



Australian Institute
for Commercialisation

INSIDE

COMMERCIALISATION

→ ideas → opportunities → outcomes

opening the door to ideas

IDEAS OPPORTUNITIES OUTCOMES



Australian Institute for Commercialisation
Annual Review 2005/06

Brisbane | Sydney | Melbourne | Adelaide

Head Office

1 Clunies Ross Court, Eight Mile Plains, QLD 4113

PO Box 4425, Eight Mile Plains, QLD 4113

t. 1300 364 739 f. +61 7 3853 5226

info@ausicom.com

www.ausicom.com

LETTER FROM THE CEO

Welcome to the second edition of 'Inside Commercialisation', the annual review produced by the Australian Institute for Commercialisation (AIC). 'Inside Commercialisation' is designed to provide an insight into Australia's commercialisation landscape and highlight some of the work the AIC is doing to enhance national capability.

One of the original purposes of the AIC was to work with Australia's publicly-funded research institutions – universities, Cooperative Research Centres (CRCs), medical research institutes and the like – to reap greater returns for the nation by improving the harvest or application of the knowledge and intellectual property (IP) developed by their scientists and researchers. Our scope now extends beyond supporting researchers into other communities including: businesses, government agencies, individual inventors and entrepreneurs.

This harvesting process has come to be known as 'commercialisation' in Australia, although it is often referred to elsewhere (for instance, in the US) as technology transfer. Just as the harvesting of grain first requires sowing, fertilising, watering, weeding and sunshine before a skilled farmer can ultimately reap, so too commercialisation requires good research, business input, incubation and funding before a practitioner with the right set of skills can create a marketable application from the research that seeded it. The AIC is there to support that process of converting an idea into an outcome.

2005/06 has been an exciting year for us. It was a year of transition as we moved to more closely align our services with the changing needs of our core markets – government, industry, research organisations and entrepreneurs.

Today the AIC is a fully integrated commercialisation consultancy delivering customised solutions to meet each of our clients' specific needs.

The AIC has come a long way and achieved a great deal since it was formed in 2002. The continuous support of the Queensland Government over that time has been instrumental, as has the recent support of the Australian Government Department of Industry, Tourism, and Resources (DITR). I would also like to thank and acknowledge all our staff who have contributed immeasurably to the growth and success of the AIC.

To our government supporters, our clients, partners and service providers, thank you as well for your confidence and commitment to the AIC.

A handwritten signature in black ink that reads "Rowan Gilmore". The signature is fluid and cursive, with a large initial 'R'.

Dr Rowan Gilmore
Chief Executive Officer

2005/06

accomplishments

- ▶ In its first 18 months of operation, our TechFast® program has helped match publicly-funded research and know-how to 20 businesses, facilitating 28 technology transfers to fast-track product commercialisation. This program has significantly increased the volume of technology and knowledge transfers between the entire Australian research sector and small business
- ▶ Through TechFast® we have engaged companies from a range of industry sectors, including manufacturing, engineering, agriculture, defence, information and communications technologies (ICT), mining, viticulture and biotechnology
- ▶ We have assisted six Queensland government departments sign 24 IP commercialisation agreements and participated in collaboration projects with 10 small to medium enterprises (SMEs) in the ICT industry
- ▶ Through our Office of ICT Commercialisation (OICTC) we have increased product opportunity in the ICT sector and brought benefits that will exceed \$5 million to participating government departments
- ▶ Our market research service has helped over 40 organisations address new opportunities by providing research that has better quantified their markets, including some of the biggest university commercialisation offices, SMEs and a number of CRCs
- ▶ Our Commercialisation Bootcamp™ was again recognised as a key business and entrepreneurial skills training initiative. The Commercialisation Bootcamp™ plays a crucial role in addressing cultural barriers, skills shortages and other barriers hindering successful commercialisation
- ▶ More than 240 researchers and commercialisation professionals have undertaken our Commercialisation Bootcamp™ in the past year, assisting them increase their commercialisation knowledge and skills. This brings a total of 600 professionals touched by this program over the past two years
- ▶ In the past year we have helped over 500 Queensland entrepreneurs, small businesses and inventors learn how to successfully take their innovations to market through the Ideas2Market program
- ▶ We have helped the Australian Department of Education, Science and Training (DEST) design a scholarship curriculum to improve the commercialisation skills of higher degree by research graduates by investigating the needs of the employers of these prospective graduates
- ▶ We have developed commercialisation frameworks for clients that are helping them apply better governance and achieve consistent decision-making to IP commercialisation opportunities
- ▶ Through Commercialisation Expo 2006, over 600 participants from the research, government and industry sectors were exposed to new technologies being developed by Australian publicly-funded research organisations
- ▶ We have helped a CRC nearing the end of its Australian government support to develop future structural options enabling it to continue to serve its mission
- ▶ Working with our partners on behalf of DEST, we have developed and improved upon our 2004/05 CRC template documentation so it can be used by new and incorporating CRCs in 2006.

OUR VISION

To enhance Australia's future economic growth, jobs and lifestyle by improving our national capability to take innovative ideas to market.



Helping innovators accelerate success

The AIC is a leading service organisation helping innovators achieve commercial success. Around Australia, the AIC helps business, research organisations and governments convert their ideas into successful outcomes.

We address market gaps and accelerate the commercialisation of know-how and technology that our clients have created.

By providing advice, solutions and tools, and by helping people improve their commercialisation skills, we fast-track the commercialisation of Australian innovation.

Our consultancy services include:

- ▶ technology transfer facilitation and brokerage of IP, typically based on a market-pull (rather than technology-push) approach to stimulate demand

- ▶ commercialisation project management
- ▶ strategic IP management advice
- ▶ market research and opportunity analysis
- ▶ professional development programs to increase commercialisation skills and successes.

These services are delivered by our three business units: TechFast®; OICTC; and Solutions and Consultancy.

Through our work, our clients are able to better develop their ideas and capitalise on opportunities that create high value jobs, exports and economic growth.

Established in 2002 with seed funding from the Queensland Government's 'Smart State' initiative, the AIC enjoys the support of Australian, state and territory government agencies, industry and the research and development (R&D) community throughout Australia.

The debate surrounding commercialisation and its role in innovation has assumed a much higher profile during the past year. This has partly been the result of governments proposing new initiatives or seeking community comment on science and innovation. For example, the Research Quality Framework (RQF), the Parliamentary Inquiry on 'Pathways to Technological Innovation', and the Productivity Commission study into Public Support for Science and Innovation all seek to identify or improve how Australia can participate more fully in the knowledge economy. Commercialisation features strongly in all such debates, because it can create enhanced social and economic outcomes and grow new industries for the country. The success that our programs have so far achieved means that the AIC is a trusted, credible, and legitimate contributor to these policy forums.

In particular, the RQF places great importance on defining and measuring the impact of research. Considerations of how a university should best engage with the community have followed. This has led some academics to ask whether the focus on research commercialisation by universities has been overdone, and whether researchers would be better off freely disseminating their research in order to maximise community engagement, and by implication, increase its uptake. We believe that such a utopian view is generally misleading. History is littered with examples where the free distribution of research or inefficient commercialisation has in fact prevented any potential benefits from reaching its intended population. Reaching markets costs money, and unless that cost can be recovered, either through government subsidies or profits, no business can be viable. Put simply, unless a business has a competitive advantage in serving a market, it will rarely take the risk, leaving it to governments instead.

To some, commercialisation is perceived to be a negative trend that threatens the very core of research liberty. However, most taxpayers have come to expect return to the nation on some portion of the funds invested in public research. Such returns can be social, cultural, environmental, or economic. They can result in a greater 'public good', or they can come in the form of greater national wealth, prosperity and high value jobs. While we believe that social and cultural engagement are indeed important elements of the innovation system, commercial engagement is no less so. Importantly, even in cases where the intended impact is for 'public good', a cost benefit analysis usually applies, and reaping the benefits typically requires good business principles to be followed. The role of commercialisation and the skills required are just as valid even where the desired outcome is not for profit or economic benefit. Environmental sustainability and climate change are just two major research areas

in which commercialisation of appropriate research will most rapidly achieve greatest public good.

The transfer of knowledge from research institutions takes multiple forms. Diffusion of knowledge through teaching and education is certainly the dominant transfer mode, and the human capital this creates is undoubtedly the key role of most universities. However, other ways to transfer knowledge include publication, licensing, transfer of personnel and contract research. The point is that the use of knowledge for productive outcomes – which we refer to broadly as 'commercialisation' – requires as a spark, a process in which the creator of the knowledge either builds or engages with an entity that can further express, develop and deliver its embodiment to markets that need it.

It is therefore surprising how few incentives and resources are directed to this collaboration effort, and to the ensuing process of commercialisation, in spite of the potential returns from Australian research. We estimate that less than one percent of the total public R&D spend is invested in its direct commercialisation. This of course is the complete inverse of what it costs businesses to take a product to market, where multiples of ten to 100 times the cost of the research itself are the normal expense for taking an idea to the marketplace.

It remains stubbornly difficult to commercialise research from publicly-funded institutions. In attempting to find a buyer for its knowledge or technology, an institution is most likely engaging in 'technology-push'. However those working in a business environment readily confirm that 'market-pull' is the necessary initiator for product development. Yet technology transfer and commercialisation offices around the world are 'pushing' their technologies out, hoping to find customers or venture capitalists in pursuit of their new business opportunity. Some will succeed with blockbusters; others will have

discovered the better mousetrap that has customers knocking at their door; but the statistics prove that, more generally, many start-up companies created through technology-push will fail.

How then, is the AIC fulfilling its mission? Strategically, we are creating new marketplaces and building collaboration between suppliers and potential users. Between the publicly-funded research organisations and Australian-based SMEs through our TechFast® program; and between government agencies and Australian-based IT companies through our Office of ICT Commercialisation. By starting with existing SMEs, we can articulate latent market needs and promote a demand-driven approach. We also avoid the difficulties of attracting venture capital, by building on existing companies that already know their markets and have distribution channels

in place. However, our role is more than a broker; it is an independent intermediary that can catalyse new activity and overcome market inefficiencies. While a broker can connect supplier to user (in this case, a SME); an intermediary will also provide skills and expertise that ensures the technology transfer is consummated. In this respect, TechFast® and OICTC are new approaches that have so far been highly successful.

To us, the use of publicly-funded research to spawn new businesses and new industries for Australia is a perfectly rational approach. Strengthening our economic performance into the future requires a concerted effort to raise business spending on R&D, and to greatly improve the efficiency with which publicly-funded R&D is converted into commercial and economic outcomes. As we are showing through AIC's programs, business R&D can indeed build on publicly-funded R&D. To achieve the full potential from our nation's investment in research, it is essential that an even greater focus be placed on

commercialisation, particularly at the very early stage of research when market input can be accommodated with minimal cost and adjustment.

The AIC is grateful to the Queensland government for its continued strong support, to other state governments for their support, especially for TechFast®, and to the Australian Government for its support of the initial TechFast® trial. We are confident that when the full

evaluation of the TechFast® trial is completed in coming months, this program will become a permanent part of the Australian innovation landscape. As the owner of the IP that is embodied in TechFast®, we are looking to work more fully with an even greater number of partners in using Australian knowledge and ingenuity to strengthen Australian industry. In the year ahead we shall also

explore possible private sector involvement, although we are currently of the firm view that TechFast® is overcoming clear market failure, and thus deserves ongoing public support and funding.

The AIC's brand promise is converting ideas into successful outcomes. The focus should not be on research income, grant funding, or even research output. It should be on outcomes. Social, cultural, environmental and economic outcomes. One pathway to achieving those outcomes is commercialisation, and the AIC will continue its work to improve the skills required to better commercialise IP, along with developing programs and policy recommendations to change the culture to embrace outcome-based research, collaboration with business and sensible, calculated, risk-taking behaviour.



AIC CEO Dr Rowan Gilmore with Chairman Peter Jonson (right)

OUR MISSION

Working with Australian industry and research organisations to maximise the returns from Australia's investment in R&D and innovation.



deliveringsolutions acrossAustralia

Victoria/Tasmania

Across Victoria and Tasmania, the AIC has provided companies in materials manufacturing, defence, medical devices, environment and mining with access to new capabilities to enhance their businesses, products and services. In total, nine companies in this region were accepted into the TechFast® program.

From formulating solutions to design improvements, the AIC's TechFast® program has worked with companies including Ausmelt Ltd, Composite Materials Engineering Pty Ltd, SVP Industries Pty Ltd and Fiomarine Industries Pty Ltd - delivering business solutions to reduce the risks associated with product development. Along the way, companies have built greater knowledge of what technology and know-how is available to them through access to the national research community. Ausmelt, for example, has gained access to formulation and analytical expertise from the University of Melbourne to assist their development of a new mining chemical.

During the year, six companies from urban and regional areas of Victoria and Tasmania were matched with technologies. A total of eight agreements have been finalised between these companies and research providers for access to new knowledge. In the coming

year, these companies are expected to begin reaping the benefits of these new relationships.

Several Commercialisation Bootcamps™ were conducted for CRCs over the year, including the CRC for Antarctic Climate and Ecosystems, the CRC for Advanced Composite Structures and the CRC for Greenhouse Gas Technologies.

New South Wales/ Australian Capital Territory

The AIC has provided a strong linkage environment for organisations throughout New South Wales (NSW) and the Australian Capital Territory (ACT). Actively engaging several of its specialised programs and services with local organisations, the AIC has been a catalyst for technology commercialisation opportunities across a range of situations with mentoring assistance, linkage opportunities and referral advice provided to 16 companies.

TechFast® has connected NSW and ACT companies with transferable technology, inter-company collaborations and business development opportunities across Australia. These linkages and connections across industries as diverse as aquaculture, image analysis, robotics, command and control systems, manufacturing, waste

water and energy systems will lead to more efficient use of Australian IP and result in economic growth outcomes in the future.

Advisory services have helped organisations formulate IP-based business cases and build market understanding. Commercialisation Bootcamp™ education has provided researchers from seven different research organisations with a solid grounding in practical commercialisation skills.

Queensland

In 2005/06 the AIC's TechFast® program worked with nine Queensland SMEs to assist them identify, assess, adopt and commercialise innovative technologies from Australian research organisations. Participants included National Poly Industries Pty Ltd, Russell Mineral Equipment Pty Ltd (RME) and Maverick Biosciences Pty Ltd.

TechFast® was successful in facilitating 14 transfers of technology or know-how from research organisations for these companies. For instance, TechFast® facilitated a new collaboration between RME, the University of Southern Queensland and the Julius Kruttschnitt Mineral Research Centre. RME is benefiting significantly from access to expertise and technologies held by these research organisations in their pursuit to develop and commercialise safer and more efficient mining technologies.

The successes of the Ideas2Market program, Commercialisation Bootcamps™, and the OICTC in Queensland has also contributed to outcomes in the state for individual inventors, entrepreneurs and government departments.

South Australia/Western Australia

TechFast® has proved to be a resounding success in South Australia (SA) with seven companies entering the program in the past 12 months. Three agreements are in place between SMEs and research organisations, with a further three deals currently in the draft stages.

One business-to-business introduction has led to a collaborative R&D project and more than half of these SMEs are in the process of applying for, or have already been granted, government innovation program funding.

TechFast® projects have incorporated wide cross sections of industries including viticulture, automotive electronics, radio frequency identification technology,

digital rights management and advanced manufacturing. One TechFast® SME is a regional based agribusiness looking at import replacement opportunities in the food sector.

The AIC presence in SA has led to a further 28 companies seeking assistance with identifying public research expertise, alliances and commercialisation assistance.

Researchers and commercialisation professionals have increased their knowledge and skills by the delivery of an AIC Commercialisation Bootcamp™ with plans within the next year to expand these within the state and in Western Australia.

The AIC's commitment to improving Australia's commercialisation landscape saw the AIC provide policy input and program advice to the Department of Trade and Economic Development (DTED) on their innovation and commercialisation programs offered in SA.

Some other research organisations participating in AIC programs nationally include:

- ▶ Victorian Partnership for Advanced Computing
- ▶ Griffith University
- ▶ University of Queensland
- ▶ Central Queensland University
- ▶ CSIRO
- ▶ Dr Edward Koch Foundation
- ▶ Environmental Biotechnology CRC
- ▶ University of the Sunshine Coast
- ▶ Australian National University
- ▶ Sydney University
- ▶ University of Melbourne
- ▶ University of South Australia
- ▶ University of Southern Queensland
- ▶ Smart Print CRC
- ▶ Monash University
- ▶ Australian Nuclear Science and Technology Organisation
- ▶ University of Wollongong
- ▶ Smart Internet CRC.

Many of the AIC's programs are specifically aimed at improving business growth through innovation. These programs are of particular interest to government departments responsible for science, innovation, industry and regional development.

The AIC has introduced a range of new solutions to support all government departments, especially those that produce IP, knowledge or research of their own. An increasing number of government agencies across Australia are improving IP management and achieving better value from the IP they have created by working with the AIC.

Solutions for government are designed to:

- ▶ deliver independent commercialisation expertise
- ▶ increase cost savings and royalty streams to government through Office of ICT Commercialisation activities
- ▶ deliver programs in support of government agendas
- ▶ draw from a pool of consulting and project management talent to deliver solutions on time and on budget
- ▶ access pre-eminent thought leaders to develop innovation and research policy strategies for various agencies
- ▶ liaise across whole-of-government.

One year ago, the AIC was working with approximately seven government departments around Australia. This has more than doubled as more governments realise the benefits of partnering with the AIC.

The scope of work has broadened from high level policy input to providing strategic, practical tailored solutions. The AIC is in the unique position of being able to draw on our numerous hands-on programs and experience in commercialisation to provide topical, informed input into the commercialisation policy debate.

Outcomes:

- ▶ commercialisation frameworks, strategies and identification of IP for a range of government clients
- ▶ increased collaboration between government agencies and industry by project managing the execution of 16 ICT transfer licence agreements
- ▶ development of policies, practices and an online support system to identify, manage and capitalise on IP generated in one of the largest Queensland government departments
- ▶ successful delivery of a number of consulting projects to government agencies to provide guidance on IP management issues relating to ICT procurement and collaboration projects with industry and research organisations
- ▶ template models and legal agreements for incorporating Round 9 and 10 CRCs for DEST
- ▶ commercialisation curriculum development for the DEST Commercialisation Training Scheme.

“Queensland Health is appreciative of the assistance that the AIC’s Office of ICT Commercialisation (OICTC) has provided to the department. In particular their commercialisation expertise has contributed to the successful commercialisation of a number of ICT projects across the department.

Additionally, the professional project management personnel of the AIC together with their extensive ICT IP expertise has assisted this department through the provision of strategic IP management advice on a number of ICT projects.”

Greg Moran, Director, Queensland Health Information Investment

“The AIC’s OICTC has been invaluable in the assistance it has provided to our department in the commercialisation of our Fleetscape Management System.”

Bryan Quant, Chief Information Officer, Department of Public Works

Online petitioning

Attracting interest and income

An innovative web-based petitioning system developed by the Queensland Parliamentary Service is providing an alternative to the traditional, often cumbersome and time intensive, paper-based petitioning method.

e-Petitions was designed to overcome the limitations associated with paper-based petitioning, particularly for members of communities located in regional and remote areas.

Following its success in Queensland and interest from other local and state governments, the Queensland Parliamentary Service sought to commercialise the innovative software and in the process derive financial benefits for the state government as well as meeting the government's objective of assisting the growth of the local ICT industry.

To do this, the AIC's Office of ICT Commercialisation was engaged in a project management role to negotiate a commercialisation licence covering the two main components of IP – software code and the business processes governing the way parliaments undertake the petitioning process.

According to OICTC Director Peter Beven, the potential value to an industry partner for commercialisation was to be found in the business processes rather than the software code itself.

“Our key function was to ensure the agreement reflected a balance between the need to reduce risk for government and the removal of potential roadblocks for the licensee

in the way they need to commercialise their products and services.”

Queensland Parliamentary Service has now signed a commercialisation licence with Brisbane-based software developer Creatop Pty Ltd for the commercialisation of e-Petitions.

As a result of the AIC's involvement, Queensland Parliamentary Service will derive a range of benefits:

- ▶ a royalty arrangement will provide revenue back to government for re-investment in further development
- ▶ access to the modifications and enhancements undertaken by the selected industry partner delivers significant cost benefits in upgrading the products to better meet the business needs of Queensland Parliamentary Service
- ▶ commercial success by the selected firm delivers on the Queensland government's commitment to assist the local ICT industry in capturing new export and job creation opportunities.

For Creatop, they have a new product which is an excellent 'fit' with their existing software solutions and a stronger value proposition for their local council clients.

According to Peter Riley, CEO of Creatop, the company has received enquiries about e-Petitions from a number of sources including councils and the Taiwanese government.

“The AIC's role in facilitating the transfer of this IP to our company from government was vital,” Mr Riley said.



outcomesforindustry

Innovative and emerging businesses across Australia have improved the scale and speed with which they successfully expand and grow their businesses through the linkages provided by the AIC.

By working closely with industry, regional clusters, the venture capital sector and other organisations with a specialist interest in innovation and commercialisation, the AIC has provided tailored solutions to increase their competitiveness by:

- ▶ identifying and accessing IP nationally that can be implemented into businesses for growth
- ▶ accessing new ICT products for commercialisation
- ▶ objectively assessing business opportunities and determining their commercial viability
- ▶ building partnerships with research organisations, other businesses, government and service providers
- ▶ identifying gaps within their markets by providing market business intelligence.

Outcomes:

- ▶ matched research and know-how to 20 businesses resulting in 28 technology transfer deals
- ▶ provided critical market intelligence throughout Australia to over 40 businesses developing all manner of products or services, from small start-ups to established technology-based companies
- ▶ helped over 500 entrepreneurs, small businesses and inventors get the information they need to take their innovations to market

- ▶ facilitated the establishment of new ongoing collaborative relationships between SMEs and research organisations
- ▶ introduced over 200 industry and business professionals to 200 business opportunities from the Australian research sector at Commercialisation Expo
- ▶ assisted SMEs access other government support programs such as 'Commercial Ready'
- ▶ provided linkages between SMEs and other private sector commercialisation service providers who can assist them through the commercialisation challenges.

"The TechFast® program has allowed VPAC to expand our client base by allowing us to apply our advanced computing facilities and technologies to assist Fiomarine in developing design solutions for their next generation products."

Dr Thomas Ting, Business & Operations Manager, Victorian Partnership for Advance Computing

"Many great concepts, processes and products that could have wide commercialisation potential have been discussed within the company over the years, but time and resources to follow up and see them through has been overshadowed by the day-to-day demands to run and manage a growing and agile SME. These potential ideas may have been destined to stay within our company without the structure of AIC's TechFast® to facilitate and drive the commercialisation process".

Tom Ayers, Managing Director, Adelaide Hills Vineyard Contractors

Technology transfer goes below sea level

The development of a niche underwater technology that will benefit the global petrochemical, defence and academic markets has been fast-tracked through the AIC's TechFast® program.

ATSA Defence Services Pty Ltd, located in the Hunter Region of New South Wales, supplies maintenance services and develops new components for the Royal Australian Navy's 14 military mine clearing remotely operated vehicles (ROV).

Leveraging its extensive experience managing the technology requirements of miniature, unmanned submarines, ATSA sought a new market niche for diversification and expansion of its business. Teaming with specialist researchers from the Australian National University (ANU), ATSA selected the 'SeaSwarm' Autonomous Underwater Vehicle (AUV) as the right project for their innovation efforts.

The SeaSwarm AUV is a platform underwater observation technology. The system provides improved data retrieval and broad observational capacity for the user compared to a single vehicle. With each AUV only 400mm in size and low weight for easy handling, the SeaSwarm can opt to drift with ocean currents and turbulence in small linked

groups of up to 20 vehicles, or power up to a forward speed of two knots and vertical speed of one knot.

According to ATSA's Engineering Manager Darren Burrowes, TechFast® helped ATSA access the AUV plans and design capability from ANU to further develop a new method of underwater data collection for researchers and engineers.



"TechFast® has been of invaluable assistance to ATSA in supporting the commercialisation of our swarming small AUV technology. We strongly recommend this program to other small businesses with a technology-centred approach to the market," Mr Burrowes said.

With the assistance of the TechFast® program, ATSA has signed a technology transfer agreement with the ANU and has undertaken the transfer of IP related to the Mark I SeaSwarm. The development of the Mark II SeaSwarm is underway.

strengthening impact for research organisations

The AIC is fast becoming a valuable outsource partner, delivering commercialisation advice, project management services, tools and solutions tailored to the unique needs of research organisations and CRCs to accelerate R&D commercialisation across Australia.

Over the past 12 months the AIC has worked with 50 research organisations, including universities, CRCs and specialist research bodies and helped researchers create and build mutually beneficial relationships with industry, other research organisations and government.

Solutions for research organisations include:

- ▶ engaging researchers with established, technology receptive SMEs that have a proven track record in their sector and a desire to grow
- ▶ reducing organisations' staffing needs by outsourcing much of the 'search and find' work to the AIC
- ▶ providing solutions to manage IP and assess the feasibility of commercialisation pathways
- ▶ formulating tailored commercialisation goals and objectives for the institution
- ▶ undertaking cost-effective market research and opportunity analysis
- ▶ delivering education and professional development programs to improve commercialisation knowledge and skills
- ▶ providing a platform and customised business tools to showcase research outcomes to potential investors and assessing the commercial potential of products or innovative ideas
- ▶ building the credibility of organisations with potential investors and partners
- ▶ benchmarking commercialisation performance
- ▶ validating the commercial potential of IP and technologies.

"There is no single or simple approach to university-industry technology transfer. Each approach is context-specific, and will be more or less a fit with the perspectives and aspirations that stakeholders bring to the process.... It is incumbent upon universities and their industrial partners to choose those linkages and approaches most suitable for their environment."

Tornatzky, Waugaman & Gray (1999 p. 24)

Outcomes:

- ▶ matched researchers and knowledge workers with over 30 companies to innovate their products
- ▶ facilitated over 28 collaborative agreements between research organisations across Australia and SMEs. Several of these collaborations also involved bringing multiple research organisations together to jointly work with a SME
- ▶ assisted a number of research organisations participate in collaboration projects with Queensland government agencies and the ICT industry
- ▶ developed transition strategies to advise CRCs on exit strategies beyond the end of their funding and implemented templates to assist the incorporation of new CRCs
- ▶ helped over 40 organisations grow by providing market intelligence that better quantifies their markets and products, including some of the biggest university commercialisation offices and a number of CRCs
- ▶ designed a scholarship curriculum with the Department of Education, Science & Training (DEST), to improve the commercialisation skills of higher degree research graduates by investigating the needs of the prospective employers of these graduates

- ▶ helped more than 200 research professionals develop linkages into industry and government through Commercialisation Expo 2006
- ▶ developed commercialisation frameworks for clients to help them apply better governance and achieve consistent decision-making to IP commercialisation opportunities
- ▶ helped more than 240 researchers and commercialisation professionals increase their commercialisation knowledge and skills through the AIC Commercialisation Bootcamp™
- ▶ helped improve the corporate commercialisation culture of universities, medical research institutes and CRCs by instilling the importance of commercialisation in the context of their research oriented organisations through our Commercialisation Bootcamp™.

“TechFast® has provided a crucial link between USQ and our industry partners. This has enabled us to fast-track project milestones and maintain a more structured approach to project delivery. For a regional university such as USQ, this is an invaluable service”.

Gary Brady, Business Development Manager, Office of Commercialisation, University of Southern Queensland

DEST study to underpin Commercialisation Training Scheme

Researchers will benefit from a major study undertaken by the AIC on behalf of the DEST.

The recent study will assist DEST implement a new commercialisation scholarship for Australian student researchers, as part of the Commonwealth Government’s Backing Australia’s Ability - Building our Future through Science and Innovation program.

The Commercialisation Training Scheme (CTS) will provide approximately 250 awards each year for higher degree research (HDR) students to study for the equivalent of one semester to obtain a graduate qualification in fields such as commercialisation of research or management of IP.

Prior to the study there had been little detailed examination of the research commercialisation skills, knowledge and experience most valued by those involved in research commercialisation in Australia.

DEST sought to address this lack of research by engaging the AIC to undertake a study which:

- ▶ identified the research commercialisation skills, knowledge and experiences that would best equip Australia’s next generation of researchers to bring research-based ideas, inventions and innovations to market
- ▶ sampled and documented the current research commercialisation-related offerings provided by higher education providers
- ▶ recommended a CTS training framework that would ensure the intended outcomes of the CTS are met and allow for training to commence under the CTS from the beginning of the 2007 academic year.

The AIC designed the survey instruments, executed the survey, analysed the data and prepared a report for publication by DEST.

Central to the findings was the need to develop the three key skills areas of most value to the employers of HDR graduates. These were:

- ▶ organisational behaviour skills
- ▶ technical commercial skills
- ▶ commercialisation knowledge.



AIC CEO Dr Rowan Gilmore pictured with Federal Minister for Education, Science and Training, the Hon. Julie Bishop.



ideasandopportunities forentpreneurs

The AIC has recognised that Australia is an economy with budding entrepreneurs, small businesses and inventors that need a lending hand commercialising their ideas or inventions. With only one in 3,000 ideas making it to market, the AIC has developed a series of programs and tailored solutions to improve the likelihood of success. These include:

- ▶ education programs to improve commercialisation knowledge and skills, such as Ideas2Market and Commercialisation Bootcamp™
- ▶ Gateway Enterprise™, an online tool with relevant resources for business growth, knowledge and/or product commercialisation
- ▶ practical checklists to apply to commercialisation strategies
- ▶ assisting in the preparation of a concise, bite-sized pitch that can be marketed to investors, customers and future business partners
- ▶ building skills to commercialise ideas, inventions or products
- ▶ objectively testing ideas against leading practice know-how
- ▶ validating the commercial potential of an idea/product through market research
- ▶ identifying gaps within the market to provide a competitive advantage through business intelligence
- ▶ providing networks with government and industry professionals that can assist with the new business venture.

Ideas2Market is a program assisting innovators, small businesses and entrepreneurs improve their skills and knowledge on how to get ideas or products to market. It is delivered throughout Queensland and in 2006/07, in Tasmania.

The AIC Commercialisation Bootcamp™ is delivered nationally with leading education partners to deliver capability-building programs for researchers and commercialisation professionals. The two-day Commercialisation Bootcamp™ is a highly interactive and practical introduction to the key principles and issues surrounding the commercialisation of research.

Testimonials

Ideas2Market

“The structure of the [Ideas2Market] course was superb in touching on every critical issue faced by entrepreneurs, and the quality and expertise of the individual presenters were outstanding. Armed with a powerpack of information, links to fundamentally important resources, and an open door to the wonderful people ... I now feel so much more confident in diving into the uncertain waters of commercialisation...Congratulations to all involved in creating a truly value added experience which I hope will be shared with many more of the creators of our collective futures.”

Charl Liebenberg

Market research

“As a comparatively small Brisbane-based company competing in a global market, access to accurate and timely market research is a key to maintaining a competitive edge. We found the AIC’s market research service an ideal solution for our company. What has made this program a winner for Panbio is the responsive and thorough facilitation of the service through the AIC. It’s like having an extra marketing headcount included in the cost.”

Mr Bruce Peatey, Sales and Marketing Manager – Australia and New Zealand, Panbio Ltd

Outcomes:

- ▶ helped over 40 organisations grow by providing market intelligence that better quantifies their markets and product
- ▶ provided business support to over 500 entrepreneurs through our Ideas2Market program
- ▶ helped over 240 researchers and commercialisation professionals understand the importance and potential available through the commercialisation of their research outcomes
- ▶ provided access to over 130 information providers covering more than 30 global industries.



Dr Greg Hafner (left) from Panbio Ltd receives the Science & Technology Smart State Award from Queensland Premier Peter Beattie. Panbio is a customer of the AIC’s market research service

The AIC's commercialisation capability is delivered through its three business units:

- ▶ Commercialisation Solutions and Consultancy - offers the AIC's business solutions and tools, market research, professional development programs, ExpatriateConnect, Aussie Opportunities, and policy and commercialisation advice
- ▶ TechFast® – delivers a program to help SMEs find and adopt new commercially viable know-how and technologies from Australia's research organisations
- ▶ Office of ICT Commercialisation – manages a commercialisation hub that draws on government-owned IP for businesses in the ICT sector.

Aussie Opportunities is a web-enabled program and database showcasing research and technology projects developed in Australia. It aims to increase the interaction between Australian researchers and entities that may be able to help progress Australian inventions and maximise the effectiveness of these potential partnerships.
www.aussieopportunities.com

ExpatriateConnect is a global portal that captures the expertise and international experiences of expatriates and shares them with business, government, industry and research organisations in Australia.
www.expatriateconnect.com

Working together

The AIC's highly skilled personnel include leading figures from the commercialisation, innovation, science, financial services and research sectors.

Our Board and advisors

The AIC is overseen by a Board of Directors:

- ▶ Dr Peter Jonson (Chair), professional director and economist. Peter spends most of his time directly or indirectly helping scientists and technologists produce commercial outcomes from their research. As well as being AIC Chairman, Peter is Chair of the Federal government's CRC Committee (a position held since 2005) and Chair of Australian Defence and Aerospace Innovations Ltd.

- ▶ Mr John Read, Principal and Director, CVC Ltd, NSW. John has over 25 years experience in leading and promoting high growth Australian enterprises including directorships of numerous companies listed on the Australian Stock Exchange. He is one of Australia's foremost and experienced venture capitalists and is currently Chairman of The Environmental Group Ltd and Chairman of Pro-Pac Packaging.
- ▶ Professor Paul Greenfield, Senior Deputy Vice-Chancellor and Professor of Chemical Engineering at The University of Queensland. Professor Greenfield is currently a Director of UniQuest Pty Ltd, IMBcom Pty Ltd, Symbiosis Ltd and NICTA Ltd. He is currently Chair of the Scientific Advisory Group of the Moreton Bay & Waterways Partnership. He is also Chair of the Riversymposium Strategic Planning Committee, the Thies International Riverprize Committee and a Director of the International Riverfoundation.

Company secretary:

- ▶ Dr Rowan Gilmore, Chief Executive Officer, Australian Institute for Commercialisation.

Advisors:

- ▶ Mr Brian Anker, Deputy Director-General, Queensland's Department of State Development, Trade and Innovation
- ▶ Professor Peter Andrews, Chief Scientist, Queensland Government.

Our team

The AIC employs a team of 23 highly qualified and experienced professionals in the areas of commercialisation, IP, technology transfer, market research, economic and business development, consultancy and marketing and communication. Most also have backgrounds in science, engineering, or technology.

Our partners

Partnerships are the cornerstone of the AIC's approach to business. The AIC has forged partnerships with the Australian, state and territory governments, universities, research groups, commercialisation organisations, and industry to help lead a national effort to drive economic and social returns from commercialising IP developed by Australia's researchers.

The AIC also engages with a variety of service providers to jointly address gaps in the commercialisation services market and to ensure that research organisations and SMEs have access to expert advice on specific commercialisation, business, legal or financial issues.



OUR VALUES

People – partnerships, teamwork and commitment

Professionalism – responsiveness, openness, integrity, honesty, trust

Passion – innovation, outcomes, fun

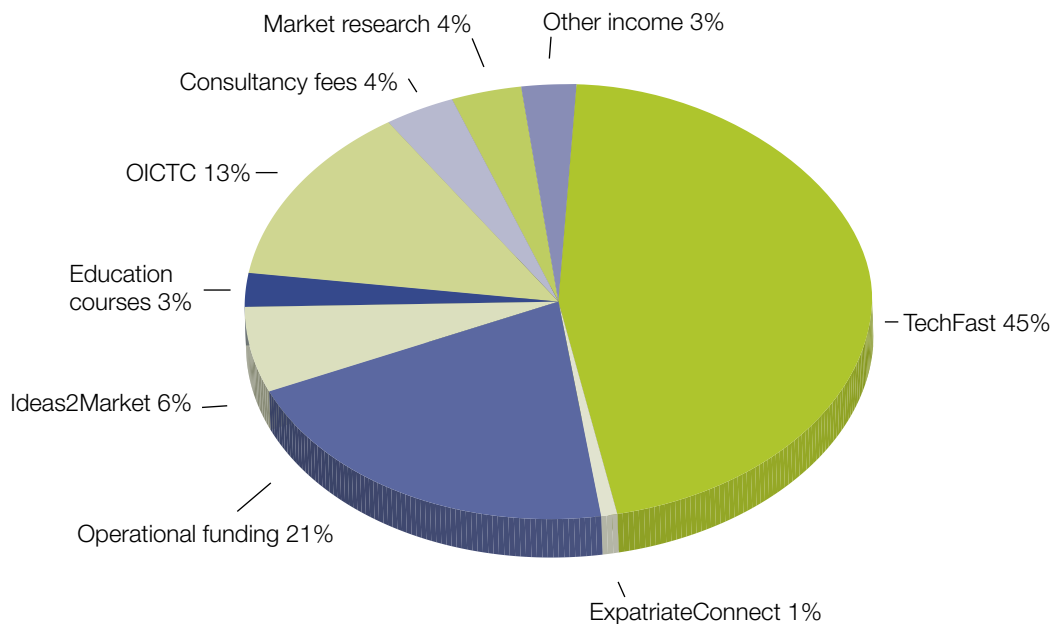


performance

The AIC derives income from a number of sources in addition to funding received from the Australian and state

and territory governments. Total income in 2005-06 was \$4.42 million.

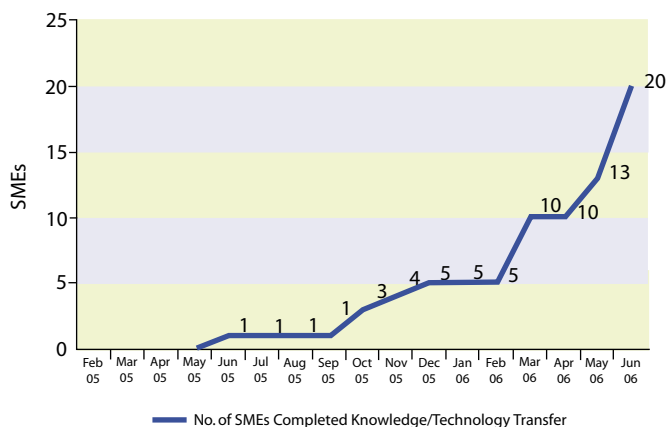
Income 2005-06



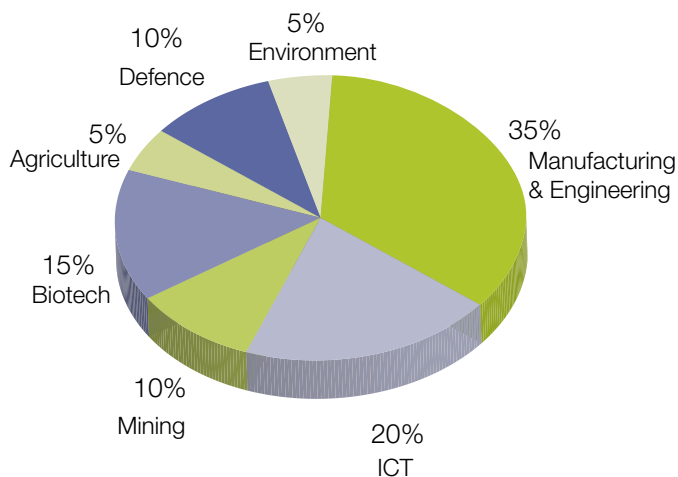
During the initial 18 month pilot, 29 SMEs from around Australia participated in the AIC's TechFast® program with 20 of these benefiting from at least one technology transfer from a research organisation. In total, 28 transfers were facilitated.

The AIC is helping SMEs operating in a diverse range of sectors locate the technology they need to accelerate the commercialisation of their innovation.

TechFast National Progress



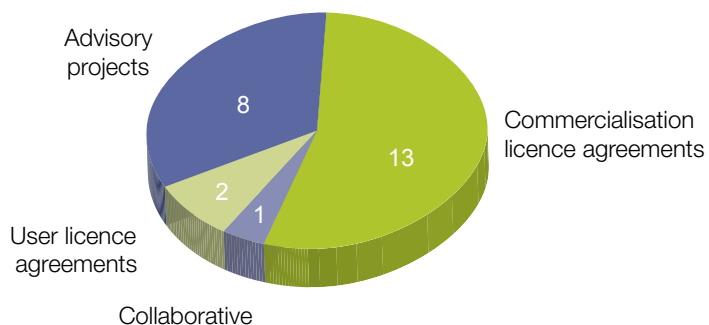
Sectoral Breakdown of Completed SME Technology Transfers



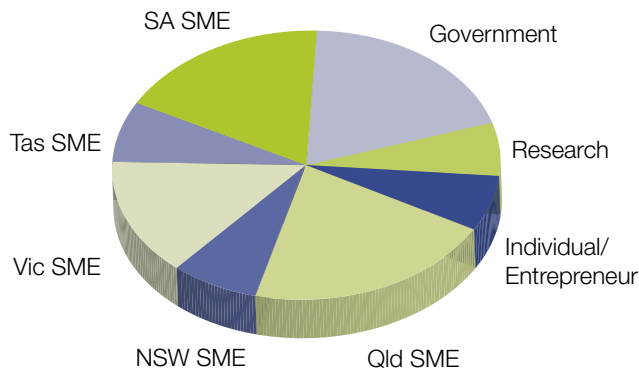
An increasing number of governments and agencies are recognising the value of the IP they have created and engaged the AIC's Office of ICT Commercialisation to help them maximise the opportunities.

Around Australia, the AIC helps businesses, research organisations, governments and entrepreneurs convert their ideas into successful outcomes.

Completed ICT Transfer Projects 2005-06



Service Provision by Sector



What is commercialisation?

Commercialisation is the transformation of ideas into economic outcomes. They could be in the form of a product, a service, a process or something of value to the community. Commercialisation is a major component of innovation.

Can the AIC help me source funding (for my opportunity)?

Through its linkages, the AIC can provide access to venture capital and funding sources, and help articulate the investment proposition.

What are the issues/barriers to successful commercialisation?

What makes it so difficult?

There are a range of challenges. These include:

- ▶ the level of linkages between research and industry
- ▶ lack of experienced and skilled people in commercialisation
- ▶ culture and awareness
- ▶ lack of appropriate incentives
- ▶ disincentives posed by the tax system in Australia
- ▶ availability of venture funding
- ▶ IP – management and clear ownership.

How does the AIC differ from university or research commercialisation offices?

Unlike these offices, the AIC does not have a financial interest in the commercialisation of others' IP, nor does it have IP of its own to commercialise. The AIC can however assist university commercialisation offices, and partner with them to build scale at a national level. The AIC is perfectly placed as an independent, third-party intermediary to catalyse commercialisation outcomes between these important sources of IP, and industry.

What are the greatest challenges facing Australia in seeking to become a "first tier innovator economy"?

One of the biggest challenges is that Australia's industry culture has been slow to recognise the importance of

investing in R&D (relative to other OECD countries). This low level of historic demand has led to current skills shortages in the areas of science, engineering and technology, and generally poor levels of collaboration with the publicly-funded research organisations (such as universities, CRCs and medical research institutes). The AIC is working with emergent small businesses to develop new industry structures for Australia that in future will provide sustainable economic growth, high wage jobs and create national wealth.

How does Australia compare with other countries in its innovation performance? On what basis?

In Australia, government support for R&D exceeds the OECD average, while business investment in R&D is well below the average. Australia is not yet a first-tier innovator nation because of its low level of business R&D and its:

- ▶ mismatch between public and private research effort
- ▶ mismatch between public sector skills base and private sector research investment
- ▶ lack of a number of diverse and well developed clusters
- ▶ decline in human capital.

What role do SMEs play in commercialisation?

Many SMEs rely on innovation for competitive advantage and growth of market share. Big business often finds it difficult to innovate technologically, so is often more focussed on increasing profitability through cutting costs. In addition, multi-national corporations make strategic decisions such as R&D investment at global headquarters level - and Australian management has no control over this spend.

SMEs are crucial in commercialisation, both through their adoption and production of technology, their flexibility and ability to quickly shift into new markets, and their role as both customers and suppliers in the innovation process.

What can the AIC do for me?

	Entrepreneurs	Start-ups & small business	Research organisations & CRCs	Service providers	Peak bodies	Government
Help to overcome the barriers to successful commercialisation	✓	✓	✓		✓	✓
Establish linkages to commercialise intellectual property	✓	✓	✓	✓	✓	✓
Develop knowledge and skills to improve commercialisation management and capability	✓	✓	✓			✓
Link with researchers, industry, and government	✓	✓	✓	✓		✓
Provide independent assistance with negotiating deals	✓	✓	✓			✓
Conduct intellectual property audits and valuations	✓	✓	✓			✓
Source and analyse business intelligence or market research	✓	✓	✓			✓
Accelerate technology transfer into small businesses and industry	✓	✓	✓	✓		✓
Provide commercialisation education and training	✓	✓	✓			✓
Provide leading practice commercialisation know-how and tools			✓		✓	✓
Develop commercialisation frameworks	✓	✓	✓			✓
Provide advice and hands-on support for taking an idea to market	✓	✓	✓			✓
Help to identify optimal commercialisation pathways – what do I do next?	✓	✓	✓			✓
Connect commercialisation expertise and networks	✓	✓	✓	✓		✓
Provide access to venture capital and funding sources	✓	✓	✓			✓
Provide policy ideas and practical supporting documentation					✓	✓

Fast-track the delivery of your idea to commercial success.



Australian Institute
for Commercialisation

→ ideas → opportunities → outcomes

Stuck in the slow lane with your innovation or technology?

The AIC can help you fast-track the conversion of your idea into successful outcomes. As the leader in delivering commercialisation advice, tools and solutions, outcomes are our business.

Outcomes for researchers

- ▶ Mutually beneficial partnerships with industry
- ▶ Improved research impact

Outcomes for business

- ▶ Access to intellectual property (IP) from across Australia's research spectrum
- ▶ Successful research collaboration
- ▶ Commercialisation of your innovations

Outcomes for government

- ▶ Improved IP management
- ▶ Better value from IP
- ▶ Improved regional economic development through innovation

Jump into the express lane. Call us on 1300 364 739 or visit www.ausicom.com to find out how the AIC can help you.



Australian Institute
for Commercialisation