

Inside Commercialisation

→ ideas → opportunities → outcomes

2007-08

Collaboration and Connectivity



Australian Institute
for Commercialisation

ideas opportunities outcomes

Australian Institute for Commercialisation

Annual Review

2007-08

About the AIC

Our mission

To work with Australian industry, research organisations, and governments to create high-value jobs, exports, and wealth by taking innovative ideas to market

The Australian Institute for Commercialisation (AIC) provides innovation and collaboration services that help organisations grow.

Nationally, we work with entrepreneurs, businesses, research organisations and governments to identify new business opportunities and convert them into successful outcomes.

Using our networks and experience, we deliver services to achieve that by establishing partnerships, improving skills, and providing commercialisation advice. We are also an advocate for commercialisation, and assist government with policy initiatives and thought leadership in the innovation space.

The AIC's core competencies include:

- extensive innovation networks across Australia, including the research sector
- relationships with many governments
- the AIC business model – independent and not-for-profit, trusted, able to take risk
- ability to facilitate collaboration across stakeholder sectors

- know-how, experience and skills in commercialisation planning and execution
- experience and track record as an innovation intermediary
- the diversity of skills and experience of AIC staff

Our consultancy services include:

- facilitation of collaboration along the value chain, for instance between research organisations and SMEs, or governments and industry (intermediary services)
- commercialisation project management services to achieve and manage technology transfer or brokerage of intellectual property
- strategic advice around IP management and commercialisation
- market research and opportunity analysis
- professional development programs to increase commercialisation skills and successes

Clients working with the AIC are able to better develop their ideas and capitalise on opportunities to help them grow through innovation.



WELCOME!

Welcome to Inside Commercialisation, an overview of commercialisation and innovation trends in Australia, and the 2007-2008 annual review of the Australian Institute for Commercialisation (AIC).

This year has held great promise for those who are serious about Australia embracing a path of innovation and improving its competitiveness. It is ironic that in the midst of a commodity boom producing unprecedented wealth, we should be talking about the use and application of intellectual property (IP) rather than real property to continue on a trajectory of growth and as a weapon to maintain our future competitiveness. But with a new government in Canberra, and a long overdue review of the national innovation system, the argument for innovation is being made. The challenge will be to deliver.

At the AIC, we've worked hard in the innovation space since 2002, helping those with ideas and intellectual property to successfully convert these into products or services that deliver value. Innovation needs a creative spark to ignite it, but then requires a conversion step so the value can be seen and used in the marketplace. The role of the AIC is to focus on that conversion.

What makes it so hard? Many things, depending on who you are. Some researchers prefer to create and study, rather than apply and market their research. Many small businesses lack the time and money to convert all their ideas, while other entrepreneurs don't know where to start. Governments often develop unique or novel intellectual property – software, for example – that might be of use to other governments, but hold onto it because it is not their job to convert it for use elsewhere, and the risk of “commercialisation” is just too high. Every time someone says “it's just too hard”, the potential of their IP to create further value is diminished.

Our vision is to help all our clients recognise value through innovation and so build more valuable economic, environmental, and community outcomes. I hope you enjoy reading how we're working to achieve that.

Rowan Gilmore
CEO | Australian Institute for Commercialisation



→ A year in review

Since 2002, the AIC has been working with business, research organisations and government to facilitate collaboration, enhance innovation and accelerate the commercialisation of know-how and technology across the nation.

2007-08 has been another colourful year, bringing a great deal of change to Australia's innovation landscape. With several major cuts to key funding programs and a national innovation review underway, the process of taking commercial ideas and opportunities to market remains just as challenging for those involved.

The AIC continues to bridge the boundaries along the value chain by facilitating partnerships, assisting in technology transfer, providing commercialisation advice and developing crucial skills required for the journey.

During 2007-08 the AIC has:

- delivered capability identification and collaboration facilitation services to more than 65 business nationally through the TechFast program to foster increased industry and research sector engagement. This resulted in more than 35 new collaborations commencing that will ultimately grow the companies involved and lead to high-value outcomes.
- provided more than 50 companies with in-depth market research to identify new markets and product opportunities; and provided business intelligence services to universities including University of Queensland (UniQuest), Queensland University of Technology (QUT Bluebox), and University of Newcastle (Newcastle Innovation) to improve their commercialisation capacity.
- delivered 12 Ideas2Market commercialisation education programs to 220 small business owners and entrepreneurs state-wide and 14 Commercialisation Bootcamp courses to 377 researchers and industry representatives.
- worked with the Queensland state government to refine an online IP training system, which will be expanded as required during the project rollout.
- project managed 25 transfer licence agreements between government agencies and industry. These agreements are creating local jobs in the ICT sector, providing new export opportunities as well as generating revenue and delivering substantial cost savings to government.
- engaged with the Victorian government to deliver 160 Gateway Enterprise business systems to Victorian SMEs, to increase commercialisation outcomes from SME innovation activities.
- successfully delivered several major networking and education events to raise awareness of the importance of innovation and commercialisation. These include the Brisbane Innofest, the Innovation in Government Summit, the Queensland Innovation Series lunches and the Sustainable Industries Forum.
- received extensive media coverage in national newspapers and magazines, with more than 55 articles published describing our activities. Among these, supportive media partners have published more than 15 opinion pieces from the AIC.
- sponsored and presented at more than 20 innovation and commercialisation related events across the country.

The AIC: innovating around Australia



At its core, the AIC is itself an innovation – an intermediary designed to provide crucial advice and support to facilitate collaboration across stakeholder sectors. Our strength lies in our extensive innovation networks across Australia, our key government relationships, our know-how, experience and skills in commercialisation, and the diversity of skills and experience of our staff.

Some of our key innovative achievements include the development and implementation of:

- TechFast – Australia's first market-pull commercialisation service
- commercialisation frameworks – to institutionalise achieving outcomes from research
- Expatriate Connect – linking companies with Australians abroad
- Commercialisation Bootcamp workshops – helping researchers see value in their IP
- whole-of-government IP sharing – Australia's first program to facilitate better use of government IP
- collaborative R&D models – spanning the value chain to better inform government procurement
- new AIC website – a single source for information on commercialisation and collaboration



From the boardroom



Dr Rowan Gilmore (CEO) and David Barbagallo (Chair)

Commercialisation means different things to different people. Wikipedia defines commercialisation as “the process of introducing a new product into the market”, and as a process that is often confused with sales, marketing or business development. It states that commercialisation has three key aspects: a funnel of ideas, a stage-wise process, and essential stakeholders that must be involved early, particularly customers.

Commercialisation seems to be something that business does, and that mature or profitable businesses already do well. Such businesses sometimes wonder how the AIC can help. Our role is to work with entrepreneurs, research organisations, small businesses, or governments in which the ideas funnel needs replenishment, the stage-wise process is fragmented or broken, or the customers are difficult to reach. The AIC’s commercialisation advisory services, seeding of collaborations, professional intellectual property (IP) skills development programs, and policy advice all help to achieve commercial outcomes from the ideas funnel.

In some cases, our small business clients are in new or emerging industries and are so-called “early movers”, undertaking their first commercialisation projects. They bear all the costs of bringing a new technology to market, educating customers, changing the regulatory environment, and so on – benefits

that will spill over from their early investments to other firms that follow. In other cases, such as with research institutions, the benefits of research commercialisation might accrue to the broader community, for instance from the impact of a new drug on public health, or improved environmental impact, and produce only a small financial return to the institution. In the case of government agencies, ideas and IP are often hidden in-house, even though other governments could benefit and reduce their costs by adaptation of that IP if it were commercially available. In cases like these, normal market processes fail, and the benefits of commercialisation are never realised.

Governments provide funding to organisations like the AIC to mend these processes, recognising the public interest in achieving outcomes in such cases. Thus in 2007-08, 78 per cent of the AIC’s revenue was earned by providing commercialisation services paid for by governments.

However, governments around Australia are weakening in their resolve as to whether they should support these forms of commercialisation. Last year the Productivity Commission released its research report into Public Support for Science and Innovation. It considered support for basic research well justified, because research could potentially impact many beneficiaries downstream through a variety of mechanisms. On the other hand, it suggested that 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 that the private

sector was itself unwilling to take. We believe this view is fundamentally and commercially naïve. Nor is it a view taken by many of our international competitors, particularly in Asia. The Productivity Commission needs to better understand the complex interplays that underpin commercialisation and the inherent difficulty that a “free market” approach has in realising these opportunities, especially in early stage ventures.

This report was also used to justify the axing of the Commercial Ready Program in the May 2008 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 a number of firms in emerging industries such as the biotech sector, and has led to outcries from venture capitalists, technology transfer offices, and firms themselves.

The case for commercialisation of research was further set back during the year by the much-publicised Sirtex judgement, which 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.



Our TechFast program has established nearly 70 collaborations between SMEs and research organisations to do this, and we have arranged more than 50 licences for industry partners to commercialise IP (mainly software and data) developed within government. These deals establish the AIC as Australia's leading innovation intermediary organisation, bringing value to industry from potential new revenue streams from leading-edge products, and cost savings to government through the licence fees and efficiencies such collaborations can bring.

To our knowledge, there has never been a Newspan on taxpayer support for commercialisation of Australian ideas, but we would bet that the overwhelming majority of Australians believe that we must do a better job at retaining more value from these ideas onshore. Certainly, at the AIC forums we host on commercialisation, the public support is palpable. Perhaps the commercialisation process implies too much an economic currency; but it can equally yield an environmental or social 'currency' as well.

For example, the TripleP program spun-out from the University of Queensland is helping parents understand how to raise children better in over twenty countries around the world, creating enormous social currency. But to achieve 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 we wear the populist hat) to exploit it! Since its inception, the AIC has held almost 60 Commercialisation Bootcamps for researchers and more than 55 Ideas2Market courses for entrepreneurs to improve professional commercialisation skills and to help foster better understanding of how the value in their IP can be optimised and realised.

But commercialisation requires more than skills, it often requires partners to reach markets. One problem we have in Australia is there just may not be enough of them. In the case of the research sector, only around two per cent of Australian firms collaborate with universities – the lowest rate in the OECD! The reasons behind this are well documented:

- lags in our research funding system discourage industry participation, since quick solutions are needed
- incentives for researchers to work with companies, especially small local companies, are almost non-existent
- processes to access relevant IP, once it is known, often don't exist
- there are too few companies interested in research and development
- many companies have limited absorptive capacity
- there is limited pre-seed capital to test viability.

It is little wonder that when companies do understand the need to innovate, they will consider internal development first, and when collaboration is required, look to other companies before the research sector.

This year, the AIC has been actively working to establish collaborations to either jointly create new IP, or to commercialise existing IP. Our activity works between organisations, where risks are high and value can remain hidden. Better identification, application, sharing, and reuse of IP can bring huge benefits to both industry and governments.

Last year, our investment in intermediary activity incurred an operating loss. In the current year, the AIC will continue to focus on bringing value to clients. To do that, the national review of the innovation system must convince governments responsible for innovation policy that achieving outcomes requires catalysts like the AIC to provide the connectivity where markets fail. New product ideas or partnerships based around development or sharing of IP can bring business and government greater revenue, cost efficiencies, and improved service delivery. It's worth the investment.



Providing innovation and collaboration services nationally



South Australia

The AIC has continued its strong partnership with the South Australian Government to increase innovation and drive collaboration between businesses and research organisations, and recently agreed to extend this partnership for a further three years.

Through the AIC's TechFast program numerous SA companies have been assisted to enter into new collaborations with research organisations including mining equipment producer PAC Mining, Ophthalmic device manufacture Opto Global and ground remediation specialist Remediate.

The AIC is also a partner in the newly launched Medical Device Partner Program, which connects South Australian health professionals, industry and researchers to jointly develop cutting-edge medical devices to solve existing issues concerning the provision of medical care.

Victoria

In partnership with the Victorian Government, the AIC assisted 190 businesses from across Victoria to accelerate their business innovation ideas and find collaboration partners. Companies assisted were from many industry sectors including automotive, finance, pharmaceuticals, medical, sporting equipment and clean energy.

Six food companies also engaged the AIC to help solve production issues and pursue growth opportunities through collaborative innovation partnerships. Some of these included confectionary manufacturer Fyna Foods, exporter of premium dairy products Burra Foods and specialty dessert manufacturer Exquisite.

In partnership with the Small Technology Cluster, the AIC also worked with four exciting microtechnology and nanotechnology businesses to improve their commercialisation capabilities by providing market intelligence and identifying new technical and commercial partnerships.

The AIC assisted the City of Melbourne to define commercialisation parameters for one of its software developments and facilitated negotiations between the City of Melbourne and the Municipal Authority of Victoria. Other work included the ICT commercialisation project for the Ballarat District Nursing and Healthcare, and policy research with the Victorian Department of Innovation, Industry and Regional Development project on "Industry Access to University Knowledge and Infrastructure".

Case Study: Fred Bergman Healthcare Pty Ltd

Melbourne-based Fred Bergman Healthcare (FBH) specialises in products that improve the quality and cost of clinical and community care. The company has focused its initial efforts in the areas of aged care and incontinence. Its first product, the SIMPAD™ system, is for the assessment and management of urinary continence for residents in aged care facilities.

TechFast helped FBH to understand the full breadth of commercial activities that would be required to maximise the successful commercial uptake of the SIMPAD™ technology.

The company had previously had difficulty negotiating a commercially attractive agreement with a research provider. TechFast assisted FBH to find appropriate expertise and quickly negotiate a three party research agreement between FBH, CRC Smartprint and Nanotechnology Victoria. The negotiations were fruitful and all parties were satisfied with the outcomes.

TechFast then provided FBH with assistance in finding and selecting a patent attorney and law firm that provided expert advice and support to help them better understand their intellectual property position, their target markets and the dynamics of those markets and competing clinical solutions.

FBH has since been able to raise additional capital, successfully complete its clinical and field trials and is gearing up to launch SIMPAD™ over the next few months.

David Barda, Chief Operating Officer of FBH said

"having the ear of someone experienced in technology transfer and commercialisation opened our eyes and helped us realise that we didn't have to invent everything ourselves - but that we could find existing know-how and gain access to it through deeper collaboration".

New South Wales and ACT

The AIC assisted several innovative NSW businesses to locate and tap into capability and IP residing in other organisations. One example is Sydney-based Jenmar Australia, that the AIC helped to access expertise and capability within the University of Sydney to develop and test a new product for the energy industry.

The AIC also worked with Canberra-based Beacon Software Innovations to progress a partnership with Queensland Health to commercialise several health care innovations developed by Queensland Health for their own use.

Queensland

Seventeen QLD companies located across all regions of the state received hands-on support through the AIC's TechFast program to identify and pursue new innovative project and collaboration partnerships. They included innovative waste water systems manufacturer Biolytix Water from Maleny and natural cosmetics company Diva Cosmetics from Townsville.

More than 220 budding entrepreneurs from around QLD were helped in planning their product commercialisation strategies through the AIC's Ideas2Market educational program. Furthermore, a number of researchers attended the AIC Commercialisation Bootcamps and for the first time an advanced Commercialisation Masterclass was held for previous graduates of the Bootcamp program.

The AIC also assisted a further 180 entrepreneurs and small businesses by providing commercialisation assistance for their projects, including market research, opportunity evaluation, commercialisation strategy development, funding, strategic IP management, representation and negotiation services, and referrals to other service providers.

Some interesting AIC commercialisation projects included representing medical device company StockEZEon in licensing negotiations with a large global medical company, assisting the Hear and Say Centre with its worldwide commercialisation strategy for their auditory-verbal program, identifying new nutraceutical product opportunities for a local company, progressing the commercialisation of an innovative, environmentally friendly engine design, developing a commercialisation framework for University of Southern Queensland, and working with a number of cooperative research centres (CRCs).

Western Australia

The AIC formally spread its wings into WA in 2007-08 with a new local TechFast manager assisting WA companies including Perth-based Advanced Nano Technology and The SpectrumData Group. This activity led to Advanced Nano partnering with Monash University in Victoria to enhance its internal product development and testing capability.

Tasmania

The AIC completed its delivery of the Ideas2Market program in Tasmania, providing specialist training and mentoring services to 84 small businesses. Participants of the Tasmanian Ideas2Market program also received Gateway Enterprise subscriptions to keep them current with leading practice commercialisation procedures in the form of tools, guides and templates.

During 2007-08 the AIC also delivered a commercialisation workshop on behalf of the Department of Economic Development (DED) to researchers at the University of Tasmania. The workshop assisted participants in developing an understanding of intellectual property and related issues, as well as understanding the commercial potential of their research outcomes. The AIC was also involved in briefing biotechnology businesses in Tasmania prior to their attending the international biotechnology conference, BIO2008.



Innovation in government

Directions for government

Future Directions for Government

To obtain significant business benefit, government agencies should create an environment that embraces innovation. With budget constraints and the rising costs of delivering services, there is a need for agencies to understand all potential opportunities for delivering better services and leveraging the current knowledge, which is vast in government.

The value of knowledge and intellectual property (IP) has been formally recognised in national and state government regulations and standards requiring all agencies to establish and implement better IP management strategies and practices. The AIC continues to be an active facilitator in helping government agencies recognise and manage IP, and providing transparent and accountable paths to manage commercialisation opportunities.

In delivering services to government departments, the AIC focuses on assisting agencies to realise benefits through service innovation, facilitating collaboration with both industry and research organisations, and achieving outcomes with broader sharing of IP and subsequent commercialisation activity.

Historically, the majority of government IP related to software and data and was thus transferred through to the information and communications technology (ICT) business sector. However, the broader service agenda will increasingly see the AIC deliver commercialisation services in relation to other non-ICT forms of IP, such as health, clean technology, and environment and sustainability, to deliver wider community benefits.

In addition to its core offering of managed commercialisation work for government departments, the AIC delivers a wide range of education, awareness and advisory services, and industry development programs on behalf of government departments responsible for innovation or industry. These services help implement policy initiatives aimed at improving regional economic development through innovation.

Working together

The AIC delivers solutions to government by:

- providing access to international and national networks across industry, research, and government
- providing education and awareness sessions for government officers
- providing expertise to support contract negotiation, particularly as it relates to IP
- providing cost savings and royalty streams through commercialisation of government IP, particularly ICT-related IP

- delivering experience and expertise to improve IP management and governance
- effectively project managing IP commercialisation and lowering risk by working as an “arms length” provider for government
- collaborating between government jurisdictions for IP sharing
- collaborating more effectively with industry.

Benefits for government

The benefits to government from commercialisation activity include:

- cost savings. Through licensing IP to industry partners, agencies have access to modifications and enhancements to the IP at no cost to government
- revenue generation. Most licensing deals have a revenue generating component from up-front license fees paid to government
- service delivery improvements through the sharing of leading edge IP across governments nationally
- reduced risk by providing “arms length” support mechanisms to implement IP management change and commercialise for government
- validated outcomes from collaborative R&D projects against objectives



"Governments are in a tricky position. Their hands are tied when it comes to risk-prone innovation, yet they are expected to continually improve services through working smarter. The AIC closed this gap for Queensland Health through the VLAD commercialisation agreement, which allows Queensland Health to reap the rewards of its own innovations without the associated commercial risk, and provides a great opportunity for Opus5K to firm up its position in the health informatics industry".

Hassan Kani, Director, Opus5K

Outcomes:

- identified and evaluated 115 new commercialisation opportunities from IP developed within government agencies
- commenced and completed project management of more than 50 IP license opportunities between government and industry, or government-to-government, 25 of which have now resulted in formal executed agreements
- reduced risk and liability to government in formalising user license arrangements involved in inter-jurisdictional sharing arrangements
- commenced the facilitation of 5 new collaboration projects between government agencies, industry and research organisations, within health and environment areas
- continued to assist regional economic development objectives in Queensland by expanding the TechFast program into regional areas of the state
- delivered an Innovation in Government Summit promoting, recognising and displaying innovations within government with keynote speakers, project showcasing and case studies
- assisted in national and state policy development supporting innovation, IP management in government and inter-jurisdictional sharing of knowledge and IP.

Our clients in the Queensland Government include:

- Department of Health
- Department of Emergency Services
- Environment Protection Agency
- Department of Mines and Energy
- Queensland Studies Authority
- Department of Natural Resources and Water
- Department of Communities
- Department of Housing

Importance of IP management

IP management is being viewed by governments as an increasingly important function. In particular, agencies are faced with a number of obligations relating to IP, including:

- management of IP assets in an appropriate and accountable manner
- development and implementation processes to identify IP
- encouraging and managing commercialisation of IP where appropriate.

The AIC is working with and within a number of government agencies to help departments meet these obligations.

Innovation - an increasing focus for government

The AIC is able to collaborate with industry and research organisations to create commercial and internal business value from government IP. The AIC is able to build upon the established credibility of its government programs to assist government executives and CIOs achieve further business value for their organisations through effective IP management.

Collaborative R&D paths provide the opportunity to partner with industry to:

- inform government procurement requirements where there are high technical or business risks
- prove and validate the value of anything before significant investment
- extend governments and community outcomes for any initiative because of a broader view of investment involved in collaborative R&D.



Helping businesses grow

Over the past year, the AIC has leveraged its extensive innovation networks across Australia to create collaborative partnerships between the research sector and industry. The AIC has worked specifically with the Commonwealth Government, Victorian Government, South Australian Government and the Queensland Government to increase industry innovation and collaboration through the TechFast program.

What's driving industry innovation?

While the need to innovate is driven by a broad range of factors, the AIC is seeing an increased prominence of specific drivers encouraging Australian businesses to innovate. These include:

Climate change – resource scarcity, customer demand, customer perception and impending government regulatory changes are pushing some companies to respond, while inspiring others to embrace new opportunities.

Increasingly globalised market – increased local competition from overseas organisations and also increased awareness and access by Australian companies to overseas opportunities are forcing companies to develop new products or services.

Skills shortages – inability to find highly skilled workers is requiring companies to look for technologies and processes that could be operated by less skilled workers forcing suppliers to innovate to make their products more intelligent and automated.

Increased recognition of the benefits of “open innovation” - more businesses are realising that innovation partnerships can allow them to increase their ability to innovate, while reducing innovation time and costs.

Pressure and opportunities coming from within the value chain – companies are finding suppliers, buyers and end consumers all actively seeking

product improvements and efficiency gains. This is leading to increased collaboration by players along the value chain in many sectors to meet these needs and opportunities.

Outcomes for industry

“As part of our long term growth strategy, we have engaged TechFast to help us uncover capability and technologies that would be otherwise difficult to source ourselves”.

Remediate Managing Director Richard Stewart

“TechFast was the perfect adaptor plate between research organisations and our company and showed us what we should do to better engage”.

Russell Mineral Equipment Managing Director John Russell

During the past 12 months the AIC has:

- arranged more than 35 innovation partnership (commercialisation) agreements between SMEs, research organisations and other businesses across Australia
- delivered 160 Gateway Enterprise commercialisation tools to Australian businesses to help assess opportunities

Case Study: Ageing in Place

Cairns-based company Ageing in Place assists the ageing population to remain at home longer through provision of tailored advice and support.

Architects by trade, Wim van den Herik and his business partner Tanya attended a three-day Ideas2Market workshop run by the AIC in June 2007. They thoroughly enjoyed the workshop and while they'd been already progressing for four years researching their product, it gave them a clear direction on where to take the business.

"Ideas2Market gave us greater focus in translating our ideas into marketable products. It also helped us to see that relying on just one product might be very limiting and we have since diversified to explore other markets," Wim said.

Wim then returned in May 2008 to present a case study of their success at a subsequent Ideas2Market workshop. They also met up with the AIC's Qld TechFast Manager Cameron Johns, who has since been able to assist Ageing in Place by:

- linking them to partners and clients
- putting them in contact with Tasmanian researchers to help quantify the market
- opening doors to conduct a clinical trial with Queensland Health

- provided critical market research and business intelligence reports to more than 50 businesses looking to launch new products
- raised the skills of nearly 600 entrepreneurs and researchers by providing Commercialisation Bootcamps and Ideas2Market courses
- delivered more than 20 industry briefings and workshops to increase awareness of commercialisation opportunities arising from Government-owned IP
- worked with industry bodies to promote the importance of innovation, and facilitated new business opportunities with organisations including the Science Industry Action Agenda (SIA), Food Science Australia, BioMelbourne Network, Australian Spatial Industry Business Association

(ASIBA), Australian Electrical and Electronic Manufacturers Association (AEEMA) and the Australian Nano Business Forum (ANBF).

New government – new business innovation program

In January 2008 the Australian Government announced a wide ranging review of Australia's national innovation system to be conducted by an expert panel chaired by Dr Terry Cutler.

This somewhat overdue, yet complex and ambitious task aims to set an appropriate future foundation for innovative Australian businesses to leverage the national innovation capability in their pursuit of global competitiveness. The review will likely shape the government's approach in assisting industry to innovate well into the future.

The government has already indicated through the \$240 million Clean Business Australia initiative that it has a specific interest in encouraging and supporting businesses that have potential solutions to the effects of climate change.

The Enterprise Connect network is also being established in an effort to provide a more integrated government approach to assisting SMEs to increase their productivity and innovative capacity. The Government has also indicated a strong desire to increase industry access to public research capability, an area where Australia performs particularly poorly in comparisons with other developed countries. More detail is expected over the coming months on how Enterprise Connect can be utilised by businesses.

Case Study: Fiomarine Industries Pty Ltd (Fiomarine)

Tasmanian company Fiomarine joined the AIC's TechFast program to explore whether it could improve the way it designed, tested and developed products. Fiomarine specialise in the manufacture of a submersible marine marker buoy and retrieval system called the Fiobuoy®.

Fiomarine's previous design activities for the Fiobuoy® were based on "traditional" manufactured prototype trials using working models. Through the TechFast program they were introduced to the Victorian Partnership for Advanced Computing (VPAC). VPAC worked with Fiomarine to undertake design and optimisation studies on a new product to improve the efficiency of the manufacturing and assembly operations. This access to external

technology and expertise saved them both precious time and money in getting the product to market.

Mike Shegog, Technical Director at Fiomarine said

"the TechFast program helped us to realise that the key to such projects is in clearly defining the goals and objectives from the beginning, so for any future projects we'll know to put far more time and energy into that stage."

Strengthening impact for research organisations



Research organisation projects

Through its innovative TechFast program, the AIC has continued to bridge the cultural divide between research organisations and industry. The AIC worked with more than 50 research organisations in 2007-08 to develop collaborative projects with industry, as well as assist them to identify and partner with companies to commercialise their research and IP. One example was a new relationship facilitated between CSIRO and an Adelaide-based company that had the capability and interest to further develop, market test and commercialise some innovative environmental technology being developed by CSIRO.

“We have been working with researchers and the commercial offices of most Australian research organisations since 2004 and are seeing genuine improvements in the level of industry engagement” said TechFast National Operations Manager Alex Blauensteiner.

“The improved engagement is largely due to a rethink by many research organisations of the real value of industry engagement in terms of their integration with the community, external perceptions of the organisation and their research

competitiveness. As such, many are realising that the main game needs to be productive long-term industry collaboration rather than simply securing contracts or transactions” Alex said.

The AIC’s business intelligence service has also helped many research organisations and commercialisation offices with their market intelligence needs. Research organisations and commercialisation offices understand the importance of market research as it helps to assess the market feasibility of new technology before it is developed, and as an aid in the subsequent commercialisation of the technology if a real market opportunity is identified.

The business service assists research organisations and commercialisation offices to save valuable time and resources by utilising the AIC’s analysts with technical and commercial backgrounds to assist with their market intelligence search. With access to more than 130 information providers and databases covering more than 30 global industries, the AIC provides customised market intelligence information specific to their new research or technology.

Client outcomes

Over the past year the AIC has delivered solutions for research organisations and has:

- helped accelerate research and industry collaboration, for example, between Monash University and Antaria Ltd (previously Advanced Nanotechnology Ltd), and between CSIRO and Remediate
- provided market research to university commercialisation offices and a number of CRCs to verify commercial opportunities
- established linkages and collaborations between SMEs and CSIRO capability
- provided business intelligence services to universities and research organisations such as Uniquest, QUT, Newcastle Innovations, ANU and NICTA
- delivered commercialisation services to universities and CRCs
- provided researchers and commercialisation practitioners with professional development through the AIC Commercialisation Bootcamps



"USQ has used the Commercialisation Framework developed in conjunction with the AIC to structure its IP transfer activities. It has given us a learning platform, used in academic staff training, as well as a methodology to review our legal and contractual templates, ensuring higher standards of governance and a better chance of commercialisation success".

Gary Brady, Director of Commercialisation, USQ

Developing a commercialisation framework for the University of Southern Queensland

Closely engaged with its communities, the University of Southern Queensland (USQ) is a leader in flexible learning with a significant profile in regionally relevant research. With their main campus located in Toowoomba, USQ's primary research priorities are in the areas of community health, agricultural engineering, sustainable catchments and engineered fibre composites.

USQ recognised that the intellectual property (IP) created within its various faculties, schools and projects was a potential source of value to the Queensland economy and the broader community. For this reason, USQ undertook the development of a Commercialisation and Entrepreneurial Framework with the assistance of the AIC.

At USQ, "commercialisation" and "entrepreneurship" describe a broad set of activities including:

- the commercial exploitation of IP and the transactional-based sharing or distribution of IP rights
- raising funds from collaborative research
- business development
- income from commercial and technology precincts.

The AIC's Commercialisation and Entrepreneurial Framework is an integrated work flow of commercialisation activities linked to leading practice processes, tools and templates, that provide a practical approach to progressing commercial and entrepreneurial opportunities while managing risk.

The framework delivers guidance in:

- USQ's approach to commercialisation
- a process and governance for progressing commercial and entrepreneurial activities
- assessing the feasibility of opportunities
- IP valuation
- IP protection
- developing commercialisation models
- implementing the commercial opportunities.

USQ can now utilise the framework to maximise value creation from the IP it develops through:

- commercialisation activities aligned with key research focus areas to enhance the market uptake of USQ research
- market intelligence informing USQ's researchers of particular areas of market need for research development
- advancing USQ's engagement with the business community, potentially leading to student acquisition, contract research, collaborative grants and consulting opportunities
- generating additional revenue streams for USQ
- enhancing the positioning of USQ as a leading regional university
- contribution to the USQ's sustainability.



Outcomes for start-up businesses

The AIC assists new businesses by providing feasibility assessment, market intelligence and small business skills development.

With nearly two million small businesses registered in Australia, growing a new business can be a daunting and confusing task. Since 2002, the AIC has worked with more than 1,000 entrepreneurs to provide them with advice and support to help them successfully take their idea to the marketplace.

Ideas2Market assists entrepreneurs and innovators as well as existing small business owners throughout Queensland.

For entrepreneurs and innovators, Ideas2Market provides advice and information to assist with taking an idea or product to market. For existing business owners, Ideas2Market focuses on strategies for fostering innovation and creating sustainable growth.

The AIC also offers a suite of professional development programs for researchers and commercialisation professionals including Commercialisation Bootcamp, Collaboration Bootcamp and Commercialisation Bootcamp Master Class.

These programs provide a highly interactive and practical introduction to the key principles and issues surrounding the commercialisation of research. Tailored content is also included to ensure the needs and educational goals of each host organisation are properly addressed.

AIC's market research team provides practical and useful market intelligence to support commercialisation activities of clients. Clients use this service to gain insight into market and technological trends, market gaps, potential competitors or collaborators, and changes in government regulations. The market intelligence provided to clients can be used to determine appropriate strategies to commercialise product or technology as well as build credibility with potential investors or partners.

Outcomes

Over the past year the AIC has:

- delivered the Ideas2Market workshop to more than 220 entrepreneurs and small business owners in Queensland
- hosted 14 Commercialisation Bootcamps at locations across Australia including Brisbane, Melbourne, Sydney, Hobart, Perth, Newcastle and Armidale to improve the quality of commercial outcomes arising from research. More than 370 participants attended.
- helped nearly 50 SMEs grow their business and improve business outcomes through the AIC Market Research and Consultancy service.
- provided a Gateway Enterprise online commercialisation tool to more than 160 SMEs across Australia

"Thank you for the most stimulating two-day workshop I think I have attended and been part of: you have a great approach and I'm sure you've helped remove some of the mystique of the commercialisation process for all the workshop participants."

Peter Sniekers, Agribusiness Development Manager, NSW
Department of State and Regional Development

"I can't thank you enough for the Bootcamp you ran for the AB-CRC students last week. It was a huge success with the students who not only found it very challenging, but a lot of fun. Many thanks again for an extremely professional workshop."

Peta Edwards, Education and Training Program Coordinator,
Australian Biosecurity CRC for Emerging Infectious Disease

"The AIC's market research service helped us to make an informed decision about the direction of a new business venture".

Thomas Beck, Managing Director, EDAG Australia

"We have reviewed the report on IVS application and have no additional requests or comments. The report is comprehensive and to the high standard I am accustomed to receiving from the AIC".

Simon Edwards, ICEBERG Innovations, UK AIC Market Research Client

Case Study: StockEZEon as per the other case studies

StockEZEon is an innovative device designed to apply and remove all types of compression hosiery and circular bandages. This device can be used independently at home, in nursing or community health settings and in acute care environments. The invention of StockEZEon was driven by the need for a more effective method of applying and removing compression hosiery. This device enables easy loading, application and removal of compression hosiery without causing any pain or further skin damage.

StockEZEon inventor, Rob Skerman, recognised the StockEZEon device would benefit the wider community, in particular the mature-aged population, by making it simpler for users to follow the prescribed use of compression hosiery as well as improving quality of life for the patient. The device provides independence for many users through enabling pain-free self administration of compression hosiery and saves significant costs in community nursing.

Rob Skerman engaged the AIC to help devise a commercialisation plan to introduce the device to the global market. The AIC first undertook a comprehensive market research study to identify key opportunities and players in the global compression hosiery industry. Based on this market research, the AIC then developed a commercialisation strategy that involved more securely protecting the device IP and then licensing the device to major global players.

The direct value provided to StockEZEon as a result of this project included:

- increased revenue opportunities through access to new markets
- a unique market positioning through the protection of IP
- increased revenue through improved negotiation capability with partners

Several major companies in the industry have expressed interest in the StockEZEon device and it is now being trialled by a major global compression therapy organisation in Europe. The AIC also invited Rob Skerman to showcase this device at an annual nursing conference in Brisbane and through this exposure, a group practice of vascular surgeons, two wound management clinics and a deep vein thrombosis (DVT) clinic have all expressed interest in the product. Rob Skerman has also been invited to present at the Queensland Wound Management Conference scheduled for October.

The AIC is currently assisting with preliminary negotiations between StockEZEon Pty Ltd and the European organisation to distribute the StockEZEon device globally.



"You've done great work! It's a really professional report. Thanks for all of your efforts. I'll pass the key points on to our worldwide team..."

Sarah Davidson, Hear and Say Centre, AIC Client

"This (report) look great, and confirms our impression of the importance of this technology. Thanks for your comprehensive and professional report."

Kathy Andrewartha, La Trobe University, AIC Market Research Client



Delivering commercialisation



The AIC delivers commercialisation solutions across Australia through a number of specialised programs and services.

- TechFast – a program helping SMEs solve problems, fill capability gaps and identify growth opportunities by working with innovative external organisations
- ICT Commercialisation Program – a program that seeks to optimise return on investment to government, by unlocking hidden value in ICT technologies created as core agency business, as well as to provide industry opportunities as part of released government IP
- Commercialisation Advice – customised advice, tools, solutions or professional development programs to assist those with a commercial venture improve their commercialisation outcomes
- Market Intelligence – a customised market research service that helps businesses, research organisations, innovators and entrepreneurs understand market feasibility, opportunity and industry trends for their new product or technology
- Ideas2Market – an interactive workshop assisting innovators and entrepreneurs turn their ideas into viable opportunities, and existing small business owners to create sustainable growth
- Commercialisation Bootcamp, Collaboration Bootcamp and Commercialisation Bootcamp Master Class – a range of professional development programs for scientists, research organisations and PhD students to help them create value from their research



Working together

Our Board

The AIC is overseen by a Board of Directors:

- David Barbagallo (Chair)
- Dr John Ballard
- Professor Paul Greenfield AO, FTSE
- Professor Sandra Harding
- Professor Vicki Sara
- Robert Tucker

Our Team

The AIC has a team of 25 highly-qualified and experienced professionals in the areas of innovation, collaboration, commercialisation, IP, technology transfer, market research, economic and business development, consultancy and marketing and communications. Most also have backgrounds in business, science, engineering and technology.

Our Value

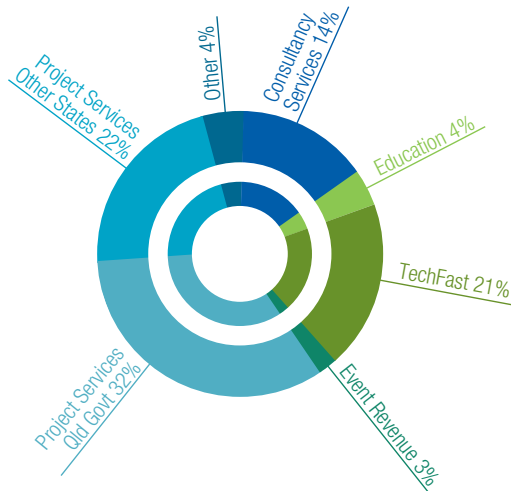
The AIC has delivered the following value for our clients:

- revenue growth and increased market share from new product or service development resulting from collaboration and innovation services
- increased business development opportunities from the AIC's deep innovation networks and strengthening of a firm's value chain
- improved negotiated outcomes from collaborations, because of AIC's track record and because the AIC has no vested interest in collaboration or commercialisation outcomes (other than customer success)
- cutting edge or improved products and services that meet customers' needs, developed as a result of AIC's linkages with the research sector
- improved skills and effectiveness from better understanding, recognition, and utilisation of IP



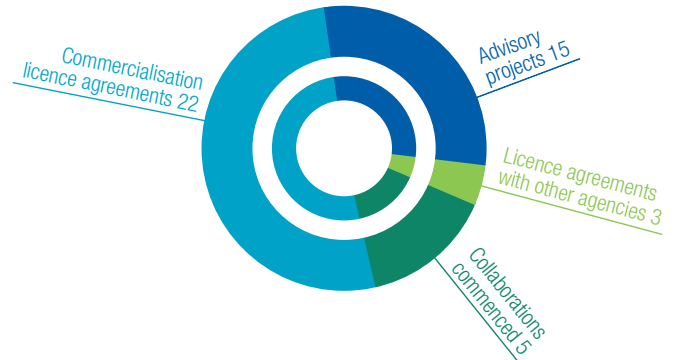
Performance

Income



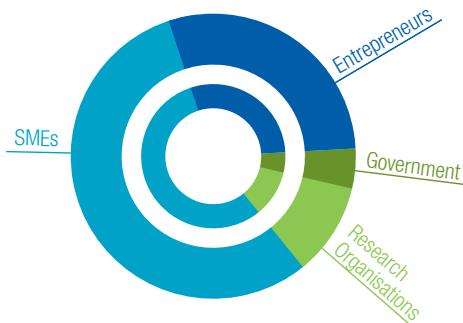
The AIC derives income from a number of sources in addition to funding received from the Australian, state and territory governments. Total income for 2007-08 was \$4.1 million.

Completed Government IP Transfer Projects 2007-08



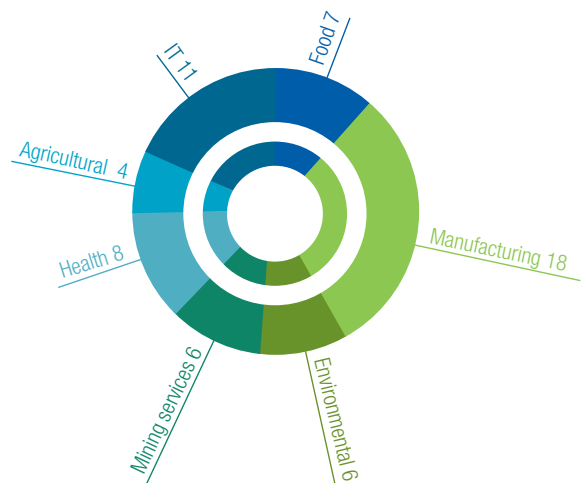
An increasing number of governments and agencies are recognising the value of the IP they have created, and have engaged the AIC to help them negotiate and manage collaborative or licensing arrangements.

Service Provision By Sector



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

Sectorial breakdown of TechFast projects 2007-08



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



Commercialising sustainability

When talented entrepreneurs walk into the AIC's offices to see how we might help them take their inventions to market, it's sometimes hard to keep up a brave face. Especially when they come with models of wind turbines, wave generators, or other ideas to create renewable energy. Their chances are slim.

It's a shame, because the sustainability sector might not only help solve global environmental challenges, it could be one of the best sources of future competitiveness Australia has.

The global market for environmental goods and services was recently valued at more than \$US 548 billion and is forecast to grow to \$US 688 billion by 2010. AIC Consultants stifle a smile as they tell us "one per cent of that is still a large number!"

The fact is, the so-called "cleantech" sector is not unlike the biotech industry in the early 1980s: a number of undercapitalised, single-product companies operating in an isolated context. One venture capitalist familiar with the sector has used the label "cottage industry" to characterise it.

But while the development of the biotech industry continues to be stymied by its very long supply chains, and the lack of a major global pharmaceutical company headquartered in Australia, the cleantech sector in Australia arguably has a greater opportunity. Where they exist, supply chains are shorter, and there are no multinational companies that demonstrably dominate the sector. In addition, there are much stronger and more urgent government responses globally to the immediate challenge, as well as a growing recognition of the role of

government procurement in building a new industry. An emissions trading scheme will also provide pricing and market certainty, thereby reducing development risk. The sector should also, in time, be able to look to the mining and infrastructure industries as sizable immediate clients.

Shi Zheng-Rong did it. A PhD. student at the University of NSW in the 1990s, he used his skills and research there to start up Suntech Power – a company that produces solar panels and is now the size of Qantas. Problem was, he had to do it in China. Just in case you think we wouldn't let such an opportunity slip through in today's more enlightened environment, the AIC was unable to find an industry partner last year to work with the University of Sydney on a million-dollar linkage grant into biomimetic photovoltaic systems. This next generation solar technology mimics nature and generates electricity with a process similar to artificial photosynthesis: highly useful in overcast conditions and tropical climates, or in smoggy cities. The grant lapsed.

The majority of corporate purchasers of environmental products still view environmental issues as a liability and therefore seek the lowest cost solution to solve the problem that is constraining their main business. Without demonising the industry as a whole, there are mines where environmental outcomes are a constraint in optimising output and therefore need to resolve these production constraints as quickly as possible for the lowest cost. Not a positive environment for the adoption of innovation.

Our entrepreneurs could follow the big money. But the rush to build new dams, recycle water, or desalinate water, is no different. These projects are dominated by large civil infrastructure builds requiring the movement of large volumes of earth and the pouring of massive amounts of concrete because the conventional wisdom is that water processing is batch based. The race against time, election commitments, and government restraints on risk does not create an environment for innovation, where smaller systems and distributed processing might provide better long-term outcomes.

The missing prelude to such sales and procurement are demonstration projects. That feasibility stage, or commercialisation chasm, can only be bridged by collaborative partnerships between the research, industry, and government.

No single entity can do it alone. Collaborations are needed, to share the risk and to build scale. A good example is the \$30 million project to build a ten megawatt solar thermal power station in Cloncurry using hot rocks, where Lloyd Energy Systems is working in a consortium with SMEC and Ergon, with significant funding from the Queensland Government. More than 8,000 mirrors will reflect sunlight onto graphite blocks, and water will be pumped through them to generate steam that will operate a conventional steam turbine electricity generator.

The US defence industry was built on government procurement creating clusters of small suppliers around the major systems integrators, resulting in new supply chains to beat a pressing challenge – the Cold War. A very different war is going on now, but our response needs to be similar.

Australia's future hope

Department of Primary Industries and Fisheries Professional Development Day with Scientist Sharon Hamill, March 2008.



Recognising the importance of quality science and technology education across the country to eventually drive innovation forwards, the AIC has invested in a number of partnerships to help strengthen the innovation capability of our future generations.

As part of Education Queensland's Science Education Strategy, the AIC hosted Senior Science Officer Sue Monteath at its head office in order to initiate and sustain collaborative partnerships between schools and industry.

A former senior school science teacher, Sue has been able to utilise the AIC's extensive network and industry contacts to facilitate professional development training for science teachers, bringing cutting-edge research to the classroom.

More than 75 teachers put their skills to the test in the Science and Engineering Challenge in Brisbane during March 2008. Held at the University of Queensland, the challenge pitted teachers against their students in a race to apply problem solving and investigative skills to a range of challenge questions.

Developed by the University of Newcastle for students across Australia, the challenge allowed teachers to engage in real-world problem solving with their students and enabled them to take fresh ideas back to the classroom for implementation.

Queensland Chief Scientist Prof Peter Andrews said the challenge offered teachers a rare opportunity to

engage with colleagues in industry from the science and engineering community to develop practical skills.

"The Science and Engineering Challenge is an excellent opportunity for middle school science teachers to foster active partnerships with the industry in a practical setting," Prof Andrews said.

"Competing against their students will provide an added challenge, creating a fun and competitive atmosphere for them to put their knowledge into action."

AIC Chief Executive Officer Dr Rowan Gilmore said it was imperative for teachers and students to maintain regular contact with other practitioners in the emerging sciences to ensure Australia remained competitive at a national level.

"If we are to continue to generate future science and engineering leaders, we need to ensure our teachers are given the best resources and industry support in order to educate our future generation," Dr Gilmore said.

"The new idea that a teacher takes away from this challenge could be the one that inspires their students to pursue a career in science or engineering".

During the past year, Sue also worked with local researchers to develop a comprehensive low emissions and energy teaching unit for teachers as a timely addition to the current science curriculum.

Developed in collaboration with the Queensland Centre for Advanced Technologies (QCAT), the Queensland Resource Council (QRC) and the Kenmore Cluster of Schools, the teaching unit will undergo a trial with 20 teachers before being reviewed and subsequently made available as part of the broader national curriculum.

Entitled "Powerful Science: cleaning up our energy", the unit of work was developed for both upper primary and lower secondary school students as a result of an initiative in 2007 to provide world-class teaching resources for school science curriculums.

The unit pack for teachers includes a CD of scientific presentations and resources supplied by QCAT and QRC, a unit overview plan, practical experiment guides, literacy activities, and topical background information within the 5E model for teaching (familiar to teachers using Primary Connections from the Australian Academy of Science).

As part of its own professional development program Ideas2Market, the AIC has also worked with students at the Queensland Academy of Science, Maths and Technology (QASMT) to deliver a ten-week course on entrepreneurship and commercialisation.

QASMT design and technology teacher David Gooch said the course had provided an excellent insight for the students into the real-world challenges of commercialising an innovative idea or product.

"I knew we had a number of students in our school that had product ideas in their heads but had no idea what to do with them. We developed our 'Beyond an Idea' program as an adaptation of the I2M format for our year 10-12 students," David said.

"The exposure of our students to commercialisation experts has been brilliant. The opportunities for students to actively deal with the challenges and pathways to being an entrepreneur have been very well received.

"The students are then able to apply the principles taught by pitching to a panel of mock investors at a pitching session in week ten."



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					✓	✓



Australian Institute
for Commercialisation

→ ideas → opportunities → outcomes



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