

**April 9, 2025**

# **ACGR Response to the Strategic Examination of Research and Development Discussion Paper**

The Australian Council of Graduate Research (ACGR) acknowledges the work of the government in commissioning a Strategic examination of Australia's R & D system and welcomes the opportunity to provide feedback on the Strategic Examination of Research and Development discussion paper.

ACGR was established in 1997 and is Australia's peak body for higher degree by research (HDR) education, often referred to as graduate research. Through our programs and advocacy, we support the development of the Australian research ecosystem and research workforce. We engage and consult with stakeholders to advocate for excellence in research training and scholarship, and high standards for all HDR programs. As a group we aim to contribute to the development of effective HDR policy as well as promote the value and benefits of HDR within academia and beyond into industries and communities.

All HDR-awarding Higher Education (HE) institutions in Australia are members of ACGR, each represented by a senior academic leader. In most cases this is the most senior relevant executive at the institution, usually a Graduate School Dean or Pro Vice-Chancellor with responsibility for graduate research. Additionally, professional leaders in researcher development and management from the member institutions participate in working groups, annual conferences, and webinars, where they contribute insights into operational and regulatory challenges in the recruitment and management of HDR candidates. ACGR is thus uniquely qualified to provide credible advice on the Australian research training environment and is pleased to provide the following responses for consideration by the expert panel.

**1. ACGR recommends broadening the terms of reference to include focus on building the pipeline of Australian researchers**

ACGR appreciate that the discussion paper recognises that *'Consistent investment in Australian R&D and its outcomes are crucial for building the Australia we aspire to.'* ACGR completely concur that the future of research in Australia is critical to solving the wicked problems facing our society as referred to in the introduction. While ACGR broadly agree with the terms of reference of the strategic examination as outlined, we note that there is a gap in relation to the important task of ensuring that there is an examination of the development of the pipeline of the researchers of tomorrow as a key priority.

As outlined in the recent position paper, *'Investing in PhD candidates in Australia'*<sup>1</sup>, nationally enrolments have declined in domestic PhD enrolments between 2018 and 2023 by 8 percent. PhD candidates are a crucial pipeline not only to academic research, but to research in industry, government, education and healthcare. This decline can be attributed in part to a strong job market, but also to inadequate financial support, with an ACGR report finding that in 2024 the average full-time stipend across Australia was \$32,192 – which is well below minimum wage. As part of any strategic examination of research and development in Australia, we argue that it is crucial that the nation strengthen the pipeline to attract and support the most talented students to PhD study and we urge the expert panel to recommend an increase in the PhD stipend.

**2. ACGR rejects the premise that the PhD model has not changed at scale**

The ACGR reject the premise of the statement *"The PhD model has not changed at scale to reflect the needs of graduates and the broader economy."* Many Universities in Australia have embraced approaches to the PhD that are outside of so-called 'traditional' models by incorporating industry internships and industry-generated research components; by creating novel pathways into research studies, by actively seeking more diverse cohorts of candidates; by structuring other professional development into the PhD; and by expanding inter-University and international opportunities.

We note also that there has been a longstanding commitment to research end-user engagement in HDR programs and that Universities have amplified these commitments in recent years.

The discussion paper cites a systematic review by Chen and colleagues regarding doctoral employability to imply that PhD graduates face employment challenges outside of academia. However, the review was less conclusive than this sentence suggests. The authors identified only two papers that addressed this question, both of which found that industry employers valued PhD graduates' in-depth knowledge, general research skills, and ability to critically synthesize research evidence<sup>2</sup>. Indeed, a range of studies in that review confirmed that most PhD graduates were working full-time (93%–94%) and that 80% of PhD graduates believed that the skills that they had developed during their PhD had prepared them well for employment<sup>3</sup>.

Further, Chen and colleagues<sup>2</sup> highlight potential solutions in their paper including focusing on developing ones' professional identity, delivering transferable and nuanced skills training, and developing industry PhD programs and internships. In a survey of our members, every University that responded described numerous ways in which they had modernised their PhD offerings by engaging more with industry, developing HDR capability or research frameworks to guide skills development, and developing comprehensive new suites of PhD offerings. ACGR is in the process of developing a HDR Researcher Development Framework at a national level to help ensure Universities continue to offer relevant skills training to their PhD cohorts.

A key contributor to the myth that the PhD has not changed is that some institutions offer a single doctoral degree. However, increasingly institutions are developing a more diverse array of PhD offerings. For example, The University of Technology, Sydney have launched numerous new PhD programs that fall outside what would be considered a more traditional PhD. These include (1) the Entrepreneurial PhD designed to attract entrepreneurs who want to bring their inventions, ideas and expertise to UTS to develop an agreed leading-edge tech, creative or other artefact that represents an original contribution to knowledge; (2) the Industry Doctorate Program (IDP) for industry professionals who want to tackle a grand challenge in their field, learn to scan horizons for future disruptions and build competitive advantage in their sector; (3) the Impact PhD, which is similar to the industry PhD (IDP) in that it delivers a research portfolio for a partner/s or sector/s but is focused on not for profit, government or community groups; and (4) the Global PhD which is undertaken in partnership with other global institutions. Many Australian Universities have similar offerings.

While some Universities have adopted the approach of offering industry-focused (and other non-traditional) PhDs, some institutions maintain that doing so increases the complexity of the PhD offerings unnecessarily because the type of PhD research that is completed within non-traditional PhDs can already be accommodated within existing PhD

structures. Within the AQF, the PhD structure has the flexibility to incorporate different elements, to ensure our candidates and their supervisors can shape their program to develop the skills that they require for their planned career. We note that every institution that responded to our survey indicated that candidates that completed their PhD within the National Industry PhD program or the competitive CSIRO PhD were enrolled in the so-called ‘traditional’ PhD program. This is significant considering that these programs, by definition, include the elements of industry supervision, industry research training opportunities, internships and industry data collection.

### **3. Industry engagement in PhDs is growing rapidly across Australia**

There is a comment in the discussion paper that ‘Programs linking researchers to business have barely changed the dial.’ The ACGR does not believe that this is an accurate description of the current landscape in postgraduate research training.

As indicated in our response to point 2 above, most Australian Universities have been actively engaging in industry HDR programs, whether formally through the NIPhD or via their own programs. The Trailblazer Universities programs are examples of how universities are engaged with key industry partners to develop PhD programs that encourage entrepreneurial and industry-focused research. Similarly, the Sydney Quantum Academy is an example of a collaboration between government and Universities in NSW to train a research workforce specifically to meet the needs of that sector of business as it is projected to develop into the future.

The RTP Internship component has also resulted in a renewed focus across the sector that will result in increasing HDR Industry Engagement. However, time-limited internships are only one such way of engaging with businesses. Many ARC Linkage grants are used to support PhD students whose work is embedded in the collaborations between industry partners and academics. Increasingly, business is investing directly in scholarships to fund embedded PhD research across the sector. As these partnerships strengthen, feedback is consistently received to indicate that the more engagement occurs between business and Universities, the more businesses and industry value the skills of the PhD researcher. While we agree that there is additional scope to further build industry links within the PhD, we disagree with the characterisation that we have “barely changed the dial”.

Industry engagement could be further enhanced by the government providing funding or

other benefits to the industry partner to supplement the cost of internships and research training – we regard the paucity and inadequacy of such incentives as a key obstacle to further growth in industry engagement. Likewise, no funding for the development of pre-HDR pathway courses is available yet. Such courses are already offered by some institutions, including Central Queensland University, Federation University and Charles Sturt University. These can be crucial to providing skills to allow professionals working in a range of sectors that would allow them to succeed in PhD study.

The National Industry PhD Scholarship scheme attempted to provide a vehicle to this end, but for the industry-linked component it is reliant on universities having scholarships available and therefore does not help to build capacity. However, the industry researcher model is a welcome addition as it genuinely recognises the costs and incentivises the industry partner to engage with the process. These researchers can help to further ‘shift the dial’ as they are already employed in the industry and the research training provided helps demonstrate to the industry partner how universities can support their activities. However, at present, the industry-linked component of the scheme is small and overly bureaucratic, and it replicates what many universities are already doing. If each university were provided additional RTP scholarships designated for industry, they would have been able to achieve similar outcomes with far less administrative work and a lower overall cost per candidate.

In summary, the ACGR is supportive of a strategic review of the research environment in Australia. We concur that the need for this examination is undeniable. We urge the expert panel not to overlook the pipeline of researchers and engage with the ACGR as a key stakeholder group.

## References

<sup>1</sup>Universities Australia and Australian Council of Graduate Research (2024). Investing in PhD Candidates in Australia.

<sup>2</sup>Chen, L. A., Mewburn, I., & Suominen, H. (2024). Australian doctoral employability: A systematic review of challenges and opportunities. *Higher Education Research & Development*, 43(2), 298–314.

<sup>3</sup>Pitt, R. (2012). *Australian employers’ expectations and perceptions of PhD graduates in the workplace*. 2012 Quality in Postgraduate Research Conference: Narratives of Transition: Perspectives of Research Leaders, Educators & Postgraduates, Adelaide, Australia.