



Risk meets reward: Taking Mac innovation to market

Meredith MacLeod

June 2, 2011

A McMaster University engineering professor sees an opportunity to make some dough out of that Hawaiian pizza baking in the oven.

Jim Cotton, associate director of the McMaster Institute for Energy Studies, has partnered with Pizza Pizza to develop heat recovery units that will use and store at least a portion of the 90 per cent of energy that is wasted from the chain's pizza ovens.

Cotton says the energy could be used to heat and cool the stores and to power hot water tanks. It can be stored in thermal batteries and there might even be enough to feed some back into the power grid.

Pizza ovens are just the most logical place to begin, Cotton told the McMaster Innovation Showcase Thursday. He sees many applications for his technology in all kinds of manufacturing.

The showcase hosted by the university's research commercialization unit, the McMaster Industry Liaison Office, highlighted a number of campus research endeavours that are in the process of being commercialized.

They included a package of e-training tools for mental health students and professionals, studies of the effect of a liver secretion on cholesterol levels and technology for machining companies.

The goal of the showcase, now in its fourth year, is to nurture the culture of commercialization at McMaster and to reach beyond the campus, says Elsie Quait-Randall, executive director of MILO.

A key part of that is linking faculty and student researchers with the local business and investment community.

"That is one area that we definitely need to work on. Our researchers do a lot of work with companies in the United States or in Toronto or across Canada. It's a work in progress connecting the university with Hamilton."

Cotton said one of his first steps was finding an industry customer.

"I decided right off that I would approach Pizza Pizza," Cotton told a group of researchers, academics, students, industry players and investors. "I didn't want to take a build-it-they-will-come approach. I wanted to build a product to their needs."

The 695-store pizza chain has provided funding and pizza ovens for Cotton's research.



_DSC4939.jpg. Robert Cooper, co-founder of Stage-Gate International and a former business professor at McMaster, delivered the opening speech at Connecting the Dots, McMaster's Innovation Showcase Thursday. John Rennison/The Hamilton Spectator Source: The Hamilton Spectator

Mick Bhatia, director of the McMaster Stem Cell and Cancer Research Institute, outlined his work into using stem cells for disease therapy. He said the rapid pace of technological change in the field scares both scientists and investors.

Bhatia and his institute are focused on transforming adult skin cells into stem cells, including blood stem cells for patients needing bone marrow transplants to fight disease. The institute has a wide range of funding partners and has applied for a number of patents for its discoveries.

"This science is very expensive," said Bhatia. He says typically university-based researchers develop technology and then return to expensive research to solve the next problem.

"But at McMaster there is a different approach. We are focused on clinical or commercial applications."

Daniela Fischer Russell, program director for the Ontario Consortium for Regeneration Inducing Therapeutics, says it's very clear to Bhatia and other researchers at the institute that "you can do wonderful science but unless you transform that into something that helps a patient, your science doesn't leave a legacy."

Robert Cooper, a professor emeritus at McMaster's DeGroote School of Business, kicked off the innovation showcase with an energetic keynote address highlighting the do's and don'ts of product innovation, including coming up with a unique and clearly defined product, thoroughly understanding the marketplace and knowing when to kill a dud.

"You have to understand how your customers see value and quality. For instance, car buyers judge quality by opening and closing doors. You can have the best engine, transmission and rear and front axles in the world but if you get the sound of that door wrong, you've blown it."

Cooper and research partners turned years of study of corporate successes and failures in launching products and spun that into a strategic system and Ancaster-based company called Stage-Gate. The company has worked with 80 per cent of the world's top 1,000 companies, including Johnson & Johnson, Procter & Gamble, GlaxoSmithKline and Molson.

In western economies, new products (in the market three years or less) represent about 30 per cent of company sales, says Cooper.

"Really, innovation is the only game in town. You either succeed at this or die," said Cooper. But failure is common. For every nine new products launched, only one becomes a commercial success. About 40 per cent of new products fail at launch and about 46 per cent of a company's resources spent on new product development go to unsuccessful ventures.

"It's a pretty tough game you guys have decided to get into. It's not for the faint of heart. Maybe you should just go to Vegas and bet on black," he joked.

The showcase concluded with innovation awards. The winners were Jack Gaudie, lifetime innovator, Mick Bhatia, innovator of the year and Adiga Life Sciences, industry award.

mmacleod@thespec.com

905-526-3408

This article is for personal use only courtesy of TheSpec.com - a division of Metroland Media Group Ltd.
