Early stage organizations require more than investment funding; they need mentoring and expertise support from hands-on experienced business people. Successful incubators provide that.

Are We Addicted to Tax Credits?

An important theme in the discussion was the role of government in fostering innovation. The central issue for participants was not the level of government funding, but the lack of accountability attached to the funding, and the focus on front-end research rather than market commercialization.

By continuing to support front-end research without the expectation of profit, companies settle for too little in the marketplace, accepting marginal profitability instead of pushing for market-building results.

“The Canadian government has screwed up early stage developing companies by causing companies to get addicted to cash credits...the government says ‘be barely profitable and we will pay to make version 2; be barely profitable and we will pay you to make version 3’. But there’s a warehouse full of version 1.”

“As a private company I was able to do things with my partners and shareholders that I could never do in a public company. I would never have gone public if I didn’t’ ...need to raise substantial chunks of money. It’s easier to be an entrepreneur in a private company.”

The Role of Government

Our panel believed government does have a role in funding innovation, but that their approach needs to change. The process-driven, shared-decision-making approach of government is not helpful in commercialization:

“They don’t understand innovation, particularly at the Federal level... One thing they keep doing wrong is pouring money into granting councils without any sense of where to get the commercialization from”

Instead, governments need to avoid funding research without funding sales and marketing. Instead of assuming that sales and marketing will happen somehow outside the funding framework, the framework needs to reward the activities that can lead to successful commercialization.

Government should be the first customer

A second key role for government is to be a first buyer of newly commercialized innovations. This has been a huge lever for success in the US, driven largely by defense industry spending. Our entrepreneurs reported having an easier time of selling to the US government than the Canadian government.

What Needs to Be Done?

Our panel had some very concrete thoughts about how Canada can become more innovative:

- Give intellectual property ownership to the researchers
- Encourage the formation of public-private networks
- Pay attention to the different approach of female innovators, who have a higher success rate
- Reduce the obstacles for immigrants build successful enterprises in Canada
- Rejuvenate the concept of apprenticeship and open it up outside the trades, by investing in community college programs
- Keep government – and the universities – out of the direct process of commercialization
- Give funding support to commercialization of the entrepreneurial instinct and recognize this with changes to the tax credits

"Innovation is about leadership and culture."

Acknowledgements

Any conversation is only as good as the participants and panelists, and we thank the executives from these organizations for taking the time from their schedules to add to our collective understanding:

- Alliance Data Systems Corp.
- Genesis Analytics Inc.
- J.D. Power and Associates
- Mandrake Management Consultants
- Moscow State University, Russia
- Ontario Centres of Excellence
- Ontario Ministry of Research & Innovation
- Schulich School of Business
- Urban Strategies Inc.
- VereQuest Inc

Schulich Executive Education's Research Partners in this project include:

- Abbott Research & Consulting
- PostStone
- The Glasgow Group

For more information about the Business Pulse Project on Innovation, please contact Alan Middleton, PhD. or Elaine Gutmacher at Schulich Executive Education or any of the research partners listed above.

Research conducted March 8, 2006.

Resources mentioned by panelists included:

Conference Board of Canada, Research Series on Innovation. *Solving Canada's Innovation Conundrum: How Public Education Can Help*. 2003. (some reports free with registration)

Friedman, Thomas L. *The World is Flat: a Brief History of the Twenty-First Century*. New York: Farrar, Straus and Giroux, 2005.

Grove, Andrew S. *Only the Paranoid Survive: How to Identify and Exploit the Crisis Points that Challenge Every Business*. New York: Currency Doubleday, 1996.