

WHERE TO NOW FOR INNOVATION?

In case you'd missed it, one of the hundreds of reviews the new Australian government is currently undertaking is a review into the national innovation system, chaired by Dr. Terry Cutler. Due to report on the challenges and possible improvements in a green paper at the end of July, his committee invited public submissions and received them in spades – nearly 700 in total! In addition, the committee has been holding further consultation sessions across the country, on topics as diverse as “rural innovation” and “innovation in the tropics”, that draw together leading authorities for discussion of the issues.

There are many positive aspects to this review. Firstly, it shows the government is listening and as most of us know, this has not always been so in the past. Secondly, there are a large number of stakeholders prepared to contribute their own time and thoughts into the process. Finally, the process will create a body of knowledge of near biblical proportions, which handled properly, could be mined to show the nation's strengths and weaknesses. At best, this will result in far-reaching policies and programs that will position Australia for future prosperity.

However, there are risks in the short term because any government-led activity is unlikely to be enacted before the May 2009 budget and the hiatus in the interim is unsettling. This risk, intensified with the untimely axing of the Commercial Ready program in May 2008, will leave many growth firms starved of co-investment and growth capital during the short-term period.

Innovation has numerous definitions, but among its attributes are a novel idea and its application to create something of value in the marketplace. Surveys show the most common sources of novel ideas are from employees within a business, followed by partners and then customers. Research as a source of idea generation for industry comes way down the list, despite it having particular value in generating breakthrough innovation that is “new to the world”. Prof. Ian Frazer's research into the human papilloma virus first threw up some novel ideas in 1991, but it was the application of that research into the development of a vaccine against cervical cancer in 2007 that is now producing not only economic outcomes, but also health and community outcomes as well. That's innovation – an inventive or creative step followed by an application or commercialisation step. It can create economic, social, and environmental outcomes for the community. Commercialisation is frequently disparaged by some in the research community, for fear it denies the achievement of public good. The fact is that without application, which is embodied by the knowledge transfer within a “commercialisation” process, innovation from research never happens and research remains locked away as simply a good idea.

The vaccine example of traditional linear commercialisation i.e. research-push commercialisation – is unusual, even if inspired. Across Australia, revenue from such activities as a percentage of total university revenue is very small and has in fact declined over the past 5 years. For example, in 2000, total Australian university income from licensed research was \$112M, or 3.5 per cent of research income, while in 2004 it represented around only one per cent of research income. The US average is about three per cent. Traditional commercialisation is not a core function of a university: it requires a committed research team and inspired university leadership to achieve the occasional breakthroughs such as with the cancer vaccine.

The average taxpayer would certainly wish for more from their research dollar, but these numbers do not tell the whole story. It is engagement with the community (including industry) that **should** be a core function of a university. This can be measured by the broader income received from research contracts and consultancy to industry, which now totals \$1B – a much more significant figure.

The innovation review is sure to proclaim the value of improving collaboration between industry and research organisations. It's not easy, for we know that internationally, Australian industry collaborates very poorly with the research sector – in fact, the worst of all developed economies. It's partly about people, so skills development is critical. Not just research skills, but conversion and translation skills as well. Receptiveness and the absorptive capacity of business also needs improving and company boards should play a role here. Because innovation is based on serving a market, it also needs to be demand-led. Independent intermediaries between small businesses and the research sector can connect and facilitate demand-driven collaborations by improving access, bridging cultures, sharing trust and getting projects off the ground. Funding for demonstration projects to remove some of the technical or market risks is also needed in a country like ours, where industry is a reluctant partner.

Let's hope the reviewers can make sense of those 700 submissions!