



Cooperative
Research
Australia

2022-23 Pre-Budget Submission

January 2022

Cooperative Research Australia acknowledges the traditional custodians of the land on which we operate, the Ngunnawal people. We also acknowledge the traditional custodians of the various lands across Australia upon which Cooperative Research Centres operate.

We pay our respects to Elders past, present and emerging and celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to our lands and waters.

For further enquiries contact:

Jane O'Dwyer

Chief Executive Officer

Cooperative Research Australia

Unit 2/13 Napier Close Deakin ACT 2600

02 6260 3988

www.cooperativeresearch.org.au

Cooperative Research Australia (CRA) welcomes the opportunity to provide recommendations for consideration in the 2022-23 Pre-Budget Submission.

CRA is the voice of industry-research collaboration and advocates for the translation of research into commercial, economic, social, and environmental outcomes that benefit all Australians. Our members form a lynchpin in the Australian innovation system and are focused on creating new products, services, industries, and value in our economy. CRA represents Cooperative Research Centres (CRCs), CRC –Projects (CRC-Ps), post-CRC entities, and 30 universities as well as other collaborative research entities, associated businesses, and alumni.

CRA commends the Australian Government on its commitment to science and innovation and welcomes recent announcements to support the innovation system through Australia's Economic Accelerator (AEA) program, industry PhDs and fellowships, and funding to support university research commercialisation.

Policy recommendations

[Recommendation 1](#)

Invest in collaborative, industry-led, research and innovation to grow our economy and enhance sovereign capability through the creation of new industries and jobs by growing the investment in industry-led CRCs and CRC-Ps by \$50 million a year over the forward estimates.

[Recommendation 2:](#)

Incentivise industry-research collaboration across Government through the implementation of recommendation 18 of the Miles' Review that the CRC Program model should be used and funded by other Australian Government portfolios to achieve their policy objectives. We propose the establishment of up to 3 new centres to address the needs of portfolios not captured under current collaborative research programs or schemes but in areas of significant national need in a post-Covid environment.

[Recommendation 3:](#)

Evidence the return on investment from industry PhDs and embed the lessons learned in new workforce schemes through an investment of \$1.0m in 2022/23 into a detailed Cooperative Research Centres Alumni Destination and Outcomes study that will provide baseline evidence to support the success of Industry PhD schemes by drawing upon the experience of 4000 industry-focused PhD graduates.

[Recommendation 4:](#)

Incentivise innovation through industry-led research collaboration by establishing an up to 20% R&D tax collaboration premium consistent with recommendation 2 of the 2016 Review of the R&D Tax Incentive.

[Recommendation 5:](#)

Commit to growing funding for fundamental research to guarantee Australia's global competitiveness and ensure a pipeline for future applied research, translation and new products, services, and processes.

[Invest in success through collaborative research](#)

The future role of collaborative research and translation in driving innovation in the Australian economy cannot be understated. For Australia to recover from COVID-19 and prosper, stimulating and facilitating collaboration between research organisations and business must be a priority.

Australia's industry is not characterised by a high proportion of research-intensive businesses, and collaboration between public research institutions and businesses has not yet reached its full potential. The 2017 OECD Science, Technology and Industry Scoreboard ranked Australia last out of the thirty-three countries surveyed in firms' collaboration with the higher education/public research institutions, with equal weighting between SMEs and large firms.¹

The Australian Government's Investment through the University Research Commercialisation Package will drive greater activity in research translation and build Australia's sovereign capability. This, in turn, will create even greater demand for access to successful programs operating under the industry and science portfolio.

The Cooperative Research Centres Program (CRC Program) was established 30 years ago to increase Australia's global competitiveness and de-risk companies investing in research. It is an Australian success story and is looked to internationally as an exemplar to foster medium to longer-term collaborative research between industry, the research sector, and end-users, and forms one of the key pillars in the Australian innovation system.

The CRC Program provides a well-established and well-understood model for industry-led research, and the development of productive collaboration between research institutions and business.

Bidding for a CRC is a major undertaking that requires deep collaboration between industry and research institution partners, and a clear capacity and potential for step-change in an industry sector. Each year, we see on average more than a dozen bids go into stage. Generally, only 5-6 bids progress to Stage 2. Under the current funding levels up to 50 per cent of bids for CRCs that progress to Stage 2 are not able to be funded. As major undertakings, the unsuccessful bids in Stage 2 tell us where enormous potential lays in Australia, where business interests and ambition meet research expertise and talent.

An investment of \$50 million per annum over the forward estimates would allow us to tap into this underutilised potential and return the program to its long-run average level of funding and capacity for economic impact. Such an investment could create two new

¹ [2017 OECD Science, Technology and Industry Scoreboard](#)

industry-led CRCs per year, or one new CRC and up to 8 new CRC-Ps.

[Recommendation 1](#)

Invest in collaborative, industry-led, research and innovation to grow our economy and enhance sovereign capability through the creation of new industries and jobs by growing the investment in industry-led CRCs and CRC-Ps by \$50 million a year over the forward estimates.

Embed Industry-Research Collaboration Programs across Portfolios

CRA welcomes the government's investment into research translation through the University Research Commercialisation package and increased funding for such activities through the Education portfolio and CSIRO.

Recommendation 18 of the 2015 Miles' review of the CRC Program, *Growth through Innovation and Collaboration*, proposed that the "CRC Programme model should be used and funded by other Australian Government portfolios to achieve their policy objectives." ²

Elements of the influence of the model can be seen in the eight Drought Resilience Adoption and Innovation Hubs established by the Department of Agriculture, Water and the Environment which are funded to \$86 million; the Trailblazer Universities Program through the URC package funded to \$243 million; and the Department of Defence's Trusted Autonomous Systems CRC and the Defence Materials Technology Centre (DMTC). The model also persists through many post-CRC entities and spin-off companies.

[Recommendation 2:](#)

Incentivise industry-research collaboration across Government through the implementation of recommendation 18 of the Miles' Review that the CRC Program model should be used and funded by other Australian Government portfolios to achieve their policy objectives. We propose the establishment of up to 3 new centres to address needs of portfolios not captured under current collaborative research programs or schemes but in areas of significant national need in a post-Covid environment.

Invest in an industry-ready, innovative workforce

CRCs and other industry-research collaborative entities are responsible for a sizeable proportion of current and past industry PhDs and industry-focused post-doctoral fellowships. Since the inception of the CRC Program in 1991, 4,000 PhDs have been supported. The volume of new knowledge and know-how is evidenced in the 121,000 industry and research publications that have been produced.

The innovation workforce developed in Australia over the past 30 years is poorly understood. Understanding the career paths, academic-industry permeability, barriers to movement between industry and academia, and barriers to employment in industry for this workforce would support the success of extended Industry PhD schemes.

² [Miles' Review – Growth through collaboration and innovation](#)

Recommendation 3:

Evidence the return on investment from industry PhDs and embed the lessons learned in new workforce schemes through an investment of \$1.0m in 2022/23 into a detailed Cooperative Research Centres Alumni Destination and Outcomes study that will provide baseline evidence to support the success of Industry PhD schemes by drawing upon the experience of 4000 industry-focused PhD graduates.

Incentivise collaboration with a commercial focus

Approximately 30% of Australia's spend on R&D is through the indirect measure of the R&D Tax Incentive (R&DTI). Although there is a modest amount of collaboration with universities and research institutes through the R&DTI already, it is not a focus of the Incentive³.

We believe incentivising collaboration through the introduction of up to a 20% collaboration premium consistent with Recommendation 2 of the *Review of the R&D Tax Incentive*, would be an effective mechanism generating new collaboration between industry and research institutes and foster a culture of innovation.

We also support the recommendation in the review to apply the collaboration premium to the cost of employing new STEM PhD or equivalent graduates in their first three years of employment. As of 2015, six OCED countries (Belgium, France, Iceland, Italy, Japan and Hungary) provide an R&DTI for collaboration.⁴

Recommendation 4:

Incentivise innovation through industry-led research collaboration by establishing an up to 20% R&D tax collaboration premium consistent with recommendation 2 of the 2016 Review of the R&D Tax Incentive.

Ensure adequate funding for fundamental research.

We welcome the government's focus on research translation and the recognition of the importance of industry-research collaboration in building the Australian economy. The \$2.2 billion investment through the University Research Commercialisation Action Plan is a step forward in the right direction to ensuring a more prosperous and competitive country.

Applied research and commercialisation of research are critical to Australia's success. It is imperative to secure the first stage in the research commercialisation pipeline which is a steady stream of outstanding fundamental research, which provides the basis from which unimagined possibilities flow. In the post-war era, Australia has built a well-earned reputation and capacity for excellence in fundamental research.

³ [Review of the R&D Tax Incentive \(asbfeo.gov.au\)](https://www.asbfeo.gov.au/review-of-the-r&d-tax-incentive)

⁴ [R&D Tax Incentives: Evidence on Design, Incidence and Impact](#), Appelt, S. et al OECD Science, Technology and Industry Policy Papers

A robust system for supporting fundamental research is the bedrock upon which an innovative economy is built. Continuing to fund it at a sufficient level is vital to Australia's global competitiveness and ensures a pipeline for future applied research.

[Recommendation 5:](#)

Commit to growing funding for fundamental research to guarantee Australia's global competitiveness and ensure a pipeline for future applied research, translation and new products, services, and processes.