

Victoria University

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Comments

Victoria University welcomes this report and the opportunity to make these comments. Victoria University would like to make some initial general comments and then make specific responses to individual recommendations.

- The report makes some recommendations regarding the skills shortages, with implicit recognition of the role of the vocational education sector. Victoria University considers that more can be done to drive innovation in the all important technical and trades areas. As a multi-sector university with a large vocational education sector and expertise in innovation with respect to technical and trades areas, Victoria University is well-positioned to take leadership in this area. It needs to be recognised however that VET contestability might put at risk investment by institutions in research and innovation in trades and technical fields – something that is welcomed by the review.
- With respect to the above, Victoria University's expertise in technical and trades innovation places the University in a strong position to act as a Hub or Centre of Excellence for Innovation in Technical and Trades Areas.
- Victoria University supports the full funding of research which we understand would be to cover costs including overheads, infrastructure and researcher salaries; however we are concerned that this appears to be limited largely to national competitive grants. Some of the largest challenges are in obtaining appropriate budgets from other research income sources, particularly state and commonwealth government research contracts. Victoria University considers that the Commonwealth Government should provide the lead in ensuring that research contracts and grants from the Commonwealth Government to universities are fully funded and the contracts should not require universities to battle with federal agencies in terms of ownership and use of IP by the researchers. Universities should not be expected to cross subsidise government research contracts from other university sources.
- Victoria University is concerned at the implication that universities should not be involved in commercialisation, and that it is only firms that should commercialise. This presupposes an active venture capital and entrepreneurial sector that is prepared to work with universities on taking research outcomes to market. All of the evidence in Australia is that the private sector is not willing to take the risks in early stage "proof of concept" and that universities themselves are in a better position than individual firms to commercialise and manage IP produced by their staff. What is needed is an appropriate framework for ensuring the ownership and management of IP (e.g. the Bayh-Dohl Act in the US) and seed funding for proof of concept.
- Victoria University considers that the Government should examine the development of a Commercialisation Hubs program around certain areas. For example, there may be a hub for environmental technologies. This hub would provide the expertise to universities that need to commercialise IP related to environmental technologies. Such a program would be a more efficient alternative to the current practice whereby individual universities attempt to commercialise their IP and



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the level of experience and expertise that would be developed by each of the hubs in the particular areas would lead to superior innovation outcomes.

- Victoria University is concerned about the recommendations of the review regarding distribution of RTS and APA and research funding. The review has placed a level of reliance on the ERA metrics as an indicator of quality in postgraduate supervision that appears to be unjustified on current evidence. The ERA is underdeveloped and un-trialled and relies upon a single rather than multifaceted set of measures. Furthermore, there is no evidence that publication metrics are correlated with the quality of postgraduate supervision and good postgraduate outcomes.
- R&D Tax Concessions are currently limited to science related disciplines, with the humanities, arts and social sciences explicitly excluded. Victoria University considers that this should be changed to enable R&D in these fields/disciplines to take advantage of properly targeted R&D Tax Concessions. This makes sense for an advanced services sector economy such as Australia, where much innovation occurs in the services sector. Examples of innovations to come out of these disciplines include the HECS scheme (a model that has been exported); computer games (through creative industries); and the Positive Parenting Program commercialised by Uniquest. While the R&D programs should be extended, Victoria University agrees that it should be targeted and monitored.
- Victoria University would particularly like to highlight its endorsement of recommendations 3.1, 3.2, 3.3, 5.1, 5.3, 6.1, 6.11, 7.9, 9.1, 9.2 and 9.5.

Recommendation 3.1

Support business innovation as an explicit priority for Australia's innovation policy by incorporating the following objectives into programs aimed at building business innovation capacity:

- *assist the generation and absorption of business knowledge by private firms;*
- *help private firms to secure returns and to appropriate value from undertaking inherently uncertain innovative business activities;*
- *foster the capacity for innovation at the company level in response to market and customer demands;*
- *facilitate economically useful connections between firms and other institutions for knowledge transfer and capability building;*
- *extend the global reach and market access of Australian firms; and*
- *increase the managerial, technical and collaboration skills and competencies of private firms.*

VU Response: Victoria University endorses this recommendation. We applaud the use of the term knowledge transfer which encompasses much of the work undertaken by universities and is a major mechanism for the transmission of innovation.

Recommendation 3.2

Extend the Enterprise Connect Program to include services firms and expand it to provide explicit business innovation services in conjunction with the existing business review and advisory services.

VU Response: Victoria University endorses this recommendation. Too often, innovation is seen in 'hard' scientific or engineering terms, and this recommendation implicitly broadens its scope and thought. In addition, for an advanced economy such as Australia which is characterised as having a large services sector, it makes sense to open up programs such as Enterprise Connect to the largest sector of the economy.

Recommendation 5.2

Innovation policy should be aligned with immigration policies to ensure that they facilitate Australia's access to the global talent pool. In particular, human capital should carry equal or more weight than economic capital in individual migration assessments.

VU Response: Victoria University supports recommendation 5.2; however, in addition to the above, recommends that programs should be developed that would assist migrants with transitional issues. In particular programs that would enable migrants to overcome cultural barriers and difficulties that hinder successful engagement with Australian research and innovation.

Recommendation 5.3

Establish a program to encourage and support professional bodies (working with educational institutions and State and Territory Governments as appropriate) to provide accelerated pathways to facilitate enriching professional transitions so as to make Australia a world leader in this area.

- *The Advocate for Government Innovation (see Chapters 10 and 12) should develop priorities with the aim of developing some breakthroughs within eighteen months;*
- *An early priority should be further building pathways for key professions in which there are skill shortages. One such initiative would facilitate the entry of science and mathematics graduates into teaching; and*
- *The Minister for Education, Employment and Workplace Relations should make a statement on progress on this agenda within eighteen months.*

VU Response: Victoria University endorses this recommendation, subject to its being broadened to recognise that innovation occurs in broader areas and activities other than science related fields. Broadening the scope of this recommendation would place it in greater alignment with the spirit of other recommendations, such as recommendation 3.2, which recognise the importance of service sector industries and professions to the Australian economy.

Recommendation 6.2

Base the distribution of research block funding to universities on success in winning national competitive grants and on evidence of excellence in research, such as the research quality rankings to be produced by the Excellence in Research for Australia initiative.

VU Response: Victoria University does not endorse this recommendation. Reliance on measures such as the untested ERA metrics and national competitive grant success to determine the quantum of block funding grants risks limiting significant block funding to a relatively small number of universities and research institutes. It will severely hamper the aim of recommendation 6.5 which recommends greater collaboration between universities and research institutions – including those that may not be research intensive but can nevertheless contribute meaningfully to innovation partnerships. If collaboration across the sector is being encouraged, then shrinking the pool of institutions that can collaborate successfully by relying on the traditional, backward looking measures of 'research excellence' will disadvantage this aim.

Instead, Victoria University proposes a course similar to that proposed in recommendation 6.9 below; namely a multi-faceted approach using a broad number of measures for research performance. Importantly, while retrospective measures such as grant success have their place, so too should forward looking measures that take into account new research areas and skill shortages and the need to develop expertise in emergent fields. This will prove far better in driving innovation and the ability of Australia's research and research training to meet future needs rather than relying on historical and traditional measures.

Recommendation 6.5

To build concentrations of excellence, encourage collaboration and achieve better dissemination of knowledge, introduce additional funding support for university and other research institutions to partner with each other and with other research organisations (national and international). Discussions about additional levels of support should occur during the projected round of compact negotiations.

VU Response: Victoria University supports this recommendation. However, the collaborative nature of this recommendation stands in contrast to others such as recommendation 6.2 that would base funding on the ERA, and which encourages competition at the expense of collaboration.

Recommendation 6.9

Funds currently distributed under the Research Training Scheme and Australian Postgraduate Award (APA) schemes should be allocated to institutions on the basis of demonstrated excellence in research based on the research quality rankings that will be produced by the Excellence in Research for Australia Initiative.

VU Response: Victoria University does not support this recommendation. Victoria University does not consider the Excellence for Research in Australia initiative an appropriate tool to determine the allocation of RTS funds. Firstly, the ERA utilises retrospective metrics to determine research performance. As such, allocation of RTS or other funding sources along these lines could deleteriously impact on up-and-coming disciplines or institutions on a developmental path. Secondly, the metrics used by the ERA are based on traditional measures of academic publication. Reliance on such measures (with the explicit exclusion of other metrics such as end-useability of the research outcomes) would, ironically base RTS funding arrangements on methodologies and formulae that are anything but innovative. The time-frame of the ERA also means that funding would be based on information that is outdated (up to ten years old) during which time researchers may have shifted focus or moved to join other research groups. It also is based upon disciplinary panels with significant time and assessment challenges in assessing interdisciplinary research that is widely acknowledged as the most appropriate way to address Australia's research challenges.

Victoria University considers that a superior alternative would be to base Research Block funding and RTS allocation on a multi-faceted set of indicators, including, inter alia, evidence of quality of postgraduate outcomes, student employment outcomes, average time to completion data and student satisfaction ratings. The ERA may be a minor one of these measures-replacing the publications measure for example- once the structural challenges have been overcome and it is properly tested.

Recommendation 6.10

The research quality rankings from the Excellence in Research Australia initiative should be made publicly available to promote matching of the best research groups with the best doctoral students.

VU Response: Victoria University considers that the assumption underlying this recommendation is an antiquated idea or notion of research groups; namely that it is a group of researchers based in the one location at a single institution. It assumes that the 'best research groups' are going to be in one location to attract 'the best research students'. Research groups are increasingly cross-institutional and sometimes cross-national. If this understanding is correct, then it poses difficulties for the vision for collaboration between institutions articulated in recommendation 6.5. Recommendation 6.10 assumes static research groups in single locations not innovative dynamic ones across multiple locations.

Victoria University therefore considers that this recommendation needs fine tuning so that it better fits with the spirit of collaboration espoused in recommendation 6.5 and enable a modern understanding of the research process and the dynamic and multi-institutional and locational structure of research groups. This more modern conception will require funding and supervisory models that enable and encourage cross-institutional groups to supervise and train research students. These models need also take into account the

increasing role of industry based researchers and the greater collaboration between universities, publicly funded research agencies and private industry. Finally, there should be scope to enable groups that span sectors, so that they may include participants from the vocational education sector as well as traditional research participants such as those from the higher education sector.

Recommendation 7.2

Patent law should be reviewed to ensure that the inventive steps required to qualify for patents are considerable, and that the resulting patents are well defined, so as to minimise litigation and maximise the scope for subsequent innovators.

VU Response: Victoria University considers that this recommendation needs to be considered in light of the international patent law.

Recommendation 7.8

Australian governments should adopt international standards of open publishing as far as possible. Material released for public information by Australian governments should be released under a creative commons licence.

VU Response: Victoria University supports this recommendation with caveats. There should be safeguards included to protect any IP related issues (for the university and the academics producing the research), cultural sensitivities, commercial confidentiality and commercialisation considerations. See recommendation 7.14 for a fuller explanation.

Recommendation 7.14

To the maximum extent practicable, information, research and content funded by Australian governments – including national collections – should be made freely available over the internet as part of the global public commons. This should be done whilst the Australian Government encourages other countries to reciprocate by making their own contributions to the global digital public commons.

VU Response: Victoria University does not support this recommendation in its current form. Victoria University considers that in its current form the recommendation does not pay sufficient attention to IP, commercial confidentiality and cultural sensitivity issues that may in many instances make such a global information commons untenable or even undesirable. Such a commons could inadvertently undermine Australia's position should other nations not provide reciprocal and equivalent arrangements.

In addition to the above considerations, Victoria University considers that recommendations such as 7.14 and 7.8 could potentially undermine the goal of recommendation 9.6. A public commons would by definition extinguish (or at least limit) the property rights of the originators of the information, process or invention that has been developed. This would have implications for university researchers, commercialisation and the venture capital markets necessary to make commercialisation possible.

This recommendation seems to stem from the review's position that universities should play a diminished role in the commercialisation of research, and should instead pursue pure research. Pure research is often thought of as having little commercial application, and as such would make the publication of university generated research less prone or sensitive to commercial considerations. However, this view neglects an important reality faced by many universities, in that in the Australian context, the private sector is often ill equipped to commercialise intellectual property. It also suggests that the line between pure research and commercial application is a simple one to demarcate, whereas in reality this is often not the case. Indeed, what may appear to be pure research today is often eventually viewed in applied, commercial terms.

Recommendation 9.6

The Government consider strategies to attract international venture capital fund(s) to Australia as the base for investment in the Asia Pacific region, with the short term objectives of attracting a major US venture capital firm to Australia and strengthening Australian links into US capital markets.

VU Response: Victoria University supports this recommendation, however considers that its intent could be undermined and made redundant by indiscriminate adoption of chapter 7 recommendations related to open publishing and open information repositories. As mentioned elsewhere, while open information repositories are a worthwhile pursuit, information should only be posted after taking into consideration commercial, cultural and IP issues.