Consolidated ACDS Responses to SERD Issues Papers 1-3, and Paper 5

December 2025

Introduction

The Australian Council of Deans of Science (ACDS) is the peak organisation representing the leadership of Australia's University Science Faculties, Colleges, and Schools, which are responsible for the strategic development and delivery of science teaching and research in our universities. We are the voice of university science.

The ACDS welcomes the opportunity to contribute to consultations on the Strategic Examination of Research and Development (SERD) Issues Papers. This document brings together our submissions on the papers our Council considers to be the highest priority for our members—Papers 1–3 and 5. We have not provided submissions on the other papers released as part of the current consultation.

Each of the SERD Issues Papers provided background information and posed specific questions. Our submissions addressed each question directly. The sections below present our responses to those questions, along with any general comments where the consultation portal provided an opportunity to offer them.

Paper 1: National Coordination for RD&I Impact

What aspects of the model work well?

For clarity and focus, the Australian Council of Deans of Science presents its submission in bullet points as follows:

- There is strong alignment with ACDS's call for national research missions linked to the National Science and Research Priorities.
- Cabinet-endorsed 10-year focus areas provide clarity, scale, and stability.
- Emphasis on tri-sector collaboration across government, industry, and universities is welcome.
- Inclusion of investment and evaluation frameworks improves accountability and outcomes. Evaluations should explicitly consider whether initiatives deliver measurable increases in GDP.
- Recognition that missions must balance with support for foundational research and infrastructure.

What could be improved and how?

For clarity and brevity, the Australian Council of Deans of Science presents its submission on how the model could be improved in the following bullet points:

- Given Australia's industry base is dominated by SMEs, incentives and coordination mechanisms must be carefully structured to reach and support this large cluster. Otherwise,

SMEs — who stand to benefit most from SERD reforms — risk being underrepresented or unable to engage effectively.

- Governance must include senior, research-active academics in university science (e.g. Executive Deans or equivalent) who understand the realities of conducting research in universities. Without this, expectations risk becoming unrealistic or unachievable.
- The selection and decision-making process for portfolio proposals must be transparent and involve those with current leadership experience in university science, not only senior managers.
- The model underplays the importance of the people pipeline (domestic HDR decline, undergraduate science enrolments). Reforms should also explicitly enable workforce → PhD → upskilled workforce pathways, supporting industry employees to undertake research degrees. This would build capacity, strengthen industry-university links, and produce graduates with both academic and practical expertise.
- Missions should embed equity and First Nations research capability as core requirements.
- Research infrastructure requires reform alongside coordination. NCRIS funding must move to longer, more certain cycles, with structures that enable early industry access at the lower end of the TRL pipeline. While NCRIS can support national missions, complementary systems and structures will be needed to ensure infrastructure investment supports scaling as well as discovery.
- The model must be flexible enough to pivot and incorporate new national or international imperatives as they arise, to ensure Australia can respond to and prioritise emerging challenges and opportunities.
- Human capital must be explicitly recognised as a core enabler. Reforms should include the provision of relevant training to support scaling and ongoing discovery, not only in HDR programs but also across broader workforce pathways.

Paper 2: A Proactive Approach to Scaling the RD&I System

What aspects of the framework would work well?

For clarity and focus, the Australian Council of Deans of Science presents its submission in bullet points as follows:

- There is strong alignment with ACDS's proposals to simplify RDTI and reduce barriers for SMEs.
- Emphasis on co-investment and procurement levers to bridge the "valley of death" for SMEs.
- Positive focus on pre-accelerators, accelerators, and mentorship to foster entrepreneurial talent.
- Supported proposals to attract international capital and superannuation investment.
- Recognition of the need for researcher mobility and industry PhDs aligns with ACDS's workforce proposals.
- Also support several proposals from page 7: education pathways, development of expertise, tackling cultural barriers for executives (e.g. enhancing boardroom expertise of scientists), mentorship for PhD candidates, and industry PhDs (dot points 1, 2, 4, 8, 9 on p.7).

What could be improved and how?

For clarity and brevity, the Australian Council of Deans of Science presents its submission on how the model could be improved in the following bullet points:

- The framework risks being "talent blind": assumes steady HDR supply despite domestic decline.
- RDTI reform must extend deeper into the pipeline, incentivising businesses to engage undergraduates through work-integrated learning (WIL).
- Opportunities for WIL and undergraduate industry placements in university science should be eligible and funded under RDTI, embedding pathways into HDR and research careers. It is too late to wait until the EMCR stage; industry mentorship must start earlier.
- Business access to RDTI and procurement should be tied to evidence of collaboration with universities and provision of HDR/WIL opportunities in science.
- NCRIS reform must deliver clearer pathways for industry access as well as greater certainty and longer funding cycles.
- NCRIS should be directly connected to national focus areas, but complemented by other mechanisms that bridge foundational research and market-ready innovation.
- Current NCRIS capabilities are geared to early-stage development and are not well suited to supporting industry at scale. Additional mechanisms are needed to help firms move from early-stage use of NCRIS facilities to full industrial and commercial application.
- Talent development should be viewed as a two-way street: while students and graduates need clearer pathways into industry, incentives should also support existing industry personnel to be upskilled through PhD-level research training. Such candidates already understand industry contexts and may be regarded by employers as more credible and attractive hires, strengthening both research translation and workforce capability.

Paper 3: RD&I incentives: Incentivising breakthrough innovation and ambitious R&D

Which of our proposals will work?

For clarity and focus, the Australian Council of Deans of Science presents its submission in bullet points as follows:

- We see strong alignment with ACDS's call for RDTI reform and simplification.
- Support for segmented incentives tailored to startups, SMEs, and large firms.
- Welcome proposals for proof-of-concept funding (convertible notes, repayable grants).
- Agreed value in collaboration premiums and rewarding projects linked to national priorities.

What should be improved and how?

For clarity and brevity, the Australian Council of Deans of Science presents its submission on how the model could be improved in the following bullet points:

- Reforms must embed workforce development— RDTI eligibility tied to HDR scholarships and graduate hires, and also to undergraduate WIL opportunities in university science.
- Segmentation should extend deeper into the pipeline, covering WIL, undergraduate industry placements, and HDR pathways in science faculties to stimulate talent earlier.

- There needs to be incentives for workforce → PhD → upskilled workforce pathways, to facilitate industry employees accessing research training and returning to their sectors.
- Eligibility rules for each segment must be clear and transparent to avoid gaming by beneficiaries who do not deliver meaningful R&D or innovation.
- Domestic HDR decline must be recognised as a systemic risk; incentives should directly address this.
- Reforms must avoid entrenching advantages for existing large players at the expense of new entrants. Clear and transparent metrics are needed to assess the growth potential of smaller firms, to ensure support flows to those most likely to scale-up.

Paper 5: Foundational research: Creating knowledge

Introduction

A more complex economy drives productivity, sustainability, and jobs. Economic complexity—producing and exporting a diversity of goods and services—fuels long-term growth. Innovation builds this complexity, with university research as an essential part of its foundation. Universities deliver breakthroughs, technologies, and talent, yet Australia's R&D sector struggles with underinvestment, inadequate industry involvement, and fragmented policies.

A sustainable innovation future requires coordinated policies to overcome these barriers, along with programs that strengthen university–industry partnerships and build pipelines of professionals and experts with diverse skill sets and from diverse backgrounds to contribute to both academic and industry-led research and translation. This must include actions to uplift underrepresented groups, build Indigenous research capability, and embed First Nations knowledges. It also requires closer integration with the social sciences and business communities to ensure innovation aligns with consumer needs, behaviours, and acceptance.

To address these challenges the ACDS highlights the following four key points, outlined in detail under the relevant consultation questions.

- **Fund and Prioritise National Research** – Research missions aligned with Australia's five National Science and Research Priorities are critical to driving innovation and addressing the nation's most pressing challenges. We advocate for the establishment and dedicated funding of at least five research missions—one for each priority. These missions should be coordinated across sectors and designed to incentivise and increase industry engagement, *including* investment, in research. Importantly, they must support the full research and development pipeline—from foundational research, which underpins future breakthroughs, to translational research that accelerates real-world innovation.
- **Develop a Skilled R&D Workforce** – Improve researcher mobility, expand Work-Integrated Learning (WIL), industry placements and internships for EMCRs.
- **Strengthen Industry-University Collaboration** – Co-locate industry and national laboratories with universities as occurs in other advanced economies, simplify IP agreements, and create a 'front door' for industry engagement.
- **Re-imagine Research Infrastructure investment and access** – Support business access to national research infrastructure, Publicly Funded Research Agencies (PFRAs), and university-hosted research facilities. Doing so will stimulate greater business investment in research and enable stronger, more effective collaborations between industry and researchers.

Responses to Discussion Paper Questions

1. What should an integrated, sustainable, dynamic, and impactful Australian R&D system look like?

The system must recognise innovation as a central pillar of Australia's future economy and acknowledge that science and research are its foundation. It should be purposefully designed to drive and incentivise deep, enduring partnerships between industry and research providers. Universities are uniquely positioned to play a pivotal role: training the next generation of scientists and technologists, conducting world-class research, and collaborating with industry to translate discoveries into real-world impact. To achieve this:

- Develop a centrally coordinated set of at least five research missions based on the National Science and Research Priorities, each with a clear strategy and oversight from industry, government and higher education. Missions should harness Australia's national research capacity and capability across diverse sectors, coordinate efforts across research providers and end-users, and support the full spectrum of research—from foundational, often long-term programs to 'fast-fail', translation-focused projects that reflect industry timeframes—and help build a strong, diverse pipeline of skilled STEM professionals.

- Grow BERD strategically by linking business access to the R&D Tax Incentive to research aligned with National Research Missions. Minimise barriers to business-led research by expanding eligible activities, strengthening incentives through a premium for partnering with publicly funded research providers including universities, and hiring early-career STEM graduates.

- Reduce fragmentation across Commonwealth research funding structures to improve efficiency and make it easier for industry to access and be eligible for key funding programs.

- Provide stable, long-term funding for the PFRA and university research to support the development of sustained industry partnerships.

2. What government, university, and business policy settings inhibit R&D and innovation? Why?

A key to growing BERD—and increasing the share of GDP invested in R&D—is stimulating innovation within Australia's SME sector. Medium-sized businesses are the most innovation-active of all Australian business, yet they face significant challenges in scaling innovations and building capabilities to grow and diversify. Additionally, 72% of SMEs view commercialisation as unimportant to their innovation efforts and prefer to adopt existing innovations over investing in high-risk, self-driven R&D.

Policies are needed to de-risk commercialisation, encourage greater R&D collaboration, and simplify business access to R&D funding. Key issues include:

- Program Fragmentation: Disjointed funding programs create administrative burdens and reduce efficiency. For example, health and medical research policy and funding are disconnected from other funding programs.

- Intellectual Property (IP) Barriers: Complex IP arrangements discourage academic-industry partnerships.

- Lack of Researcher Mobility: Limited pathways for researchers to move between academia and industry, and vice versa, hinder knowledge and skills transfer.

- Inadequate incentives for business to invest in R&D, particularly small and mid-sized businesses that face scaling challenges.

Program Suggestions:

- Introduce an expanded Researcher Mobility Scheme that celebrates and funds secondments between universities and industry.

- Establish a government-industry-university co-investment mechanism to help SMEs bridge the mid-stage 'valley of death' where promising innovations often stall.

3. What do we need to do to build a national culture of innovation excellence, and engage the public focus on success in R&D and innovation as a key national priority?

We need a culture of engaging 'stories' showcasing the impact of R&D, and that 'failure' is part of the innovation journey. This can be achieved by:

- Public Engagement Campaigns: University and industry partners should work together to celebrate and highlight R&D success stories, particularly those that ride on the back of early failures.

- STEM Outreach Programs: Build on existing university-led STEM outreach initiatives to ensure coordination and consistency among providers, to inspire young people to pursue careers in science and innovation.

- Industry Partnerships: Expand programs that foster partnerships between industry and universities to demonstrate the real-world benefits of research.

- Create an Innovation Metrics Framework to track the impact of mid-late stage Technology Readiness Level (TRL) development activity and to assess how innovation policies influence economic growth, productivity, and social outcomes.

Program Suggestion: Create a National Science R&D Communication Hub within the 'Inspiring Australia' program, funded through a small levy on industry recipients of the R&D Tax Incentive. The hub would promote Australian R&D achievements, engage R&D-focused industries on the benefits of being early adopters of innovation, and strengthen public understanding and support for science and innovation.

4. What types of funding sources, models, and/or infrastructure are currently missing or should be expanded for Australian R&D?

Research providers require diverse funding sources and modern infrastructure to support cutting-edge research. Key gaps include:
- A Research Translation Future Fund (RTFF): a dedicated Research Translation Future Fund to complement the existing Medical Research Future Fund (MRFF) to support research in other areas of national priority, for example transitioning to a net zero future and protecting and restoring Australia's environment. The RTFF would focus on funding research at Technology Readiness Levels (TRL) 4 to 5, ensuring that promising innovations progress toward real-world application across diverse fields. Its programs and operations should be closely coordinated with—or potentially subsume—the MRFF to maximise strategic government research investment and avoid further fragmentation of the system.

- Infrastructure Investment: ensure longer-term, predictable funding for national research infrastructure which would help incentivise industry research activity. Reforms should focus on driving business engagement by improving access to, and use of, facilities. They should be informed by international models such as the Canada Foundation for Innovation (CFI)—an independent, non-profit corporation established by the Government of Canada.

Program Suggestions:

- Establish a Research Translation Future Fund (RTFF) to support non-medical research, complementing the Medical Research Future Fund (MRFF). The RTFF should be established with *new* money and its programs managed within the science and industry department to ensure alignment with economic and scientific policy priorities. It should:

  - Integrate the Cooperative Research Centres (CRC) Program and expand its funding to further enable industry–research collaboration

  - Integrate the industry growth center initiatives to improve coordination and oversight of higher TRL R&D programs

  - Proactively drive stronger links between academic and industry researchers, and deeper engagement with business expertise.

  - Incorporate the functions of NCRIS as part of a comprehensive reform of research infrastructure strategy, delivery, and funding.

5. What changes are needed to enhance the role of research institutions and businesses in Australia's R&D system?

- Co-locate university, PFRA and industry R&D facilities to foster collaboration at-scale and streamline access to expertise.

- Reform the R&D tax incentive to reward collaborative inter-sector projects.

- Create and communicate 'front door' mechanisms to make it easier for businesses to engage with research expertise.

- Nationally funded and scaled programs are needed to upskill STEM graduates and early career researchers to understand the full TRL spectrum and operate effectively at every stage of research translation.

- Expand Government Innovation Procurement Programs to prioritise Australian R&D-driven SMEs.

6. How should Australia support basic or 'discovery' research?

- Link a proportion of R&D tax incentive funding to evidence of the industry recipient supporting university-led discovery research.

- Recognise and track the impact of basic research, and its fundamental importance to innovation, through development and implementation of an Innovation Metrics Framework, overseen by the proposed RTFF.

7. What should we do to attract, develop, and retain an R&D workforce suitable for Australia's future needs?

- Expand opportunities for HDR students and postdocs to undertake industry placements and internships, with businesses able to claim costs through the R&D Tax Incentive.

- Scholarship support for HDR students should be uplifted to remain competitive with industry salaries, and PhDs—especially those with industry partners—should be funded for four years to enable meaningful collaboration and impact.

- Develop opportunities for early- and mid-career researchers to transition between academia, industry, and government roles and incentivise employers to enable these transitions.

- Ensure that the rewards schemes in PFRAs and Universities reward success in innovation in a similar way to research and teaching.

Program Suggestion: Introduce a Science Workforce Development Program that funds internships and interdisciplinary training and industry placements for university researchers, funded through the R&D tax incentive.

Conclusion

The Strategic Examination of Australia's R&D System presents a critical opportunity to reshape and strengthen the national research and development landscape. A sustainable innovation future requires coordinated policies to overcome barriers to R&D and address challenges to international collaborative research that have become more pronounced with recent geopolitical developments.

Any reforms must recognise the critical importance of fostering greater diversity – in all its forms – in the pipeline of STEM professionals, uplifting the capability of First Nations researchers and embedding First Nations knowledges across the entire R&D spectrum.

ACDS urges the government to take bold steps to incentivise industry to engage with research partners from other sectors, increase the amount they invest in research, improve coordination, and enhance the translation of research into national impact, while recognising the enduring importance of supporting foundational research. By funding national research priorities – potentially as coordinated national research missions – reforming research infrastructure support, fostering PFRA-university-industry co-location, and encouraging industry engagement with university researchers and STEM graduates, our suggestions will ensure a robust, innovative, and inclusive research ecosystem that benefits all Australians.