



Queensland University of Technology

Response to ACOLA discussion paper: Enhancing research outcomes from Australia's regional, rural and remote universities

QUT welcomes the opportunity to respond to the ACOLA discussion paper: *Enhancing research outcomes from Australia's regional, rural and remote universities*. QUT's physical campuses are based in metropolitan areas and services RRR areas through online offerings and distributed sites. We will make our submission accordingly.

Question 1: What does research success look like for universities in RRR areas? and

Question 2: What role does research excellence play in the overall success of universities in RRR areas?

In spite of the Australian University sector's tendency towards homogeneity driven through planning and funding, there is no 'one size fits all' approach to research success. In fact, such an approach discourages contextually-bound measures of success and introduces poor proxies that encourage perverse outcomes and gaming of the system.

Research success must be judged on a case-by-case basis and approached in a targeted way that fits the needs and goals of the institution in question. For example, a regionally-based, community-embedded university may strive to achieve excellence in targeted agricultural innovation and regional health initiatives. It would be improper to judge that institution by the internal standards of a metropolitan university with broad research output.

Question 3: What strategies have been implemented to boost research excellence in RRR universities? What has and has not worked?

As discussed above, RRR universities should be supported to achieve *their* research excellence. QUT acknowledges that the rise of international rankings (and their effect on international student recruitment) and shorter political cycles increase pressure on academics to demonstrate their research impact, and pressure on Government and regulatory bodies to justify public spending. However, to limit the scope of research excellence to one archetype will narrow the range of potential discovery, and deprive RRR areas of specifically tailored improvements to their communities.

The Education Investment Fund (EIF) was a strategy that, when used, proved effective in supporting research excellence in RRR universities. Since 2007, the EIF and its predecessor the Higher Education Investment Fund (HEIF) offered universities, HE providers, VET providers and research institutions the opportunity to fund priority infrastructure projects aligned with their and their communities' needs. Despite the manifest success of EIF in setting Australian research up for the future, the Australian Government announced the closure of EIF from 1 January 2015. This approximately \$4 billion endowment is currently at risk of being transferred away under the *Emergency Response Fund Bill 2019*. The fund has survived two prior attempts at abolition in 2014 and 2017. QUT strongly encourages ACOLA to recommend that the Government reverse its decision to repurpose the EIF and instead to reactivate it to enable essential research infrastructure investment through an arms-length, rigorous process.

Question 4: How can universities in RRR areas best address the ‘breadth versus depth’ challenge described above, with particular consideration to attracting and retaining high-calibre staff?

The development and retention of high-calibre staff can play as big a role in research success as recruitment. One way to develop an internal research pipeline is to align teaching priorities with research strengths. QUT is exploring opportunities to do so in fields such as robotics and agriculture. Our Science and Engineering Faculty is expanding its range of postgraduate offerings to include both new courses and new majors attached to existing postgraduate degrees. Whilst these programs are initially offered on campus, work is in prospect to make this content available through online education. Graduate education will also include short courses in these future-focused fields, units of which may be expanded into further study.

Broadly, all universities should support the flow of talent back and forth between urban and regional universities. By aligning teaching priorities with RRR area research strengths and developing curricula that prepares students for RRR life accordingly, universities may reduce barriers and encourage high rate of talent to RRR universities and areas. For example, the QUT Education Faculty has developed a film medium to document the voices of Mt Isa leaders, teachers, parents, Indigenous Elders and the community, to celebrate and provide insights and stories of teaching in rural communities. The film is a learning material embedded in the new “Stepping In” unit – a first semester unit for all students in the new courses from 2019.

Development, attraction and retention are all highly influenced by both research infrastructure (see above) and research culture – each of which is itself significantly resource-dependent. Adequate public investment in both people and facilities is key to providing workplaces where people feel valued and are able to make their best contributions.

Question 5: What steps can be taken to increase the Aboriginal and Torres Strait Islander research workforce, and encourage research on Aboriginal and Torres Strait Islander communities and issues?

QUT is committed to increasing the Aboriginal and Torres Strait Islander research workforce as a priority for the entire Australian higher education sector. As institution, we acknowledge the findings contained in the January 2018 NATSIHEC Report (particularly those contained in *Section 6 Academic workforce*) and support the recommendations, as a means of empowering, growing and sustaining the Aboriginal and Torres Strait Islander research workforce.¹

Question 6: How can universities in RRR areas better engage with local Indigenous communities through research?

QUT is active in encouraging the quantum and quality of research on Aboriginal and Torres Strait Islander communities and issues. The importance of developing Aboriginal and Torres Strait Islander research has been the subject of many reviews and reports. For example, the Behrendt Review highlighted the urgent need to build research capability relating to Aboriginal and Torres Strait Islander knowledges and perspectives in Australian universities.²

¹ Buckskin, P., Holt, L., Larkin, S., Anderson, P., Ma Rhea, Z. (2018). *Report for the Australian Government Department of Education and Training to accelerate education and employment outcomes for Aboriginal and Torres Strait Islander people in the higher education sector*. NATSIHEC.

² Behrendt, L., Larkin, S., Griew, R., & Kelly, P. (2012). *Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People: Final Report*. Australian Government.

QUT's Aboriginal and Torres Strait Islander Research Strategy was developed in response to recommendations 23 and 29 of the Behrendt Review. The key goals and objectives of the strategy are to promote to development of:

1. Aboriginal and Torres Strait Islander Research Strengths and Leadership
2. Transdisciplinary Research
3. Culturally Competent Research
4. Research Partnerships and Collaborations

QUT's Indigenous Research and Engagement Unit (IREU) has responsibility for facilitating implementation of the Aboriginal and Torres Strait Islander Strategy. The role of the IREU is to provide strategic leadership, guidance and advice across the university in relation to the increasing and strengthening Indigenous research capabilities, engagement and outputs. The IREU encourages Indigenous research through capacity building activities and collaborative research projects.

Finally, QUT is establishing the First Nations Institute at its Gardens Points campus in 2020 to supercharge programs aimed at increasing the participation and attainment of Indigenous Australians in higher education research, and growing the Indigenous academic workforce. The First Nations Institute will build Australia's Indigenous academic workforce by increasing the number of Indigenous research students and developing supportive pathways. It will grow the body of Indigenous-led research and research co-designed with Indigenous Australians, and provide training in Indigenous Research Methods.

Question 7: What barriers exist to universities in RRR areas improving their research outcomes? and

Question 8: Are there perverse incentives that negatively impact research outcomes in RRR universities?

The international higher education sector is biased towards large, older, research-heavy prestige universities, and the highly publicised international rankings are geared to reward institutions that fit this archetype. Universities and researchers alike are powerfully motivated to keep to the existing rules of play. Research metrics are widely accepted as an important determinant of both researcher achievement and university value. Research metrics play a large part in determining university domestic and global rankings, which in turn have a major impact on the choices of international students, who contribute fee revenues that help fund research.

The yearly release of rankings provides a material incentive for scientists and researchers to publish research that has immediate present benefit in high profile journals in pursuit of volume and citation credit, competing for prestige, appointments, promotion and the award of tenure. The overly enthusiastic adherence to this incentive can lead to poor research and publication habits, and may encourage the undertaking of purely applied research to the detriment of discovery research (which through longer-term problem solving and wider scope has the potential to contribute to deeply entrenched issues facing RRR communities).

This is not to say the RRR universities engage in these practices to a greater degree than others – this trend is plainly a sector-wide issue. However, the perpetuation of a system rooted in the superiority of one archetypal university model (which in Australia, at least, is a very metropolitan model) will inevitably prejudice those who adopt a different, and no less noble, approach.

Question 9: What opportunities exist for universities in RRR areas to pursue research excellence and impact?

Collaborations between university researchers, industry, government and regional communities are key to sustainable RRR economic growth. Partnerships must utilise all parties' skills and expertise to support communities, develop industry and effectively recruit and retain talent. University-RRR area partnerships are most effective when premised on local community-directed approaches, genuine consultation with industry and communities, and collaboration embedded within long-term planning agendas.

The most important outcomes of a new industry development strategy are tied to the sector's direct challenges. For example, Queensland faces the task of increase agribusiness and food sector exports in the face of the increasing impacts of climate change. Thus, the relevant RRR areas require us to resource and empower scientists to increase research into climate-resistance and resilient agricultural systems. Whether in the fields of energy, the environment, farming, health and many others, gaps exist across Australia, ready for locally embedded universities to fill.

Question 10: What are some examples of strong collaborations between industry and universities in RRR areas? What has and has not worked?

QUT offers up the follow collaborations as examples of strong collaboration between business, communities, industry, government and universities.

Strong research collaboration between industry, universities and government can promote meaningful social impact. The Reef Restoration and Adaptation Program (RRAP), is comprised of Australian institutions (including the Federal Government) that develop the resilience of the Great Barrier Reef in the face of inevitable climate change. In addition to environmental and cultural benefits, RRAP stimulates regional economies with the potential for several thousand permanent and many more part-time jobs. Given the Reef's asset value of at least \$56 billion, this project will bring enduring and significant social and economic benefit to regional Queensland communities.³

The Queensland Hydrogen Industry Strategy provides strong opportunities for job and industry creation in regional areas.⁴ The QUT Institute for Future Environments was involved in the first production and export of 'green hydrogen' from Australia to Japan, a development that holds major promise as a sustainable and growing fuel export market and industry.

Question 11: How can government policy facilitate universities in RRR areas to boost their research excellence and impact?

Government policy may facilitate universities in RRR areas to increase research excellence and impact by recognising and cultivating the diversity of the Australian higher education system, and altering the incentive structure accordingly.

³ O'Mahony, J., Simes, R., Redhill, D., Heaton, K., Atkinson, C., Hayward, E., & Nguyen, M. (2017). *At what price? The economic, social and icon value of the Great Barrier Reef. At what price? The economic, social and icon value of the Great Barrier Reef* (p. 7). Brisbane, Qld: Deloitte.

⁴ Department of State Development, Manufacturing, Infrastructure and Planning. (2019). *Queensland Hydrogen Industry Strategy 2019-2024*. Queensland Government.

The inflow and retention of younger talent is vital in maintaining steady population growth and providing viable options for the planned future of communities.⁵ Thus, we suggest that policymakers supplement existing metro-centric development plans with effective and sustainable community-led approaches to RRR development. We particularly highlight the role and value of entrepreneurship, both social and for-profit approaches, in building healthy, sustainable regional communities and creating new employment opportunities.⁶ To this end, QUT is pursuing avenues to trial entrepreneurial methods of development in regional Queensland to facilitate economic growth.

Infrastructure investment is a constant in the success of RRR universities. While the development of the National Broadband Network (which promises to provide high speed internet access to all regional areas by mid-2020) is essential in removing geographical barriers, RRR areas still require investment to build world-class research infrastructure. The return of the Education Investment Fund would greatly contribute to the infrastructure necessary for this boost.

We would counsel against over-determining locus of activity when trying to deliver benefit to RRR communities. Some activities are best undertaken locally, to be sure, and expansion of local capacity is undoubtedly warranted in some cases. However, much of the research that benefits RRR communities is undertaken in cities; RRR researchers benefit from time working on facilities and in research groups in metropolitan and international institutions; and a certain degree of ebb and flow of personnel, along with a strong emphasis on welcoming diversity, is good for research cultures and productivity. Boosting collaboration and exchange with non-RRR institutions is just as beneficial as providing additional resources specifically to RRR institutions: it is a case of getting the mix right.

⁵ Lange, S., & Vollmer, S. (2017). The effect of economic development on population health: a review of the empirical evidence. *British Medical Bulletin*, 121(1), 47–60. doi:10.1093/bmb/ldw052 %J British Medical Bulletin

⁶ Eversole, R., Barraket, J., & Luke, B. (2014). Social enterprises in rural community development. *Community Development Journal*, 49(2), 245–261. doi:10.1093/cdj/bst030