STRATEGIC EXAMINATION OF RESEARCH AND DEVELOPMENT

Submission to the Strategic Examination of Research and Development

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 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) Discussion Paper.

Introduction

The Academy welcomes the opportunity to contribute to this examination and congratulates the Australian Government on its on its decision to engage in a timely and comprehensive examination of Australia's R&D system. However, we note that many of the issues raised in the Discussion Paper have been of long-term concern and the Strategic Examination is not a novel exercise. Since the 1970s, successive Australian Governments have overseen various reviews, programs and research and development (R&D) priority statements that have sought to address low levels of business investment, establish challenge-led R&D strategies, and close the research-practice gap. Previous activities have tended to address problems through conservative, incremental adjustments to existing R&D systems and measures, with limited coherence and continuity.[1]

The Discussion Paper makes a strong link between R&D intensity, technological change and enhanced productivity. However, evidence to support this implied causation is not so clear, and it is often a matter of using R&D investment more efficiently for high-quality R&D that targets the key drivers of productivity.[2] Indeed many of the international examples of R&D reform noted in the Discussion Paper, while successfully increasing R&D intensity, have not contributed substantially to productivity growth. Although this definitional point is beyond the scope of the Terms of Reference, the Academy wishes to highlight that there is a more nuanced story to tell about productivity and some of the assumptions underpinning the case studies of successful R&D reform cited in the Discussion Paper.

The fundamental question underpinning the Strategic Examination is why Australia does not produce the level of R&D that is considered optimal? The measures that are currently in place are clearly not delivering the intended outcomes. The Academy proposes that for the full opportunity of the Strategic Examination to be realised, new considerations, perspectives, and solutions are required. The Strategic Examination is an important opportunity to rethink the policy mix shaping our national economy and broader society, to move away from longstanding but ineffectual measures, and to build on and adapt successful measures and programs.

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[1] Lewis JM and Mikolajczak G (2023) 'Policy on innovation in Australia: Divergence in definitions, problems, and solutions', *Australian Journal of Public Administration*, 82: 26–45, https://doi.org/10.1111/1467-8500.12575.
[2] Research shows that firm-level R&D investment has no association with firm-level productivity across the OECD at low levels of R&D intensity. There are also inter-sectoral differences with high-investing firms in technology dependent sectors achieving larger productivity gains from R&D investment. See: Kancs d'A and Siliverstovs B (2016) 'R&D and non-linear Productivity Growth', *Research Policy,* 45(3): 634–646, https://doi.org/10.1016/j.respol.2015.12.001.

The Academy's submission posits that the integration of social science research and expertise into Australia's national R&D strategy will support a comprehensive, purposeful and impactful R&D system.

We make 10 recommendations:

- **Recommendation 1:** Increase Australian Government R&D investment as a share of GDP towards the OECD average.

- **Recommendation 2:** Develop and embed a long-term, challenge-led national R&D strategy that addresses the full range of economic and societal goals.

- **Recommendation 3:** Establish dedicated funding bodies aligned with national R&D priorities for coordinated, long-term investment.

- **Recommendation 4:** Consider discontinuing the R&D Tax Incentive (R&DTI), replacing it with a program that is more accountable, outcomes-focused, and rigorous.

- **Recommendation 5:** Consider what R&D looks like in the service sector and explore opportunities for greater service sector innovation and investment.

- **Recommendation 6:** Adopt a definition of R&D that is broad enough to include the full range of economic and societal goals, rather than the narrow definition which has been applied previously.

- **Recommendation 7:** Develop a distinct First Nations R&D strategy and dedicated R&D funding mechanism to position First Nations peoples to lead R&D that affects them—as community leaders, traditional knowledge holders, Indigenous data custodians, researchers, and entrepreneurs.

- **Recommendation 8:** Explicitly consider and engage with social science research and expertise as the Expert Panel builds, tests, and decides on recommendations, policy options, and the action plan for the path ahead.

- **Recommendation 9**: Consider the national data infrastructure investments needed to support and grow R&D and integrate social science insights for innovative solutions to economic and societal goals.

- **Recommendation 10:** Reforms progressed via the Strategic Examination should explore and trial the technical and behavioural mechanisms and support networks needed to improve cross-sectorial collaboration.

The Academy's recommendations are intended to be practical and support the Expert Panel. As they build, test and decide on the recommendations, policy options, and action plan for a high performing R&D system, we welcome the opportunity to connect the Expert Panel with Academy Fellows.

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.

A coordinated, coherent and appropriately funded R&D system demands government leadership

Australian business and industry under-invest in R&D in comparison to other developed counties, and our R&D system is siloed and inconsistently engages with national priorities. This is both a matter of perceived need and risk appetite. Most Australian businesses are investing in R&D to a level that is deemed adequate *for their needs.* Only around 5-15 per cent of business leaders in small and medium-sized enterprises (SMEs) want to grow their

business substantially and Australia's domestic markets are too small for this to change risk-reward evaluations when considering innovation and R&D investment.[3]

Culture and communication are also at play. Efforts to showcase the substantial social and economic benefits of research and innovation and build public support for R&D have been inconsistent and ad hoc. Successive exercises have restated the problem and offered conservative adjustments to existing ineffective measures, and there have been years of inertia in climate, resource, and manufacturing policy and a lack of concern for sovereign capability. This has signalled to business and industry a culture of complacency and an R&D system that lacks coordination and long-term strategic direction.[4]

Activating more R&D investment demands that the Australian Government own and lead the nation's strategic R&D agenda through direct funding and effective policy incentives for State and Territory, business, industry, international, and philanthropic investments. Australia's R&D expenditure as a percentage of GDP has steadily declined since 2007, falling from 2.4 per cent to just 1.7 per cent in 2021. This is well below the OECD average of 2.7 per cent.[5] Australian Government expenditure on R&D is 0.49 per cent of GDP, also below the OECD average of 0.74 per cent.[6] This trend must be reversed if the Australian Government's stated goal of improving R&D performance is to be met.

> **Recommendation 1:** Increase Australian Government R&D investment as a share of GDP towards the OECD average.

The Australian Government must engage in careful, long-term planning to develop a national R&D strategy that is challenge-led and oriented around coherent and strategic messaging. The Academy welcomes current efforts to this end, such as the National Science and Research Priorities (NSRP) and the National Research Infrastructure (NRI) Roadmap. However, past similar national priorities have described but not significantly influenced the focus of Australia's R&D investments. This points to the need to articulate more clearly national R&D priorities and the intended outcomes and benefits for the economy and society, and to embed and measure this across the R&D system.

> **Recommendation 2:** Develop and embed a long-term, challenge-led national R&D strategy that addresses the full range of economic and societal goals.

As the Discussion Paper notes, advanced, internationally competitive R&D systems rely on investment mechanisms that improve coordination across the system and support a range of R&D activities to occur. These investments grow and maintain sovereign research capability—both basic and applied—to fuel innovation and commercialisation opportunities, drive international collaboration, and deliver long-term societal benefits.[7]

In Australia, short-term funding cycles and the broad and thin nature of Australian Government R&D investment has resulted in a funding system that lacks the coherence and consistency needed to effectively address national R&D priorities. Duplicated effort and inefficiencies across projects are also common. Dedicated funding

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[3] Department of Industry, Sciences and Resources (2023) *Barriers to collaboration and commercialisation,* Industry Innovation and Science Australia, Canberra.

[4] Calcut B (2021) 'She'll be right mate: Australian complacency and national responses to wicked social problems', *Cosmopolitan Civil Societies*, 13(2): 91–96, http://dx.doi.org/10.5130/ccs.v13.i2.7443; Lewis (2023) 'Policy on innovation in Australia'.

[5] OECD (2023) 'Gross domestic spending on R&D', OECD, accessed 4 April 2025.

[6] Department of Industry, Sciences and Resources (2025) '2024–25 science, research and industry (SRI) budget tables', accessed 7 April 2025.

[7] Academy of the Social Sciences in Australia (2021, 14 April) 'University research commercialisation consultation paper, Academy of the Social Sciences in Australia submission to Department of Education, Skills and Employment', Academy of the Social Sciences in Australia, accessed 31 March 2025.

bodies that span all national R&D priorities, similar to the Medical Research Future Fund, may be one way to support more coordinated and purposeful investment in R&D. The programs funded should be ongoing and conducted before, during and after regular policy and funding cycles to generate a continuous flow of research and to enable the effective use of emerging intellectual property (IP), data assets, and other research insights.[8]

> **Recommendation 3:** Establish dedicated funding bodies aligned with national R&D priorities for coordinated, long-term investment.

Bold reform demands decisive action, not conservative adjustments to existing ineffective measures

Over many years, the Australian Government has sought to address low levels of business and industry investment in R&D through various iterations of the R&D Tax Incentive (R&DTI). However, research examining the impact of R&DTIs finds that they do little to increase market sector productivity or technological or efficiency change. Businesses can reclassify as R&D activities that they would ordinarily undertake to access the R&DTI, with no change to the level of actual R&D investment.[9] There is a mismatch between the level of accountability and rigour associated with, for example, funding for innovation awarded through the Australian Research Council (ARC) and the benefits received through the R&DTI.

The R&DTI is an expensive program with little accountability for outcomes. The 2025–26 Budget Papers include an allocation of over $4.5 billion for the R&DTI for the mining, manufacturing, and construction sectors. This is roughly equivalent to the combined budgeted amount for research undertaken or funded by the Commonwealth Scientific and Industrial Research Organisation, Australian Nuclear Science and Technology Organisation, Australian Institute of Marine Science and ARC.[10] In comparison, Japan, Korea, Germany, Denmark, Switzerland, Finland, Norway and Sweden all have higher than OECD average government R&D expenditure. Some offer no R&D tax relief, and the rest rely more heavily on direct government budget allocations to R&D than Australia does.[11]

> **Recommendation 4:** Consider discontinuing the R&DTI, replacing it with a program that is more accountable, outcomes-focused, and rigorous.

There are demonstrated, significant spillovers to innovation and productivity growth from public spending on R&D for research agencies and universities.[12] One of the key factors contributing to the return on R&D investment in university research is the outcomes-focussed nature of grants and the associated reporting requirements. The impact and efficiencies of public spending on business and industry R&D could be enhanced by replicating these requirements, either via the R&DTI (if it is retained) or its replacement and other grants programs.

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[8] European Commission (2024) *The future of European competitiveness: Part A, A competitiveness strategy for Europe*.

[9] Elnasri A and Fox KJ (2017) 'The contribution of research and innovation to productivity', *Journal of Productivity Analysis*, 47: 291–308, https://doi.org/10.1007/s11123-017-0503-9; Fox K (2024) 'Impacts of public R&D funding on innovation and productivity', UNSW Sydney and ESCoE Conference on Economic Measurement Alliance Manchester Business School Manchester, 15–17 May 2024.

[10] Department of Treasury (2025) *Budget 2025–26: Budget strategy and outlook, budget paper no. 1*, Commonwealth of Australia, Canberra.

[11] Department of Industry, Sciences and Resources (2025) '2024–25 science, research and industry (SRI) budget tables'.

[12] Haskel J and Wallis G (2013) 'Public support for innovation, intangible investment and productivity growth in the UK market sector', *Economics Letters* 119(2):195–198; Elnasry and Fox (2017) 'The contribution of research and innovation to productivity'; Fox (2024) 'Impacts of public R&D funding on innovation and productivity'.

Australia's rural research and development corporation (RDC) model involves co-contributions from industry and the Australian Government through a combination of industry levies and matched government funding. Applications for research grants undergo an assessment process to ensure that research is targeted to the needs of industry. The RDCs themselves are accountable for their expenditure.[13] Internationally, grants awarded by various Aotearoa New Zealand Government agencies resemble academic grant processes in terms of application criteria and processes, including reporting requirements and demonstrating that activities are beyond business as usual and consider end-user adoption strategies.[14]

The Strategic Examination must look beyond manufacturing and technological innovation to consider Australia's national and sectorial context and broader societal goals

Australia's R&D system and the kinds and impact of investments cannot be separated from the limiting and enabling conditions of our education and training system and the features of our economy and workforce, including business and industry mix, economic complexity, the degree and nature of international economic embeddedness, and firm size, structures and mix.

Responses to R&D challenges often call for increased investment in and scaling up of industry, which generally means manufacturing and selling more products. The Discussion Paper has also adopted this approach. However, Australia's economy, workforce and GDP are dominated by the service sector, including human and public services.[15] This is also where employment and economic activity is projected to grow, particularly as we adopt and respond to automated manufacturing and the productivity improvements promised by artificial intelligence (AI).[16] Given the established role of the service sector in Australia's economy and workforce, and its projected growth, R&D policies and funding programs focused on increasing the productivity and value of public and private-sector services should be an area of particular focus for the Expert Panel.

The Expert Panel must consider how to align Australia's R&D investment and activity with our national context, existing strengths and projected growth areas, rather than focus on unachievable aspirations in other sectors. The Academy notes that several of the international examples of R&D reform cited in the Discussion Paper present solutions that are not reasonable benchmarks for Australia. The German Fraunhofer Institutes, for instance, exist in an R&D system with higher levels of government, business, and industry investment. The Institutes also benefit from an education and training system that is tightly coupled to occupations and industries and a business and industry mix that is not dominated by SMEs and the associated growth and scalability challenges.

> **Recommendation 5:** Consider what R&D looks like in the service sector and explore opportunities for greater service sector innovation and investment.

R&D promises many of the innovative solutions needed to safeguard a resilient and strong economy and society. The challenges facing Australia now and into the future are complex and straddle human, natural, and physical systems. Despite cutting across disciplines and sectors, these challenges—from an ageing population

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[13] Department of Agriculture, Fisheries and Forestry (2025) 'Research and development corporations', Department of Agriculture, Fisheries and Forestry, accessed 31 March 2025.
[14] See for example: Ministry of Primary Industry (2024) 'SFF Futures assessment criteria', Ministry of Primary Industry, accessed 4 April 2025.
[15] Productivity Commission (2021) *Things you can't drop on your feet: An overview of Australia's services sector productivity,* Commonwealth of Australia, Canberra.
[16] National Skills Commission (2021) *The state of Australia's skills 2021: Now and into the future,* Commonwealth of Australia, Canberra.

and the increased demands on the public healthcare system to climate change and energy transitions—are largely characterised in the Discussion Paper as having technological solutions. Yet technology acceptance and use are fundamentally human activities.

Social science research and expertise help build our collective knowledge of the social systems, structures, and institutions that shape our lives. These insights help policymakers design policies that promote societal outcomes and understand the behavioural and institutional factors that shape behaviour change for technology acceptance and uptake. They also help industry leaders and innovators make decisions about investment opportunities and people management for products and services that are responsive, competitive, and improve the lives of current and future generations.[17]

Australia's R&D system would benefit from embracing and integrating the social sciences to align research efforts with societal needs, inform innovation and business strategies, and adapt existing programs such as the RDCs. Internationally, the United Kingdom Research and Innovation (UKRI) councils demonstrate that integrating social science research into national R&D strategies with commensurate funding, strengthens economic complexity, enhances innovation, and delivers more responsive products and services.[18]

> **Recommendation 6:** Adopt a definition of R&D that is broad enough to include the full range of economic and societal goals, rather than the narrow definition which has been applied previously.

A modern and inclusive R&D system must recognise and elevate First Nation's knowledge, knowledge systems and leadership

First Nations knowledge, knowledge systems and ways of working offer perspectives and opportunities previously overlooked in Australia's R&D system, with the potential to bring immense value to the economy and improve the lives of Aboriginal and Torres Strait Islander people. The Strategic Examination provides a unique opportunity to operationalise the funding models and policy settings across government, research, business and industry needed to elevate and integrate First Nation-led and focused innovation in Australia's R&D system.

Currently, the limited availability of First Nations-led or dedicated research infrastructure creates a bottleneck for the R&D resources needed by communities, organisations, and researchers. Moreover, the current system relies on established infrastructure, which sees non-Indigenous designed projects and researchers elevated or retrofitted to address First Nations priorities.[19]

The development of a distinct First Nations R&D strategy will provide the foundation needed to embed Indigenous innovation and leadership within the R&D system. As per the NSRP, to ensure the best outcomes, this strategy must be guided by and engage with First Nations peoples and organisations and be informed by First Nations philosophies.

A First Nations R&D strategy must be accompanied by dedicated, long-term funding to attract new ideas and strengthen Aboriginal and Torres Strait Islander knowledge networks. A First Nations-led innovation investment strategy, overseen by First Nations experts who can apply and apportion capital can embed First Nations

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[17] Sovacool BK and Hess DJ (2017) 'Ordering theories: Typologies and conceptual frameworks for sociotechnical change', *Social Studies of Science*, 47(5): 703–750, https://doi.org/10.1177/0306312717709363; Western M (2019) 'How to increase the relevance and use of social and behavioral science: Lessons for policy-makers, researchers and others, *Justice Evaluation Journal,* 2(1):18–34, https://doi.org/10.1080/24751979.2019.1600381.
[18] UKRI (2022) *UKRI Strategy 2022–2027: Transforming tomorrow together* , UKRI, Swindon.
[19] Gordon S, Quiggin R, Trust I, Watego L, Evans M and Jack G (2024) 'Indigenous business in Australia: Opportunities, tensions and new futures', in Gavin J, Evans M, Lythberg B and Mika J (eds.) *Managing the post-colony: Voices from Aotearoa, Australia and the Pacific*, Springer Nature, Singapore.

knowledge and innovation across the R&D system. Funding to incentivise and support the emergent First Nations startup scene and to resource communities, organisations, and businesses to access research training and attend academic and industry fora will provide the capabilities and connections needed to bring previously excluded perspectives into Australia's R&D system.

Safeguarding traditional knowledge and cultural expressions as sources of First Nations innovation is also a key consideration. One way to achieve this would be dedicated, stable funding to support Traditional Owners to invest in IP protection through patent law.

> **Recommendation 7:** Develop a distinct First Nations R&D strategy and dedicated R&D funding mechanism to position First Nations peoples to lead R&D that affects them—as community leaders, traditional knowledge holders, Indigenous data custodians, researchers, and entrepreneurs.

The explicit integration of social science research and expertise will protect against reinvention and help realise the full opportunity of Australian R&D

An R&D system that supports growth and prosperity is more than a matter of simply producing and commercialising new goods and services. The system must also coalesce around clear priorities and models of how R&D can address broader economic and societal goals. Bold reform demands new considerations and perspectives, and the Academy urges the Expert Panel to learn from past mistakes.

Social science can support such outcomes, through analysis of assumptions and lessons learnt in previous unsuccessful attempts by the Australian Government to enhance R&D performance. Social sciences research and expertise can also help identify and operationalise new contributions—particularly from sectors and groups previously overlooked—and investment and innovation opportunities that align with Australia's national context and projected growth areas.

Research from the social sciences and cognate fields, such as design thinking and implementation science, plays a leading role in identifying opportunities for more effective and efficient service delivery and professional practice.[20] For instance, integrated government-collected administrative data, improved computing capabilities and greater data access for researchers have unlocked innovation that has enabled Australia's healthcare and support system to adapt. Social scientists draw on such data to analyse the social, cultural and developmental drivers of health and motivators for behaviour change.[21]

If effectively and equitably implemented, disruptive new technologies have the potential to both enhance productivity and the quality of care. Social scientists have engaged with AI developers and age care providers in Australia to explore how digital inclusion can be embedded in the design of AI and other elder care automation technologies.[22] The broad insights that the social sciences bring provide the foundations to transform clinical practice and service delivery and implement the new technologies, diagnostic tools, and treatments needed for a healthy, thriving Australia.

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[20] Liedtka J, Salzman R and Azer D (2017) *Design thinking for the greater good: Innovation in the social sector*, Columbia University Press, Columbia; Wensing M and Wilson P (2023) 'Making implementation science more efficient: Capitalizing on opportunities beyond the field', *Implementation Science*, 18, Article 40, https://doi.org/10.1186/s13012-023-01298-9.

[21] The Academy of the Social Sciences in Australia (2024) *The future of Medicare: Research-informed policy for better access and health*.

[22] Neves BB, Petersen A, Vered M, Carter A and Omori M (2023) 'Artificial intelligence in long-term care: Technological promise, aging anxieties, and sociotechnical ageism', *Journal of Applied Gerontology*, 42(6): 1274–1282, https://doi.org/10.1177/07334648231157370; Neves BB, Omori M, Petersen A, Vered M and Carter A (2024) 'Navigating artificial intelligence in care homes: Competing stakeholder views of trust and logics of care', *Social Science and Medicine*, 358, Article 117187, https://doi.org/10.1016/j.socscimed.2024.117187.

Academy Fellows include experts in business and economics, society and culture, technology uptake, and the broader research and higher education ecosystem. The Academy encourages the Expert Panel to engage with its Fellows as key stakeholders throughout the Strategic Examination process.

> **Recommendation 8:** Explicitly consider and engage with social science research and expertise as the Expert Panel builds, tests, and decides on recommendations, policy options, and the action plan for the path ahead.

Adequate investment in Australia's national data infrastructure is fundamental to positioning Australia's R&D system for success

Australian R&D exists in a global marketplace characterised by competition for talent and resources and increasing geopolitical and economic uncertainty. As the Discussion Paper notes, we have seen a refocusing of public and private R&D investment that seeks competitive advantages, a retreat from globalisation and a contraction of the international investment, supply chains, and labour that have previously benefited Australia's R&D system. Mitigating these risks requires a careful balance between investing in Australia's sovereign R&D capabilities and maintaining and growing international collaboration where possible.

While the Academy welcomes recent developments to improve availability and access to government-collected data to support world leading R&D, the prohibitive costs, protracted data sharing arrangements, and insufficient infrastructure investment creates capacity bottlenecks and limits innovation.[23] The Australian Bureau Statistics, for instance, is struggling to meet surging demand for data access from the research sector and has moved to a cost recovery model for some data services, thus limiting what research can be done.[24] The Academy's *Decadal Plan for Social Science Research Infrastructure* sets out solutions to problems such as the limited access to linked data from the national spine and outlines how to achieve an affordable, inclusive business model that meets growing demand and creates opportunities for projects that showcase high levels of innovation and positive societal impacts.[25]

> **Recommendation 9**: Consider the national data infrastructure investments needed to support and grow R&D and integrate social science insights for innovative solutions to economic and societal goals.

With a workforce of more than 2.5 million across Commonwealth, State and Local Governments, the public sector presents a considerable and often overlooked opportunity for R&D investment and innovation to drive growth, prosperity, and productivity. Moreover, there is a growing demand from the public for more innovative approaches to policymaking as service delivery, recognised in the *Independent Review of the APS* and subsequent APS Reform agenda.[26] The public service is, therefore, particularly well-placed to explore how new technologies and processes generated by R&D can materially boost productivity.[27] Opportunities include data-driven modernisation of government services, digital tools and behavioural economics for more personalised

[23] Academy of the Social Sciences in Australia (2024) *Connected, innovative and responsive: Decadal plan for social science research infrastructure 2024-33*.

[24] Australian Bureau of Statistics (2021) 'DataLab' Australian Bureau of Statistics, accessed 31 March 2025.

[25] Academy of the Social Sciences in Australia (2024) *Connected, innovative and responsive*.

[26] Department of the Prime Minister and Cabinet (2019) *Our public service, our future: Independent review of the Australian Public Service*, Commonwealth of Australia, Canberra; Evans M, Dare L, Tanton R, Vidyattama Y and Seaborn J (2019) *Trust in Australian regional public services*, Institute for Governance and Policy Analysis, University of Canberra, Canberra.

[27] Cuffe, H (2024) 'Knowledge brokering for public sector reform', *Australian Journal of Public Administration*, 1–6, https://doi.org/10.1111/1467-8500.12665.

programs that both reduce costs and enhance public trust, and new and more efficient ways of using public finance, such as outcomes-driven equity loans and social impact bonds. [28]

A unique opportunity to trial and scale the conditions for cross-sectoral collaboration

Finally, the Strategic Examination provides an opportunity to address workforce development and mobility challenges that undermine innovation and research uptake and implementation. As the Discussion Paper notes, the mismatch between end-users' needs and the narrow topic focus in researcher education and training, inadequate mechanisms for businesses to access and use academic research, and the undervaluing of cross-sectorial experience prevents meaningful collaboration and the movement of ideas and people across sectoral boundaries.

Social scientists have examined the behaviours and mechanisms than can help overcome barriers to research-government-business collaboration. These include bureaucratic-level incentives and practices that encourage and normalise cross-sectoral experience, such as co-designed research and project-specific secondments, career progression pathways that reward cross-sectoral experience and collaboration, and more flexible contracts that include peer-review, open access fees and provisions for the publication of government and industry procured research. [29] In university settings, dual-sector models can enhance university-industry partnerships through sponsored PhDs and collaborative research projects that are responsive to industry and workforce needs. [30]

Initiatives of this kind promote the diverse networks, attitudinal shifts, cross-sector experience, and new ways of working needed to embed cross-boundary thinking and the role of research transfer and exchange in supporting innovation. There is an opportunity to trial and draw lessons from these mechanisms and others, which can be scaled up and applied to a range of sectors and industry contexts.

> **Recommendation 10:** Reforms progressed via the Strategic Examination should explore and trial the technical and behavioural mechanisms and support networks needed to improve cross-sectorial collaboration.

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[28] Productivity Commission (2025) 'Australia's Productivity Pitch: What you told us', Productivity Commission, accessed 4 April 2025; McKinsey & Company (2017) *Customer experience: New capabilities, new audiences, new opportunities*; Department of the Prime Minister and Cabinet (2019) *Independent review of the APS.*

[29] Cuffe H, Vromen, A and Brownlee P (2024) *Brokering knowledge, brokering relationships: Improving research-practice collaboration in support of public sector reform*, ANZSOG Research Insights No. 35, ANZSOG, Melbourne; Ball S (2024) *Australian Public Service-academia collaboration workshop 2023: Outcomes report*, Commonwealth of Australia, Canberra; ACOLA (2023) *Research assessment in Australia: Evidence for modernisation*, A report to the Office of the Chief Scientist, Commonwealth of Australia, Canberra; Jasny BR, Wigginton N, McNutt M, Bubela T, Buck S Cook-Deegan R, Gardener T, Hanson B, Hustad B, Kiermer V, Lazer D, Lupia A, Manrai A, McConnell L, Noonan K, Phimister E, Simon B, Strandburg K, Summers Z and Watts D (2017) 'Fostering reproducibility in industry-academia research', *Science,* 357(6353):759–761, https://doi.org/10.1126/science.aan4906; Western (2019) 'How to increase the relevance and use of social and behavioral science'.

[30] Department of Education (2023) *Australian universities accord: Final report*, Commonwealth of Australia, Canberra.