**HAS THE WIND GONE OUT OF THE SAILS OF RESEARCH COMMERCIALISATION?**

Perhaps the wind started to die early last year, when the Productivity Commission released its research report into Public Support for Science and Innovation. It suggested the case for government support of companies seeking to commercialise university research was weak, principally because it held that public money should not be used to assume risk the private sector is itself unwilling to take – especially when the benefits of any ensuing returns would be restricted to those organisations directly involved.

This report was also used to justify the axing of the Commercial Ready Program in May's Federal Budget – a program that helped research organisations and their partner firms cross the "commercialisation chasm" to develop prototype products, prove viability and de-risk private investment. Certainly, this decision seems to have put at risk entire cadres of firms in nascent industries such as the biotech sector and has led to outcries from venture capitalists, technology transfer offices and firms themselves. Without doubt, there are firms that are now in receivership because of this unexpected cut-off of seed capital.

The wind seemed to further stall as a result of the much-publicised Sirtex case, in which a WA judge ruled that an employer (in this case, the University of West Australia) did not legally own an "invention" created by an employee who was ostensibly employed as a professor to undertake "research". This case, which is being challenged, has thrown into doubt the ownership by universities of intellectual property that they seek to commercialise.

Finally, the wind seems to have reversed completely with the suggestion that CRCs should focus less on commercial outcomes and more on public benefit (as if the two were mutually exclusive).

To my knowledge, there has never been a Newspoll on taxpayer support for commercialisation of Australian research, but I am prepared to bet the overwhelming majority of Australians believe that we must do more, not less. Certainly, at the AIC forums we host on commercialisation, the public support is palpable. Could it be that a populist uprising is needed to put the wind back into those commercialisation sails?

Perhaps we need to focus more on the outcomes we expect, because the terminology has become overloaded. "Commercialisation" is the second half of innovation – the conversion of an idea into an outcome that has *value*. What becomes contentious is the definition of "*value*", so we need to start talking in terms of value "currencies" – currencies that might be economic, environmental, or social. Perhaps the commercialisation process implies too much an economic currency; but it can equally yield an environmental or social currency as well.

*Value* creation comes from the application of knowledge, a process that must be resourced and managed. Good business practice, strategy and enterprise are still required. For example, the University of Queensland's TripleP program has created enormous social currency by assisting parents in more than twenty countries to raise children more effectively. But in deploying the resources needed to do that, it has followed strong commercialisation practice. Public benefit and commercial practice have gone hand-in-hand. Without commercialisation, the research would have remained as a published paper, perhaps lost in the journals or waiting for some other body (overseas, if I wear the populist hat) to exploit it!

However, creating outcomes of value from research usually requires a partner to "translate" or "convert" it into practice, and there just may not be enough of them with the right expertise. In the case of the research sector, only around two per cent of Australian industry collaborates with university – the lowest rate in the OECD! The reasons behind this are well documented:

- The lags in our research funding system discourage industry participation, since business wants quick solutions;

- Incentives for researchers to work with companies, especially small local companies, are almost non existent;
- Ways to access to relevant IP, once it is found, are often obscure;
- The university entry system can be unhelpful (it can take six weeks to get a non-disclosure agreement signed);
- There are too few companies interested in research and development
- Many companies have limited absorptive capacity;
- Pre-seed capital to test viability is limited.

All these obstacles occur before the issue of cost is even addressed! It is little wonder that when companies do understand the need to innovate, they will consider internal development and when collaboration is required, look first to other companies rather than the research sector.

Which brings us back to those winds blowing against research commercialisation: how important is commercialisation? By the time you read this, the Green Paper from the National Innovation Review will have been published. Presumably, it will argue for greater collaboration and perhaps even make the case for funding to bridge the commercialisation chasm, so more research can make it across to a successful outcome – in other words, more innovation.

But the classic route of taking intellectual property to new markets in a single company or licensing deal is just one of many commercialisation pathways for research. For example, as a result of the skills shortage, companies are increasingly turning to universities for specific expertise that can add value to their existing products, services and networks. The transfer of researchers in and out of companies creates knowledge diffusion, and the commercialisation experience that brings strengthens both the individuals and their organisations. We should keep in mind Stanford University counts among its successes that 60 per cent of Silicon revenues are generated by firms with Stanford alumni or faculty founders (such as Yahoo, Google and Cisco Systems). Likewise, Massachusetts Institute of Technology (MIT) graduates have founded 4,000 companies with 1.1 million employees, including companies like McDonnell Douglas (now part of Boeing), Texas Instruments and Tyco international. Companies founded by MIT graduates and faculty would rank as the 24$^{th}$ largest economy if measured among nations, based on company revenue.

Is that wind in the sails I can feel?