

SUPPLEMENTARY RESPONSES:

Recommendations considered in the development of *Backing Australia's Ability: Building Our Future through Science and Innovation*

Recommendation 2

The committee recommends that the Commonwealth government expand the mentoring services available to small and medium-sized enterprises beyond those currently offered by the COMET Program.

Response:

The Australian Government is currently evaluating *Backing Australia's Ability*, a five-year initiative introduced in 2001 to provide \$3 billion of additional funding to support science and innovation. This evaluation, together with the findings of a major science and innovation mapping exercise, will inform the development of science and innovation measures to apply when *Backing Australia's Ability* expires after 2005.

Future changes to the Tailored Assistance for Commercialisation stream of the Commercialising Emerging Technologies (COMET) program will be considered within the Government's post-*Backing Australia's Ability* policy development framework. In response to a review of the COMET program in 2002, however, changes are already underway to introduce an expanded mentoring element under the Management Skills Development stream of the COMET program.

In addition to the mentoring services provided under COMET, the Innovation Investment Fund, Pre-Seed Fund managers and the Building on IT Strengths Incubators also provide mentoring to their investee companies to assist in building managerial and entrepreneurial skills. The Small Business Assistance Program also provides assistance to eligible applicants for the provision of mentoring services through its Small Business Enterprise Culture grants.

Supplementary Information:

Backing Australia's Ability – Building Our Future through Science and Innovation provides an additional \$100 million for the highly successful COMET program. Funding support will now be available from 2004-05 to 2010-11.

Backing Australia's Ability – Building Our Future through Science and Innovation also announced a number of refinements to the COMET program. It will continue to provide grant support to entrepreneurial firms to enhance their commercialisation capabilities and will be delivered through private sector Business Advisers. However, it will be expanded to:

- increase the number of Business Advisers;
- strengthen support for emerging technologies from universities and public research institutions; and
- ensure access to the program in outer metropolitan and regional areas, including the Northern Territory.

Key stakeholders will be consulted in the course of designing these new measures, including the IR&D Board, COMET National Managers and Business Advisers, service providers, COMET customers, State governments, industry associations, university commercialisation arms and the CSIRO.

A 2002 survey of firms which were assisted by COMET indicated that the program was successful in encouraging entrepreneurs and enabling firms to achieve their business goals. The network of Business Advisers is a unique and valuable feature of COMET, and leads to long-term and beneficial changes to firm behaviour.

Recommendation 3

The committee recommends that the Commonwealth government ensure that the Australian Bureau of Statistics undertakes surveys of innovative activity in the Australian economy, such surveys to include details of the non-technological innovation that is taking place in Australia.

Response:

The Australian Government is currently evaluating the *Backing Australia's Ability* initiatives. Future changes to surveys of innovative activity in the Australian economy will be considered within the Government's post-*Backing Australia's Ability* policy development framework.

The Australian Bureau of Statistics (ABS) is planning to conduct an innovation survey in early 2004. The reference period will be calendar year 2003. The survey will be compatible with the Organisation for Economic Cooperation and Development/Eurostat guidelines (as outlined in the "Oslo Manual") and will include technological, organisational and managerial innovation in a wide range of industries, including service industries.

The ABS currently has no firm plans for future surveys beyond 2004. The decision on future surveys will be based on demand, relative priorities and the ABS's overall funding (including external funding).

Supplementary Information:

The Australian Bureau of Statistics (ABS) in conjunction with other agencies, including the Department of Industry, Tourism and Resources, is currently conducting an Innovation Survey over a reference period of 2003. The survey is compatible with the Organisation for Economic Cooperation and Development guidelines (as outlined in the "Oslo Manual") and will include questions about technological, organisational and managerial innovation in a wide range of industries, including service industries. There is growing international consensus that innovation surveys should be conducted every two years.

Any future Australian surveys will be dependent on the reaction to the 2004 survey and the availability of significant user funding.

Recommendation 14

The committee recommends that the Commonwealth government make further changes to employee share option arrangements to boost the financial incentives for researchers to commercialise their research outcomes (possibly by removing the requirement to pay tax upfront on the issue of shares in a start-up company).

Response:

Firms in innovative industries can ensure they are taking full advantage of the taxation concessions already available through information obtainable from the Employee Share Ownership Development Unit of the Department of Employment and Workplace Relations. In turn, the Unit, established as part of the Australian Government's response to the House of Representatives Standing Committee on Employment, Education, and Workplace Relations Shared Endeavours inquiry into employee share ownership released in September 2000 (the Nelson report), can gather data on the potential for employee share schemes to encourage start-up activity.

Any further changes to employee share option arrangements will be considered within the Australian Government's post-*Backing Australia's Ability* policy development framework.

Supplementary Information:

The Australian Government has recently launched a number of initiatives with respect to employee share ownership.

In February 2004, the Hon Kevin Andrews MP, Minister for Employment and Workplace Relations, announced an Australia-wide target for employee share ownership of 11% by 2009. This doubles the proportion of employees with employee shares from the number recorded in the last ABS data collection in 1999.

The Minister also launched two initiatives to assist in achieving this goal:

- the Employee Share Plans Project which is an innovative strategy designed to make employee share ownership easier to access for all Australian businesses and employees. The project aims to develop a suite of template employee share plans which will be easy for businesses to customise and implement for their own use; and
- a promotional CD ROM and video.

Time is needed to allow these measures to have an impact on the market and to enable their measurement.

Recommendation 23

The committee recommends that the Commonwealth government continue to simplify the various R&D programs and consider the introduction of a version of the Canadian Preclaim Scheme whereby businesses can get preliminary advice about their eligibility for the Government's R&D schemes.

Response:

The Australian Government is currently evaluating *Backing Australia's Ability*. This evaluation, together with the findings of a major science and innovation mapping

exercise will inform the development of future measures to apply when *Backing Australia's Ability* expires in 2006. The broader issue of R&D programs will be considered within the Australian Government's post-*Backing Australia's Ability* policy development framework.

While the introduction of a Preclaim scheme may have benefit for users of the R&D Tax Concession, its delivery would entail the expenditure of significant additional resources.

Supplementary Information:

Backing Australia's Ability – Building Our Future through Science and Innovation provides \$1 billion for the new Commercial Ready program, which will replace R&D Start, the Biotechnology Innovation Fund and elements of the Innovation Access Program. The new streamlined program, which targets SMEs, will ensure that more innovative firms are able to undertake research and development, and take competitive ideas to market.

Commercial Ready will have a single entry point and provide simplified access to competitive grants support for research and development, proof-of-concept, technology development and early stage commercialisation activities.

To increase access to Government support for innovation, AusIndustry will increase its "on the ground" presence in regional Australia. Under *Backing Australia's Ability – Building Our Future through Science and Innovation*, funding for the AusIndustry Regional Office Network has been extended to 30 June 2011 and the number of regional customer service managers will be increased.

Recommendation 33

The committee recommends that the Commonwealth government review its ongoing level of funding for the START program, in light of significant demand and the program's great success in assisting the establishment of small and medium-sized enterprises. Increased funding of programs like START and COMET might be particularly appropriate at times when the general profitability of business is constrained by a downturn in economic activity.

Response:

The Australian Government is currently evaluating *Backing Australia's Ability*. This evaluation, together with the findings of a major science and innovation mapping exercise, will inform the development of science and innovation measures to apply when *Backing Australia's Ability* expires after 2005. This recommendation will be considered within the Australian Government's post *Backing Australia's Ability* policy development framework.

Supplementary Information:

Backing Australia's Ability – Building Our Future through Science and Innovation, provides an additional \$5.3 billion investment in the science and innovation system. The package includes \$100 million for the highly successful COMET program, taking it through to 2010-11.

The new \$1 billion Commercial Ready program will replace the R&D Start program, the Biotechnology Innovation Fund and the industry elements of the Innovation Access Program. The new program provides streamlined access to support for research and development, proof-of-concept, technology diffusion and early stage commercialisation activities. In doing this, it will assist around 1700 SMEs to undertake research and development, and take competitive ideas to market.

The Commercial Ready program will be launched in October 2004. Consultations with key stakeholders on the design of the program have recently concluded, with around 650 people participating in public discussion forums and a further 80 making written submissions.

Recommendation 34

The committee recommends that the Commonwealth government expand the grants-based START program by introducing a scheme that provides loans to early-stage companies, with the requirement that those loans be paid back if the venture is successful (but which enables the loans to be converted back to grants if the venture is unsuccessful).

Response:

The Australian Government is currently evaluating *Backing Australia's Ability*. This recommendation will be considered within the Australian Government's post *Backing Australia's Ability* policy development framework.

While supporting the need to assist early stage companies, the repayment options may be a disincentive to small, high growth companies. Concessional loans are already available under the R&D Start program to companies employing fewer than 100 people and which are involved in the early commercialisation of technological innovations.

Supplementary Information:

The new Commercial Ready program, announced in the *Backing Australia's Ability – Building Our Future through Science and Innovation* package, will replace the R&D Start program and will provide grants to assist small and medium sized enterprises to undertake R&D, proof-of-concept, technology diffusion and early stage commercialisation activities.

Concessional Loans under the R&D Start program have been available to companies employing fewer than 100 people and which are undertaking the early stage commercialisation of technological innovations. The Concessional Loans program is not widely supported, with only 8 loans, with a total value of \$8.4 million, approved in 2002-2003. Concessional loans are complex to administer, assess and manage for both applicants and the Government. However, the activities being supported by Concessional Loans will continue to be supported under the new Commercial Ready program.

Recommendation 35

The committee recommends that, in relation to BITS incubator seed funds, the Commonwealth government consider:

- *increasing the current eligibility threshold of \$450,000; and*
- *review the existing taxation treatment of the seed funds in order to maximise the encouragement of R&D by businesses.*

Response:

An evaluation of the Building on IT Strengths Incubator Program has been completed, including an examination of the key design factors that impact on the success of the incubators. The findings of this evaluation will be considered within the Australian Government's post-*Backing Australia's Ability* policy development framework.

Supplementary Information:

On 11 May 2004, the Government announced that it would extend funding for the ICT Incubators Program by \$36 million for four years from 2004-05 to 2007-08. Final guidelines for the program were issued on 4 June 2004 and a process to select incubators for further funding is underway. The guidelines note that the Government has removed the previous investment cap limit of \$450 000 (and \$600 000 for up to 4 investments). This extension of funding and change to investment caps will increase the opportunities for the program to contribute to research and development by business.

Recommendation 37

The committee recommends that the Commonwealth government increase the incentives for researchers to work in businesses by:

- *promoting the Graduate START program more widely;*
- *providing within the Graduate START scheme an option whereby up to an additional 100 post-doctoral students could be placed in businesses with the cost shared equally between government and business;*
- *encouraging research bodies such as the CSIRO to regularly meet representatives of the companies that currently conduct a high level of R&D in Australia; and*
- *consider the use of tax rebates to businesses employing new graduates in R&D activities.*

Response:

The Australian Government is currently evaluating the *Backing Australia's Ability* initiative. This evaluation, together with the findings of a major science and innovation mapping exercise, will also inform the development of measures to apply following the expiry of *Backing Australia's Ability* in 2006. Future changes to the R&D Start programme will be considered within the Australian Government's post-*Backing Australia's Ability* policy development framework.

It should be noted that the Premium 175% (Incremental) Tax Concession, which provides incentives to increase labour related costs, encourages increased employment in R&D activities. The Australian Research Council (ARC) also has initiatives that support the broad intent of both parts (i) and (ii) of the recommendation. Elements of

the ARC's Linkage-Projects program are designed to facilitate the mobility of personnel between various elements of the system including universities, industry and research agencies. For example, Australian Postgraduate Awards Industry (APAI) provide support for postgraduate research students studying towards a Masters or PhD award; and Australian Postdoctoral Fellowships Industry (APDI) provide support for researchers with less than three years postdoctoral experience.

In the 2003 funding round, the ARC awarded 412 new APAIs and 32 new APDIs. The ARC is also supporting 947 ongoing APAIs and 58 ongoing APDIs (awards and fellowships awarded in previous years).

In the course of research and research commercialisation activities, public research agencies are in close contact with Australian companies with active R&D programs. The Commonwealth Scientific and Industrial Research Organisation (CSIRO) already meet on a regular basis with representatives of its large accounts and engage regularly with business through mechanisms such as its Sector Advisory Councils. In addition, CSIRO conducts a quarterly customer value survey to assess the ways in which its business and other clients view the organisation's performance. The Australian Nuclear Science and Technology Organisation and the Australian Institute of Marine Science also meet regularly with current and potential research collaborators in business.

Supplementary Information:

The Government's new *Backing Australia's Ability: Building our Future through Science and Innovation* recognises the strong benefits which come out of collaboration, both between businesses and between industry and public sector research organisations. It also recognises the needs to enhance the skills of graduates.

The new Commercial Ready program (see Recommendation 33) places a strong emphasis on collaboration and the employment of graduates. In particular, it seeks to enhance business linkages with universities, and to give graduates an understanding of the commercial market and operation of businesses. The program will support the employment of graduates and collaboration, and the most appropriate mechanism to achieve this is still under discussion.

Backing Australia's Ability: Building Our Future through Science and Innovation provides over \$1 billion to the Australian Research Council for its National Competitive Grants Program. Key objectives of the program are to offer incentives to Australia's researchers to form alliances with industry and to create 250 new post-graduate research scholarships to develop skills in research commercialisation and intellectual property management.

The CSIRO's National Flagships initiative, which also received additional funding in the innovation package, creates large scale collaborative partnerships, as well as linkages between CSIRO and other organisations across Australia. The new funding for the program will further strengthen collaboration with universities through a contestable funding pool.

Recommendation 46

The committee recommends that the Commonwealth government:

- *promote the opportunities for very early phase commercialisation by university researchers (such as developing a prototype) under the existing R&D programs; and*
- *encourage the study of commercialisation as part of the relevant undergraduate courses.*

Response:

Early phase commercialisation is already supported under *Backing Australia's Ability*. Specific initiatives already in place include: the Pre-Seed Fund for universities and public sector research agencies to advance research to a venture capital stage; the Commercialising Emerging Technologies (COMET) Program; the Biotechnology Innovation Fund; and the New Industries Development Program.

The Pre-Seed Fund is designed to encourage commercialisation and private sector investment in university and public sector research at the early phase of commercialisation. Assistance available through the COMET program also focuses on this very early phase of commercialisation, and provides support for processes such as strategic business planning, market research, proven technology and a working prototype. The Biotechnology Innovation Fund and the New Industries Development Program are accessible to eligible university researchers. While COMET does not directly support university researchers, it is targeted at spinout firms, thereby supporting early stage commercialisation of university research in the commercial environment of a company. In addition to these *Backing Australia's Ability* programs, the Building on IT Strengths Incubator program assists with commercialisation, enabling participants to inject seed capital into their ICT start-up companies.

The Australian Government is currently evaluating *Backing Australia's Ability* to inform the development of measures to apply upon its expiry after 2005. Future changes to Australian Government support for early phase commercialisation will be considered within the governments post-*Backing Australia's Ability* policy development framework.

In regard to the study of commercialisation as part of relevant undergraduate courses, it should be noted that universities, as autonomous institutions, are responsible for course content. Nevertheless, appropriate opportunities will be taken to promote the study of commercialisation, including through the Australian Institute of Commercialisation.

Supplementary Information:

As noted in the response to Recommendation 2, the expanded COMET program will expand its reach into universities to ensure that researchers have the skills to take their products to market. As noted in the response to Recommendation 37, the Commercial Ready program will also encourage collaboration and support early stage commercialisation activities.

The National Stem Cell Centre, which received funding to 2010-11, will continue to work with a range of public sector and not-for-profit institutes, and to commercialise

the outcomes of its research. The Centre enhances Australia's biotechnology skills base in research, research leadership, education, training and key professional and business skills.

To improve the quality of science, mathematics and technology teaching and learning, and to encourage school-based innovation, the Fostering Scientific, Mathematical and Technological Skills and Innovation in Government Schools program will continue and a new Boosting Innovation, Science, Technology and Mathematics Teaching initiative has been introduced. Both of these measures are aimed at boosting the innovative capabilities and understandings of students. They provide the basic skills that students will take with them into the workforce.

Backing Australia's Ability delivered 2000 new university places per year with a priority on programmes in ICT, mathematics and science. *Backing Australia's Ability: Building Our Future through Science and Innovation* provides funding to continue this measure.