

## **Industry Research and Development Board Submission**

The Industry Research and Development (IR&D) Board is an independent statutory body established under legislation to assist with the administration and oversight of Australian Government industry innovation programs delivered by the Department of Industry, Tourism and Resources (DITR). The industry innovation programs administered by the Board are primarily focussed on supporting technological innovation and its commercialisation, involving Australian and, to a lesser extent, internationally sourced research and development (R&D).

The Board's mandate encapsulated in its mission statement is *“to increase the economic return from successful technology-based enterprises in Australia by guiding the Australian Government's investment in the commercialisation of the nation's research and development and innovation”*.

Board and Committee members are appointed as part-time office holders, in large part to provide technical assessments and advice. This arrangement assists in providing a clear delineation between the high levels of technical skills required to assess applications versus management of large public sector organisations. As noted through outcomes of the Uhrig Review, statutory bodies established to perform both of these functions can result in the loss of truly independent technical advice.

The arm's length advice provided by the Board and its committees provides a level of separation from government and provides objectivity which is crucial given the level of technical and business acumen required when assessing applications of a commercial nature. The IR&D Board considers the application of its entrepreneurial skill, objectivity and experience gained through many years of professional service adds value to its governance arrangements.

Members of the Board and its committees comprise over 50 experts drawn from business, government and the research community. This group of experts has a strong alignment to business in Australia and networks with the wider industry and government communities. The Board has initiated an outreach program to meet with other program assessment bodies including the Rural Research and Development Corporations, the Australian Research Council and the National Health and Medical Research Council. The Chair of the Board is a member of the Prime Minister's Science, Engineering and Innovation Council, and led a recent study of the Council on Growing Small and Medium Sized Enterprises.

In developing its submission, the IR&D Board undertook a survey of members of the Board and its committees. The purpose of the survey was to bring together the collective experience of members who are engaged with the Australian business, academic and research communities and who also have first hand knowledge of applications from businesses for government support for innovation activities.

The survey covered a wide range of issues relevant to the PC study including:

- features of effective innovative companies;
- differences between innovation in Australia and that of our competitors;
- reasons for lower industry innovation;
- types of support required to build innovation in businesses;
- the gaps in support for industry innovation;
- the drivers and constraints of innovation in Australia.

The findings of the survey identify many positive outcomes, as well as some gaps and opportunities for further development of the Australian innovation system. Based on the information received from its members the IR&D Board has focussed its submission on those elements of the Terms of

Reference (ToR) of particular relevance to the work of the Board in increasing the level of industry research and development and innovation activity in Australia and improving the commercial success of these activities. Consequently, its comments principally address clause 1 of the reference (economic impact of public support for science and innovation); clause 2 (impediments to the effective functioning of Australia's innovation system); and clause 3 (decision making principles and program design).

### **Economic Impact of Public Support for Science and Innovation** (ToR 1)

In addressing this clause of the reference, the IR&D Board provides quantitative and qualitative data highlighting the short and long-term returns to the economy of public investment in industry innovation. The quantitative data illustrates the outcomes from investment in the industry innovation programs, sourced through company provided post-project reporting (Attachment 1). The qualitative data demonstrates the longer term impact of the funding support on the company and economy and is illustrated through an historical case study (Attachment 2). In addition, to supplement this data, information collected through studies undertaken by DITR on the impact of grant funding on company behaviour and on inducing further business investment in R&D is also provided (Attachment 3). A summary of the findings from the above are set out below.

#### *Short-term Impacts of the Board's grant programs*

Key Performance Indicators have been set up for each Board program. These were streamlined to ensure consistency across programs in 2002-03 in accord with a request from the Ministerial Science and Innovation Committee following the 2001 *Backing Australia's Ability Statement*. The introduction of five categories of Key Performance Indicators (KPIs) – knowledge creation, human resources, finance, collaboration, and market outcomes - was to provide consistency across programs and departments in the collection of key output data<sup>1</sup> and aligned to similar categories used by the OECD. The complete list of KPIs and outcomes data for existing programs is also included as part of Attachment 1.

In 2002, the Board commenced collecting post project report (PPR) data, which is now collected at the end of the project, and again after one, two and five years. This long term data collection enables the Board to monitor the impact of program support on a company's growth and development and to report to Government on the outcomes from grant support and on potential areas for continued improvement and focus in the design and delivery of current and future grant programs.

An analysis of the available performance data at the company level indicates that the industry innovation programs are having a measurable impact on the development of companies, and are generating flow-on economic benefits particularly in the areas of employment, investment and training. In particular:

#### *Investment Spillovers*

- An independent review of the R&D Start Program was conducted in 2003. The review was based on a comprehensive survey of R&D Start recipients designed to collect detailed qualitative data on benefits and costs, R&D inputs, outputs and outcomes. The review found that based on the data from grant recipients, there are high additional national benefits – 33 percent of the total benefits are attributed to the R&D Start funding, resulting in a benefit cost ratio of 4.5:1 for R&D Start funds. This means that for every dollar invested in R&D Start, the community in total receives \$4.50 in return.

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<sup>1</sup> An explanation of the Indicators is provided at Attachment 1

- DITR performance data available for the Commercialising Emerging Technologies (COMET) similarly reports significant investment multipliers in order of approximately 6.2:1 for COMET funds.

#### *Employment*

- The performance data indicates that businesses receiving industry innovation support are reporting positive employment growth. Most notably, the respondents in receipt of Biotechnology Innovation Fund (BIF) support have reported an average staff increase per grant of two employees after completion of the project, and R&D Start program respondents have reported an average staff increase of three per grant after completion of the project.

#### *Training*

- Government investment in R&D also produces a spillover benefit in the area of skills development. A number of the IR&D Board programs including the COMET and venture capital programs specifically aim to address areas of skills gap. For example, a key objective of the Innovation Investment Fund (IIF) is to develop fund managers with experience in the early-stage venture capital industry. Over the life of the program, 78 professionals have gained experience in early stage venture capital which has enhanced the skill base in the industry by providing fund managers with job specific skills not readily available in the market.

#### *Impact of R&D Tax Concession on Business Investment in R&D*

An independent evaluation of the R&D Tax Concession Scheme in 2003 measured the effectiveness of the scheme by the amount of additional R&D that was induced. Based largely on a survey of companies, the review found that the R&D Tax Concession was delivering an inducement rate in the range of 50 to 90 per cent. The inducement rate may be defined as the amount of additional R&D expenditure undertaken for every dollar of incentive given to a company.

The efficiency was also tested using a comprehensive benefit-cost framework to evaluate the net impact the scheme has on Australia. The potential benefit-cost ratio was found to be up to 1.3 to 1 as a result of analysis of spill-over benefits.

Further, in 2001 the 175% premium for additional R&D, and the delivery, by way of offset, of both the standard and premium concessions were introduced. It was initially expected that the R&D Tax Offset would provide support for up to 1300 small companies per annum over the five year period 2001-2006. However, take up of this element has exceeded expectations with an average of more than 2100 companies per annum having indicated the intention to claim the offset in the period 2001-2005. Over the most recent reporting period (income year 2004-05), the number of registrants intending to claim the R&D tax offset has continued to increase by about four per cent over the previous year.

There has also been a 24 percent increase in the number of companies intending to claim the premium concession. This is also reflected in a 43 per cent increase in R&D expenditure by premium registrants in the 2004-05 income year as at 30 June 2006 to \$3709.2 million (48 per cent of total reported R&D expenditure) compared with \$2588.1 million (37 per cent of total reported R&D expenditure) for the 2003-04 income year.

Recent analysis of the impact of these measures shows that significant additional R&D expenditure occurred in the years following their introduction. Analysis establishes that the additional R&D (over and above what might otherwise have been anticipated) resulted from these changes.

### Behavioural Change

Behavioural additionality can be defined as the difference in company behaviour resulting from a government intervention. DITR undertook a study in 2005 of 116 companies which used the R&D Start program<sup>2</sup>. The receipt of a R&D Start grant was found to have induced long term behavioural changes in all businesses that participated in the study, although the nature and degree of change varied. The most marked changes in business behaviour attributed were:

- increased commitment to R&D;
- increased understanding of the benefits of R&D;
- long term changes to the way in which R&D projects are managed;
- formation of new collaboration with companies which is expected to continue; and
- encouragement of companies to apply for other forms of government assistance.

Sixty-three percent of the businesses surveyed suggested that their project would have proceeded in the absence of government funding. But importantly, of those, around 78 per cent indicated that the lack of support would have resulted in a project that was slower, less well funded and with reduced outcomes. The need to get high quality innovative products to market quickly is critical to the competitiveness and growth of Australian industry. As such, the R&D Start program has a clear and positive impact, even on projects which would have proceeded to some degree in the absence of grant funding.

### Longer-term Impacts of the Board's grant programs

It is generally acknowledged that it is difficult to measure the impact of government support mechanisms through quantitative data alone. As such, the Board has included an historical case to demonstrate the longer term social, economic and environmental benefits to Australia flowing from an initial investment through an R&D Start grant (refer Attachment 2: R&D Start Case Study: Radiata Communications Pty Ltd). The Board would be pleased to provide further examples of case studies upon request.

## **Current Impediments to Australia's Innovation System** (ToR 2)

Overall, business expenditure on R&D lags that of our international competitors on a sectoral or global basis. There are a range of factors contributing to this situation. These include:

- Australian industry is dominated by small less R&D-intensive companies. In 2004-05, approximately 82 per cent of registrations for the tax concession were from the SME sector i.e. firms with up to 100 employees (this is up from about 72 per cent in 1999-2000);
- Australian public sector investment in R&D is strong, with the majority of researchers being located in higher education and government research organisations; and
- Australian business R&D intensity is relatively low due in part to the dominance of the agriculture and mining industries which contribute significantly to Australia's GDP.

In addition to these general characteristics of Australia's industry innovation environment, responses to the Board's survey identified additional specific key factors limiting Australia's innovative capacity including: the size of the local market and distance to global markets, scarcity of skills particularly management and entrepreneurial skills which impact on commercialisation and availability of finances.

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<sup>2</sup> DITR, *Behavioural Additionality of Business R&D Grant programmes in Australia* (2005)

### *Markets*

- Australia has a relatively small local market which is unable to support many technologically innovative products that would otherwise flourish in a world market. Its high technology industry is also of a relatively small scale. These two factors combined with the distance to large overseas markets means that many companies are not experienced in international networking and trade. The distance to large markets also puts an added strain on small companies to maintain overseas operations and limits an Australian based company's opportunity to commercialise effectively.
- Notwithstanding these impediments, companies need to access overseas distribution channels and customers in order to build sustainable markets.

### *Management Skills*

- The current quality of management and leadership skills is clear to the Board in its oversight of applications for support. There is experience in running R&D programs and competing internationally, however, the Board recognises there is a need for further development of commercialisation skills, including in the area of marketing and sales.

### *Finance*

- Too often the Board witnesses companies going offshore simply because they cannot secure the type of support (the risk money) needed in Australia. Whilst large companies use earnings (or in some instances capital raising) to finance innovation, startups do not have such reserves as a source of finance.
- Venture capital (VC) investment is a growing source of funding in Australia but the case can be made that the absence of VC funds capable of follow on funding is leading startups to IPO too early. However, it is recognised that the Australian VC market is very young compared to that of either the EU or USA. Having said that, the Board welcomes the announcement of Round Three of the IIF and the introduction of the Early Stage Venture Capital Limited Partnership (ESVCLP).

Despite these impediments to the Australian innovative system, it should be pointed out that limitations can sometimes be turned to advantages. In the case of Australia, "small" can mean "quick moving". Australian innovative businesses can succeed by moving quickly to bring innovative products to market and then aggressively seeking international partners who can market the products effectively. The Board is continuing to explore ways of accelerating this trend.

## **Decision-Making Principles and Program Design** (ToR 3)

In addressing this clause of the PC terms of reference, the IR&D Board is providing comment on the general design principles underlying the industry innovation programs it administers. The Board's programs are specifically designed to encourage innovation as a key growth strategy for Australian businesses. The programs have been developed in response to identified market gaps (for example, venture capital programs) or to address industry-specific capability gaps or growth opportunities identified through mechanisms such as industry mapping exercises, and Industry Action Agendas (Biotechnology Innovation Fund, MVP R&D Scheme).

The IR&D Board has an overview of the DITR policy framework for industry policy development and business regulation and the complementary framework for industry program design which inform the requirement for, and development of, industry intervention mechanisms and works closely with the Department in the design stage of new industry innovation initiatives. Having said that, the Board embraces a flexible approach to the design and delivery of its programs as well as extensive industry consultations that are conducted in the development of industry support mechanisms.

The Board has been closely involved in the design of new programs and the modification of existing programs where changes are identified. For example, with the change from the R&D Start and BIF programs to the Commercial Ready program, the Board took part in the national consultations with industry jointly with DITR which assisted in the development of the Ministerial Directions and Guidelines. In this regard, a key feature built into the design of the Commercial Ready program is the flexibility to enable companies to access assistance as needed dependent upon the type of activity in which they are engaged (R&D, proof of concept, early stage commercialisation). Flexibility has also been incorporated in to the application process with applicants having the ability to choose between making a single application or multiple applications for a single project.

Similarly, in 2001, the IR&D Board was active in supporting the expansion of the flat 125% R&D Tax Concession to include the Tax Offset to assist cash strapped new companies build technologies through R&D and for the 175% Premium to encourage companies to increase their investment in R&D over time.

Once programs are introduced the Board also collects and analyses data on program performance, and assesses whether refinements or modifications are required to programs to maximise their uptake and to ensure they remain focussed on relevant program objectives.

#### *Program Focus (Sectoral vs Generic)*

The policy framework that guides market intervention decisions specifies that corrective action be implemented in circumstances where a market gap is identified. In the innovation sphere such assistance may be required for a range of reasons, including to encourage a particular activity which would otherwise not be undertaken (such as investment in R&D); to encourage the establishment of high-growth potential industries (such as biotechnology); to offset the impact of government policies in other areas (such as the former Pharmaceutical Industry Investment Program); to improve processes and relationships between key players (CRC program) or to ease structural adjustment pressures (automotive).

The form of the intervention is contingent upon a number of factors including the nature of the industry or the impediment being addressed. The industry innovation programs administered by the IR&D Board currently comprise a mix of broad based generic programs<sup>3</sup>, as well as tailored sectoral programs<sup>4</sup>. The programs provide support to innovative businesses ranging from small to large and from a diverse range of industries,<sup>5</sup> including emerging industries to mature sectors.

In the Board's view, the current mix between generic and sectoral-specific programs is appropriate, having regard to Australia's industrial structure. Generic programs such as Commercial Ready and the Industry Cooperative Innovation Program (ICIP) address areas of market gap common across all industry sectors and are designed to stimulate R&D and commercialisation capabilities of Australian businesses. Similarly, sectoral-specific support mechanisms such as the Pharmaceuticals Partnerships Program address specific impediments and opportunities in the identified sectors.

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<sup>3</sup>Commercial Ready Program, the former R&D Start Program, the Tax Concession Program, COMET, ICIP

<sup>4</sup>Renewable Energy Development Initiative (REDI), Pharmaceuticals Partnerships Program (P3), MVP R&D Scheme, former Biotechnology Innovation Program

<sup>5</sup>Industries include health, medical scientific, agricultural, fishing, forestry, environmental, food-processing, biotechnology, engineering, manufacturing, transport, resource, energy, mining, computer systems (hardware and software), communications, broadcasting, electronics and photonics

### Growing Companies

The existing suite of industry innovation programs has coverage across the continuum of the innovation system (i.e. from research, development to commercialisation) and its customer base ranges from micro-businesses through to small, medium and large companies. The programs are designed to support the growth of companies by providing assistance and growth capital at critical stages of the business development cycle.

For example, the COMET and former Biotechnology Innovation Fund specifically targeted support to small early stage growth companies; Commercial Ready and IIF target small-medium sized companies requiring expansionary funds; while the Pharmaceuticals Partnerships Program and MVP R&D Scheme provide support to larger companies engaged in high-end research and development.

The Board has observed individual companies accessing multiple industry innovation programs at various stages during their growth process to support their expansion. The historical case study at Attachment 2 is an example.

In oversighting the administration of the business innovation programs, however, the Board has identified areas of need not currently addressed through existing programs. Specifically:

- encouraging the formation of new companies and spin-outs; and
- encouraging and stimulating the growth of small companies into medium-sized and large companies.

The Board sees an ongoing need for the Government to stimulate investment in very early stage startups from the university research environment. The Board sees that these fledging companies must be carefully nurtured by the development of commercial skills, which must necessarily be drawn from the business environment for success. In particular, the Board supports Business Angel capital being invested in growing companies via the COMET program or otherwise. Angels are a key source of funding and a means of building commercial skills in new companies and more effort could usefully be directed to assisting them to coordinate and invest as has been done in a number of countries including the United Kingdom.

### Grant vs Entitlement

The IR&D Board supports the provision of both market based competitive incentives (such as grants) and entitlement mechanisms (such as the tax concession) to stimulate additional business investment in innovation activity.

Competitive based measures cost more to deliver, but provide focussed support as well as transparency and accountability in decision-making. They can also target assistance to specific areas – for example Pharmaceuticals Partnerships Program (P<sup>3</sup>).

The R&D Tax Concession, on the other hand, is an entitlement program that responds to market signals and has an advantage for companies in that they decide what R&D to fund and all companies irrespective of size are able to get assistance. It is interesting to note that many countries (for example, Ireland, Korea, UK, Singapore, China and India) are adding tax concessions to their suite of innovation programs to support innovative companies.

The Board is of the view that the current mix between grant and entitlement programs aimed at encouraging increased business investment in research and development is appropriate.

### National vs International

It is currently a condition of funding that businesses accessing support through the industry innovation programs are required to seek approval from the Board prior to proceeding with an overseas sale or the transfer of intellectual property. Over recent years, the Board has considered an increasing number of requests for change of control/transfer of intellectual property.

In 2004, the IR&D Board undertook a study of companies receiving R&D Start and BIF grants that had either been sold to foreign companies or established overseas holding companies. The study found that the key motivations behind the overseas sales or transfer of intellectual property were the need to:

- raise funds;
- form alliances with larger global organisations in order to gain access to international markets, strengthen management or sales capability or draw on existing complementary technologies.

The study also highlighted that, in many cases, the offshore sale was not part of the company's business plan, but rather a response to emerging opportunities. Further information in relation to the study is at Attachment 3.

The Board recognises that the constraints of the domestic market, particularly in regard to finance and scale issues, will continue to place increasing pressure on companies to consider and/or enter into international alliances. As a consequence, the Board has reviewed its policies on change of control and national benefits assessment processes to allow greater flexibility in dealing with these issues.

At present, the issue of ownership remains a key factor in assessment processes and is also considered a key factor in considering national benefit spillovers. Nevertheless, in recognising the increasingly global nature of innovation, the Board considers that 'national benefit' considerations should focus on seeking to retain in Australia the entrepreneurial capacity/human capital (i.e. key personnel) and the research, development and commercialisation skills, regardless of ownership considerations. The movement of Australian IP off-shore should therefore not be seen as a failure if in so doing it enhances its further development. In fact, the extensive marketing, sales and distribution centres of large multinational companies often dovetail well with the products and services of Australia's innovative companies. Furthermore, an Australian manager who has a few years experience in a multinational and ends up resident in Australia, improves his/her skill in the very areas in which we perceive we need improvement.

### Coordination of Innovation Support Programs

There are a number of government portfolios administering programs designed to stimulate innovative capacity, particularly in the commercialisation sphere. The recent *Pathways to Technology Innovation* report (House of Representative Standing Committee on Science and Innovation, June 2006) highlighted the perception that Australia's innovation support framework is too complex, involving a proliferation of innovation programs. The Committee recognised "that the plurality of programs, while posing some difficulties, is a necessary feature of a comprehensive suite of innovation support to address different innovation needs" and recommended that the Australian Government adopt measures to better promote the available assistance.



The IR&D Board recognises the complexity of the innovation support framework and has over recent years, taken steps to strengthen its links with other key science, technology and innovation entities to encourage discussion of industry innovation issues and mechanisms for cross-referral of customers to optimise government investment in this area. In addition, the Board has a streamlined program – Commercial Ready – which has replaced three previous programs. The Board considers that there is also opportunity to further consider rationalisation of programs and delivery agencies to achieve more focussed coordination in relation to policy decisions and program delivery.

#### *Funding Arrangements for Industry-Driven Programs*

Private expenditure and the achievement of milestones in relation to innovation projects are inherently unpredictable, reflecting the speculative and high risk nature of such projects. As a result, annual expenditure patterns for government programs are hard to predict. In these circumstances it is often the case that annual budget targets are unmet and programs often finish the year under budget. In this situation the flexibility to automatically re-distribute appropriations between financial years to meet grantee needs would increase the ability of programs to maximise the desired policy outcomes. The Board believes that providing departments with flexible appropriations for granting programs is important and should be seriously considered.

## PROGRAM PERFORMANCE MEASUREMENT

Key Performance Indicators have been set up for each Board program. These were streamlined to ensure consistency in 2002-03 in accord with a request from the Science and Innovation Committee following the 2001 *Backing Australia's Ability Statement*. The introduction of five categories of KPIs - knowledge creation, human resources, finance, collaboration, and market outcomes - was to provide some consistency across programs and departments in the collection of key output data.

A summary of the definitions for the indicators is as follows:

- Knowledge creation – the ability to generate new ideas and technologies
- Human resources – the capacity of the labour force to transform these ideas and technologies into tangible economic outcomes
- Finance – the pool of funds available to commercialise ideas and technologies
- Collaboration – domestic and international linkages of Australia's innovation system
- Market outcomes – economic return on the investment in innovation.

The indicators are not designed to be prescriptive, but to provide an overview of Australian trends in key innovation indicators and to compare these to trends in OECD countries.

The complete list of KPIs and currently available outcomes data for existing programs is attached overleaf.

## R&D START CASE STUDY: RADIATA COMMUNICATION PTY LTD

Radiata Communications Pty Ltd received an R&D Start grant in 1997 of \$753,000 as a fledgling start-up company in the area of microelectronic chips for wireless communications, particularly the IEEE 802.11a WiFi standard, and was one of two companies first to market with the chips.

At its peak Radiata employed over 50 people in Australia. Due to its leadership position it was acquired by Cisco Systems in 2001 for \$470m. Cisco maintained the design team in Sydney and brought two chipsets to market in its own products.

During this time the Radiata team in Sydney gained critical experience in bringing production mixed signal CMOS (the technology of choice) to market, including interaction with Taiwan for chip fabrication, the Philippines for packaging, and the USA for production tests. In addition, many of the Radiata personnel also spent valuable time in the USA in marketing and related operations.

The initial innovation grant gave Radiata the opportunity and the ability to “buy” rather than “build” when it came to critical CAD software and test equipment positioning it as a world leader.

As a result of the acquisition, the founders of Radiata formed an informal angel investment network (Weste, Skellern, Beare) that has subsequently funded a number of startups, including:

- g2 Microsystems ([www.g2microsystems.com](http://www.g2microsystems.com)) – This company has been the recipient of two R&D grants. The first an R&D Start grant for \$1.8m in early 2005 to develop ultra miniature radio frequency identifications chips. The second was a Commercial Ready grant in late 2005 for \$1.9m to develop SmarTag, an advanced asset tracking solution. g2 employs around 30 people in Australia and seven in the United States. The design team is one of the most experienced in the world when it comes to low power system on chip and almost all key employees from Radiata work at g2. Only one (from NZ) relocated to the US with Cisco. They have received Series A funding and have just closed a Series B round for \$US14m with Siemens Venture Capital as the lead investor.
- Avega Systems ([www.avegasystems.com](http://www.avegasystems.com)) – This company is active in the area of wireless audio speakers. They were in the top three Best in Show at the 2006 Consumer Electronics Show. They have received Series A funding and employ around 20 hardware and software engineers in North Sydney. Three of the four founders were attracted from Glasgow where they were employed by Linn Audio (<http://www.linn.co.uk/>). One was an Australian expat, PhD from ANU, giving a net gain of three in reverse brain drain. The expertise that these people bring to Australia in terms of high quality digital audio is unmatched. They use WiFi technology and the connections forged during the Radiata days have been well used. They currently benefit from the R&D Tax Concession.
- Emotiv Systems ([www.emotivsystems.com](http://www.emotivsystems.com)) – This company is active in the area of interpreting brain waves for application in computer gaming. They have received Series A funding and employ nearly 20 scientists and engineers at their lab in Pyrmont, NSW. They have around 7 management (marketing, bizdev) employees in the USA. They have received assistance through the R&D Tax Concession, and received a Commercial Ready for \$1.5m late in 2005. Flying largely under the radar, they have truly breakthrough technology that should debut in 2007.

In addition a number of smaller companies have been supported. This is a classic case of serial entrepreneurial activity – just as it happens in the USA, and there is no reason to believe that it will not continue.

## **SMEs: TAKING INNOVATION TO THE GLOBAL MARKET<sup>6</sup>**

In 2004 there was a study of a number of companies receiving R&D Start and Biotechnology Innovation Fund (BIF) grants that had either been sold to foreign companies or established overseas holding companies.

The key message of the study report *SMEs: Taking Innovation to the Global Market* was that innovative SMEs in countries with small markets, such as Australia, will generally take new products, processes and services to the global market to improve commercial return on their innovations. Mechanisms to do this include sale to, or merger with, an international company or establishing an offshore holding company or headquarters company. The benefits to SMEs include better access to growth capital, international marketing and distribution opportunities, and faster regulatory approval of products in key international markets.

The grant agreements for both the R&D Start and BIF programs require grantees to obtain the prior written consent of the Commonwealth (through the IR&D Board) to a change of company control or transfer of intellectual property during the grant and for five years after the grant is paid. These conditions apply to any change in control or transfer of intellectual property, regardless of whether Australian or international entities are involved.

Twenty five R&D Start and BIF grant recipients that had requested (and received) consent to a change in company control or transfer of intellectual property were interviewed in the 2004 study. Sixteen companies had requested approval for change of ownership, with the remainder seeking approval for the transfer of intellectual property. The interviews identified that Australia's small domestic market is a significant barrier to sourcing capital, increasing sales and growing businesses.

Over 90 per cent of interviewees cited the need to raise funds as either the primary or secondary reason for overseas sale or transfer of intellectual property. The second reason for offshore sale was the need to form an alliance with a larger global organisation to gain access to major international markets, strengthen management or sales capability, or draw on existing complementary technologies. Sixty per cent of participants cited this as a primary or secondary driver. These alliances tended to bring together the commercial experience and market expertise of the United States and Australian R&D expertise.

The general view was that globalisation will continue, and will place increasing pressure on companies to consider and/or enter into international alliances. Underpinning this is an expected increase in mergers and acquisitions, as businesses continue to cut costs to remain competitive and spread the risk and cost of R&D.

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<sup>6</sup> *SMEs: Taking Innovation to the Global Market*, Department of Industry, Tourism and Resources, February 2005