



James Milway, executive director of the Institute for Competitiveness and Prosperity, believes that with the possible exception of Waterloo, Canadian companies and cities are overlooking higher learning.  
Brett Gundlock for The Globe and Mail

## **Canadian cities need a lesson in academic potential**

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If you're a student or a professor at the University of Waterloo, any intellectual property that you create there belongs to you. This unusual policy has helped make Ontario's Waterloo Region a leading patent generator. It has also sparked local successes such as smart-phone giant Research In Motion Ltd. and software developer OpenText Inc., both university spinoffs.

"They basically have evolved from student days into incredible multinationals," says John Jung, chief executive officer of Canada's Technology Triangle Inc., the public-private economic development agency for the Waterloo Region.

Encompassing the cities of Cambridge, Kitchener and Waterloo, the region has long understood the value of close ties between business and academia. Its almost 60,000 full-time students – Waterloo's two other key schools are Wilfrid Laurier University and polytechnic Conestoga College – are a vital source of talent for local companies.

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Through the University of Waterloo's decades-old co-op system, Canadian and international students apply their knowledge in the real world. The region's three major postsecondary institutions have representatives on the Technology Triangle board, alongside business leaders. "They're intimately involved in and integral to the process of making this community grow and succeed," Mr. Jung says.

When it comes to using educational systems as an economic development tool, Canadian cities and regions lag behind Waterloo and such global centres of innovation as California's Silicon Valley. To turn things around, they must recognize that quality higher education can give them a competitive advantage.

James Milway, executive director of the Institute for Competitiveness and Prosperity, a Toronto-based think tank, believes his hometown could build stronger links to its universities. With the possible exception of Waterloo, he argues, Canadian companies and cities overlook higher learning.

"We could raise our performance, but it requires business leaders to value education more than they do now," says Mr. Milway. "It requires our civic leaders to realize that their local universities and colleges are great assets, and to work in partnership with them."

Besides the United Kingdom, not many places can touch North America in integrating postsecondary education with business, Mr. Milway says. For him, two outstanding U.S. examples are Silicon Valley and Massachusetts' Route 128.

Silicon Valley's cluster of research and teaching universities includes Stanford University, while Route 128 is home to the likes of Harvard University and the Massachusetts Institute of Technology.

"Some great technology comes out of those schools," Mr. Milway says, noting that Silicon Valley in particular draws many talented immigrants. "Then you've got venture capitalists who are sniffing around to find where [they] can invest. And the thing just gets going – it becomes almost a perpetual motion machine."

One of the Waterloo Region's strengths is its high volume of patents. In 2006, for example, applicants based there received 302 patents from the U.S. Patent and Trademark Office. The region yielded 631 patents per million people that year, almost 4.5 times the Canadian rate of 148. By the same measure, Waterloo also rivalled California (725) and Massachusetts (682).

But in their enthusiasm for patents from universities, cities may forget that keeping graduates around is just as important. Mr. Milway encourages economic developers to work with universities to attract the best and the brightest – and then convince them to stay in the community. "Those students will be more productive and innovative wherever they work," he says. "And if they're working in our city, that's more power to us."

As other parts of the world get smarter about education, there's no room for complacency. John Douglass, a senior research fellow at the Center for Studies in Higher Education at the University of California, Berkeley, notes that Canada and the U.S. have enjoyed an educational advantage because they innovated early.

But in recent years, nations such as Qatar and Singapore have built education hubs by partnering with prestigious foreign universities. Although it's too early to tell how successful their efforts will be, these countries are taking a strategic approach to postsecondary education that has no North

American equivalent, Dr. Douglass explains. “They see it as a key component for developing the right kind of environment to both attract talent and retain it.”

Ignoring these developments is foolish. “We have to be really smart and not just sit on our laurels,” Dr. Douglass says. “[We] need to think internationally.”

Inspired by Silicon Valley, the Global Schoolhouse in Singapore is one example of “a larger worldwide effort by nation states to increase the quality of their schools and the quality and capacity of their higher education systems,” according to Dr. Douglass. Since it launched in 2002, this ambitious public-private venture has attracted outposts of big-name foreign schools such as France's INSEAD and the University of Chicago Booth School of Business. It aims to have 150,000 international students by 2015.

A government-funded site in the Qatari capital of Doha, Education City houses branch campuses of several top foreign universities that offer degrees in fields from business and engineering to medicine and journalism.

In Toronto, local business and academic leaders looked at many international models when they conceived the MaRS Discovery District early last decade. Besides housing more than 80 tenants, including startups, multinationals and research labs, this self-described innovation centre advises some 800 young companies in life sciences, IT and other sectors.

Although MaRS is independent of the nearby University of Toronto – which contributed \$5-million in seed funding – it works closely with that school and others. In 2008, it launched MaRS Innovation, a commercialization agent owned by 17 Toronto-area universities and research institutes.

CEO Ilse Treurnicht says MaRS's mandate is not only to commercialize its scientific and research assets, but also to grow the companies it starts. “Many of those companies come out of [academia], but many of them are started by entrepreneurs in the community.”

Rather than aspiring to be the next Silicon Valley, cities with universities should play to their strengths, Mr. Milway says. He points to the University of Windsor, whose automotive engineering program provides talent for the region's car manufacturing industry. “You need to be realistic about what you can do with your local institution,” Mr. Milway advises, “and how you can make it relevant to the industries that you've got there.”

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