

BHERT Conference – The Challenges of Commercialization

HIGHER EDUCATION AND THE NATIONAL INNOVATION AGENDA



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6 August 2003

Australian Higher Education Institutions

Core Business Outcomes

1. Quality Graduates

- **> 620,000 Domestic Students Enrolled**
- **> 120,000 Overseas Students Enrolled**
- **> 180,000 Graduates**

2. New Knowledge

- **HE R&D Expenditure ~ \$3,000 million**
- **25% of National R&D Activities**
- **R&D predominantly at the basic and strategic basic levels**

What is Innovation?

Knowledge → Money

‘Innovation is a process through which economic value is extracted from knowledge through the generation, development and implementation of ideas to produce products, processes and services.’

Conference Board of Canada 2002

Summary of Presentation

The principal role of the higher education sector in the National Innovation Agenda is:

- In developing intellectual capital through mentoring quality people; and**
- In the generation of new knowledge with its effective dissemination for both public good and private gain.**

What are the Elements of a National Innovation Agenda?

(1)

- ***The Availability of Creative People***
- ***Assessment: Australians are creative people with a substantial capacity to generate original ideas to drive the innovation cycle.***
- ***The Quality of Australia's Education System from Primary to Tertiary Levels***
- ***Assessment: While Australia overall has a good education system by OECD standards, there are some serious deficiencies in selected areas especially related to resourcing, science teachers and science literacy.***

What are the Elements of a National Innovation Agenda? (2)

- ***The International Standing of Australia's Science Base and its R&D Infrastructure***
- ***Assessment:*** ***Australia's science base is deficient in leading-edge equipment, specialist laboratories and staff remuneration packages to attract and retain sufficient numbers of outstanding researchers to achieve an internationally competitive level of innovation outcomes.***
- ***The Availability and Expertise of Entrepreneurs***
- ***Assessment:*** ***Australia has too few people with entrepreneurial skills. There should be more training programs to develop the specialist skills required for management of the innovation process.***

What are the Elements of a National Innovation Agenda? (3)

- ***The Strength and Effectiveness of Public-Private Sector Strategic Alliances for Collaboration and Commercialization***
- ***Assessment:*** While there are several notable examples of effective research linkages between universities, research agencies and industry, generally it is very difficult to establish partnerships to progress projects beyond the research/discovery stage.
- ***The Sources and Quantum of Venture Capital Available Compared with Our International Trading Partners***
- ***Assessment:*** There has been a significant increase in available venture capital funds in Australia in the past five years, but an insufficient proportion of these funds are available for early stage development. A serious innovation gap exists for IP protection and seed capital funding.

What are the Elements of a National Innovation Agenda? (4)

- ***The Gateways to World Markets and the Strength of Distribution Networks for the Penetration of New Products***
- ***Assessment: Many Australian companies have inadequate international networks to facilitate the marketing of innovative new products on a world stage.***

Initiatives to Strengthen the Contribution of the HE Sector to the National Innovation Agenda

1. More Effective Intellectual Property Patent Protection and Industry Liaison

Governments to assist with

- a) The provision of funding for industry liaison staff located in Technology Transfer Units within universities**
- b) The subsidization of patent filing costs in national priority areas**
- c) The funding of business skills courses for researchers.**

2. Strengthening Strategic Alliances

Increase tax incentives to business enterprises that invest in University R&D Programs

- A pilot program, linked to the National Research Priority Areas, providing 200% tax credit for targeted R&D industry expenditure in HE, including research training, should be initiated.**

Economic Benefits from HEIs Contribution to the National Innovation Agenda

- **Very favourable internal rates of return for society from the investment made in the education of graduates (10-20% *per annum*).**
- **One-third to one-half of all GDP growth is due to R&D activities.**
 - **HEIs undertake 25% of all R&D activities. Hence, the annual contribution to wealth generation is near \$3 billion *per annum*.**

Conclusion

- Higher Education has a central role to play in fulfilling the aspirations embodied in a National Innovation Agenda.
- Strategic partnerships with industry and targeted funding for early stage development are vital to supplement core funding for teaching and research activities.



