Closing panel
Priorities for Action

Grant McVicar

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Moderator: Diana Royce

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Jerome Le Corvec

President & CEO, Aonix Advanced Materials Corp

Royce asked the audience to cast this assessment in terms of four questions: what should we keep doing that is helping us, and is working; what should we stop doing that we are currently doing and is not helping us; what do we need to start doing that we are not currently doing, in order to achieve our goals; and what is the single most transformative thing that needs to be done in your sector, or across sectors, in order to move the markers and have Canada move up in the rankings.

She then began by asking Le Corvec and McVicar if they heard anything at the conference that surprised them. McVicar said that he had come to the conference expecting to hear more negative responses to the changes in the SR&ED program, which did not happen. He was also struck by the suggestion of using Canadian military procurement as an economic stimulus strategy, especially in light of the observation that the government has actually set aside more money than contractors will be able to claim. Finally, he marvelled at how often "collaboration" and "silos" were each brought up in discussions, something that revealed to him tensions that fuel the Canadian challenge for innovation.

Le Corvec remarked on how eagerly Canadians plan to implement strategies that work abroad, such as the emphasis on military procurement. We have been slow to learn from these examples, he insisted, because we have been unwilling to play by the rules of international competition.

Crelinsten said he was struck by the slide in Tom Jenkins' presentation that purported to show the traditional three pillars of Canada's research system, which supplemented the Canadian flag with the nest of provincial flags, demonstrating just how complex most government initiatives become. An audience member also referred to Jenkins' identification of Key Industrial Capabilities, which moved from the idea of innovation for innovation's sake to a discussion of what the outcome of innovation should be, which can rally all participants around those concrete outcomes.

Other members of the audience commented on how large they found the health care procurement could be, how large they found the medium-sized portion of the business community in relation to the public resources that are being dedicated to this segment, the striking disparity of information that is available amongst various Canadian business sectors, and the heartening comments about the value of design.

Peter Frise recalled the blunt talk from the American investors, which served as a reminder that urging governments to invest in ventures that the business community has already rejected is a recipe for failure. He suggested that such observations serve as a pointed reminder that Canadians need to have a grown-up conversation amongst themselves about how big or how small we are in the global context, and what real impact we have made or can expect to make. "We need to be more aware of what's going on abroad, or we're not going to make any progress," he said. "We'll just run through a whole bunch of money for no purpose."

For her part, Royce admitted she was struck by the American investor's observation that without direct flights to Quebec, he would do no business in that province. "There are some things outside of our policy conversation that are completely out of our control, and we probably aren't even aware of them," she said. Crelinsten added to that list the harsh realities of Canada's impending demographic trends and our need to sustain innovation with immigration, as observed by Le Corvec in his presentation — another topic that is unlikely to come up at formal discussions about innovation policy. Further to the immigrant issue, an audience member mentioned a program that would fast-track immigrant entrepreneurs who have secured funding from investors, which might cause some friction amongst Canadians and might not even promote innovation in Canada. Le Corvec endorsed this kind of program as a recognition of how to motivate people to overcome the many minor but annoying logistical obstacles that can get in the way of talented people moving to this country.

Another audience member remarked on Tim Bradshaw's observation that despite monumental economic

challenges, the rate of R&D in the UK had not gone down. In contrast, the uptake in the SR&ED program has declined, although we do not know if that is because there is less R&D taking place or companies are finding it too difficult to qualify for the credits. Another comment touched on Bradshaw's observation that funding should not be spread too thinly, but that universities should be granted autonomy in the spending of that funding.

Bert Van Den Berg of NSERC pointed out that much of our innovation strategy is premised on our current lines of trade, which is with countries and cultures that have a great deal in common with Canada. In the coming decades, however, the world will welcome upward of 1.7 billion new consumers, most of them in places that have very little in common with Canada. "I'm not sure I'm hearing in the discourse that we're really understanding all of the challenges that it takes to change our innovation model to be one from selling to people like us nearby to selling to people that are across the world that are from a different cultural context and a different developmental state," he said.

McVicar responded that this comment reminds us of the enduring advice to know one's customer. "There is the issue of selling into a culture that we don't necessarily understand," he said. "But the rules in some ways are still the same. If we don't meet their needs, if we don't understand their needs, we're not going to sell to them. And the worst thing we usually do is project our needs on them." By way of example, he referred to an American ultrasound machine maker that had failed to make inroads in China because its product price was too high; the Chinese then developed their own machine for a much lower price, one that was initially of inferior quality but has been steadily improved until it is now competitive.

Doug Barber extended this point, noting that our educational system omits any formal teaching of human behaviour. He regarded that as a flaw that inhibits our ability to engage in commercial activities. "Commerce is a value exchange," he said. "It's a value exchange that goes on between people. There are human values that have to get exchanged, before you can get to exchanging a product that uses technology." He added that this process amounts to building up a level of trust sufficient for individuals to commit their time, money, or other resources.

Le Corvec agreed with Barber's argument, which overrides the possibility that good ideas are all we need to succeed in business. We cannot ignore our own history, or that of other nations, Le Corvec insisted, assigning much of China's current success to a tradition of commerce and trade that goes back for thousands of years; he portrayed Canada, in contrast, as a place people settled as a safe haven, not as a hub of enterprise. "At the scientific and technological level, we're doing a really good job," he said. "But we are not good sellers. We don't know how to do commerce with others."

McVicar outlined a fundamental aspect of any commercial strategy as that of solving a customer's problem, but that strategy fails if a business does not take responsibility for providing that solution, and instead directs a potential client to someplace else, such as a university research lab. Le Corvec added that such a response reinforces the silos in which people contain their efforts.

Tim Bradshaw extended this line of thought to the significant activity of procurement, where it is entirely acceptable to select the cheapest option even if it is not the most appropriate for the task at hand. What he is looking for is a way to change this attitude so that procurement instead makes innovation its leading priority.

Peter Frise returned to a similar observation, namely that we should not stop setting outstanding standards for our work in science and technology, but we must make that work relevant, and make it relevant in a timely fashion. "All the quality in the world isn't going to do us any good if we can't get it in time to be relevant," he concluded.

With regard to the power of basic research, Le Corvec observed that this work used to be done in research centres of one sort or another; today, small and medium size firms conduct a great deal of such research.

A representative of the National Research Council's Industrial Research Assistance Program noted that this decades-old government initiative came up in practically every talk given at the conference. He suggested this was because the program has been successful in adapting to the changing needs of its clientele, often venturing into areas that were entirely new but highly relevant. "It demonstrates that there isn't one way to do this," he said. "There's a number of different ways you can work with companies, there's a number of ways you can encourage innovation, there's a number of different needs out there."

By way of example, Barber noted that there is a post-graduate innovation and entrepreneurship program at McMaster University, which can only be entered by students who are in the process of attempting to start an enterprise. Kevin Tuer added that essentially all of the incubators and accelerators that are part of the Canadian Digital Media Network have mentoring programs, with paid in-house mentors. As laudable as this may be, he suggested that informal mentoring may be even better. "It's the peer-to-peer mentorship, an early stage company that's struggled with an issue that can mentor one of their colleagues in another company, which we don't see happen but it's probably some of the best information that they can get," he said. "That peer learning shouldn't be underestimated, but it does get seeded by formal mentoring programs."

Royce asked McVicar to initiate the commentary on things that Canada is not doing that we should start doing. He replied that our venture capital culture needs help, specifically in the form of more experienced people from elsewhere who can show us what to do. At the same time, we need to grasp the idea that innovation must lead to commercialization, otherwise it has no purpose. "If you don't commercialize your new widget, new concept, new process, new way of doing things, it's simply a bright idea," he said. In other words, commercialization is not merely nice to have, but an essential part of all research, including the most basic research.

Le Corvec responded that Canada must tackle the task of implementation, of acting on these same bright ideas that have already been put forward. "Implementing is tough, and first we need to have the talent," he said. "I'm not sure if we have the talent we need to implement it. There is a lot of capacity building to do." For example, business schools should be showcasing successful and unsuccessful entrepreneurs, both of whom can offer valuable insights on how implementation works. He also endorsed the value of alliances, which means not just collaboration but bringing together organizations in ways that enable the whole to be much more than a sum of the parts.

Tuer asked if it qualifies as success or failure when a Canadian firm grows large enough to be acquired or otherwise move outside the country. "I would say anything is a success," Le Corvec replied. "Just the increase of experience is a success." He added that this interpretation goes well beyond the limited scope of our metric methods. Even outright failures can nurture talent and lay the groundwork for future successes, something he has encountered in his own experience.

Taking a new direction, Claudia Krywiak argued that something to start doing is aligning federal and provincial programs, so that government activities can be regarded in a holistic way. This will make life easier for everyone who interacts with any level of government, noting that the proposed concierge approach is just the first step in this direction. Karine Morin, of Genome Canada, echoed that view, detailing how her networks activities to assess the ethical, environmental, economic, legal, and social aspects of genomics calls for dealing with a dizzying array of provincial and federal support. A representative of the Atlantic Canada Opportunities Agency later returned to this point, suggesting that the critical mass of the population represented by his organization might be comparatively small, and the political boundaries sometimes challenging, but measures that unite participants can nevertheless yield outstanding results.

Royce then asked Le Corvec and McVicar to initiate the discussion of things that Canada should stop doing, as well as what might be our most transformational new undertaking. McVicar began by insisting that we must come to terms with the fact that we cannot do everything, that our favourite projects will not find the support they need, and move on.

"Much as we say we don't like to pick winners and losers, occasionally we have to graciously lose and figure out how to work with the winners," he said. "It would mean leaving my pet project alone and working on someone else's pet project, because that's what they need. If we all learn to do that, that would make a huge difference in moving forward the commercialization agenda."

— Grant McVicar, CEO, Innoventures Canada

In a similar vein, Le Corvec argued that we must not see innovation programs as a one-size-fits-all affair, but tailored to specific conditions. By way of response, Knowledge Transfer specialist Kay James suggested that the qualifying terms of SR&ED credits should be revisited. "Most countries are using the current OECD definition of R&D, which is worded as 'using existing knowledge to produce advanced new products'," she said. "That's something that would not qualify under SR&ED. The definition we use is the 50-year-old definition from the original version of the OECD."

Ron Freedman endorsed James' remark, adding his own radical proposal in the form of a moratorium on new innovation programs. He recounted a proliferation of innovations programs in various parts of the country, most of which addressed gaps and shortcoming in other innovation programs. "That's the definition of declining marginal returns," he said.

Le Corvec agreed with Freedman's proposal, as well as tackling the terms of SR&ED. He offered his own radical proposal in the form of shutting down SR&ED and placing this money in the hands of investors who must put it into technology firms. He explained that this would replace indirect government support with hands-on direction from business people, who will take on more risk.

McVicar concluded with an observation about the challenges surrounding metrics, which are often overshadowed by anecdotal evidence of return on investment reported by experienced and credible investors. Presenting this kind of evidence in a formal way can be done, and it can play a useful role in decision-making, so long as the way in which it is gathered is clear. "It's an interesting metric, just in terms of impact," he said. "Do we believe our clients all the time? Nope. We actually have a tendency to discount it. But even after doing that, and cutting those figures severely, they're to consistently able to report a very interesting figure back to governments. So let's get our metrics right. Let's use all this incredible data that is out there to understand what our clients need, then use that information again to report the metrics back to our clients."

Ron Freedman then wrapped up the conference by harkening back to Tim Bradshaw's comments about the perilous times in which we live. "It's a period in which we're really questioning the tenets of our society, and the very tenets of our economy," he said. Taking a broader historical perspective, he reviewed the evolution of the Canadian innovation system over the past four decades. The 1960s were characterized by the introduction of the SR&ED program, followed by the creation of granting councils in the 1970s; by the 1980s, centres of excellence were being formed, followed by entirely new structures in the 1990s, including the Canada

Foundation for Innovation, the Canada Research Chairs Program, Sustainable Development Technology Canada, and Genome Canada.

Unfortunately, no further innovative paradigms have emerged since the turn of the century. “Here we are in 2013 and we still haven’t found a new paradigm,” he complained. “What we’ve really been doing for the last 15 years or so is more of the same. We need a new paradigm for research and innovation, because we’ve maxed out the one we have now.”