ACADEMY OF THE SOCIAL SCIENCES IN AUSTRALIA

STRATEGIC EXAMINATION OF RESEARCH AND DEVELOPMENT – NATIONAL COORDINATION FOR RD&I IMPACT POLICY PAPER

SUBMISSION TO:
DEPARTMENT OF INDUSTRY, SCIENCE AND RESOURCES

SEPTEMBER 2025

Submission to the Strategic Examination of Research and Development - National Coordination for RD&I Impact Policy Paper

The Academy of the Social Sciences in Australia (the Academy) is an independent, not-for-profit organisation that brings together the multidisciplinary expertise of our nation's leading thinkers to provide practical, evidence-based advice on important social, economic and environmental issues facing society.

As the pre-eminent organisation in Australia representing excellence across the social science disciplines, we welcome the opportunity to respond to the Strategic Examination of Research and Development (the Strategic Examination) National Coordination for RD&I Impact Policy Paper (the Policy Paper).

Introduction

The Academy welcomes the Australian Government's decision to engage in a timely and comprehensive examination of Australia's research, development and innovation (RD&I) system and the opportunity to respond to the reform proposal set out in the Policy Paper.

In principle, the Academy supports the model for coordination and the governance structure intended to overcome fragmentation, enhance the impact and efficiency of RD&I spending, and deliver on a broad range of economic and societal goals. As set out in our previous submission, long-term, challenge-led RD&I system acts as a powerful signal, guiding public and private investment which grows and maintains sovereign research capability, fuels innovation and commercialisation opportunities, and builds scale in areas of national significance.[1]

The proposed model could, in principle, be effectively implemented to reflect and take advantage of Australia's existing RD&I strengths and our economic complexity, social and geopolitical circumstances and the degree and nature of international economic embeddedness.

However, we see in the proposed approach a tension between the highly instructive processes and the culture of agility, innovation and risk-taking it purports to deliver. Noting the complexity and risk involved in implementing system-level change, the Academy provides the following recommendations for consideration.

> **Recommendation 1:** Develop selection criteria for focus area goals and sub-goals that characterise improved social and economic outcomes and prosperity for all Australians as the driving purpose of Australia's RD&I system.
>
> **Recommendation 2:** Develop focus areas that are sufficiently broad and accompanied by processes for iterative review to respond to technological and societal developments and new opportunities for innovation.

[1] The Academy of the Social Sciences in Australia (2025, 9 April), 'Submission to the Strategic Examination of Research and Development'.

Recommendation 3: The advisory group must be expert-led and genuinely cross-disciplinary and cross-sectoral to ensure focus area selection is informed by robust and varied inputs.

Recommendation 4: Provide further details on how the role of the Chief Scientist could strengthen RD&I governance, and expand the remit of the Office of the Chief Scientist to include a complementary position of Chief Social Scientist to ensure an integrated approach.

Our recommendations are intended to be practical and support the Expert Panel as they refine the proposed model.

To discuss any matters raised in this submission, please contact Dr Honae Cuffe, Policy Director on 0434 636 748, or honae.cuffe@socialsciences.org.au.

Prioritisation and planning cannot come at the expense of agility and responsiveness

The Academy's initial submission to the Strategic Examination noted that Australia would benefit from an RD&I system that coalesces around national priorities and is supported by long-term funding. The proposed model reflects this sentiment; however, we foresee potential challenges in the design and implementation of the proposed model.

We acknowledge that the five focus areas noted in the Policy Paper are suggestions only; however, in specifying that Australia "already has substantial RD&I activity in defence, health, agriculture, energy and resources", we see a risk of predetermination. The five focus areas are limited and suggest an initial bias in the problem framing which preferences science and technology, rather than an RD&I system that addresses the full range of economic and societal goals. The bias towards science and technology is evident in the proposed selection criteria for focus area goals and sub-goals, which treats societal and economic benefit as supplementary.

Recommendation 1: Develop selection criteria for focus area goals and sub-goals that characterise improved social and economic outcomes and prosperity for all Australians as the driving purpose of Australia's RD&I system.

The transformation of Australia's RD&I system demands bold action, not conservative and outmoded models. Many aspects of the proposed 10-year plan approach reflect traditional frameworks for addressing national challenges. As it stands, the 10-year plan is overly directive and lacks the agility needed to respond to technological, societal, and geopolitical developments and opportunities.

The iconic moonshot mission – from which many commentators and challenge-led national coordinated RD&I strategies draw their inspiration – offers cautionary lessons about targeting activity and public RD&I spending to narrow sectors.[2] Recent analysis finds that while space race public RD&I spending increased manufacturing, employment, and capital accumulation in space-related sectors, there were limited causal effects on longer-term knowledge production,

[2] Mazzucato, M (2021) *Mission economy: A moonshot guide to changing capitalism*. New York: Harper Business.

technological spillover, and broad-based productivity growth.[3] This underscores the importance of taking an economy wide, systemic view when approaching prioritising and planning, one which seeks to join the dots between current strengths, critical future industries, education and training, and investment.

While the proposed model includes triennial reviews of the focus areas, three years is simply too long to delay responding to disruptive technologies, opportunities for innovation, or black swan events. Take the obvious example of generative artificial intelligence, which has suddenly and fundamentally come to transform and define economies, societies and lives. Timebound planning plays an important role in goal setting and preventing mission creep by guiding activity and maintaining accountability. Rather than do away with timebound planning, the proposed model would benefit from embedding avenues for iteration and adaptation. This may take the form of shorter review periods or avenues for unplanned reviews in the face of disruptive change.

The CSIRO *Convening Missions* offers useful insights for designing and implementing challenge-led RD&I strategies from which the Expert Panel can learn. CSIRO underscores the importance of agility and iterative design when approaching coordinated, sustained efforts to orient and align RD&I efforts around priority areas. This includes a theory of change that defines multiple pathways to impact, allows for experimentation, and prioritises learning and adaptation to respond to shifts and new opportunities in the RD&I system. While CSIRO adopts a timebound approach to planning, review processes are shorter – typically two years – and a cycle of implementation, evaluation and refinement sits at the core. This iterative approach seeks to overcome and mitigate risks such as initial bias in problem framing and technology lock in.[4]

> **Recommendation 2:** Develop focus areas that are sufficiently broad and accompanied by processes for iterative review to respond to technological and societal developments and new opportunities for innovation.

Focus area prioritisation must be transparent and expert-led

In principle, the Academy supports the proposed governance structure, particularly that focus areas selection will be informed by insights from academia, businesses, public officials, and First Nations communities. However, the selection process must be transparent and genuinely cross-disciplinary and cross-sectoral to provide a balanced perspective where all relevant disciplinary expertise is considered and incorporated.

> **Recommendation 3:** The advisory group must be expert-led and genuinely cross-disciplinary and cross-sectoral to ensure focus area selection is informed by robust and varied inputs.

We note that the Policy Paper refers to a stronger role for Australia's Chief Scientist in RD&I governance, albeit without further details. The Chief Scientist is a key intermediary between research and policymaking, and they play a critical role in providing independent, robust advice on nationally important issues relating to science and technology, research, and innovation. The

[3] Kantor S and Whalley A (2025) 'Moonshot: Public R&D and growth', *American Economic Review*, 115 (9): 2891–2925**.**

[4] Olsen-Boyd A, Cooke A, Pring R, McBride C, Battaglia M (2023*) Convening missions: A playbook for collective implementation of mission-oriented innovation*. Brisbane: CSIRO.

Academy is broadly supportive of a stronger role for the Office of the Chief Scientist, and scientific and research expertise in policy advice more generally. However, we suggest that this be coupled with a complementary position of Chief Social Scientist. This will ensure a genuinely cross-disciplinarity and integrated approach to RD&I planning and governance, protecting against narrow conceptualisations of impact and the risk of overlooking opportunities and emerging areas in advice to Government.

> **Recommendation 4:** Provide further details on how the role of the Chief Scientist could strengthen RD&I governance, and expand the remit of the Office of the Chief Scientist to include a complementary position of Chief Social Scientist to ensure an integrated approach.

A narrow conceptualisation of research impact may inadvertently limit bold choices in research

The Policy Paper notes the importance of both basic and applied research for an RD&I system and the proposed model will reportedly retain core funding for investigator-led research. Yet, the proposed model is underpinned by a narrow conceptualisation of research impact, focused on translation and commercialisation opportunities, and a model for research agenda setting and investment that is disproportionately shaped by industry, business and investors. This narrow focus on translation and commercial viability may invertedly limit appetite for exploration and risk in research. This approach will undermine the foundational knowledge needed for later RD&I and the breakthrough discoveries, ideas and innovations that investigator-led research produces. This will have a freezing impact on innovation over the next decade, hollowing out the expertise Australia needs to guarantee its future and leaving the nation to fall further behind in an increasingly competitive global RD&I landscape.