

Nine Years of Commercialisation Progress

Commercialisation is the "the conversion of an idea or know-how into a replicable product or service that delivers value to a market".

Nine years ago, when the Australian Institute for Commercialisation (AIC) was first created, we were quickly forced to ask ourselves how we could add value to our own market – those seeking to commercialise their ideas. It took time to understand the real market needs, and to develop and commercialise our own products and services. In some we failed, but in others we succeeded.

What is the test of success? For us, as a not-for-profit company, success of our products and services has been measured through various key performance indicators, such as the number of our customers, our customers' success, and degree of our product uptake. However, if imitation is the sincerest form of flattery, perhaps our success can best be measured by the degree to which other governments and innovation groups are now offering the services that we pioneered and institutionalised. Following are four contributions to the commercialisation environment that we're most proud of.

1. Teaching of Commercialisation Skills has become entrenched

Australia's very first Commercialisation Bootcamp was jointly created with UniQuest and delivered in May 2003. The Chief Scientist at the time, Dr. Robin Batterham, opened the course by inspiring a group of forty university researchers gathered to learn about commercialisation. The purpose of the Bootcamp was not to turn researchers into commercialisation specialists; rather, it was to increase their understanding of the pathways to commercialisation and what would be required of them.

Since then, over 1300 researchers have attended an AIC Bootcamp, and the Bootcamp format has been copied by numerous other research organisations. The acceptance of commercialisation by researchers as a legitimate outcome has slowly turned around as a result.

In 2005, the AIC advised the Federal Government on the curriculum for its Commercialisation Training Scheme (CTS), that is now competitively offered on a scholarship basis to any interested postgraduate researcher in every Australian university. The Bootcamp continues to be offered as a short course to researchers in universities, CRCs, and medical research institutes around Australia and the world.

2. 'Demand pull' commercialisation – the transfer of knowledge into existing businesses seeking to solve a problem or enter new markets - has become recognised as a 'better' pathway to commercialisation.

Classic commercialisation of university research involves 'technology push', whereby a university commercialisation office either creates a start-up company or transfers IP utilisation rights to a suitable licensee.

It has been said that "marketing a university invention is a process of finding the discrete business problem that fits the discrete university solution while overcoming the barriers of:

- limited market knowledge,
- limited contacts,

- early stage of development,
- no patent protection,
- high expectation of inventors, and
- perceived risk of new business ventures”

The problem with commercialisation through a start-up company is that quite apart from its difficulties in obtaining finance, a start-up company needs to create its delivery capability and its channels to market from scratch. On the other hand, if an existing firm is already successful in its markets, such capabilities will already exist, reducing the barriers to commercialisation.

By starting with firms that either have *a problem to solve*, or *a market opportunity to seize*, the research sector, and indeed the entire innovation system (including other SMEs) offers a knowledge source that can be tapped for solutions. While some university commercialisation offices attempt to find “buyers” for their own intellectual property (IP), the system really needs to accommodate the wishes of buyers to help them find “sellers” of the IP they need. Such collaboration for the transfer of intellectual property and skills for commercialisation is often better known by its more common name, ***open innovation***.

The AIC was the first to formalise specific demand-driven knowledge transfer and commercialisation with its TechFast program in 2004. Commercialisation has now embraced knowledge (technology) transfer into existing companies and exploiting their demand for novel solutions in preference to creating new ones. The recent emergence of Innovation Voucher Schemes around Australia, and the Federal Government Researchers in Business program, which have emulated the TechFast approach, are proof of its success.

3. SMEs (Small to Medium Enterprises) are now integral to innovation

SMEs had long been overlooked as a direct target for government programs encouraging innovation, with such programs focussing instead on improving the overall business environment. Even now, a number of programs ostensibly devoted to encouraging SME innovation have had to focus on improving operational capability, rather than on innovation.

The AIC’s Innovation Coaching program was first introduced to help Queensland SMEs in 2009. The program works with SMEs in a number of industry sectors, helping company management to “think outside the box” to grow their business or develop new products and services. In addition, the AIC refers companies to other service providers in its wider partner network, where other specialist skills are required. Many of the firms are now enjoying the results of the business model transformation and product innovation experienced through this program; firms such as Placid Pools in Cairns or B&C Plastics in Brisbane.

SMEs are important stakeholders in innovation not only because of their number and economic contribution, but because they stand to gain the most from innovating. More importantly, existing local SMEs can be critical in the incubation of new technologies or knowledge because they are frequently locally owned and “stick” to a region. New start-up companies on the other hand are often forced to relocate offshore to acquire new venture capital or access new markets. Established SMEs that are innovative will be seeking to acquire complementary assets rather than to establish operations from scratch, and are increasingly becoming an important driver of national innovation. The Federal Government’s Enterprise Connect program has recognised this by now offering innovation services as more SMEs develop the absorptive capacity required to benefit from it.

4. Value Chains are coming to the fore in innovation policy

The value chain, first popularized by Michael Porter in 1985, refers to a network of activities, connected by linkages that are performed by an organization to design, produce, market, deliver and support its products and services. As corporations have become less vertically integrated, adopted open innovation, and embraced globalization, most value chains today cross organizational boundaries and consist of many firms, loosely linked but interdependent on each other.

Value chains are a useful model to describe how a product or service is developed and ultimately utilized. When a value chain lacks transparency, or is fragmented, or perhaps does not yet exist (for instance, in a new emerging industry sector), the commercialisation of new ideas can stall and innovation can be stifled because small firms find themselves unable to offer fully integrated products, or unable to access markets on their own.

For the first time in 2009, the AIC developed its TechClinic process to restore, reorganize, or assemble value chains in existing or emerging industry sectors through a structured, facilitated process. Through the TechClinic process, successful outcomes have been achieved for companies in industries as diverse as energy, mining, tourism, and agriculture.

Value chains have long been overlooked by government innovation programs, which usually focus only on the “firm”, rather than on where and how the firm fits within a more extended value chain. However, all firms need “complementary assets” to achieve successful market penetration. The AIC expects the value chain to feature more prominently in future innovation policy. If innovation is all about “serendipitous connections”, then TechClinics can help to engineer these.

The future

One of the key challenges for anyone attempting to take new opportunities to market is the issue of ‘what to do next’.

In 2011, the AIC made available to the global commercialisation community an open source version of its Commercialisation RoadMap, now known as the Commercialisation Blueprint. Under a Creative Commons license, anyone can now access the full content of a comprehensive system designed to support the commercialisation journey, from idea generation right through to company growth stage. The Blueprint provides a step by step guide to each stage in the process, and enables innovators and their mentors or government supporters to track, monitor, and report progress. The Blueprint contains a comprehensive suite of software, tools, guides, and templates that answer the “how to?” and “what next?” questions, that entrepreneurs *should*, but only sometimes *do*, consider on their path to market.

By opening up much of its core IP for global use, the AIC expects others in the commercialisation and innovation community to benefit from localised improvements to the system that will be contributed back by users. The AIC itself of course will continue to offer its consulting services and expertise in support of the global community of Blueprint users.

Summary

What’s happened to commercialisation in the past nine years?

The AIC has commissioned independent economic research that shows the value of its TechFast service alone has been worth over \$350M to the national economy each year in additional business revenue, and created up to 1000 new jobs. If that’s not evidence enough of the importance of government investing in innovation intermediaries such as the AIC, consider this and think back nine years: industry *is* now beginning to take innovation seriously; researchers are receiving commercialisation skills; the market is demanding new sources of innovation for its projects; SMEs are collaborating for open innovation; and value chains to market are being assembled. With others, the

AIC is proud to have pioneered and facilitated these changes. Can the momentum continue? Time will tell.

Dr. Rowan Gilmore, CEO, Australian Institute for Commercialisation