



The Cutting Edge

As a nation, Australia boasts a highly impressive tradition of innovation and entrepreneurship. Domini Stuart explains why our ability to develop, market and export new products and technologies is critical to our economic success

Australia is a very inventive nation. From the Sarich orbital combustion engine to the wine cask; the 'Black Box' Flight Recorder to the Hills Hoist, Gene Shears to the Ute - a long list of groundbreaking inventions reflects a strong tradition of innovation and entrepreneurship.

Innovation is good for business and good for Australia. According to the Department of Trade, Industry and Tourism, innovation is a major factor in adding value to manufacturing and industrial processes, improving the range and delivery of services and creating new jobs. Australia's economic, social and environmental well-being is underpinned by an understanding of innovation and the adoption of innovative practices.

Innovation is also inextricably linked to our export achievements.

"Innovative firms are the ones that are typically exporting in the first place," says Tim Harcourt, Chief Economist at Austrade. "But it doesn't stop there. By choosing to be exposed to the world market those same firms are taking advantage of innovation overseas and bringing it back to Australia. Therefore innovation creates exports, which in turn assists innovation."

The Federal Government clearly agrees that our ability to develop and market new ideas and technologies is critical to our overall trade performance. Back in 2001, when the new five-year \$3 billion *Backing Australia's Ability* strategy was unveiled, it was the largest-ever single investment in this area. Then, in May last year, the Prime Minister announced a further \$5.3 billion in funding.

Backing Australia's Ability – Building Our Future through Science and Innovation focuses on three key elements of the innovation process:

- strengthening our ability to generate ideas and undertake research

- accelerating the commercial application of these ideas
- developing and retaining Australian skills

The initiative has established an unprecedented \$8.3 billion 10-year commitment to Australian science and innovation.

A range of programs

As the program delivery division of the Department of Industry, Tourism and Resources, AusIndustry supports more than 10,000 businesses every year with a range of innovation grants, small business services, tax and duty concessions, industry support and venture capital products.

\$1 billion of the *Backing Australia's Ability* funding is being directed to AusIndustry's new Commercial Ready program. Building on the successful R&D Start program, the Biotechnology Innovation Fund and elements of the Innovation Access Program, Commercial Ready is designed to encourage the growth of innovative Australian companies in emerging and high-technology industries. Over the next five years, Commercial Ready will help more than 1,700 small and medium-sized firms with support for research and development, proof-of-concept, technology diffusion and early-stage commercialisation.

“Commercial Ready is a competitive, merit-based program, so not everyone will qualify - but there are many other ways for businesses to get help,” says Russell Edwards, AusIndustry's NSW State Manager..

“For instance, the R&D Tax Concession has offset provisions for companies in tax loss. That's wonderful for small business – you can actually get a cheque back from the tax department to support your R&D when you really need it.- before you are tax positive!

“COMET is another great program for early-stage companies who want to commercialise an innovative product,” he continues. “The businesses which benefit are all under five years old, and more that 90% have a turnover of less than \$500,000.”

COMET – the Commercialising Emerging Technologies program – is also benefiting from the Federal Government initiative. With an additional \$100 million in funding and a guaranteed extension until June 2011, COMET is set to help more than 1,000 firms to develop an innovative product or service with commercial potential.

“We also have the The Tradex Scheme to help with cash flow,” says Dr Edwards. If you're importing goods intended for re-export or to be used as inputs to exports, a Tradex order brings an up-front exemption from Customs duty and GST. For instance, if goods normally attract 5 per cent customs duty and 10 per cent GST, with Tradex you will save 15 per cent on the value of the imported goods when they first arrive in Australia.

“AusIndustry’s value proposition is that, if we can’t help you, we’ll know someone who can,” says Dr Edwards. “We work closely with Austrade and the Institute of Export so that we can roll up grants and advice into one tailored package.”

Encouraging co-operation

In the increasingly specialised and fast-moving worlds of technology and biotechnology, research cannot exist in a vacuum. Sharing knowledge and working in collaboration can benefit entire research communities.

To make co-operation more viable, \$42 million is being used to create 24 new research networks that will coordinate leading-edge research across Australia. The money will be provided jointly over five years by the Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC), with five of the networks co-funded by the two organisations.

The Government anticipates that bringing leading researchers together will expedite the development of world-leading biotechnology tools and health diagnostics. Areas of particular focus are improved childhood development, establishing a better quality of life amongst older populations, controlling and eradicating parasites and developing a better understanding of the relationship between genes and the environment.

“This is the beginning of a new era of collaboration across Australian research,” says Dr Brendan Nelson, Minister for Education, Science and Training. “Australia’s best researchers have told us that they increasingly need to find ways to work across organisational, geographic and discipline boundaries. These network grants will help our best minds to exchange ideas, to collaborate, and to work together for the benefit of Australia’s future.”

Support from the private sector

The Australian Innovation Festival is a demonstration of the private sector’s willingness to celebrate and support Australian innovation. Now in its fourth year, the Festival is continuing to build momentum. Last year, more than 244,000 people participated in over 500 events, including 200 regional events and nine associated festivals. With a theme of ‘Innovation and You’, this year’s Festival will feature conferences, events, awards, exhibitions and industry workshops throughout Australia, including the high-profile Mercedes Australian Fashion Week.

“Our vision is to increase public awareness of the importance of innovation and entrepreneurship,” says Festival media and program co-ordinator Katherine Cheesewright. “We do this through a renewed emphasis on the three pillars of economic growth - excellence in research, development and commercialisation.

“The 2005 event program will celebrate Australia’s successes as well as suggest opportunities for further improvement. With our many supporters, partners and associates throughout Australia, the Festival aims to showcase our innovation

achievements to the world, build on our innovation capability and help to develop a new generation of innovators and entrepreneurs.”

Running from 26 April - 15 May 2005, the Festival is continuing to attract bipartisan support at the Federal and State level from all major political parties.

The human factor

Tim Harcourt stresses that, while there are many ways for Australia to become a more innovative economy, we should not overlook the importance of investing in education and training, both in terms of innovation and the development of knowledge-based industries.

“Exporting is an important part of this process as exporters are big investors in human capital,” says Harcourt. “They tend to spend more on education and training than their non-exporter counterparts. For instance, according to the Australian Bureau of Statistics (ABS), in 1997-98, 77 per cent of exporters provided training relative to just 56 per cent of non-exporters. Exporters also tend to outperform non-exporters in terms of the variety of training provided, the training methods used and career development options for their employees.

“Exporters are more likely to have links to formal education institutions such as Universities and TAFEs. Exporters are also more likely to provide information technology training and are more likely to provide staff with personal computers than non-exporters. Exporters are generally better connected to the Internet than domestic firms are, which is crucial to Australia’s capacity to compete in the ‘Information Age’.

“Exporters also help expose Australia to new ideas around the world, generating competitive pressures to create new ideas at home. In short, exports helps innovation as exporting itself unleashes competitive and creative forces from the world market to Australia. This will not only help the exporters themselves but will also be beneficial to the community as the exporter knowledge flows on to the domestic Australian economy.”

Unfortunately, there is a down side to all of this good news. ABS research also shows that only 4 per of Australian businesses are exporters.

“The flip side of the strong link between exporting and innovation is that 96 per cent of firms have a relatively low innovation rating, with much less commitment to training and innovative business practices.”

Small wonder, then, that business leaders and politicians of all persuasions are doing everything they can to promote, encourage and celebrate Australian innovation in all its forms.

Innovation online

Given the nature of the subject, the most surprising thing about www.innovation.gov.au is that it took so long to materialise. Launched in November last year, the website was developed under the \$35 million National Innovation Awareness Strategy (NIAS) - a program funded under the Australian Government's original *Backing Australia's Ability* package back in 2001.

Within the website, *Innovation for Business* offers information to help small to medium businesses become more innovative, and then to develop implement their innovative ideas. Advice includes how to get started, taking an idea to market and protecting intellectual property.

"The site was developed to promote the benefits of innovation to Australia and to identify innovation programs that will assist individuals and businesses," says David Miles, Chair of the National Innovation Council. "It provides a 'one-stop shop' in cyberspace for the many innovation activities currently underway, and it is also designed as a rallying point to draw together the community of people interested in innovation in Australia."

Turning innovation into export success

Wetronome®

The primary focus of Perth-based Atamo Pty Ltd is improving clients' returns on their investment in technology. However, when director Andrew Holmes invented the Wetronome, his fellow directors were happy to embrace an opportunity to expand their export horizons.

"Both of my children swim at a national level, and they needed something to help them train to competitive stroke rates," says Holmes.

Designed to withstand the harsh environment of a chlorinated pool, the Wetronome has a completely sealed casing - it is programmed by an inexpensive magnetic wand. Tucked into a swimming cap or goggles, it provides a reliable beep of strokes per minute, using so little power that it will last for years.

Already popular with Australian swimming coaches, the Wetronome has been selling strongly overseas via the Internet. However, Holmes is now taking exporting more seriously, working closely with Austrade and talking to overseas distributors.

"Perth's Austrade representative Sandra Drape has been great," says Holmes. "20 hours of free consultation was very helpful, as was the initial grant."

"We're glad we decided to take it slowly - to use Australia as a test market and plan each stage carefully. That way we can build our exports on firm foundations."

Gippsland Aeronautics

Based in Victoria's La Trobe Valley, Gippsland Aeronautics is the only company in Australia – and one of only a handful in the world – able to design and manufacture commercial aircraft from first principles to meet specific market needs.

“We have planes involved in search and rescue for the US Airforce Auxilliary - Civil Air Patrol. Others are doing relief work, carrying freight and tourists, taking aerial photographs – they're versatile enough to meet every need in every situation,” says co-founding director George Morgan,.

Founded in 1983, the company now has 120 full time employees and a network of subcontractors. Of the current 20 - 25 aircraft manufactured each year, around 80 per cent are exported to countries all over the world.

“We saw a niche market for a versatile, piston-powered aircraft that could operate from short, unprepared strips and carry more passengers or freight than the Cessna 206,” says Morgan. “With twice the payload and cabin volume, our GA8 Airvan increases the operating scope and profitability for the operator.

“We have a world-leading product, and that's why it sells,” he continues. “It doesn't matter what you're making, if you want to export successfully, you need to be world market competitive.”

Dynamic Hearing

Melbourne-based Dynamic Hearing is a spin-off company from the highly regarded Cooperative Research Centre (CRC) for Cochlear Implant and Hearing Aid Innovation. Both developed from the world-renowned research group lead by Professor Graeme Clark at Melbourne University.

The company has 18 employees – and a world-class reputation for research and development into digital solutions for better hearing.

“We provide audio processing software to manufacturers of hearing aids and audio devices,” says CEO and director Dr Elaine Saunders. “Our new technology is a huge step forward – we're the first people to exploit the digital platform fully, and that puts us in a very strong position for exporting. At the moment, we're targeting Europe, Scandinavia, the US and Japan, where most of the major manufacturers are based.”

“Australia is a great place to be an innovator – though the downside is that we're a long way away from our customers,” she continues. “We're selling really, really exciting technology to a conservative market, and our products have a long sales cycle. That makes face to face contact especially important. I spend a lot of time pretending I'm not jet lagged!”

Qlicksmart

Struggling to remove a scalpel blade with a pair of artery forceps, a senior nurse muttered "There has to be a better way to do this". She was overheard by Dr Neville Henry, a GP in the Emergency Department of Princess Alexandra Hospital, Brisbane – and, within two weeks, he had made a prototype of the Qlicksmart[®] system.

Designed to be used with one hand, Qlicksmart reduces the danger of injury, and possible infection, that comes with handling scalpel blades

The product was launched in 1997 at Melbourne's Hospital+Healthcare Trade Exhibition where it won the first of a number of prestigious awards.

"Qlicksmart is a valuable but relatively inexpensive safety product," says Michael Sinnott, Managing Director and one of the 'three and a half' people now working with the Brisbane-based company. "Because the volume of sales we can achieve in Australia is restricted by the small population, we couldn't even cover our IP costs if we didn't market internationally.

We were further limited by our lack of skill in finding and supporting the right distributors. Six months ago we decided to work in partnership with SmartStream channel managers and, since then our sales have doubled."

Wotif.com

It was such a simple idea that Graeme Wood could hardly believe someone else hadn't thought of it. If he could only persuade hotels to discount rooms that would otherwise go unsold, he could use the Internet to get the good news out to last-minute travellers.

He did and he can –Wotif.com is now the global specialist in last-minute accommodation, with a portfolio of more than 6000 hotels, motels, serviced apartments, resorts, guesthouses and bed & breakfasts in 36 countries.

Wotif.com also has a team of more than 75 employees working out of offices in Canada, New Zealand, Singapore and the United Kingdom as well as their Brisbane headquarters.

"The international market is now growing faster for us than the domestic market," says Wood, "though we are still educating the market on the concept of last-minute accommodation."

Wood financed the business from seed capital from the founding shareholders and retained earnings. He also received support from AusIndustry, which provided invaluable credibility along with financial help.

“The company was founded in 2000, a time when the landscape was littered with dot.com failures,” he explains. “An Australian Government innovation grant signalled to the marketplace that our business plan was on the mark.”

Codan

Codan's innovative radio and telecommunications equipment is exported around the world. The Adelaide-based company has regional sales offices in the US and the UK covering markets in North and South America, Europe, the Middle East and the Asia Pacific. Formed in 1959, Codan started selling overseas in a small way in the late 70s. Last financial year, exports represented 94% of revenue.

This success is built on a commitment to research and development and what CEO and MD Mike Heard describes as time-worn and time-proven concepts.

“It’s important to understand that you need to design products specifically for export,” he says. “Something may be just right in Australia, but there will almost certainly be subtle differences that mean it won’t be just right overseas.

“You also need to stay physically close to your customers, either by establishing an office nearby or making frequent visits. But I’m sure the most important things are individual drive and initiative. I tend to believe that exporters are born, not made. The best Government can do is make sure they have the right infrastructure, and the right environment, to make a success of whatever they have a passion for.”