

28 September 2023

Science Strategy and Priorities Taskforce
Department of Industry, Science and Resources
GPO Box 2013, Canberra, ACT, 2601

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Re: Australia's draft National Science and Research Priorities

The University of Queensland (UQ) welcomes the opportunity to contribute to the vision for Australia's science system through the revitalisation of Australia's National Science and Research Priorities and National Science Statement.

Across all disciplines, UQ is one of Australia's top research-intensive universities, consistently ranking in the top-50 global universities year-on-year, and with 100% of research rated as at or above world standard in the most recent Excellence in Research for Australia report. Through UQ's Strategic Plan, *Toward 2032*, we have charted a pathway to foster mutually beneficial partnerships at scale, to deliver positive impact for our communities, the environment and economy. As Australia's most comprehensive research university, UQ sees enormous opportunity to connect the strengths and leadership of our discipline excellence to deliver mission-driven research that is aligned with government, industry, and community priorities.¹

A revitalised National Science and Research Priorities and National Science Statement will be an important framework for aligning government priorities with research sector capabilities and activities. UQ applauds the ambition and vision for our national scientific and research sector underlying the draft National Science and Research Priorities (NSRP). We support, in-principle, the high-level draft NSRP, with some suggested revisions to strengthen alignment with other signals of government priority, including the Measuring What Matters Framework and other research priority frameworks.

In addition to these proposed evolutions for the draft NSRP, the submission below draws out two high-level principles that we believe are particularly important in the draft NSRP, and which should be prioritised as the National Science and Research Statement (henceforth, the Statement) is developed. These are:

- 1. Championing both discovery and priority-driven research**
- 2. Developing a National Science and Research Priority architecture.**

Thank you again for the opportunity to comment on the NSRP draft. We would welcome the opportunity for ongoing engagement and consultation on this vitally important policy agenda.

Kind regards,



Professor Mark Blows
Deputy Vice-Chancellor (Research and Innovation)

¹ UQ is ranked in the top 300 global universities in 50 subject areas in the QS Subject rankings 2023, more than any other Australian university.

University of Queensland Submission: Draft National Science and Research Priorities

Australia’s universities are major contributors to the national research effort and are therefore important enablers of government priorities in science, research and innovation. Universities currently receive many streams of government communication in relation to research and innovation priorities. The ‘Alignment with government priorities’ list presented in the National Science and Research Priorities (NSRP) draft is a prime example of this, with 28 discrete policy programs listed (p.19-20).

UQ believes that there is an opportunity for the revitalised NSRP and National Science and Research Statement to act as a guiding architecture by which to strengthen government messaging of priorities to the research sector.

Through greater alignment of national priorities and research capabilities both government and universities will be able to deliver on our shared commitment to the public good and national interest.

1. A vision for discovery and mission-driven research through the National Science and Research Statement

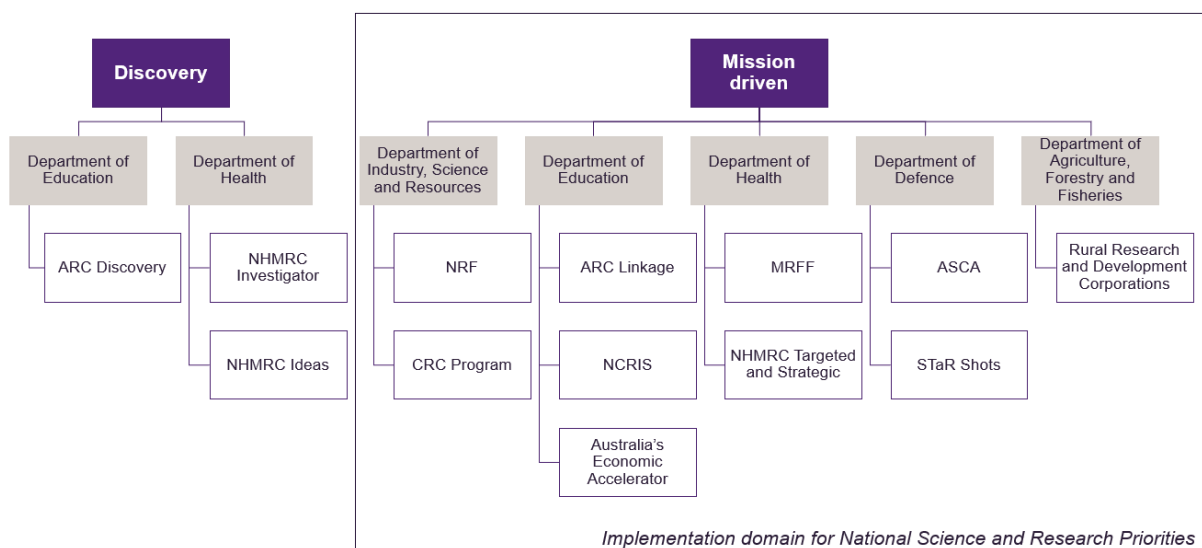
The consultation questions raised in the NSRP draft ask how the National Science Statement can articulate the role our science systems will play in delivering the priorities and maximising the benefits of science for Australia. We believe that a National Science and Research Statement (we hope it will be expanded to align with the naming of the NSRP) will play a critical role in communicating a national vision for Australia’s sovereign research sector.

At its core, this Statement should be a vision of the critical importance of both discovery and mission-driven research for Australia.

Considering their small size relative to applied research spend, and their unique role in the national research system, **UQ suggests that ARC Discovery, NHMRC Investigator and NHMRC Ideas schemes should not be within scope for the implementation of the new NSRP.** Instead, these schemes should be truly investigator-driven, allocated according to their existing rigorous processes of expert peer review. The principle of this suggestion aligns closely with the recommendations of the recent ARC Review, which have been accepted by the Minister for Education.

Figure 1 proposes a potential vision of the implementation domain for the NSRP, excluding the discovery research granting schemes. We believe that emphasising the importance of discovery research through the Statement in this way will support the Department’s communication of research priorities to the sector through clarifying the sphere of influence of the new NSRP.

Figure 1. Proposed implementation domain for the National Science and Research Priorities



2. National Science and Research Priority Architecture

As a research provider, UQ welcomes opportunities to align our research capabilities with the needs of government. However, navigating the multiple priority agendas set out across jurisdictions can be extremely challenging. We believe the new NSRP will fulfil a valuable role if it sets out an **architecture**, rather than an additional list of priority topic areas.

Features of a National Science and Research Priorities architecture may include:

1. Guidance for the research sector on how to understand research priority established by funding agencies or schemes within a larger context of government priorities
2. An implementation model that aligns with existing priority-aligned research funding programs and articulates a partnerships model for achieving NSRP outcomes
3. An impact planning and evaluation framework that builds upon existing methodologies for assessing research impact that are well understood by the research sector, for example, the CSIRO Impact Framework and the ARC's (currently disestablished) Engagement and Impact Assessment.

UQ proposes that **the NSRP architecture should set out government priorities at a high-level and should not extend into the more granular critical research paths set out in the draft NSRP**. Rather, these paths should be articulated through agency or scheme-specific priorities, such as the NHMRC's Health Priorities, or the National Reconstruction Fund Priorities (which are applied to the ARC Linkage program). This would allow the NSRP to take a critical guiding role within the sector in signalling headline government research priorities.

Figure 2, overleaf, sets out a possible preliminary model for this NSRP architecture. It seeks to align the proposed science priorities with the themes of the Measuring What Matters Framework released in July 2023 by Treasury. As the mapping suggests, there is an excellent alignment between the draft NSRP list and the Measuring What Matters themes. In support of this alignment we propose a minor evolution, through disaggregating the 'Building a stronger, more resilient nation' into 'building a stronger nation' and 'supporting resilient communities and connections.'

The **example architecture**, overleaf, additionally aligns the draft NSRP with National Reconstruction Fund priorities, identifying these as a critical pathway for Government-University-Industry research partnerships.

2.1 An example National Science and Research Priorities Architecture

Figure 2. A proposed preliminary example for a National Science and Research Priorities Architecture

		Measuring what matters Framework				
		Inclusion, equity and fairness				
		Healthy	Secure	Sustainable	Cohesive	Prosperous
National Science and Research Statement	National Science and Research Priorities	Supporting healthy and thriving communities	Building a stronger nation	Ensuring a net zero future and protecting Australia's biodiversity	Supporting resilient communities and connections	Enabling a productive and innovative economy
	1. National Reconstruction Fund Priority Areas (example)	<i>Medical science</i>	<i>Defence capability</i>	<i>Renewables and low-emissions technologies</i>	<i>Enabling capabilities</i>	<i>Transport</i> <i>Value-add in ag, forestry, fisheries</i> <i>Value-add in resources</i>
	2. Other jurisdictional priority areas (example)	<i>NHMRC Targeted Calls</i> <i>MRFF</i>	<i>ASCA</i>	<i>ARC Linkage</i>	<i>ARC Linkage</i>	<i>ARC Linkage</i> <i>Australia's Economic Accelerator</i> <i>NCRIS</i> <i>Rural RDCs</i>
	3. Other research priorities areas can be identified row-by-row	-	-	-	-	-
	Evaluation framework	<i>Planning for impact</i>				
	<i>Research impact indicators</i>					

3. Conclusion and recommendations

A renewed National Science and Research Priorities and National Science and Research Statement will be a valuable coordinating mechanism in the Australian research and innovation landscape. There is clear potential for greater alignment between our powerhouse national research capabilities, particularly in our universities, and priorities identified by Government for future intensive research focus. UQ believes that sectoral alignment, particularly through partnerships, will allow both Government and universities to serve the national interest through the discovery and translation of new knowledge.

We commend the ambition and scope expressed in the draft NSRP, and have proposed the following recommendations for implementation of this policy program:

1. The National Science and Research Statement should express a vision of the critical importance of both discovery and mission-driven research for Australia. To clarify the scope of the NSRP, ARC Discovery, NHMRC Investigator and NHMRC Ideas schemes should not be within scope for NSRP implementation
2. The National Science and Research Priorities should present a high-level architecture that signals areas of major Government need for research, pathways for implementation, and an evaluation framework.