

**PRIME MINISTER'S SCIENCE, ENGINEERING AND INNOVATION COUNCIL****FOURTH MEETING - 26 NOVEMBER 1999****AGENDA ITEM 1(a)**

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**INNOVATION IN ESTABLISHED BUSINESSES****EXECUTIVE SUMMARY**

Earlier reports to this Council have emphasised the importance of innovation. The working group believes that a culture of innovation is the most important way to generate long run, sustainable economic growth, and international competitiveness. This applies equally to new and established industries.

A tremendous amount of hidden innovation potential can be unleashed from within established businesses. The challenges for government and industry are to facilitate change, and to encourage a new momentum towards a "true development culture".

These issues have implications for development of Government programs and policies intended to ensure that the needs of established businesses, which are attempting to increase their levels of innovation, can be met. Established businesses form the basis of our economic activity. If they are not continuously innovating our economy will not be competitive going forward.

There are four important ways in which Government can create a supportive environment for building cultures of innovation in established businesses.

The Government can:

- **Excite** the community;
- **Educate** managers;
- **Enable** access to expertise and enterprise capital; and
- **Encourage** investment;

The recommendations which flow from these are:

1. Government and industry together should repeatedly emphasise the importance and value of continuous innovation, and should use every opportunity to recognise and where appropriate reward the work of innovative firms.

The Government and industry should use the National Innovation Summit to make a major statement that both emerging companies and established businesses need to embrace a development.

2. The COMET Program should be expanded, to offer training for managers of established businesses to manage innovation.

3. A. Researchers and academics who interact with individual businesses to assist adoption of technology should be recognised and rewarded.  
  
B. Government should encourage investment networks by strongly supporting the Private Capital Council or similar body.
4. The Government re-examine the issue of the R&D Tax Concession to address the declining investment in innovation by business. Such recommendations as those provided in the previous innovation working group report to PMSEIC which suggested introducing aspects of the Canadian Tax Concession Scheme should be considered. The Concession should be a major topic to be addressed at the Innovation Summit.

The Innovation Summit is a focus for discussion of innovation in Australia. Government and industry must use this chance to demonstrate their commitment to innovation, as a driver of economic growth in the next millennium.

## **Introduction**

The working group on *Innovation in Established Businesses* was created following the consideration by Council of a report on *Strengthening the Nexus Between Science and Its Applications*. That report concentrated on the opportunities for, and needs of, small, rapidly growing firms which are developing particular research discoveries or technology advances. In many ways, new and established businesses have much the same needs in undertaking or increasing innovative activities, and innovation is a key to success and survival in both types of firms.

However, although the earlier report addressed these more general innovation issues, we believe that there are some very important issues, which specifically affect businesses with established products or service lines, which would benefit from further attention. These issues have implications for development of Government programs and policies which will ensure that the needs of established businesses, which are attempting to increase their levels of innovation, can be met.

Much industrial innovation is not based on cutting-edge generation of knowledge, but rather on firms adopting (and as necessary adapting) knowledge and practices already in place in other firms, industries and countries. While occasionally break-through innovations lead to giant leaps forward, innovation in established businesses is more commonly achieved by gradual improvements and changes in smaller steps, driven in the main by a careful knowledge of, and response to, the competitive pressures of the market place.

The working group believes that a tremendous amount of hidden innovation potential can be unleashed from within established Australian industries. This paper attempts to identify mechanisms which can help to encourage innovation, and remove unnecessary impediments. The challenges for government and industry are to facilitate change, and to encourage a new momentum towards a “true development culture” in Australian firms.

Our recommendations, if adopted, will address the difficulties firms and industries face in changing from traditional paths, to new trajectories as a result of, and involving, a higher level of innovation.

## **The Importance of Innovation**

Earlier reports to this Council have emphasised the importance of innovation, and we will not repeat these arguments here. We believe that a culture of innovation is the major path by which Australian industries can generate long run, sustainable economic growth, and international competitiveness. This applies equally to new and established industries.

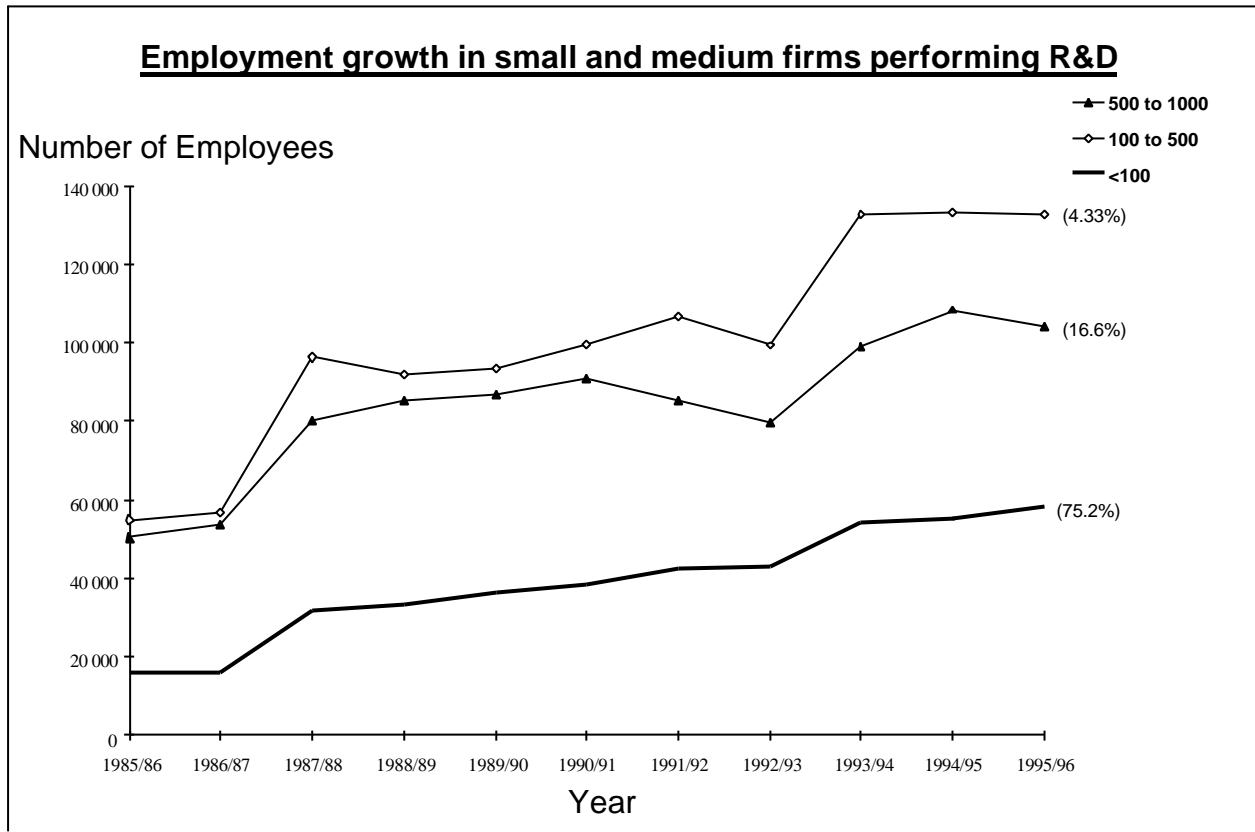
A simple definition of *innovation* is that it comprises the processes by which new products and methods of production are generated. From the standpoint of existing business, innovation may amount merely to it doing things that *it* has never done before. For that to have competitive value, however, its innovation must lead to a reduction in production costs and/or products which offer better value for money to its customers. This may have to do with the design or intrinsic quality of the product, timeliness and convenience of delivery, or post-sale customer support.

Businesses achieve a competitive edge by building and drawing on sustainable distinctive capabilities. Such capabilities give businesses unique and lasting capacities to do things which other firms cannot do, or to do them consistently better. A culture of continuous, faster, cheaper, better innovation is a source of continuing advantage, and provides a path to sustained competitiveness.

Firms need to use mechanisms such as intellectual property protection, quick lead times, learning curve advantages and better sales and service to preserve these advantages.

### **Innovation and Its Effect on Employment Growth**

There is evidence linking research and development investment by firms (as an indicator of innovative capacity) and employment growth in those firms. The growth in employment for more than 96% of about 4,000 Australian firms claiming business expenditure on research and development through the R&D tax concession over the period 1985-86 to 1995-96 is shown in the graph below. There is a definite upward trend in employment growth over a range of firm sizes (determined by the number of employees) for those firms actively engaged in innovation through R&D.



## The Innovation Cascade

The working group has developed the concept of an “innovation cascade”, in an attempt to identify the key components of the innovation process.

To achieve global competitiveness we must have internationally competitive businesses. For our businesses (whether in service or non-service industries) to be internationally competitive, the compelling need is to innovate continually. There are two complementary mechanisms that will form the basis of successful, continuing innovation.

The first is *generation* of new and better ideas and processes by stimulating re-invention and development within a company. The second is *adoption* (for which we could almost substitute the word diffusion), ie the process of acquiring, adapting and exploiting knowledge from outside the organisation. Knowledge and ideas taken up from outside a company need to be appropriately integrated into that company’s culture and management directions.

Both generation and adoption require three key components to be successful:

- The appropriate licensing and control of intellectual property, which is vital to realising full value from innovation, particularly in circumstances where this intellectual property will form the basis of product and process to be marketed internationally;
- Proper linkages to innovation systems, to allow the innovating firm to draw on research results, experience and skills of other firms and public research institutions; and
- Effective use of outsourcing, to maximise innovation potential.

## *Innovation in the Outsourcing of Information Technology and Telecommunication Services*

### *A Case Study of the Commonwealth Bank*

In 1997 the Commonwealth Bank of Australia was looking for a cost effective way to ensure that its information technology and telecommunications (IT&T) would provide sustainable advantage and innovation. IT&T is central to all aspects the Commonwealth Bank's business. Information technology and the internet are totally re-inventing much of the way the Bank does business.

The Bank looked upon outsourcing as an opportunity for improving business performance and strategic business positioning. The perceived benefits included:

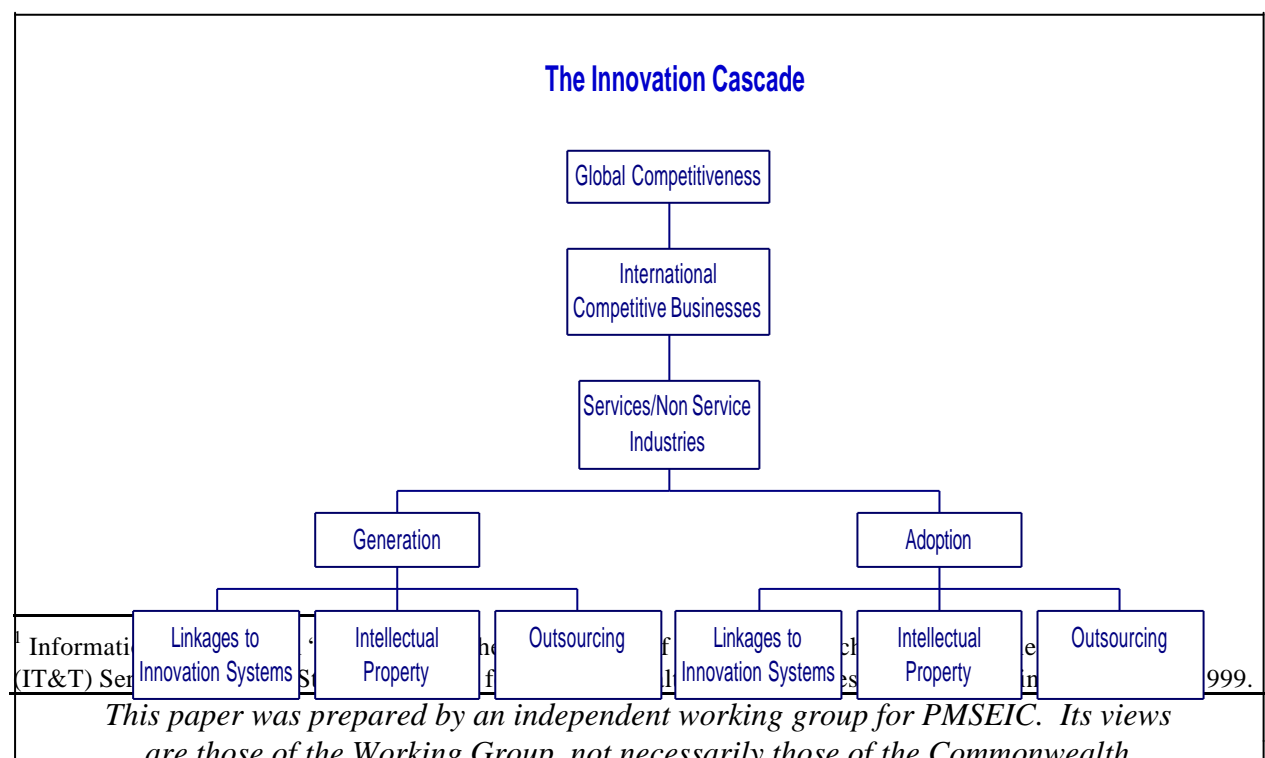
- Better application of technology to business needs;
- Improved speed to market of new products and services;
- Access to global IT&T expertise;
- Best practice pricing;
- Enhanced career opportunities for the banks IT&T employees; and
- World class training in technology.

It was thought that outsourcing to a single global technology partner would deliver the benefits and mitigate risks associated with managing multiple outsourced relationships.

The outsourcing exercise has brought the Bank new business opportunities and opened up new markets. The process followed has been followed by other Australian and international companies.

As a result of outsourcing the IT&T partnership has potential to continuously develop and to grow the innovative potential of the Bank to create wealth for its customers, shareholders and employees.<sup>1</sup>

We believe there are significant ways in which Government can facilitate the processes we will describe to increase our global competitiveness.



## **Improving Our Performance**

The working group's analysis of innovation, leads it to suggest that there are four important ways in which Government and industry can create a supportive environment for the building of a culture of innovation in established businesses. These are:

1. *Exciting* the community;
2. *Educating* managers;
3. *Enabling* access to expertise and enterprise capital; and
4. *Encouraging* investment.

### **1 Exciting the Community**

The working group believes that Australian managers frequently under-estimate the critical value of innovation to business. In many companies, new ideas are considered to have a negative economic value because of the costs involved in their development and commercialisation. Managers and educators need to adopt a more positive attitude and focus on the potential for enhancing competitiveness through innovation.

Government and industry leaders can influence companies by making strong statements supporting a culture of innovation and pointing to the importance of innovation as a driver of prosperity. Policy tools which could be used to reinforce this message include:

- Repeated public statements by both government and industry leaders,
- Competitions and awards which reward innovative firms; and
- Show-casing innovation successes.

#### **Recommendation 1**

**Government and industry together should repeatedly emphasise the importance and value of continuous innovation, and should use every opportunity to recognise and where appropriate reward the work of innovative firms.**

**The Government and industry should use the National Innovation Summit to make a major statement that both emerging companies and established businesses need to embrace a development culture of continuous innovation.**

### **2a) Educating - The need to manage for innovation and improvement**

Not all established businesses rely on being first to market, or on being a fast follower, as the basis of their innovation strategies. Companies that successfully manage for innovation and continuous improvement tend to have five characteristics. These are:

1. *They understand the value they are trying to create.* The value, which includes knowledge of customers and markets, focuses inquiry, testing and implementation. Established companies usually have a clear sense of where their products will fit and the incremental value that is being sought. Within sometimes narrow boundaries, focussed approaches to innovation can lead to rapid rates of new product or process innovation. Examples include innovations – in organisation, technical equipment, product and process – that make existing or intended operations more competitive.

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*This paper was prepared by an independent working group for PMSEIC. Its views are those of the Working Group, not necessarily those of the Commonwealth.*

2. *They take on projects and risks appropriate to their type of business.* Where technology and other factors have relatively stable trends, emergent strategies, which build on existing strengths, tend to be more successful than innovations based on market-changing products. Some established organisations have an approach based on managing ‘one risk at a time’ (e.g. market, technical, financial).
3. *They share a high degree of understanding and cohesion at senior levels* about the strategic intent and processes of the business. This characteristic leads to a widely shared view of what the organisation can do and how it might be done. It leads to opportunities to shorten the cycle time for implementing innovation.
4. *They use integrated systems and processes for managing projects, with clear accountabilities, very effective use and sharing of information, clear decision criteria and project champions.* A feature of some processes is that they aim to avoid ‘kissing frogs’. That is, they aim to eliminate unprofitable options as quickly as possible to ensure resources are effectively deployed. An underlying principle is to minimise the cost of maximising the probability of success at each step in the innovation process.
5. *They make selective use of external resources, including technical marketing and managerial expertise.* Established companies have a more clearly defined focus about what capabilities are required in-house and what skills and partnerships need to be out-sourced. This means quite focussed searches for solutions to relatively specific opportunities for improvement, whose size will depend on the circumstances of the business or perhaps the opportunity offered by new technology.

In short, successful innovating enterprises tend to know what they want from external collaborators, and tend to seek them out. An important issue in this is the effective apportionment and management of risk. Conversely, this implies that potential external partners need to invest significant time in understanding how their skill, expertise and capability might fit with established companies. In addition they will need to appreciate the risks and how they are to be shared.

The type of innovation management described above is not easy, particularly for the firms which are just starting out in this area. There is much to be learned, and significant amounts of time, resources and experience must be invested before such new management practices will operate successfully within the firm. There are some roles for Government in assisting established firms to become more innovative. These include:

- Improving the information base available to companies and managers about good practice, concepts and models for managing innovation
- Improving the information base about the requirements for good partnerships and enduring relationships
- Incorporating business subjects and innovation management in the requirements for technical degrees (e.g. engineering and science).

## **2b) Educating Managers**

Established businesses need to know how to manage innovation processes. If a company has not traditionally been involved in innovation, there may be many new processes with which the company is unfamiliar.

Management training programs can be beneficial in improving a company’s ability to identify and successfully commercialise new ideas. For example, in the USA, companies have been able to improve success in commercialising innovative products from the benchmark 11% “normal”

success rate up to a 95% success rate in some instances<sup>2</sup>. This is achieved largely by educating managers in understanding the role of skills and the personality types necessary in management of the innovation process. Such systems of management education in Australia are largely unknown and could be of tremendous benefit in inculcating a culture which better understands the processes involved in innovation. Education should also include subjects such as valuing intellectual property and management of technology.

We congratulate the Government on the recently introduced Commercialising Emerging Technologies (COMET) Program (see Appendix 1). The purpose of this Program is to improve Australia's national performance in innovation and commercialisation of innovative research and development by supporting the key steps in the innovation process.

We note that this scheme provides a stream which could be appropriate for innovative established businesses. As such, it contains the seeds of much of the management education necessary to facilitate successful innovation in existing businesses. If the COMET Program were expanded to address the needs of established businesses it would have the potential to have a far greater impact on innovation in Australia, through assisting established businesses to move to a culture of continuous innovation. To achieve this potential benefit, the expanded part of the Program would need to be strongly promoted and appropriately funded. If this were done, a very high demand from established industries could be expected.

#### **Recommendation 2**

**The COMET Program should be expanded, to offer training for managers of established businesses to manage innovation.**

### **3 Enabling Adoption of Innovation and Linkage To Innovation Systems**

While generating new products and processes is a very important part of the innovation process, much potential for enhanced efficiency or higher productivity in Australian firms lies in their effective adoption or absorption of products and processes already marketed or in use elsewhere. The success with which Australian firms engage in the diffusion of innovations is, in aggregate terms, likely to be much more significant for overall economic competitiveness than the rate at which they generate entirely new technological knowledge. The vast majority of such knowledge (about 98%) is generated outside Australia, and to put it to productive use, Australian businesses must be able to access it and absorb it.

There are three important points here. First, the generation of new ideas and their first-time application can be conceptually separated from the subsequent spread and later uses of an idea. However, knowledge generation and its subsequent diffusion are both part and parcel of the overall innovation process, broadly conceived. However hard would-be imitators try, they cannot make an identical copy of what others have done first. In many cases, the creator or generator of a new product or process takes active steps to prevent imitation - which makes direct copying practically difficult and possibly illegal. One important reason for this is the existence of knowledge acquired through practical experience in operating a process, but

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<sup>2</sup> "Creativity and Business Discipline = Higher Profits from New Product Development" Greg Stevens, James Burley and Richard Divine, Product Development and Management Association, 1997 Research Conference, October 1997.

difficult or impossible to articulate and communicate to others. What is implied by the difficulty of technology transfer is that imitation often calls for ingenuity and local innovation to make an idea work in its new environment. Innovation continues as part of diffusion.

This leads to a second and more important point. Imitation based on simple attempts to copy a product is always likely to make copying mistakes. On the other hand, imitation based on a knowledge of how the product was made and, better still, the thinking that went into its development, is much more likely to lead to success. For this reason, firms often find it worthwhile to undertake R&D - not so much because of the new products and processes they hope to derive from the work, but because only by investigating problems for themselves will they acquire an intuitive or insider's understanding of the design, development and production issues which are being addressed by pioneering producers. R&D may then lead to innovation, but it is simultaneously instrumental in assisting diffusion and providing a foundation of skills.

The third point reflects on the extent to which Australian-located firms are parts of larger international enterprises. Being part of a global corporation often assists Australian firms in gaining access to new ideas generated elsewhere. The international company's competitive advantage may rest in part on its success in innovation. If it does, the most direct means of sharing in that advantage may be to be part of the company itself.

In equipment-embodied diffusion the R&D is likely to have been performed overseas. Diffusion of new technology will be hastened most by encouraging investment in the equipment it uses.

The transfer of ideas is much less likely to be equipment-embodied. Here the policy emphasis should be more on generating or enhancing access to the ideas themselves, improving linkages within the innovation system, and creating the intellectual property rights systems which will encourage both the production of new ideas and their transfer.

Competition in the markets for goods and services is likely to focus the minds of business people and hasten equipment-embodied diffusion. Policies encouraging competition should continue to be emphasised. But beyond that, small and medium-sized Australian companies could benefit from becoming smarter at identifying new technology of potential value to them and subsequently implementing it effectively.

### **3a) Providing Access to Expertise**

Against this background, we recommend a scheme which uses technology access specialists and generalist field officers to provide advice and support to companies with the potential to benefit from the take-up of new technology, but which are unaware of the opportunities and/or lack the time and expertise to engage in these activities. Such a scheme should also draw on the example of firms which have successfully introduced and implemented equipment-embodied innovations and implemented them successfully.

The scheme should also provide general management-enhancement training for managers who have learned on the job, but may be unaware of simple but important skills they could exercise. Successful technology uptake (diffusion) is about much more than just acquiring the equipment: it requires skilful management and in-house training programs to aid understanding of the new way of doing things.

The role for Government in encouraging embodied technology diffusion is largely in creating the correct macro-economic settings such as low interest rates and appropriate levels of depreciation allowances under taxation regulation.

For disembodied technology diffusion, the main area where Government has a role is in awareness raising and education. This could be targeted in areas such as methods of adopting technology, raising finance for technology purchase, learning mechanisms to understand supply of technology, and understanding how to get the best out of new equipment.

Linkage mechanisms such as the Cooperative Research Centres (CRCs), technology parks and technology incubators can help achieve this. These mechanisms will also help generate underlying skills and experience through research and research training.

The discussion paper on higher education research and research training released in June by the Minister for Education, Training and Youth Affairs includes discussion on funding research and ensuring incentives are appropriate:

... the Government proposes to equalise the weight given to national competitive grants and other research income .... In addition, the definition of research income should be refined to include consultancy income which contributes to innovation. The formula will better reflect and reward universities' ability to attract research income from a diverse range of sources.

The working group commends this initiative, and supports the Green Paper's emphasis on encouraging linkages. We suggest a mechanism which could encourage innovation through technology diffusion. The formula to attract research income through consultancy should reward not only large consultancies which might be won through mechanisms such as Cooperative Research Centres, but should also operate at a smaller scale, so as to encourage smaller-scale interactions. One on one relationships between businesses, academics and researchers are a strong mechanism to provide businesses with advice on new technologies and processes.

### **Recommendation 3a**

**Researchers and academics who interact with individual businesses to assist adoption of technology should be recognised and rewarded.**

### **3b) Providing Access to Enterprise Capital Networks**

Once innovators have established a successful commercialisation plan and good management practices, there may still be difficulties in gaining access to capital to produce and market new technologies. Firms may not have ready access to networks of people who will be able to provide the necessary capital or expertise in the commercialisation phase of innovation.

There are mechanisms in Australia which help both innovators and capital providers establish contacts. These include the 'E-market' of the Australian Stock Exchange which creates such networks via e-mail linking innovators and venture capital providers.

The Department of Industry, Science and Resources has funded the initial phase of development of an organisation called the Private Capital Council. (See Appendix 2 for details). The purpose of this Council is to form networks between innovators and capital providers. It includes a wide range of organisations and network providers and has already shown success in creating a pathway for innovators to use in gaining access to capital and financial management expertise.

This has proved a successful mechanism. With the changes to business taxation laws it is now an appropriate time to expand this Council to help provide an effective way to allow the benefits of increased availability of capital to be captured.

### **Recommendation 3b**

**Government should encourage investment networks by strongly supporting the Private Capital Council or similar body.**

## **4 Encouraging Investment**

In the innovation process the distribution of success is lumpy, in the sense that many of the attempts at innovation will fail, with only a few, although substantial, successes. There is always risk associated with new ideas. If a firm only innovates occasionally, it is likely that it will not be successful on many occasions.

For innovation to have a consistent chance of success within a firm, there needs to be a major shift in management attitudes and practices, to the effect that innovation becomes a continuous process. Once this pattern is established, firms can achieve success and build on it.

The introduction of the 150% tax concession scheme for research and development in 1985 was intended partly to overcome the downward trends in investment in industrial research exhibited over the previous decade. The growth in Business Expenditure Research & Development (BERD), of 13% per annum (at constant prices) over the period 1990-91 to 1995-96, to 0.89% of GDP, represented a significant and positive response to the research and development incentive. In this period, Australian business had one of the higher real growth rates in research and development expenditure among OECD nations.

The introduction of the R&D Tax Concession thus had a surprisingly high impact on encouraging innovation. It not only enabled more cost effective research and innovation, but also affected the culture of businesses, sending a strong message about the recognition of the importance of these activities.

The recent downturn in BERD of 4-5% per annum in 1996-97 and 1997-98 may be associated with the measures, introduced in 1996, to reduce the level of the R&D tax concession to 125%. The reduction of the benefit to 125% can be seen to have had a disproportionately negative effect. Companies now must bear a higher proportion of the considerable risks. At the same time they perceive that Government no longer recognises the importance of innovation. This is particularly worrying as business investment in research and development in Australia is very low relative to comparable OECD countries, and is continuing to decline.

Figures derived from a survey of Australia's leading companies conducted by the Australian Industry Research Group (AIRG) have forecast a continuing drop in investment in research and development over the next 12 months. The survey was contributed as part of an annual survey conducted by the Industrial Research Institute in USA. It found that of 16 responding companies, only 9 or 55% were planning to maintain or increase their level of R&D investment. Of the remaining 7, four were planning to reduce their expenditure by more than 5%. The figures also showed an increasing trend to cutting support for directed basic research, for hiring of new research staff, and for grants and contracts for university research and development.

Findings by the Australian Industry Research Group include:

- Extrapolating from current data, total investment on research and development by manufacturing industries has declined for the third consecutive year, from \$2.3 billion in 1995-96 to between \$1.9 billion and \$2.0 billion in 1998-99. (Data from both the Australian Bureau of Statistics and the Department of Industry, Science and Resources.)
- In 1997-99 research intensity (percentage of research and development investment in total turnover) fell to between 0.88% and 0.95%; down on the 1.02% of the previous year.
- Reflecting the competitive pressure on industry in recent years the most important factor driving increased research and development was the need for product development to expand markets and enhance competitiveness. The companies that reduced research and development investment in the last three years, did so because of profit pressures.
- The reduction in the R&D tax concession from 150% to 125% was a major/moderate consideration for one in four companies who cut investment.

The working group is also aware that recent evidence suggests that the fall-off in levels of BERD has been closely followed by a fall-off in external patenting activity. If this is so, it suggests to the working group that Australia's competitiveness and prospects for growth are both being reduced.

When discussing generation of innovation, a simple model that has often had currency in the past suggests a linear progression from scientific research to the application of resulting ideas in developing and commercialising new products and production processes.

Whilst this is a legitimate course, it is not the most common. It tends to ignore the fact that one of the key outcomes of research and development is the skills that individuals acquire through being involved in the process. These skills in research, development and innovation, include the ability to select appropriate sources of knowledge, make decisions about whether to invent or adopt new ideas, and to facilitate the implementation of innovation.

A group within a company, a whole company or even a nation can only follow the path to innovation to the extent it is skilled in doing so. The problem is that it is becoming increasingly evident we are getting worse at investing in the generation of innovation and associated skills and this is a real cause for alarm.

#### **Recommendation 4**

**The Government re-examine the issue of the R&D Tax Concession to address the declining investment in innovation by business. Such recommendations as those provided in the previous innovation working group report to PMSEIC which suggested introducing aspects of the Canadian Tax Concession Scheme should be considered. The Concession should be a major topic to be addressed at the Innovation Summit.**

Details of the Canadian scheme and suggested changes are available in Appendix 3.

## **The Way Forward**

The changes we propose will address the difficulties firms and industries have in changing from traditional paths, to new trajectories as a result of, and involving, a higher level of innovation.

The Innovation Summit is a focus for discussion of innovation in Australia. Government and industry must use this chance to demonstrate their commitment to innovation, as a driver of economic growth in the next millennium.

For information on COMET please see the AusIndustry web pages at

[www.ausindustry.gov.au](http://www.ausindustry.gov.au) or

<http://152.91.19.85/documents/dir13/doc505213.html>.

### **The Private Capital Council**

The Private Capital Council (PCC) is the national association for private equity markets in Australia. Its mission is to improve the efficient functioning of private equity markets in order to enable Australian businesses to grow and commercialise their innovation through the use of Australian Capital Markets.

Private equity markets are those markets for equities not listed on public auction style trading markets (ie: the ASX main board).

The membership of the PCC is drawn from organisations which are active participants or who have commercial interests in the functioning of the market. For example:

- The Australian Stock Exchange through its enterprise market;
- Major banks;
- Financiers, through the Australian Finance Conference;
- Industry associations such as Australian Business Limited and the Victorian Employers' Chamber of Commerce and Industry;
- Business Angel matching services;
- Corporate advisers and investment bankers; and
- Major law firms.

The PCC was formed in 1998, recognising the clear evidence that private equity markets, including business angel and venture capital markets, were fragmented and lacking in transparency, resulting in considerable difficulty for businesses in obtaining access to private equity. The PCC was formed with the view that collective action by market participants and governments could make a quantum difference to the efficiency of this market, and enable Australian firms to become more successful through accessing Australian capital markets.

The program to be undertaken by the PCC includes:

1. **Networks**  
Connecting the market and enabling access and choice.
2. **Education**  
Providing educational services through seminars and other distribution means.
3. **Information**  
Providing market participants and companies with information about market developments and deals.
4. **Awareness**  
Changing the culture to enable both companies and investors to recognise private equity as a desirable asset class.
5. **Standards**  
Providing an ethical standard in the industry and the use of standard procedures and documents to reduce costs.

PCC has placed its first efforts into education and infrastructure. In relation to infrastructure it aims to ensure that accountants and all bank managers are aware of the opportunities to improve the business prospects of their clients through access to the private equities markets. It also tries to ensure that all investors are aware of and can consider the prospects of private equity investment. For example, the PCC is working with the Australian Society of Certified Practising Accountants programs to educate and empower accountants and is proceeding with a similar program with major banks. These programs are at an early stage.

In addition, the Securities Institute of Australia has agreed to include investing in private equity markets in two components of its Graduate Diploma.

The PCC aims in the Federal jurisdiction and each State to initiate or complement programs that fit with the priorities of the Government. Federally, the PCC is examining the way in which it can provide support for the COMET Program. In NSW the PCC has given support to the regional investment initiatives of the New South Wales Government, in particular the regional investment tours. In Victoria the PCC is active in the Innovation Alliance with SIRF, and with the Victorian Government in identifying the capital raising needs of the biotechnology and multi media industries. The PCC is also the official point of contact for the private capital markets for the Tasmanian Government.

The PCC has obtained a grant from the Federal Government of \$260,000 to conduct its activities and obtained other income from its members. It has expended, to date, just over half of that grant. In order to complete its full set of tasks the PCC needs further finance from the public and private sectors.

### **A Proposed Model for the Industrial R&D Tax Concession**

Government support for business R&D is intended to increase the level of research and development conducted by industry above and beyond that which would occur in the absence of government intervention. There is a significant body of theoretical and empirical work which supports the role of government intervention in this area, based on the “spill-over” benefits which this additional R&D generates for the national economic well-being.

The 125% R&D Tax Concession currently provides a direct benefit to established companies with taxable income, and an indirect benefit to start-up and/or pre-profit companies through the carrying forward of ‘enhanced’ tax losses.

A similar scheme is already operating in Canada. As in the Australian scheme, ‘scientific research and experimental development’ (SRED) is defined in the tax regulations, and certain types of activities are specifically excluded.

The basic differences between the current Australian system and the Canadian tax incentive scheme are that:

- In Canada a *tax credit* is provided (rather than a premium tax deduction) of 20% of qualified SRED expenditure (net of government grants, contract payments and equivalent non-government assistance); and
- The tax credit is *increased to 35%* for ‘Canadian controlled private companies’ (essentially SMEs) in respect of the first C\$2 million qualified expenditure per annum.<sup>3</sup>

A further key feature of the Canadian scheme is that small claimants receive a cash (taxable) payment to the value of the tax credit generated by their eligible R&D expenditure. The direct cash payment of the concessional tax credit to small and non profitable Canadian companies provides a valuable targeted incentive to those companies in a start up or developing phase (SMEs), which is not available via a general tax deduction scheme. Under the Canadian scheme, large and profitable companies (non-SMEs) do not receive a tax credit payment, but receive instead the relevant direct tax credit benefit.

The Canadian scheme supports approximately 11,000 applicants per year compared to around 4,000 in Australia. The number of applicants in Australia has shown a decline in the past year. The difference in these numbers is largely due to the increased number of SMEs participating in the Canadian scheme. The Canadian system targets those businesses most likely to create growth for the economy far more successfully than the Australian system. The more stringent compliance regime in Canada also ensures that the increased levels of R&D being undertaken are definitely genuine.

Studies carried out by AusIndustry suggest that compliance costs related to claiming the tax concession are high for all firms, but are relatively higher for smaller businesses. This is due to the fact that these businesses would not have access to the accounting and recording systems

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<sup>3</sup> This enhanced tax credit starts to phase out where the taxable income of a small corporation exceeds C\$200,000 and reverts to the 20% tax credit rate where the taxable income exceeds C\$400,000.

available within larger organisations as part of normal business arrangements. Therefore, the relative benefit to companies is likely to be more significant for larger claimants than for small.

Under the Australian tax concession scheme, about 80% of R&D claims are made by SME-type firms, and the corresponding expenditure is only about 20% of the total R&D expenditure claimed.

For best effect the suggested targeted 'SME' incentive would need to be provided *via* a cash (tax credit) payment. Tax credit payments could be made 'automatically' on application with minimum extra administrative resource requirement, on an agreed self assessment/risk management basis as is done under the current Tax Concession Program.