

The Future of Canadian Innovation is in Recognizing the Power of Partnership



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It sounds like simple technology: a restraint system designed to keep wheelchair users safe while riding on public transit. Though such systems are now a common sight on transit vehicles around the world, there was a time when they weren't.

That's why a team of pioneering mechanical engineers at Queen's decided to take on the challenge

of coming up with an uncomplicated system that could save lives by keeping wheelchairs and their users locked in place while traveling. They devised a retractable and adjustable four-point system which has since been implemented in vehicles across North America, as well as in Europe, Asia and beyond. As a result of their innovation, more than 10 billion wheelchair transit trips have been completed more safely.

If the idea had remained a prototype within the walls of the academy, however, that might not have been the case. Instead, Professor Henk Wevers and his Clinical Mechanics Group at Queen's saw their idea translated into Q'Straint Systems Inc., a company which is now considered the world leader when it comes to wheelchair securement.

Though that idea first arose more than a quarter-century ago, I'm using it to highlight an important point. If Canada is going to become a world leader in innovation, we must find ways to nurture emerging talent, foster new ideas, and support

discovery research. One way to do that is by developing mutually beneficial relationships that meet both the changing needs of the academy and the demands of industry.

Let's go back to wheelchair restraints for a moment. Q'Straint Systems Inc. was one of the first successes to come out of PARTEQ Innovations, a not-for-profit company first established at Queen's in 1987. Our goal back then was simple: to commercialize university research, even at a time when many universities were shying away from the idea. What we saw, however, was an opportunity to advance knowledge and to translate researchers' discoveries into products and processes with wide-reaching benefits for the wider world.

In the last 25 years, PARTEQ has returned more than \$30 million to both Queen's and its inventors, and has formed or helped to form 47 companies which have attracted more than \$1.2 billion dollars in investment. It's not surprising that other institutions have since emu-

lated our model. Alongside other Queen's industry-minded endeavours – such as Tech Value Net, which brings together 40 researchers from across Canada to improve the care of seriously ill, elderly patients and their families – what it demonstrates is our commitment to fostering innovation in a way that has helped distinguish Queen's as one of the top ten research-intensive universities in Canada. In fact, "Guiding and Supporting the Research Enterprise" is one of the pillars of our new Strategic Research Plan, an initiative that lays out our goals through 2017. From an increased focus on global engagement and internationalization, to creating an academic environment that will nurture research initiative and leadership, we now know what we need to do as we move into the future.

We live in challenging times. Universities are under increasing fiscal constraint, and as an institution, we are continually striving to maintain a balance between meeting the needs of our students and

remaining mindful of our economic realities. And it's no secret that today's students worry about finding jobs. Increasingly, they're looking for relevance in their learning as they prepare for the next phase in their lives.

That's why we are more focused than ever on producing entrepreneurial students, working across disciplines, who are not only independent thinkers, but who have the skills to become the next generation of innovators. In fact, earlier this month one of our own PhD students was the recipient of the \$50,000 Martin Walmsley Fellowship for Technological Entrepreneurship from the Ontario Centres of Excellence – an award that supports a graduate student's business founded on university research. In addition, the Queen's Summer Innovation Institute began this year, pulling undergraduate engineering and commerce students together in a dynamic environment where they worked together to bring original ideas to life as a business venture.

We know that the future will depend on collaboration – between researchers and institutions, between business and academia, and across international borders. At Queen's, more than 50 per cent of our researchers are already publishing articles or books in conjunction with collaborators in other countries – a rate that's double the national average. It's a statistic that will inevitably increase.

It's no longer enough for universities to rest comfortably on their academic laurels. From conquering global poverty and eradicating the stigma of mental illness, to tackling on the challenges of climate change, we all need to be invested in making this world a better place. Rather than keeping research confined to the ivory tower, let's all be motivated by the impulse to develop viable solutions. Forging connections with the private sector will help bring more of that research to light.

As we move into the future at Queen's, we have a clear roadmap that will allow us to unleash the full potential of our thinkers and doers. And thanks to innovative research and fruitful industry partnerships, we even have a way to make sure everyone's strapped in – no matter how they're travelling.