



Collaborations expand beyond traditional tech transfer model

Panel: **The Future of University Support for Canada's Science, Technology and Innovation (STI) Strategy**

Organized by York University

CSPC 2015: November 27, 2015

Panelists: **David Phipps**; Panelists: **Christine Tausig Ford**, Vice President, Universities Canada; **Ron Freedman** CEO, Innovation Atlas Inc. and Research Infosource Inc.; **Robert Hache**, Vice-President Research and Innovation, York University; **Cameron Ower**, Chief Technology Officer for, MDA Robotics and Automation

Takeaways and recommendations

- ✓ Universities have diversified their interactions with industry with positive effects
- ✓ Industry could benefit from more funding for technology development
- ✓ Mitacs stands out as an effective vehicle for transferring skills from academia to industry
- ✓ Industry engagement has overtaken technology transfer as the preferred model for knowledge translation and commercialization
- ✓ Knowledge translation/mobilization including but beyond industry (with government and community) can be both profitable and socially beneficial

The policy issue: The predominant paradigm of university participation in Canada's innovation agenda has been the commercialization of university technology and research collaborations with industry. Funding organizations have pushed to broaden that paradigm with new programs designed to enhance the social, economic and environmental impacts of new forms of collaboration through knowledge mobilization, graduate internships, experiential education, entrepreneurship and social innovation.

Academia and their external research partners are stepping up to the challenge, examining new ways to maximize the impact of post-secondary research expertise and talent. There is also a need to reprioritize the research disciplines typically engaged with industry and expand beyond the life and natural sciences to include the social sciences, humanities and creative arts.

The options: "If we want social, economic and environmental benefits, we need to widen the focus and embrace the arts and humanities," said Tausig-Ford. "Arts and humanities skills will be the most valuable to business and society going forward as technology gets more advanced and complex."

This emerging holistic perspective of the post-secondary sector's contribution to STI is driven by a constantly evolving policy framework aimed in large part at a greater alignment between industry and academia. Innovative firms are increasingly using research contracts and pre-competitive consortia to meet their technology requirements, increase their productivity and to become more competitive.

Ower said MDA Robotics and Automation (an operating unit of MacDonald, Dettwiler and Associates Ltd.) has embraced academia's new openness as well as government investments in leading-edge equipment.

“There are a lot more diverse ways we work with universities and that’s a positive thing. **Licensing ideas from universities is a minor portion of what we do when developing products and services. Much more comes from research collaborations,**” said Owers. “Contract research is often viewed negatively as a ‘contract job’. It’s not perfect but it enhances the knowledge transfer process, especially for specialized development like MDA does.”

There is still a need to adjust the balance of support for research collaborations, added Owers, with a greater weight on technology development and fewer support programs.

Freedman said the decrease in emphasis on technology transfer was inevitable after the golden age of university research in the 1990s, as the high costs shouldered by the universities coincided with negligible impact on industry. As industry engagement took on increasing emphasis in policy circles, new arm’s length organizations emerged—but only a handful have achieved anything more than moderate, sporadic success.

“We have created a vast and costly para-government QUANGO (quasi-autonomous non-governmental organizations) sector costing hundreds of millions of dollars a year but not a lot of success. We’ve run out of paradigms so where do we go from here. **The real action is happening with researchers, research groups and students. Mitacs is the right way to go,**” said Freedman. “The basic concept of knowledge is beginning to shift ... The social sciences and humanities are also increasingly being recognized.”

Freedman added that the dominant programmatic focus on small firms needs to shift to medium-sized firms with existing product lines and supply chains. He said they will have a far better chance than start-ups of becoming Canada’s large, globally competitive companies of the future.

Technology transfer offices remain a legitimate academic endeavour for many who see social innovation as a key intermediary for transferring knowledge into society—on par with the private sector. At York University, knowledge mobilization and social responsibility are considered valid ways to look at the role of universities in knowledge generation and translation.

“How can we ensure that the many good ideas from universities bring benefits to the broad society through commercialization or other means?,” asked Haché. “We try to emphasize that **social innovation and social benefits don’t have to be a loss leader. There can be profitable entities doing work for the benefit of the community.**”