

Strategic Examination of Research and Development: response to issues papers 1-4

Australian Academy of Science
submission

30 September 2025

Australian Academy of Science response to issues papers 1-4

National coordination for R&D impact

(This section responds to the issues paper: National coordination for RD&I impact)

What aspects of the model would work well?

The Academy welcomes the unambiguous recognition that the fragmentation of Australia's RD&I system is a barrier to progress. We also welcome the inclusion of a strategic process for agreeing focus areas in the model, which reflects the Academy's recommendation for national pillars for co-investment.

The Academy welcomes the positive features of the proposed coordination model:

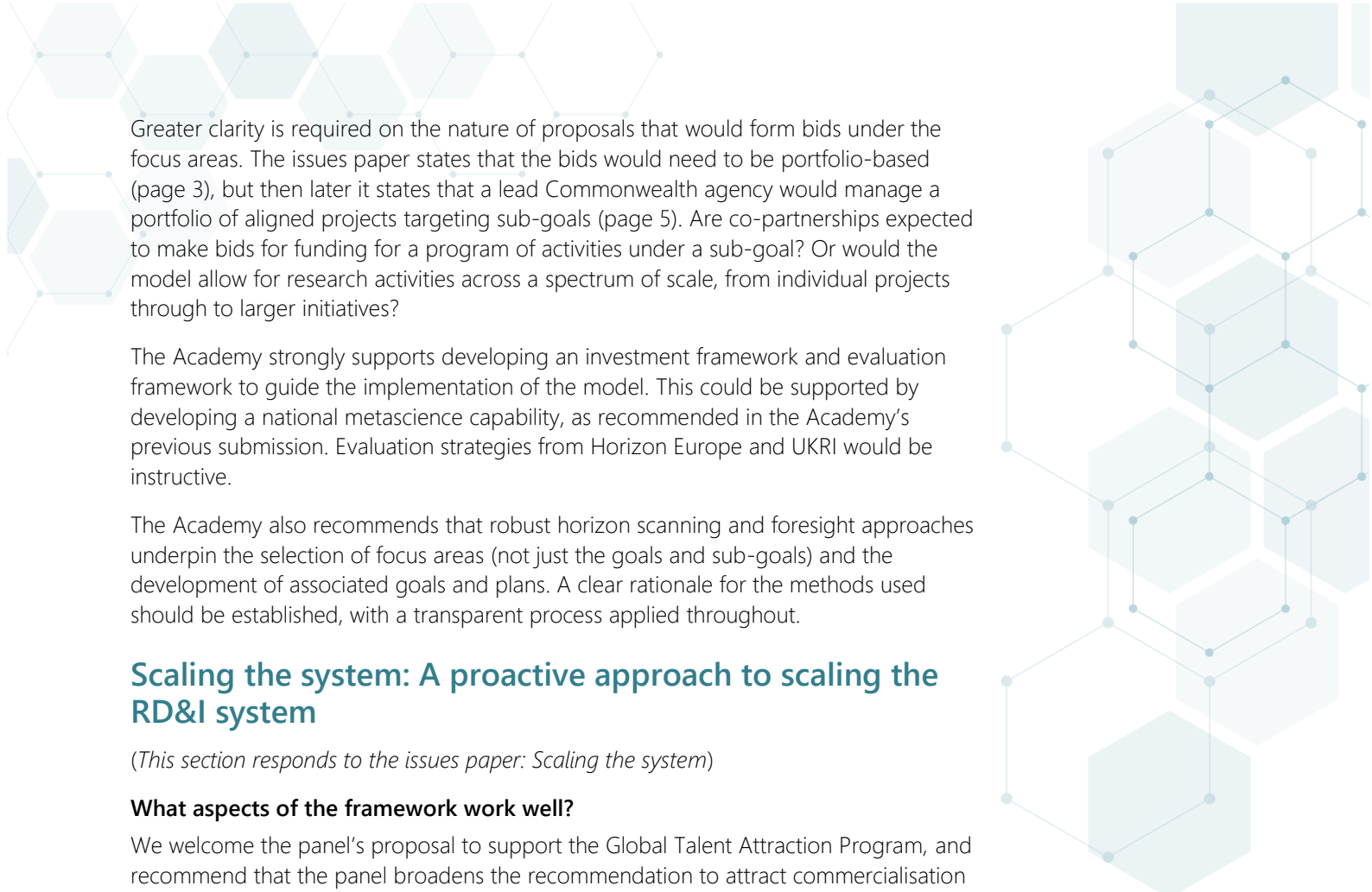
- Developing focus areas to direct co-investment towards areas of national importance.
- SMART goals under each focus area, with activity supported over a ten-year timeframe to support planning, investment, collaboration and progress.
- Tri-sector partnerships between governments, industry and research organisations to pursue research activities aimed at the sub-goals.
- Strategically consolidating existing Commonwealth government programs geared towards translation.
- A Commonwealth-level governance board to coordinate and evaluate progress, ensure strategic direction and develop whole of system strategies for research infrastructure and other R&D enablers.

What could be improved and how?

To prioritise R&D at the highest levels of government, the proposed governance model could be strengthened by establishing an R&D Strategy Cabinet subcommittee and an R&D Ministerial Council under the National Cabinet federation architecture, to provide a dedicated forum for cooperation between federal, state and territory governments.

Consideration should also be given to which department the advisory group, governance board and associated secretariat would sit within. The Academy recommends that the governance board be situated with the Department of Prime Minister and Cabinet to enable high-level coordination across all parts of government, reflecting its cross-disciplinary advisory role. The Academy also previously recommended establishing an R&D statement in the Federal Budget to elevate R&D as a national priority.

An issue that is not clear in the proposed coordination model is how broad coordination across the whole R&D system would be achieved to connect discovery research through to the activities under the pillars. In its previous submission, the Academy proposed that an Australian Innovation Council would provide a collaborative forum bringing together representatives from major research funding agencies and programs to provide research policy advice and enable coordination to logically sequence funding. This integrated approach would support continuity from discovery to translation and commercialisation. It would bring together different entities and advisory boards that inform research priorities across the system (e.g. research agencies, the Australian Medical Research Advisory Board, etc). This responsibility could sit with the proposed Commonwealth-level governance board.



Greater clarity is required on the nature of proposals that would form bids under the focus areas. The issues paper states that the bids would need to be portfolio-based (page 3), but then later it states that a lead Commonwealth agency would manage a portfolio of aligned projects targeting sub-goals (page 5). Are co-partnerships expected to make bids for funding for a program of activities under a sub-goal? Or would the model allow for research activities across a spectrum of scale, from individual projects through to larger initiatives?

The Academy strongly supports developing an investment framework and evaluation framework to guide the implementation of the model. This could be supported by developing a national metascience capability, as recommended in the Academy's previous submission. Evaluation strategies from Horizon Europe and UKRI would be instructive.

The Academy also recommends that robust horizon scanning and foresight approaches underpin the selection of focus areas (not just the goals and sub-goals) and the development of associated goals and plans. A clear rationale for the methods used should be established, with a transparent process applied throughout.

Scaling the system: A proactive approach to scaling the RD&I system

(This section responds to the issues paper: Scaling the system)

What aspects of the framework work well?

We welcome the panel's proposal to support the Global Talent Attraction Program, and recommend that the panel broadens the recommendation to attract commercialisation and research translation talent.

What could be improved and how?

None of the proposals in the issues papers target increasing government funding for research. Over the last decade, government investment in R&D has declined as a percentage of GDP.

As far as the Academy is aware, our proposal for a temporary R&D levy is the only budget-positive proposal that creates a new revenue stream that would increase the pool of funds available for research, particularly basic research that generates the knowledge that is the foundation for innovation.

We propose incentivising large business R&D investment by applying either a 0.25% or 0.5% R&D levy to businesses with annual revenue of \$100 million or more that can be discounted if businesses invest in R&D. We propose that the levy revenue be invested as a Research Future Fund and its returns invested in research. [Economic modelling](#) of the levy commissioned by the Academy indicates that under the proposal, the more a business invests in R&D activities, the lower the R&D levy payable. R&D-intensive industries are impacted the least by this measure.

Another way government funding for research could be increased is through raising disbursements from the MRFF to the maximum amount possible while maintaining the fund. [Costings](#) by the Parliamentary Budget Office, commissioned by Dr Monique Ryan MP, project that disbursement from the MRFF could be doubled and still maintain the fund at \$24 billion over the next ten years. With \$650 million annual disbursements, the MRFF is projected to grow to \$35.4 billion by 2035-36. An increase in MRFF funding must include an allocation to host institutions to address the full costs of research to facilitate sustained collaboration between research and clinical providers. We note that this solution targets health and medical research rather than the broader research sector.



The proposals to attract foreign investment and build ties internationally should be part of a broader strategic approach to deepen Australia's international research partnerships. This would be best delivered through a national framework for international R&D collaboration that would provide strategy, clarity and purpose to international engagement.

The Academy supports the proposal for industry PhDs to facilitate mobility and exchange of knowledge and skills between academia and industry. However, this does not address the critical issue of low-level financial support for PhDs. The full-time base stipend for a PhD student in Australia is \$33,511 (tax free). The minimum wage in Australia is \$49,296 (subject to income tax). In Australia, Higher Degree by Research students comprise more than half the research workforce (57% in 2020), and domestic enrolments are falling. Industry PhDs help by providing top ups to the PhD stipend, but this is not applicable to all PhDs. The proposals targeting industry PhDs could be strengthened by including a competitive minimum top up that industry must contribute.

RD&I incentives: Incentivising breakthrough innovation and ambitious R&D

(This section responds to the issues paper: RD&I incentives)

Which of our proposals will work well?

The Academy supports the reform concepts articulated in the issues paper to better target the R&D Tax Incentive (R&DTI) to support transformational R&D conducted in Australia, aligned with national priorities and incentivise novel, collaborative research and business growth.

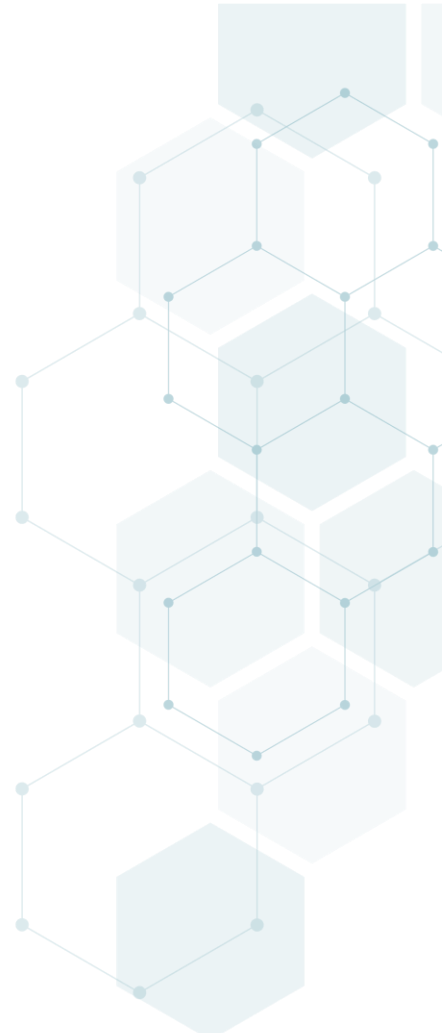
The proposed collaboration premium for large businesses to incentivise collaboration with scaleups and start-ups, and to undertake collaborative R&D activities is welcome. The collaboration premium should be used to incentivise industry to collaborate with the research sector and reward businesses who reach into universities and research organisations to form partnerships.

What should be improved and how?

Where possible, reforms to the R&DTI should be modelled to determine which interventions will be most effective at achieving these reform priorities.

Sharpening R&DTI eligibility conditions to improve additionality and spillovers should be included in the reforms. This could include eligibility conditions that target business growth and ambition and incentivise collaboration with researchers and start-ups. The proposal to base ongoing eligibility on outcomes including revenue growth from R&D activity would support this. The 2016 Ferris, Finkel and Fraser review of the R&D Tax Incentive recommended the collaboration premium and R&D intensity threshold as measures to improve additionality.

Another R&DTI reform for consideration is to enable R&DTI pre-eligibility at the beginning of the financial year before expenditure is claimed, to be adjusted at the end of the financial year based on actual accrued expense. This would give businesses greater certainty and encourage companies to strategically plan R&D investment and activities rather than the R&DTI being used solely as an accounting mechanism.



Investment and capital: growing investment and capital for RD&I

(This section responds to the issues paper: *Investment and capital*)

Which of our proposals work well?

The Academy supports changes to superannuation policy settings to establish this as a source of investment in RD&I.

What should be improved and how?

Government alone cannot reverse the decline in R&D investment in Australia, nor can it be achieved in one budget cycle. However, private sector investment will be aided when there is certainty that only government can provide. The Academy strongly recommends that a 10-year investment plan be developed so that both the public and private sectors can work together to create an R&D ecosystem that makes Australia globally competitive.

The Academy supports removal of barriers to investment via superannuation, venture capital and private equity. One barrier is the absence of mechanisms for superannuation fund managers to evaluate and consider risk and return associated with investment in R&D assets. This mechanism and expertise needs to be built in the superannuation sector or could sit adjacent to it as a function of government. This could support the issues paper proposal for superannuation funds to offer tailored investment options to preference investment in emerging Australian firms and technologies, whilst maintaining their regulatory and fiduciary obligations to superannuants.

Public-private partnerships between government and superannuation funds should be explored to enable long term investment in research infrastructure that requires large up-front investment, particularly where that infrastructure is also used by industry to innovate. These partnerships enable risk sharing and reduce the burden on public budgets.

Growing private investment in RD&I in Australia requires a culture shift to tackle the “conservative capital culture” acknowledged in the issues paper. This may be achieved via an “Innovation-Accord” that is developed and led by IISA as part of their proposed role in consolidating programs that stimulate commercialisation of research.

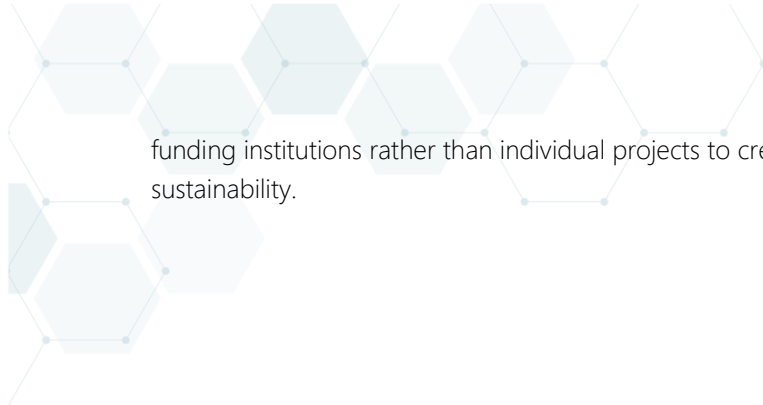
The panel could also consider additional measures to harness the substantial wealth transfer underway in Australia due to an aging population, with an estimated \$150 billion in inheritances expected in 2024 and a projected total of \$5.4 trillion over the next 20 years, up from \$3.5 trillion in 2017.¹

The issues paper does not make recommendations targeting philanthropy. Philanthropy can offer flexible funding that enables researchers to pursue innovative, high-risk projects that private research funding assessments may overlook; and support capabilities of for-purpose institutions to strategically respond to emerging challenges.

Philanthropic funders are more likely to invest when there is a clear government commitment, signaling stability and national interest. Government and philanthropic co-investment models could stimulate investment in early-stage research.

There is an opportunity for Australia to scale philanthropic donations that support long-term institutional core capabilities to build a robust and resilient not-for-profit sector –

¹ JBWere (2024). *The Bequest Report: Reshaping Australia by passing on more than assets*. <https://www.jbwere.com.au/content/dam/jbwere/documents/campaigns/JBWere-Bequest-Report.pdf>.



funding institutions rather than individual projects to create long-term impact and sustainability.



Strategic Examination of Research and Development: response to issues papers 5 & 6

Australian Academy of Science
submission

10 October 2025

Australian Academy of Science response to issues papers 5 & 6

Foundational research

(This section responds to the issues paper: Foundational research)

Which of our proposals will work well?

The Australian Academy of Science strongly supports the panel's three proposals to ensure long-term funding and strategic planning for national research infrastructure. NCRIS should have secure, strategic, long-term funding and organised, transparent funding rounds to give the sector, and research infrastructure organisations, more certainty.

The Academy also strongly supports the proposal for investment in next-generation, high-performance computing and data (HPCD) to underpin Australia's digital innovation and AI capabilities. **This must be supported by a long-term national strategy and roadmap to build national HPCD capacity.** Data-intensive research requires faster, scalable systems to process massive datasets and run high-resolution simulations. The expansion of HPCD capability also offers opportunities for innovative industry-research collaborations.

The Academy supports the idea of setting a share of national competitive grants to support longer term projects and suggests that a share also be aimed at supporting highly novel, potentially transformational research.

The Academy supports the proposal to simplify grant application and management processes to reduce regulatory burden and minimise administrative overheads. Burdensome, time-consuming application processes with low success rates do not serve Australia's research effort.


What could be improved and how?

The Academy is deeply concerned that the issues paper on 'foundational research' has no proposals aimed at boosting funding for discovery research, which data shows is in decline. There are few proposals that are aimed at supporting or strengthening discovery research.

The issues paper implies that research is only important if it is translated or commercialised. This attitude is concerning given the steady decline in investment in basic research for over a decade. Government budget allocations for R&D have stagnated at 0.36% of GDP, compared to the OECD average of 0.73% of GDP. The proportion of total expenditure on basic research contributed by government fell from 24% in 2002 to 16% in 2022. Funding for ARC and NHMRC has declined over the last decade, falling 27% from 2013-14 to 2023-24 (according to SRI budget tables).

It is inconceivable that the SERD could acknowledge the limited resources, rising costs of research and pressure funding models are under, yet not make any recommendations that meaningfully increase government investment in research.

The Academy supports the intention to protect and strengthen foundational research through sustainable funding models. The proposal to set a growth rate of ARC funding linked to the long-run GDP rather than CPI should be considered in comparison with other indexation models applied to competitive grant funding. Regardless, the presented indexation model will not create the shift needed to uplift investment in research. A 10-year investment plan must be developed so that the public and private sectors can work together to create an R&D ecosystem that makes Australia globally competitive and recognises R&D capability as a national strategic asset.



The paper proposes consolidation of translational research under the pillar focus areas. Under this model, the Academy recommends that most of the competitive grant funding through the ARC and NHMRC be secured for basic and applied research, with a limit set for how much funding can be directed to programmatic or priority-driven research. This would rebalance the focus on basic research which has become distorted over time with incoherent research policy settings that have prioritised translation and commercialisation, and abandoned basic research despite it being a legislated responsibility of funding councils.

The Academy supports the proposal for a robust R&D costing framework, which should inform decision-making on research funding, as well as increasing funding for indirect costs. Funding for indirect costs must also be available to medical research institutes who, unlike universities, are not eligible for the Research Support Program, and do not receive support for costs associated with MRFF grants.

The proposal to provide a premium rate of indirect costs support for projects in the pillar focus areas could bias the research pursued by universities towards translational research, which would be detrimental to basic research; the engine of future innovations.

The proposal to “Redesign funding and performance frameworks to better recognise translational impact, industry engagement and societal benefit” risks placing emphasis on metrics that are not suited to assessing the impact of basic research.

Government as an exemplar

(This section responds to the issues paper: Government as an exemplar)

Which of our proposals will work well?


The Academy supports the following proposals:

- Establish an outcome-focused national RD&I performance framework that defines metrics to assess impact (economic, social and environmental) and quality at both the program and system levels.
- Improve data collection for more frequent and comprehensive monitoring of RD&I performance, with metrics aligned to the national framework.
- Streamline and simplify government grant application and management processes nationally.
- Embedding PRFAs in a more coordinated RD&I system.

What could be improved and how?

The Academy strongly recommends that a 10-year investment plan be developed so that the public and private sectors can work together to create an R&D ecosystem that makes Australia globally competitive. This plan should include approaches to grow the pool of funds available for public investment in research, such as a Research Future Fund which could be established through a temporary R&D levy, a mechanism that has been successfully implemented in other parts of the R&D system.

The Academy welcomes the proposal to establish an outcome-focused national RD&I performance framework and improve data collection for enhanced monitoring of RD&I. The framework should reflect innovations in data-driven approaches to research assessment, including using digital identifiers to track research activity (such as ARDC’s RAiD service). The report “Research Assessment in Australia: Evidence for Modernisation” by ACOLA, provides recommendations for Australia’s system.



The Academy supports the proposal to simplify grant application and management processes. The requirements for researchers, reviewers and research organisations are disproportionate given the size of the grants and the very low success rates.

For competitive grant funding, burden could be reduced by implementing smaller or staged applications and introducing expression of interest stages. Commonwealth Research Rules and Guidelines across all Commonwealth research related grants could be established that would stipulate commonly agreed requirements, such as the for Open/FAIR principles and the use of identifiers. The aim would be to bring consistency across the research system on some important matters that shape the research system but are promulgated separately by funders.

Measures to improve the peer review process should also be implemented, including to broaden the base of available reviewers, and rebuilding networks of international peer reviewers. The peer review system must also account for the unique needs of interdisciplinary research, including identifying and supporting the development of assessors with the skills to assess these projects.

The introduction of more sophisticated data collection and analysis, including the mandated use of digital identifiers, will assist with streamlining application processes. Diversity principles and equity of access must be maintained.

Delayed and inconsistent funding announcement timelines have negative impacts on research planning, career certainty, and research operations. Transparency, communication and timeliness of deadlines should be built into systems to address this.

The government plays a vital role in implementing policy and programs that support diversity in the STEM workforce and promote inclusive, accessible and more certain research career pathways. As an immediate action, the Academy urges the Australian Government to formally respond to and implement the recommendations of the Pathways to Diversity in STEM review.

