

## **Response to *venturousaustralia* – *building strength in innovation***

### **Introduction**

Griffith University endorses the broad thrust of *venturousaustralia - building strength in innovation*, the report of the Review of the National Innovation System. Like others in the university sector, Griffith strongly supports the recommendations for improved funding for research, the promotion of excellence in research across the entire university system, the inclusion of humanities, social sciences and creative arts within the innovation framework, and increased emphasis on collaboration both here and abroad. We also welcome the recommendations which include greater tax incentives for business to undertake R&D with universities including vouchers for SMEs.

Media statements have been issued by the various university groupings including Universities Australia, the Innovative Research Universities Australia, the Australian Technology Network, and the Group of Eight. These suggest that there is mainstream support for the recommendations contained in Chapter 6 apart from those associated with the use of results from the Excellence in Research for Australia (ERA) initiative to inform block research funding and the allocation of research training places and scholarships. Griffith University shares this view and recommends that the Government take sufficient time and care to test the integrity of the ERA outcomes before linking it with funding or allocation of research training places. The Minister for Innovation, Industry, Science and Research, Senator Kim Carr has consistently maintained this position:

*“Crucially, the evaluation exercise will initially be decoupled from funding arrangements with the aim of ensuring that the system’s credibility and standing are assured before ERA is used to drive resource allocation. This way, the government intends to achieve the trust and confidence of university researchers, and to establish a consensus that the system is fair, equitable and transparent.”*

Senator Kim Carr, Minister for Innovation, Industry, Science and Research  
Campus Review, Vol.18 No.9; Tuesday 4 March 2008

It has been reported that the recommendation to bring publicly funded research to OECD levels will cost \$2.2 billion annually and that the recommendation to fund the full cost of research alone would require \$300 million per annum. This clearly cannot be achieved within a single budget cycle and yet no time can be wasted, given that other nations have already committed to achieving the OECD R&D targets. One intermediate step, should the Government accept these recommendations either in part or in full, would be to negotiate the additional funding through compact arrangements with universities in 2009 for support from 2010. This would ensure the immediate flow of additional funding while ensuring it is tied both to university priorities as well as outcomes sought by the Government such as addressing national priority areas; internationalisation of research; collaboration; and research that bridges the natural and physical sciences with the social sciences, humanities and arts.

Further comments on specific recommendations follow, beginning with Chapter Five.

## Chapter 5 – Strengthening People and Skills

As one of Australia's leading providers of international education, teacher training and tertiary studies in the creative and performing arts, Chapter 5 is of interest to Griffith. Recommendations 5.1 and 5.2, which talk of the need to align innovation and immigration policy, raise teacher quality, and review funding models for tertiary training in the creative arts, are warmly welcomed.

The most significant recommendation in Chapter 5 of interest to Griffith is 5.1 which suggests:

*“a process to review currently inconsistent funding models for tertiary training in the creative arts, with the aim of producing a nationally consistent policy”.*

This is explained further in the main report (page 50) where it is pointed out that:

*[creative arts education] “institutions funded through the Department of Education, Employment and Workplace Relations (DEEWR) receive much less per-student funding than institutions funded by the Department of Environment, Water, Heritage and the Arts (DEWHA). This makes it very difficult for the DEEWR-funded institutions to match the education offered by the DEWHA-funded institutions. It means that opportunities to participate in highly-funded specialist training are few and confined to a handful of institutions”.*

*“In the time available, this review cannot examine the complex and important questions around funding models for training in the creative arts. Suffice to say, there is a need to review present arrangements with the aim of ensuring opportunities for more qualified students to participate in appropriately-supported tertiary training in the creative arts.”*

Griffith strongly supports this recommendation and would wish to play a lead role in such a review.

On the issue of teacher quality, the report simply recommends that support be given to the “broader national education reforms, and their central focus on raising teacher quality”. We appreciate that the Review did not have time to examine the specifics and again therefore we urge the Government not to let this dot point disappear. The appropriate vehicle to address this issue might well be in the forthcoming compact negotiations.

Recommendation 5.2 which suggests that innovation policy be more closely aligned with immigration policy is strongly supported by Griffith University which has experienced major difficulty in attracting senior staff and research students from overseas in a timely manner. An efficient immigration system is crucial in competing for the very best staff and students and this is one area where Australia could remove a blockage and lift its performance appreciably almost immediately.

## Chapter 6 – Building Excellence in National Research

Griffith University was pleased to see the following statement on page 70 (repeated in Annex 6, page 9) which suggests that the Review has been persuaded that concentration of research activity in a handful of institutions is not in the national interest:

*“Rather than debating whether Australia can support two or three ‘world-class’ universities, the focus should switch to establishing a hundred or more world-class research facilities and research groups across the whole university system. Domestic and international networking should be promoted to ensure that the benefits of specialisation and concentration of research activity spread across the whole of the system.”*

It was therefore disappointing not to see a single recommendation that explicitly addresses how Australia should go about “establishing a hundred or more world-class research facilities and research groups across the whole university system”. Additionally it is unclear whether several of the 14 recommendations under Chapter 6 will ensure that the benefits of specialisation and concentration of research are spread across the system.

Aside from that general observation, Griffith University has deep concerns about recommendations 6.2, 6.9, and 6.10.

### 6.2 – Research block funding

The review proposes that the distribution of research block funding to universities be based on success in winning national competitive grants and on evidence of excellence to be produced by the ERA initiative. Taken with recommendation 6.1, which supports the adoption of the principle of fully-costed research, it follows that universities will be expected to recover the full cost of research from commerce, industry and the public sector as this would not be an ingredient of research block funding.

While this is currently the situation in the UK, evidence from partner universities in England suggests that the ready acceptance and uptake by business, industry and the public sector of full costed research should not be assumed. Various arguments are emerging which include:

1. Universities can fully cost research but it does not always mean they can charge that amount in a competitive market place (although it should be acknowledged there may be some research where universities are able to charge a premium over and above the full cost of that research due to scarcity value or reputation of the lead researcher);
2. Industry will continue to seek to minimise their exposure to high risk commercialisation prospects by reducing costs, including the cost of research. Without government and university support some of these high risk prospects may not proceed at all or may be pursued overseas.
3. Universities play a vital role in assisting industry to invest in R&D – Australia will not match OECD Business Expenditure on R&D rates if university-based R&D is not as attractive as before.

Griffith University accepts recommendation 6.1 for a rapid transition to a full-cost funding model however urges extreme caution before accepting recommendation 6.2 given the lessons from overseas and the unknown outcomes from the yet-to-be implemented ERA initiative. This recommendation has the potential to cause a major destabilising effect throughout the innovation system if implemented prematurely and without further testing.

### 6.9 – Research Training Scheme (RTS) and Australian Postgraduate Awards (APA)

Griffith University has similar reservations about recommendation 6.9, that funds currently distributed through RTS and APAs should be allocated on the basis of excellence as evidenced by the ERA initiative. At present the ERA outcomes will be based on research outputs dating back to 2002 while current RTS and APA allocations take into account more recent indicators including load and completions.

From what is known of ERA, it is not designed to assess the quality of research training, therefore to base RTS and APA funding on such outcomes is flawed. In addition, ERA is being implemented in a staged process beginning with two of the eight clusters in 2009 with the other six to follow later. Outcomes for all eight clusters might not be available until late 2010 or even 2011 and therefore the notion of linking RTS and APA allocations to research undertaken up to nine years prior is highly dubious given research training is highly dependent on current capacity and capability, not historical strength.

It might be appropriate that RTS and APA allocations be linked to ERA outcomes once fully tested, however Griffith University recommends that more attention in the medium-term should be directed at assessing the quality of research training as a separate exercise. Such an exercise would be based on indicators that are directly relevant such as load, completions, quality of the research environment, quality of supervision and assessment. These indicators should be consistent with the Framework for Best Practice in Australian Doctoral Programs as updated by the Council of the Deans and Directors of Graduate Studies in July 2008 and agreed in consultation with universities.

## 6.10 – Matching HDR students with universities

While Griffith University supports the publication of ERA results, it does not support the recommendation that ERA results should be used to promote the matching of doctoral students with research groups. Prospective students already have a keen sense of quality when applying for doctoral training and ERA results have the potential to complicate and obstruct the individual decision-making process.

What this recommendation fails to understand is that ERA, as designed, is not entirely suitable for the purpose suggested. Many universities assemble their research as multidisciplinary teams in thematic areas (e.g. water, climate change, social change and well-being). ERA will break multidisciplinary research groupings down into disciplinary components and fail to reconstitute these components into the original research groupings. While ERA is appropriate for the assessment of research outputs by Field of Research and ultimately for the allocation of block funding, it will not inform good decision-making by prospective RHD students and it might potentially lead to misinformation. One example of this is Climate Change which stands alone as a research theme within a university and yet could be assessed across all eight ERA clusters and rendered invisible to a prospective student as a coherent theme of study.

## **Chapter 9 – Market facing programs**

The Report states quite rightly (p.66) that commercialisation is not a core function of universities. It goes on to state that universities nonetheless play a vital role in the commercialisation process. It is a pity that the media has sensationalised several of the associated statements to infer that the Report is suggesting universities step away from research commercialisation. Griffith University recommends that the Government provide clarity in its White Paper about the role and commitment of universities to knowledge transfer and commercialisation. Access to the Proof of Concept Program (recommendation 9.1) by universities would ensure that outstanding R&D can be market-tested in the absence of a willing purchaser.

Recommendation 9.5 suggests a pilot linkage voucher scheme (via Enterprise Connect and COMET) to allow up to 5,000 SMEs per year to collaborate with public sector research organisations where each voucher is worth \$15,000. This recommendation is of particular interest to Griffith University given its catchments are dominated by SMEs who typically do not have the means to access university research services.

It is our understanding that the Netherlands' Innovation Vouchers Subsidy Scheme, outlined on p.117 of the Report, also allows the possibility of SMEs forming consortia which can be achieved in one of two ways:

- Collectives of SMEs engaged in the same business activity (usually from a region) may cluster their vouchers into a single large research project; or
- Participants might also link with others from related businesses in a supply chain provided they have a specific theme in common.

Griffith University proposes that should this recommendation be accepted then the possibility of clustering should be strongly encouraged as an innovative means to ensure a spread of research programs for SMEs to address research which is both specific to individual business enterprises and also applicable to the prosperity of entire industries and regions.

## **Chapter 10 – Innovation in government**

Chapter 10 recognises the critical role of governments in the national innovation system through strategic assessment and foresight in the development of national priorities and policies. Universities are a key contributor to the policy development and review process however, apart from one reference in recommendation 10.3, they went unmentioned. The Government might

wish to consider a more explicit reference to the relationship between universities and government agencies in its White Paper. This might extend beyond the well-established mechanisms for research collaboration, such as ARC Linkage, into innovative areas of research training including PhD internships in government and Work Integrated Learning opportunities for students at all levels.

## **Research Pooling**

Since its initial submission to the Cutler Review, Griffith University has become aware of an innovative and excellent scheme operating in Scotland called Research Pooling. Research Pooling combines the research institutions in a chosen region to address an area of research which requires a 'big science' or large scale collaborative approach. All institutions within a specified region are invited to participate provided they possess relevant research capability of international standing. Key features of pooling are (a) agreement and coordination of a pan-Scottish research strategy within defined individual research areas, (b) sharing of major facilities and equipment, and (c) joint doctoral training programs that will attract PhD students from across the UK and around the world. Scottish research pools have been established in physics, chemistry, geosciences and environmental sciences, economics, engineering, life sciences, medical imaging and policing.

Griffith University has discussed Research Pooling in its submission to the Review of Australian Higher Education and strongly endorses this approach as a way of implementing the Hubs and Spokes proposal which has been raised recently. The focus of research Pooling is on regions and sees members as partners (not necessarily equal) in a network arrangement. This is far preferable to the selection and elevation of a single hub when in reality all members might contribute in a specific and value added way according to their own distinctive strengths. Academic institutions in Australia are beginning to enter into such arrangements (e.g. ANU and the University of South Australia) and there is potential for expansion in the number of regional arrangements which would also include non-university research organisations (e.g. Queensland Institutes of Health of which QIMR is a partner).

## **Conclusion**

The Review Panel is to be congratulated on delivery of a comprehensive overview of the National Innovation System within a very tight timeline. Griffith University appreciates that the task of addressing needs across the entire national innovation system was clearly not a simple one and we acknowledge the even-handed treatment meted out to various stakeholders.

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