

Australian Government Australian Research Council

Policy Review of the National Competitive Grants Program

DISCUSSION PAPER: A NEW PLAN FOR ARC-FUNDED RESEARCH

February 2025

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Contents

Foreword	4
The opportunity before us	6
A new foundation	9
Key findings from the review of the NCGP	17
A new NCGP for the next 20 years. Streamlining processes and improving administration Strategic direction to provide clarity and deliver outcomes Enabling Indigenous researchers and research Supporting ECRs and the research workforce Facilitating Collaboration	
An overview of the proposed new model The grants by scale	
Funding schemes - small to large. Initiate Realise Indigenous Capability Breakthrough Collaborate Prioritise Lead and Mentor Embedded Fellowships Supporting Research Infrastructure Investment	26
Having your say	
Next steps	
Appendix A: Terms of Reference	34 36
Appendix C: Glossary of Terms	

Foreword



The National Competitive Grants Program (NCGP), overseen by the Australian Research Council (ARC), represents 7% of the publicly funded research in Australia. For the last 20 years the Program has played a significant role in shaping Australia through the funding of excellent research and supporting innovative and creative researchers within Australian universities. With the recent reforms to the ARC, there now exists an opportunity to take stock of what has been achieved and to reimagine how the NCGP can be improved for the next 20 years. Developed in consultation with the Australian research sector, this Discussion Paper outlines a plan for the future. It represents a once-in-a-generation chance to revitalise the NCGP.

In the last few years, the ARC has undergone substantial change and innovation. In 2023, *Trusting Australia's Ability: Review of the Australian Research Council Act 2001* delivered the first comprehensive review of the ARC since its establishment, resulting in significant amendments to the ARC Act. The amended ARC Act took effect on 1 July 2024 and set new legislative objects and governance arrangements for the ARC, including establishing an independent Board. These changes provide the opportunity—indeed the imperative—to evaluate and improve the NCGP.

The ideas and proposal for a revitalised NCGP presented in this paper have been developed following extensive national consultations undertaken in 2024. While there was sometimes disagreement about particular ideas, what emerged from these consultations – as from the independent Review of the ARC finalised in 2023 – was a strong appetite for bold reform. This Discussion Paper has been significantly informed by this mood for change.

The NCGP proposed in this paper seeks to support research in new ways: to align with the objectives of the amended ARC Act, to reduce the administrative burden of grant application and monitoring, and to enhance the way that the NCGP contributes to the broader research and innovation ecosystem in Australia. The new NCGP should nurture and develop the next generation of excellent researchers, facilitate collaboration and support breakthrough research while building Australia's capacity to respond to national challenges. It should improve the way the ARC funds research that particularly benefits Aboriginal and Torres Strait Islander peoples, communities and organisations whilst also supporting Indigenous scholars undertaking research across all fields of inquiry.

The goal, quite simply, is to enhance the way the ARC encourages and supports the very best, most creative research. The paper argues that, for funding purposes, the NCGP should not arbitrarily divide the spectrum of research activities between 'fundamental' or 'basic' on the one hand and 'applied' or 'impact' on the other. Rather the goal should be to drive increased collaboration across the range of research being undertaken in science, the social sciences, the humanities and the creative arts.

In order to fulfill that ambition, the ARC should take greater risk in two ways: by supporting more substantially the potential of early-career researchers, and by funding innovative but 'unproven' research that has the potential to contribute more to furthering knowledge of the world in which we live.

Significant changes are timely and necessary. This involves challenging some of the assumptions that have built up around the NCGP. Together the ARC and the research sector can create an NCGP model which supports excellent Australian-led research for the benefit of all Australians in decades to come.

I hope and anticipate that this paper will provoke extensive discussion. I extend the ARC Board's sincere gratitude to those who have already generously shared their expertise and encourage that high level of engagement to continue.

Professor Peter Shergold AC ARC Board Chair

The opportunity before us

Australia's research is world class

Australia has a good reason to be proud of its research record. With only 0.33% of the world's population, Australia produced 3.4% of the world's published research in 2022.¹ And it is high quality. The latest national assessment of Australia's universities rated 90% of their research outputs as world standard or better.²

Research is the intellectual basis upon which Australia can build its future. And, as part of that national effort, the ARC has an enduring interest in supporting the highest-quality research. The early-stage research the ARC primarily funds is fundamental to innovation. It is investigator-led, curiosity-driven research that creates, challenges or extends existing knowledge, introduces new methods and concepts or establishes new principles. There is a strong foundation on which to build: every dollar invested in research by the ARC over the last 20 years has returned an estimated \$3.32.³

Research creates opportunities for innovation across all fields.⁴ It supports and drives the transmission of skills and knowledge, enhancing all sectors of the economy. Benefits flow from mobility and interaction between research, researchers and the wider world.

Australians benefit from world-class research and researchers. In universities, research is intimately connected to high-quality undergraduate and postgraduate teaching and learning, benefiting students in Australia and attracting the brightest students from around the world. Universities produce graduates with the ability to analyse, conceptualise, synthesise, interrogate and interpret complex information – valuable problem-solving skills which individuals can deploy both as citizens and as employees, entrepreneurs and business owners. It is worth remembering that some of Australia's most successful people began their career in research before going on to become leaders in business, industry, the non-profit sector and the arts.

The research undertaken in universities enhances Australian society in a myriad of ways. Scientific research, even that which is fundamental in nature, often leads to industrial innovation, driving the creation of new products and services which can be commercialised. But it is too often forgotten that research can have a profound impact on Australian society in a less obvious manner.

¹ Department of Education. (2024). <u>Australian Universities Accord Final Report Document</u>; The World Bank. Population, total [data set]. Accessed 24 November 2023. <u>https://data.worldbank.org/indicator/SP.POP.TOTL</u>.

² Excellence in Research for Australia. (2018). https://dataportal.arc.gov.au/ERA/NationalReport/2018/

³ ACIL Allen. (2023). Impact assessment of ARC-funded research summary report. A report for the Australian Research Council.

⁴ International Monetary Fund. (2021). Research and innovation: fighting the pandemic and boosting long-term growth. World Economic Outlook. October. https://www.imf.org/en/Publications/WEO/ Issues/2021/10/12/world-economic-outlook-october-2021 p.76.

Research enriches how we interpret, understand and act in the world, informs public discourse, and underpins Australia's liberal democratic system of government. Humanities research contributes to Australian knowledge and self-understanding, enhancing reflection on our national identity and our place in the world. Research in the social sciences is crucial for good public policy, contributing to the work of Australian parliaments and governments at the local, state and federal levels.

Such research provides the evidence on which Australian industries make decisions on investment opportunities, the management of their people and the marketing of their products - matters that are as crucial to our national competitiveness as the goods and services that we develop.

Australia's world-class research also contributes to the capacity to attract students and industry to Australia from around the globe, evident in the international recognition of our universities. This provides significant economic, social and cultural benefits.

In short, research is worth funding and government incentives are crucial in that regard. Equally important, it is vital that every dollar of public investment is spent in the most effective manner.



A changing environment

International collaboration has been an important feature of Australian research. It has provided access to talent, technology, research infrastructure and new knowledge. But the world is changing, and many countries are reorganising and focusing their investment in research to seek competitive advantages.⁵

The early 21st century has seen a rapidly changing geopolitical and economic environment. There is a real risk of a retreat from globalisation and the significant movement of capital and labour that has enhanced world trade. This has uncertain consequences for the way that researchers and industry and a range of other partners work together across national borders.

In our complex and increasingly uncertain environment, Australia needs to build its sovereign capability to conduct high-quality research in all disciplines. Australian-based researchers work on a plethora of global challenges, but in translating that research for public good, they can also help find solutions to specifically Australian challenges and opportunities, both at the local and national level.

More than ever, Australia's research systems need to be adaptive, resilient and better connected to meet the challenges and opportunities of the coming decades. There is a need to rethink how best to support, incentivise and leverage research so that it delivers enduring social, economic and cultural benefits for Australians. Success demands an ever-greater commitment to collaboration – between basic and applied research, across disciplines, between universities, with industry and across sectors.

University-based research, including the portion that is funded by the ARC, is central to how well Australia can protect its interests in an increasingly competitive world. Working with industry, governments and community organisations, universities can help to lead and direct our national research efforts.

We must ensure that the intellectual property developed by Australian researchers is retained. Researchers now need to be more sensitive to the national security issues that may emerge through the preparation and administration of grant programs like the NCGP.

⁵ For example, India recently created a new foundation to oversee basic research and development, followed by a budget significantly expanding investment in energy and space research. (India budget: Modi bets big on nuclear energy and space. *Nature*. 2024. https:// www.nature.com/articles/d41586-024-02370-0)

A new foundation

With contemporary opportunities and challenges in mind, it is critical to reimagine how the ARC supports the highest-quality research and how its chief vehicle for doing so – the National Competitive Grants Program (NCGP) – can better support Australia's research and innovation ecosystem over the next 20 years.

This will require some bold thinking about how to reshape the way the NCGP delivers benefits to Australia. There is an opportunity to reset how public investment in research supports and develops early career researchers (ECR), advances promising but unproven ideas, and catalyses dynamic teams of researchers and their partners through collaborative projects.

This Discussion Paper outlines a path forward that will enable the ARC to support the highest quality research. It is predicated upon the need to encourage cross-pollination between fundamental and applied research and drive greater collaboration between researchers, within and outside universities, and with industry and beyond. A renewed focus and structure for the NCGP will enable Australia to:

- build the next generation of world-class researchers, including Indigenous researchers
- increase the risk appetite needed to support potentially breakthrough ideas early and before it is clear whether they will transform the way in which we look at issues
- incentivise greater collaboration across research sectors and universities, and close engagement between researchers and the users of research
- enable government to identify and marshal the best research, which responds to national priorities, and
- ensure that the intellectual property developed by Australian researchers is retained and that grant programs like the NCGP are sensitive to national security risks.

Supporting early-stage research and moving beyond the basic and applied research dichotomy

There has been a widespread, if not misplaced, perception that the subdivision of the NCGP into two core programs – 'Discovery' and 'Linkage' – is based on the division between 'basic' and 'applied' research, and between research that is 'fundamental' and that which can have direct 'economic or social' impact.⁶

This Discussion Paper calls the usefulness of this distinction into serious question – either as a way of allocating funding between research programs or as a way of organising the conduct of research.⁷

Researchers themselves report greater complexity: approximately 73% of funded projects in recent Discovery and Linkage Projects, and Linkage Infrastructure, Equipment and Facilities rounds traversed both basic and applied research, making categorisation difficult. The distinction is also not helpful for the ARC's strong and ongoing funding for research in the humanities and social sciences.

The NCGP should support bold thinking and the best early-stage research, regardless of whether it is theoretical, methodological or aimed at addressing recognised problems. The design of the new schemes challenge the so-called "linear model of innovation" which asserts a causal chain from basic and applied research to technological innovation.⁸ Increasing evidence shows that the relationship is far more complex and the path to creating knowledge is highly dependent on iterative conversations between researchers with different aspirations and approaches.

Recognition of the complex creation of new knowledge and/or revisionist interpretation of evidence needs to be at the heart of future NCGP scheme design. Instead of attempting to balance between basic and applied research, the ARC should foster a stronger appreciation of the public benefits of funding high quality early-stage research, whatever its nature. There should be greater support for the important, but not always visible, work of researchers which can provide a launchpad for the tangible creation of value for the cultural, economic, environmental and social benefits for Australians.

⁶ Noting the ARC's now legislated mandate to fund pure basic, strategic basic, and applied research.

⁷ Narayanamurti and Odumosu. (2016). *Cycles of Invention and Discovery: Rethinking the Endless Frontier*. Use of the term "basic research" rapidly increased between the 1940s and 1960s (Google Ngram).

⁸ David Kaldewey and Désirée Schauz. *Basic and Applied Research The Language of Science Policy in the Twentieth Century*. p.3.



Reducing administrative burden

One strong message to emerge from consultations was that the current structure of the NCGP is unnecessarily complicated. It is difficult for researchers, peer reviewers, administrators and collaborators to navigate. The number of schemes, many with differing administrative requirements, creates unnecessary burden. Researchers and their partners face difficulty in fully understanding eligibility criteria and application processes. This can particularly be the case for partners outside of the university sector or government, such as industry and business or community organisations. For those who support researchers (such as Research Office staff and university research leadership), the administrative burden of current processes can be onerous. Presently, universities are required to commit substantial resources to apply for, manage and monitor compliance of projects. Public accountability is and will remain vital. It is important that administration is focused on the right issues so that effort is not wasted, and it delivers the assurances needed to appropriately monitor and oversight a project.

The redesigned NCGP will be significantly simplified. The number of schemes will be reduced to ensure a more straightforward experience for researchers, their research partners (including industry and other end users), Research Office staff and those participating in peer review. Building on the well-received reforms and streamlining efforts undertaken by the ARC in recent years, the new NCGP will strengthen the ARC's commitment to continuous improvement and ensure that the NCGP remains accessible and effective while continuing to ensure responsible compliance and evaluation of the use of public funds.

Public accountability remains vital. It is important that researchers and their universities understand their obligation to provide assurance that funds are being spent in accord with the terms of the grant. However, this can be achieved without unnecessarily burdening researchers or irrelevant red tape.

Committing to Indigenous researchers and research

The ARC has a strong commitment to Indigenous research and to building the cohort of Aboriginal and Torres Strait Islander scholars through research. It is critically important that funding support for Indigenous researchers continues to grow and provide career opportunities to participate and lead research projects, and that all researchers reflect on the interests of Indigenous Peoples within their research projects. These two imperatives apply across all disciplines and all the proposed ARC schemes.

This commitment recognises the important role that research funded by the ARC has played, both in addressing issues of particular interest and relevance to Indigenous people and in better understanding the knowledge held by our First Nations.

It is critically important that specific funding support for Indigenous researchers continues to grow, whilst also providing career opportunities for them to participate and lead research projects across all disciplines and all of the proposed ARC schemes. It should not be assumed that all Aboriginal and Torres Strait Islander scholars will want to work on Indigenous research.

Other important reforms are also required. Conditions of grants need to be tightened. All NCGP grants proposing to undertake research with Indigenous peoples, organisations or communities will in the future need to demonstrate the cultural capability and responsibility of research leaders to sustain ongoing engagement. Projects will need to show that they work with communities, rather than conducting research on communities. To speed up this process, additional funding will be made available for eligible research projects across all NCGP schemes to engage with Indigenous communities in the first year.



Building the next generation of world-class researchers

Australia will need a skilled research workforce to remain competitive, which means fostering the next generation of researchers. But research careers are changing. The traditional university-only pathway is no longer available or desirable to many PhD graduates, although Australian graduates are more dependent on academia as an employer than graduates from other OECD nations.⁹

Redesigning the NCGP is an opportunity both to support a more sustainable research workforce and foster stronger connections between research and other sectors including industry and government. This means providing opportunities for early-career researchers, but also building stronger paths for researchers to make significant contributions and drive national innovation outside of universities.¹⁰

Under its current structure, the NCGP has supported thousands of excellent researchers at all career stages through traditional fellowships. Fellowships provide valuable opportunities for researchers to focus on their work and to launch a career. But traditional fellowships are expensive and highly competitive, meaning that the support they provide is only available to a small number of researchers.

The Discussion Paper recommends a different approach to supporting the research workforce. It proposes that NCGP resources be distributed more broadly by embedding a larger number of shorter-term fellowships into project grants. This will support more people at critical points in their research and provide more opportunities for early-career researchers to gain recognition for their work, receive salary support, and build the experience and connections they need to build their careers.

⁹ Christian, K. et al. (2021). Research Culture: A survey of early-career researchers in Australia. eLife. <u>https://elifesciences.org/</u> <u>articles/60613</u>

¹⁰ National Centre for Universities and Business. (2023). <u>Pathways to success: NCUB researcher career mobility Taskforce 2023</u>, and The Royal Society. (2010). <u>The Scientific Century: Securing our future prosperity</u>

Increasing risk appetite and supporting breakthrough research

The ARC is just one important part of Australia's research ecosystem. Much of the indirect funding for universities comes from research block grants administered by the Department of Education. The Department of Industry, Science and Resources, Commonwealth Scientific and Industrial Research Organisation (CSIRO) and National Health and Medical Research Council (NHMRC) also make significant contributions to the research ecosystem. In terms of overall government spending on R&D in all sectors of \$14.4 billion, the ARC is about \$1.03 billion, or just 7%.

However, the ARC has a unique role in the research and innovation ecosystem. The ARC funds university-based research at the earliest stages, which makes later research and development possible (Figure 1). As the NCGP is the only non-medical funding program in Australia with the bulk of funds committed to early-stage research, that role should be central to its design.

Early-stage research has unpredictable benefits. Just as early Australian research on quantum physics has coalesced into a world-leading industry for Australia (in part through ARC funding), today's early-stage research could lead to future discoveries that cannot be foreseen.

However, excelling at early-stage research requires boldness and willingness to take risks. Not all research will pay off immediately, although it all adds to stores of knowledge for the future. Researchers and expert assessors know this, but they need a system that better supports them to take ambitious steps to advance knowledge. This means expanding the NCGP's support for exploratory research and making more space for collaborative, interdisciplinary teams to take on major challenges. It also requires that distinguished researchers are supported to lead and mentor groups of researchers that have not yet built the same extensive research record.

As the funder of early-stage research, the ARC has a critical role. It cannot and should not try to do everything. It can, however, create a better competitive program to set us up for the next 20 years – focused on supporting up-and-coming researchers while retaining strong links with which their research can be integrated with the wider research ecosystem.

Researchers also need support to translate their research. This can take many forms. Sometimes research can result in the development, design and commercialisation of new services or products. Sometimes it can provide new evidence to support policy decisions in the private, public or community sectors. Sometimes it can challenge the way we see ourselves as a nation or the way we view the world-all are valuable contributions.

Improving connections across research sectors

There is no single pathway to excellent research, nor is success the result of brilliant individuals alone. The successes of the NCGP so far have been built from wise investment in promising researchers undertaking early-stage research, and realised through strong connections with government, universities, industry, community organisations and the public.

With the *Strategic Examination of Research and Development* on the horizon, there is an opportunity to rethink the way that the NCGP can help researchers connect with those beyond their own areas of expertise, including with end-users.¹¹ While this means encouraging collaborative research within NCGP programs, it also means exploring ways to better connect the NCGP with the rest of the government funding ecosystem.

Strengthening collaboration between universities, end-users (including industry) and international partners will produce more innovative and better funded research and open a more diverse range of career pathways for Australia's researchers.¹²

Enable government to marshal the best research in areas of priority

As the need to respond to national challenges and to build sovereign capabilities grows, the ARC will need to ensure that the NCGP remains responsive to Australia's national priorities. This is not a new direction. As it stands, the bulk of current NCGP funded research already lies within areas of identified national priorities.

It is important that elected governments can, with parliamentary support, set national priorities for publicly funded research. The new NCGP will build on its existing strong base to ensure that the large-scale national research projects can be shaped by government to build the research capability that underpins our future success as a nation.

The spectrum of government funded research

ARC funding represents approximately 7% of all government investment in research and development (R&D), and approximately 40% of competitive research grant funding.

Figure 1 shows the ARC's place in the broader government funded research landscape mapped against Technology Readiness Level (TRL).¹³ It should be noted that not all research or all government programs fit within this TRL model. Research in the humanities, arts and social sciences often does not align to the TRL model. Some government funding such as the National Reconstruction Fund sits beyond the TRL scale.

¹¹ The Australian Government is undertaking a strategic examination of our research and development (R&D) system. The strategic examination seeks to find ways to get more value from investment in research across universities, industry and government, harness and grow business investment in R&D, and leverage our scientific strengths to help address national priorities and foster new industries. Department of Industry, Science and Resources. (2024). <u>Strategic Examination of Research and Development | Department of Industry</u>. <u>Science and Resources</u>

¹² A new skills and experience framework for researcher assessment. (2024). The Office of the Chief Scientist.

¹³ Technology readiness levels (TRLs) are a method for estimating the maturity of technologies during the acquisition phase of a program. TRLs enable consistent and uniform discussions of technical maturity across different types of technology and have been used here to demonstrate the unique position of the ARC in Australia's funding landscape. Mihaly, H. (September 2017). "From NASA to <u>EU: the evolution of the TRL scale in Public Sector Innovation</u>" (PDF). The Innovation Journal. 22: 1–23. Archived from <u>the original</u> on 11.10.2017.

Figure 1: Example of Australian Government Funding for R&D



Key findings from the review of the NCGP

Between April and May 2024, the ARC and the Department of Education undertook extensive consultations including over 40 workshops with universities and stakeholders across Australia. In addition, the ARC received 95 submissions in response to the initial *Policy Review of the National Competitive Grants Program* Discussion Paper.

Inevitably, the feedback included commentary from the sector about the need for strengthened funding for NCGP schemes. While the level of funding is not in the scope of the review, the model presented in this Discussion Paper is designed to maximise the efficiency and effectiveness of the program to deliver research outcomes that benefit Australia.

Whilst the consultations evoked a wide range of views, there was general agreement that the NCGP has delivered value over the past 20 years, but that it needs to be reshaped for the future if Australia is to achieve the best research outcomes.



The Discussion Paper argues that an overhaul of the NCGP needs to address the following 10 key findings:

1.	Simplify schemes and reduce complexity. Complexity comes with significant costs, including the dilution of the identity and purpose of the NCGP, increased difficulty for stakeholders to navigate the program, and significant and unsustainable administrative overheads and burden placed on researchers and those who support them.
2.	Provide greater clarity on the strategic direction of the NCGP. This will increase certainty for stakeholders and enable the program's full potential to deliver research outcomes for Australia. It will better inform public discussion of the NCGP and the important role it plays in Australia's research ecosystem.
3.	Strengthen data and analytical capabilities. The NCGP needs to be able to monitor and evaluate the performance and impact of research conducted under the NCGP and the realisation of broad strategic direction.
4.	Provide more targeted support for under-represented groups. The ARC will identify cohorts which are currently underrepresented in the grants programs, and in such circumstances, examine how best to encourage more research proposals from them.
5.	Build Indigenous research capability and capacity. This will need to be based on engagement with Indigenous researchers, organisations and communities, including in particular the ARC's Indigenous Forum.
6.	Drive and support the best early-stage research. The importance and contribution of early-stage research as an enabler of Australia's broad national research and innovation ecosystem needs to be better understood and communicated.
7.	Encourage greater risk tolerance. The NCGP should give more support to potentially transformative research that can, over time, help to address the complex and multifaceted challenges facing Australia.
8.	Respond to the strategic use of 'calls' or 'priority' driven research. The NCGP needs to support research that is seen by the government, or the ARC, to contribute to areas of national importance.
9.	Encourage deeper collaboration across the research spectrum and between universities, disciplines, international partners and end-users of research (including industry and community partners, either in Australia or overseas). There also needs to be a much greater level of engagement with Indigenous communities and organisations as research collaborators.
10.	Develop more effective mechanisms to link and coordinate research developed through NCGP funding with other research programs funded by government and/or industry.

A new NCGP for the next 20 years

To guide development of the NCGP, the ARC proposes an overarching purpose statement for the program.

The NCGP delivers cultural, economic, environmental and societal benefits for Australia by supporting excellent, collaborative early-stage research that produces new knowledge, understandings, ideas and solutions that sustain a vibrant research-innovation ecosystem.

Streamlining processes and improving administration

The time of researchers, universities and end-users is valuable. The review has identified a range of opportunities to streamline the NCGP, from a much-simplified grants scheme structure through to improving ARC processes and administration, so that stakeholders can dedicate less time to paperwork and more time to research.

A revised NCGP will reduce from 15 to 6 schemes, organised on the basis of scale. Each scheme will encompass pure basic, strategic basic and applied research. Clear requirements, standardised processes and user-centred approaches will be developed in consultation with stakeholders to make it simple for researchers and research administrators to apply for and manage projects, and for the ARC to oversee compliance and evaluation. This can be done without reducing public accountability for the grant funds that have been awarded.

Under the amended Australian Research Council Act 2001, the authority to make funding decisions for NCGP schemes¹⁴ not declared as designated programs sits with the ARC Board. In making its decisions, the Board will continue to rely on expert peer review as the underpinning principle for all funding decisions. The ARC will use established and new "The NCGP could experiment with different models of peer review including, for example, assessing proposals on potential rather than track record ... or assessments based on de-identified proposals ('blind peer review'). This would also involve changes to the training and advice provided to assessors, with the benefit of helping to increase their appetite for 'risky' or innovative in research projects."

CHARLES STURT UNIVERSITY

assessment approaches to streamline the peer review process while preserving its rigor. Where practicable, schemes will use a two-stage 'idea first' double blind assessment, focusing initial peer review on the quality of the research idea. The ARC will incorporate learnings from its existing two-stage model to improve administrative efficiencies.

¹⁴ The Minister retains decision-making authority for designated research programs (currently ARC Centres of Excellence, the Industrial Transformation Training Centres and Industrial Transformation Research Hubs) and can direct the Board not to approve a grant for reasons relevant to the security, defence or international relations of Australia.

The ARC will also work to address known bottlenecks in the assessment process, for example by trialling modular funding tiers to simplify assessors' budget discussions. Assessors will also receive scheme-specific guidance to expand the range of risk profiles, lengths and sizes of grant that the NCGP funds. Other priorities will include reducing the burden on partner organisations and/or international researchers in the early stages of assessment and reducing post-award reporting requirements where appropriate, while maintaining the ability to report on compliance and outcomes.

Strategic direction to provide clarity and deliver outcomes

It is anticipated that in the next decade, the ARC will invest over \$10 billion in research. With greater strategic direction, the ARC can take a more active role in stewarding the sector and maximising the value of this investment.

"The ARC holds significant influence in the Australian research sector with the positioning and authority to demonstrate best practice. Through its programs and funding models, it can shape sectoral standards, norms, and expectations."

UNIVERSITY OF MELBOURNE

Future NCGP investment will be underpinned by a 10-year strategy set by the ARC Board. It will provide an analysis of the broader Australian research landscape, including major international and domestic developments affecting the research sector; areas of growth and strength; opportunities and targets for collaboration with external partners such as industry; and matters requiring strategic attention.

The ARC Strategy will also prepare foundational principles by which to assess the performance of the NCGP against its objectives, provide strategic direction to the sector, and inform the delivery of future schemes.

To maximise the NCGP's potential as an enabler of research, a long-term strategy to assist ARC-funded research and connect researchers to other relevant government funders would be highly beneficial. The current

Strategic Examination of Research and Development being conducted by the Department of Education and the Department of Industry, Science and Resources will provide the opportunity for better integration of the ARC into the full R&D funding ecosystem and identification of potential mechanisms to better leverage and connect Government funders. The ARC will look to promote explicit pathways between NCGP programs and other government schemes.

The ARC's substantial data set, internal analytical capabilities and connections to other funders will inform strategic direction. It will allow the performance and effectiveness of the NCGP to be evaluated and enhance its impact within the wider research landscape. This will enable the ARC and government to make increasingly informed decisions about performance against agreed outcomes, strategic targets and emerging priorities.

Enabling Indigenous researchers and research

Support for Indigenous researchers will build the leadership, capacity and capability needed to strengthen the contribution of Indigenous knowledges to Australian research. The NCGP model will also provide holistic mechanisms to support Indigenous researchers from students through to senior scholars, across the sector, and to encourage Indigenous-led research. It will help institutions build Indigenous research capacity, and better enable Indigenous researchers (either individually or within teams) to compete for the full range of NCGP grants.

Embedded fellowships, Indigenous-informed assessment processes and redesigned principlesbased equity policies will support Indigenous researchers in all schemes. Realise Indigenous Capability grants will be tailored to encourage and support Indigenous early-mid career researchers. The 10-year strategy will enable the Board to both set and monitor the efficacy of these Indigenous researcher support mechanisms.

The new model will continue to uphold ethical standards including the AIATSIS Code of Ethics and Indigenous Data Sovereignty and Indigenous Data Governance principles. Additional funding will be provided to eligible projects to engage with Indigenous Australian communities and entities. Appropriate expertise will be drawn on during assessment, guided by Aboriginal and Torres Strait Islander expertise. These measures will foster greater research engagement from Indigenous communities and entities and strengthen provisions to ensure that research scholars appropriately recognise Indigenous Elders and community members when undertaking research.

"Further investment in Indigenous-led research and self-determination could broaden societal impacts. Proposals include dedicating a percentage of total NCGP funding to Indigenous researchers and introducing specialised grant schemes such as Indigenous Fellowships. These initiatives would ensure substantial support for Indigenous research, leading to increased capacity building, leadership, and the elevation of First Nations knowledge within the Australian research ecosystem."

FLINDERS UNIVERSITY

Many of these issues are sensitive and complex. For example, strengthened identity requirements will need to be developed to ensure that applicants are eligible for Commonwealth funding specified for Indigenous Australian peoples. Appropriate peer reviewers also need to be carefully selected. To develop and implement the new model the ARC will continue to work closely with the ARC Indigenous Forum.

Supporting ECRs and the research workforce

Support for early-career researchers (ECR) as part of building a diverse, sustainable research workforce is a multifaceted issue spanning the entire research ecosystem.

"When there is a limited pool of funding, it can be challenging to support diversity in the research workforce, but we strongly believe that diversity is a driver of innovation, and that Australia's research sector must ensure that there is fairness and equality in how funding is allocated. We congratulate ARC on the standardised measures it has taken to take into account career disruptions due to caring responsibilities, and encourage similar targeted, evidencebased measures to improve the representation of other underrepresented groups."

WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH The proposed new scheme design will enable ECRs to be named as investigators, with flexible postdoctoral salary options. ECRs will have access to fellowships embedded in project schemes. Aligned with each scheme's objectives, the expectation is that fellows will work in a supportive environment to develop their research and leadership skills. Grants will also support research leaders to maximise the benefits that senior researchers bring to the research sector by mentoring and helping new researchers reach independence.

The proposed model will be supported by a principles-based redesign of the ARC's approach to assessing career interruptions. This could include a reformed application and assessment process featuring two-stages, and including, as appropriate, an anonymised first stage of assessment – focused on the quality of the research problem and method – to ensure that those who do not yet have an extensive track record are not disadvantaged.

Facilitating Collaboration

The proposed model embeds collaboration across the full NCGP.

Collaboration with end-users will be encouraged but will not be mandatory in smaller grants, with additional funds to support the costs of engagement. Researchers will be encouraged to use smaller grants to build up relationships before advancing to a larger project. The Collaborate scheme will support large-scale partner collaborations and give universities the flexibility to engage new partners throughout the grant. The Initiate scheme will have a simpler and faster assessment processes which will help make collaboration between universities and end-users easier for these grants.

Two main avenues are proposed to encourage larger-scale international collaboration. Collaborate supports project-level collaboration with international partners, while the Prioritise scheme will support funder-level collaboration through a flexible mechanism to support bilateral and multilateral initiatives.

Across all schemes, updated guidelines and improvements to ARC processes will facilitate collaboration with research partners. While researchers and universities will benefit from simplified processes, these improvements will also aim to encourage greater participation from government, industry, community and other organisations who will likely benefit from lowered barriers to participation.

Finally, the ARC will continue to explore methods of encouraging interdisciplinary collaboration, ranging from assessment criteria to assessment panel composition. "Research collaboration is not an end in itself but is a means for doing excellent research (with business or community partners, or across Australia or globally), and/or ensuring research has impact, and/or amplifying the capacity of researchers."

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An overview of the proposed new model

The new model of the NCGP leverages	Aim	Leveraging the ARC's place with the research and innovation ecosystem				
the ARC's role in the research system and embeds evaluation as a key driver of performance. The model includes a complete re-design of scheme structure to replace the current Discovery and Linkage programs, set new program objectives, introduce major reforms to assessment processes and encourage the development of new mechanisms to create better pathways for research across government. Clear and consistent processes will reduce burden while ensuring compliance and effective evaluation.	Architecture	Set a clear strategy to better integrate NCGP into the research ecosystem, track contributions and respond to priorities. Align the NCGP with the new objectives of the ARC Act captured in a purpose statement. Clear and consistent processes reduce burden while ensuring compliance and evaluation. Enhance evaluation and data capabilities to better inform ongoing implementation and respond to government priorities. Provide visibility of other government funding pathways to researchers.				
	Design	 6 Schemes based on scale. All incorporate pure basic, strategic bas research. Embedded fellowships provide greater Support for project specific and collabo 	 Peer review remaining Peer review remaining New assessment review remaining Clear and consistere Leverage funding to 	remains core to assessment. sment menthods are fit for purpose. onsistent processes reduce burden. Inding for research collaborations.		
		Grants for individuals and small teams to develop new and innovative research:	Grants for medium to large teams in collaborative centres of excellence to produce research at a national scale:	Grants for outstanding research leaders to mentor emerging researchers:		
		Realise Indigenous Capability	Collaborate	Lead and Mentor		
	nile Schemes Breakthrough		Prioritise			
	Outcomes	Funding not allocated based on basic-aGeneration and testing of new ideas	applied demarcation • Building workforce • Collaboration with	e capacity, diversity and sustainability industry and end-users		

The grants by scale

The 6 schemes, based on the scale of research, span small projects exploring new ideas through to major collaborative or priority-driven investments. All schemes seek to fund the highest quality research, without allocating funds on the traditional basic, strategic basic and applied research divisions. Please note this table provides an indicative model of the new NCGP only and will be subject to further refinement based on detailed modelling and consultation.

Scheme title	Initiate	Realise Indigenous Capability ¹⁵	Lead and Mentor	Breakthrough	Collaborate ¹⁶	Prioritise ¹⁷
Program intent	Foster higher-risk/higher-reward research	Grow Indigenous researcher numbers	Recognise outstanding researchers who will mentor ECRs	Fund excellent research projects across all types and disciplines	Support collaborative programs of research	Respond to government research priorities
Duration	2 Years	≤ 5 Years	3-4 Years	2-5 Years	≤ 5 Years	≤ 7 Years
Indicative Funding range p/a	\$50K to \$400K	\$50K to \$500K	Up to \$250K in support	\$200K to \$600K	\$1M to \$2M	\$4M to \$6M
Estimated grants awarded per round ¹⁸	900+	30+	40+	300+	30+	5+
Likely lead researcher career stage	ECR / MCR	ECR / MCR	SCR	ECR / MCR / SCR	MCR / SCR	MCR / SCR
Strategic focus	Either (i.) to recognise and encourage new investigators and/ or (ii.) to support researchers at any stage of their career who wish to explore new theories, evidence or knowledge paradigms	To support and grow the emerging generation of Indigenous researchers across all disciplines	To support outstanding researchers who can lead and mentor the next generation	To support research projects that build new knowledge and progress research innovation	To promote investigator- led research with strong collaboration and larger teams	To provide large, national-scale research centres that are responsive to national priorities set by government

The manner the proposed schemes could operate are set out in the pages that follow.

¹⁵ Strengthened identity requirements will ensure that applicants are eligible for Commonwealth funding specified for Indigenous Australian peoples.

¹⁶ Proposed designated program.

¹⁷ Proposed designated program.

¹⁸ Indicative numbers only, based on preliminary modelling. Assumes that Initiate, Realise Indigenous Capability, Lead and Mentor and Breakthrough are run annually, and Collaborate and Prioritise are run in alternate years.

Funding schemes small to large

Initiate

Initiate comprises small project grants for higher-risk, higher-reward research projects. They are designed to promote ambitious ideas that need exploratory funding before progressing to a larger grant. Grants will be awarded to untested but potentially transformative projects that involve radically different approaches, apply new expertise, or engage novel disciplinary or interdisciplinary perspectives.

Initiate grants can be obtained at any point in a career, but due to a strong emphasis on the quality and potential of the research idea in assessment, they will be especially beneficial for early-career researchers, those re-entering the research system after a career interruption, and researchers with non-traditional career pathways.

The scheme will:

• Provide researchers with short-term grants that can help kick off an independent research career, return after a career break, support non-linear career paths, and test ambitious ideas. "While quality and innovation are key requirements to support the calibre of research necessary to be awarded NCGP funding, it is also important to capture novelty and ambition as a key requirement."

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- Support universities in building research capacity by developing promising researchers and projects.
- Contribute to government's need to stimulate cutting-edge research that builds Australia's knowledge potential.
- Provide industry and other end-users with opportunities to participate in focused research projects that better suit their timeframes, and to build relationships with universities before committing to longer projects.
- Help researchers develop new ideas and projects to the maturity required for a *Breakthrough* grant.

Realise Indigenous Capability

Realise Indigenous Capability grants (designed in collaboration with the new ARC Indigenous Forum) are small to medium grants to support Indigenous early to mid-career researchers conducting research in any discipline. It is proposed that only Indigenous researchers will be eligible for this scheme. However, it should be emphasised that Indigenous researchers are also eligible to apply for all other NCGP schemes.

Fellowships and project costs enable the researcher to focus on leading and managing a grant that will develop their research career. It is proposed that no more than two *Realise Indigenous Capability* grants should be awarded to an individual in a career. This will encourage more Indigenous researchers to enter and engage with the full range of NCGP grants.

- Provide Indigenous researchers with short to medium grants and Fellowship costs to enable them to build their research careers in any discipline.
- Provide Indigenous peoples, organisations and communities in Australia with additional support to engage with a project.
- Support universities to build Indigenous Australian research capacity by developing excellent Indigenous researchers and, where relevant, Indigenous community partnerships.
- In line with government policy to increase support for Indigenous researchers, encourage Indigenous-relevant research, and promote Indigenous knowledges.
- Provide industry and other end-users including Aboriginal and Torres Strait Islander organisations with greater opportunities, where relevant, to participate in Indigenous-led research projects.



Breakthrough

Breakthrough grants are medium-sized project grants for research across all types of research and disciplines. They are designed to support research projects in all disciplines that build new knowledge and progress research innovation.

Breakthrough grants may include end-user partners if appropriate. Industry and other end-users will be able to participate in *Breakthrough* grants at a lower cost than in Collaborate grants, as they will be allowed to match a smaller proportion of the total grant funding. This makes *Breakthrough* an ideal program in which to partner with smaller organisations, or to build a track record of partnership in preparation for larger commitments.

- Provide researchers medium sized grants that support a variety of research projects, build track record and enable research with high potential for impact.
- Support universities to build research capacity by developing excellent researchers, teams and partnerships.
- Contribute to government's need to support excellent research that drives innovation.
- Provide industry and other end-users with opportunities to participate in research at a smaller scale.

Collaborate

Collaborate grants are large grants supporting multi-institutional programs of work involving enduser and/or international partners. These research grants will support multiple investigators on a shared theme with at least one external partner. They will also support collaborative infrastructure.

"Research collaboration is an important NCGP objective because the most excellent research is typically developed through openness and exchange."

INNOVATIVE RESEARCH UNIVERSITIES NETWORK

Collaborate grants support research of a scale that requires collaborators and diverse expertise. The grants will afford the opportunity to build the cross-university, cross-sectoral partnerships, and enhance the capacity needed for a successful *Prioritise* grant. *Collaborate* grants are proposed as a designated program under the ARC Act, over which the Minister has final decision-making authority.

ARC funding for *Collaborate* grants must be

matched by the combined cash contributions of partners. Where a *Collaborate* grant includes not-for-profit organisations, Indigenous-led organisations, or international university partners, the partners' in-kind contributions can count towards the matching contribution.

Collaborate grants will also support research infrastructure through a 'Research Infrastructure Fund' (RIF), which provides annual funding over the duration of the parent grant for research infrastructure. As with current Linkage Infrastructure, Equipment and Facilities (LIEF) grants, the RIF will contribute a set percentage of the total cost of the infrastructure. Collaborate grants using existing NCGP-funded infrastructure are also eligible for a 'Research Infrastructure Supplement' (RIS), which provides funds towards running costs, staffing and/or maintenance of that infrastructure.

- Provide researchers with collaborative programs of research at a smaller scale than centres of excellence.
- Support universities to grow institutional research capacity through partnerships and shared infrastructure.
- Contribute to government's need to stimulate collaborative research at a significant scale.
- Provide industry and other end-users with greater opportunities to participate in smaller-scale research at a lower cost.
- Provide international partners with a clear point of contact with the Australian research (inclusive of Indigenous research) ecosystem.

Prioritise

The flagship grants under this scheme will establish national centres of excellence to support large-scale research of national and international scale and importance for Australia or aligned with a government priority.

Unlike the other schemes, *Prioritise* grants will facilitate focused, long-term and multi-institutional research conducted to drive knowledge in priority areas identified by government and the ARC Board.

Prioritise grants are proposed as a designated program under the ARC Act, over which the Minister has final decision-making authority. These grants will ensure consistent and prominent alignment of centres with the national interest. "It is important for the ARC to have the agility to put forward targeted calls for research, such as Special Research Initiatives, that enable it to respond to national priorities."

UNIVERSITY OF SYDNEY

The ARC Board will determine and communicate in advance of a national centres of excellence round whether it will include calls for proposals responding to areas of specific focus, including:

- Industry partnership and/or training
- International collaboration (e.g. a joint initiative with an international funder)
- Growing an emerging or strategically important field of research.

National Centres of Excellence 'calls' may be run on an ad hoc basis, outside the usual NCGP schedule, to align with government or international funder timelines. In the absence of an ad hoc

"The University recognises the need to develop research capacity and capability in key sovereign areas. The strength of the Australian research sector has always stemmed from the bottom-up generation of ideas, including in sovereign areas, and this must be maintained and even enhanced by the NCGP. and then better leveraged."

THE UNIVERSITY OF ADELAIDE

call, an open call will run on a regular basis. Applications will be required to demonstrate national or international significance, including, but not limited to, relevance to a government priority list (such as the National Science and Research Priorities).

- Facilitate researchers conducting large scale, investigator-led research of national scale or importance.
- Encourage universities to operate internationally competitive research at a national scale.
- Enable government or the Board to prioritise areas of national significance that merit major investments.
- Provide mechanisms for significant collaboration, including bilateral or multilateral collaboration with international research funders and national research funders (e.g. through a Learned Academies joint initiative).

Lead and Mentor

Lead and Mentor grants support outstanding mid-career and senior researchers to lead, mentor and develop the next generation of researchers—both within and beyond the university sector. It is proposed that the existing named grants for women leaders (the Kathleen Fitzpatrick and Georgina Sweet awards) will continue and that two new specific grants will support eminent Indigenous academic leaders.

These grants are designed to take advantage of established researchers' experience, by allowing them to mentor PhD candidates and postdoctoral researchers through a project grant. This will help early-career researchers build the independence they need to navigate the Australian research landscape and lead future grants of their own.

As the majority of senior researchers at the level required to receive a *Lead and Mentor* grant are already employed by a university, it is not intended to provide salary costs for the lead investigator. Project funding is provided as well as salary support for a team of PhD and postdoctoral fellows.

- Help researchers gain experience in the early stages of their careers.
- Support universities to retain eminent researchers in Australia with an investigator-led research scheme.
- Address government's need to boost the research workforce in key areas (e.g. Indigenous, women, emerging disciplines) through funding for postdoc and PhD positions supported by a mentor lead researcher.

Embedded Fellowships

Embedded fellowships provide short periods of funded research focus for excellent researchers embedded within funded project grants. While fellowships are a valuable component of a research funding portfolio, as they allow researchers to concentrate on research for an extended period, traditional 4-year fellowships concentrate a significant amount of funds on a small number of individual researchers. Embedded fellowships for up to 2 years will reward excellence by financially supporting a small number of outstanding individuals while distributing NCGP funding to more people and projects. While individual investigators are eligible to apply for embedded fellowships, the fellowships will facilitate team-based research where appropriate (as many projects will include other researchers in addition to the fellow). Recipients can use their 2 years of funding flexibly to focus on their research at critical periods but will not be completely removed from the university workforce for the grant's full duration. For example, fellowships may be used to support partial or semester-long teaching buyouts for recipients in fixed term or continuing roles.

A maximum of 2 applications are available per project, at least one of which must be for an ECR. Embedded fellowships will be assessed through a merit-based process that rewards the most outstanding researchers in each cohort. Fellowships will only be awarded if the project is funded, and they are awarded on top of the project's requested budget.

Embedded fellowships will:

- Improve project viability for researchers by allowing researchers to concentrate on research at critical periods (e.g. 2 years at the start of a 4-year project).
- Ensure universities promote sustainable workforce practices and career pathways for researchers accessing ARC funds and retain excellent ECRs.
- Facilitate government workforce priorities by granting flexibility and promoting productivity for researchers with different career trajectories (e.g. women seeking to re-enter research after a break).
- Support and mentor ECRs to develop the independence and maturity required to lead future projects.

Supporting Research Infrastructure Investment

Infrastructure is supported in all schemes at different scales, where justified. Small equipment purchases associated with individual research projects will be an eligible project expenditure in all grants. *Collaborate* grants will support larger collaborative infrastructure investments (similar to those previously supported in LIEF) requiring major infrastructure that will benefit research conducted across multiple universities.

Having your say

The ARC thanks stakeholders who were involved in previous consultation and now invite you to have your say on the next stage of the policy review.

Submissions are open until 13 April 2025 via the form at the following link: https://www.arc.gov.au/ engage-us/consultations/policy-review-national-competitive-grants-program

Respondents can answer questions within the form via survey or by uploading a maximum 4-page PDF through the above link.

Your feedback is welcome, particularly in relation to the following questions:

- 1. Does the proposed model provide a strong and clear basis for the NCGP over the next 20 years?
- 2. Does the proposed model adequately address your concerns or those expressed in the initial consultations?
- 3. Do you foresee any unintended consequences or significant risks which have not been accounted for in the proposed model?
- 4. What issues would need to be addressed in the transition from the current NCGP schemes to the new model?
- 5. Are there any features that you would add to, or remove from, the model?
- 6. Do you have any feedback on the proposed grant schemes and their likely effectiveness?

Next steps

Reforming the NCGP is a long-term endeavour. A final report will be provided to Government by June 2025, with changes arising from the Policy Review to be introduced progressively from as early as 2026. Current schemes underway will be finalised and the ARC may adjust schemes as the move to a new NCGP commences.

The ARC will advise the sector of progress on the new NCGP and will continue to consult on key issues throughout the implementation process (e.g. new grant guidelines).

Appendix A: Terms of Reference

Policy Review of the National Competitive Grants Program

Terms of Reference

PURPOSE OF THE REVIEW

A strong research sector generating world-leading, impactful research is vital for Australia's future productivity and prosperity. As the primary Commonwealth funder of fundamental and applied research in Australian universities through the National Competitive Grants Program (NCGP), the Australian Research Council (ARC) plays a central role in the national innovation and research system.

Following the independent review of the ARC, the Australian Government is amending the Australian Research Council Act 2001 to reform and strengthen the ARC to drive world-class Australian research, now and into the future. The Review builds on these reforms by examining the NCGP to ensure it continues to deliver economic, social, environmental, and cultural benefits for all Australians by funding excellent pure basic, strategic basic and applied research.

KEY AREAS FOR REVIEW

Purpose and impact of ARC research grants

- The purpose and objectives of the NCGP and its capacity to support ground-breaking research, including how the program:
 - supports fundamental research in Australian universities
 - promotes research collaboration, translation and impact to generate economic, environmental, social and cultural benefits for Australia
 - aligns to the ARC's defined role and purpose set out in the Objects of the Australian Research Council Amendment (Review Response) Bill 2023.

Program structure and design

- The design and structure of the NCGP in the context of international best practice to ensure it:
 - limits administrative burden and is easy for researchers to understand and interact with
 - promotes strong research outcomes by encouraging collaboration across disciplines, universities, and with a diverse range of local, national, and international research partners and end-users
 - supports the collection and communication of research outcomes and impacts to demonstrate the value of public funding and investment.

Alignment with other government research funding programs

 In line with the ARC's unique role in supporting pure basic, strategic basic and applied research, consider opportunities to better align ARC and other government research funding programs to strengthen Australia's research and innovation ecosystems, including through the promotion of university-led and industry co-designed research.

Strong and diverse research sector

• The role and impact of the NCGP in promoting a strong and diverse research sector, including by identifying and addressing potential barriers for the participation and success of researchers and industry partners and end-users in the program.

Advancing support for Indigenous Australian research and researchers

- The capacity of NCGP to promote, embed and support Indigenous research and knowledge systems in Australia's research sector, including through initiatives to:
 - promote Indigenous academic leadership in shaping and producing knowledge of benefit to the community, and
 - strengthen the pipeline of emerging Indigenous researchers.

National priorities for research

- The capacity of NCGP to support the revitalised National Science and Research Priorities, the National Reconstruction Fund, and other relevant government priorities, including through:
 - focused and scaled investment to address emerging and significant research opportunities and complex problems facing Australia.

Appendix B: Current NCGP Schemes

	Discovery Program					
Discovery Projects Fundamental research projects across all disciplines with teams and individuals funded. 3-5 year grants, up to \$500,000 p/a. Awarded annually.	Discovery Indigenous Teams are led by an Indigenous researcher. Projects across all disciplines, often Indigenous topics. 3-5 year grants, up to \$500,000 p/a. Awarded annually.	Discovery Early Career Researcher Award Fellowships for emerging leaders in their research field to establish independence. 3-year grants, salary and up to \$50,000 p/a project costs. Capped at 200, awarded annually.	Future Fellowships Fellowships for mid-career researchers to establish capacity in competitive basic and applied research. 4-year grants, salary and up to \$60,000 p/a project costs. Capped at 100, awarded annually.	Australian Laureate Fellowships Exceptional, world-class research leaders, building globally competitive research programs. 5-year grants, salaries and up to \$300,000 p/a project costs. Capped at 17, awarded annually. Includes 2 named awards for women (additional \$20,000 p/a)		
		Linkage Program				
Centres of Excellence (Designated program) Based in Australia and leading on the global stage, Centres are a long-term focal point for expertise. Up to 7-year grants, \$1-5m p/a. 9-13 Centres are awarded every three years.	Linkage Projects Supports industry driven projects and push the boundaries of applied research. ARC funding is matched by partners. 3–5- year grants, up to \$300,000 p/a. Awarded twice each year	Early Career Industry Fellowships Develops industry collaboration skills for early career researchers to build capability in translation and commercialisation. Up to 3-year grant, salary and up to \$150,000 total project costs. Capped at 50, awarded annually.	Mid-Career Industry Fellowships Supports mid-career researchers to operate across sector boundaries building capability in collaboration, translation, and commercialisation. Up to 4-year grant, salary and up to \$290,000 total project costs. Capped at 25, awarded annually.	Industry Laureate Fellowship Supports experienced research leaders to operate across sector boundaries building capability in collaboration, translation, and commercialisation. Up to 5-year grant, salary and up to \$1.5m total project costs. Capped at 8, awarded annually.		
Industrial Transformation Research Hubs (Designated program)Industry and end-user partners supporting adoption and translation in strategic areas. 3-5-year grants, \$500,000- \$1m p/a. Awarded annually.	Industrial Transformation Training Centres (Designated program) Training Centres focus on industry-ready research graduates.4-5-year grants, up to \$1 million p/a. Awarded annually.	Linkage Infrastructure Equipment and Facilities Enabling research infrastructure, equipment and facilities to be shared between universities and industry. 1-5-year grants, up to \$150,000 p/a. Awarded annually.	Learned Academies Special Projects Learned Academies undertake projects from an independent, sector-wide perspective, to inform future strategy. Last conducted in 2017. 2-year grants, up to \$500,000.	Special Research Initiatives Funding to accelerate research in new and emerging fields, build capacity in strategically important areas identified by Government. Frequency and funding are variable.		

Appendix C: Glossary of Terms

Term	Definition
Applied research	Original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific, practical aim or objective.
ARC Act	Australian Research Council Act 2001 (compilation date 01/07/2024)
ARC Board	The ARC Board's functions include determining priorities, strategies and policies from the ARC. The ARC Board members are appointed by the Minister and include the Chair, Deputy Chair and up to 7 other members. The members of the ARC Board are the Accountable Authority of the ARC.
ARC Fellowship	A named Fellowship position within any ARC grant program where the salary is funded wholly or partly by the ARC.
Designated Research Program	The research programs known as the ARC Centres of Excellence scheme, the Industrial Transformation Training Centres scheme, the Industrial Transformation Research Hubs scheme and any nationally significant research program that will help build research capability.
Discovery Program	The Discovery Program includes the following schemes: Discovery Projects, Discovery Indigenous, Discovery Early Career Researcher Awards, Future Fellowships and the Australian Laureate Fellowships. Information on each scheme is at Appendix B.
Early-career researcher	A researcher within 5 years of the conferral date of their PhD or equivalent higher degree.
Early-stage research	The initial phase of investigation in pure basic, strategic basic and/or applied research, characterised by the exploration of novel ideas or concepts. Research outcomes may include proof of concept, preliminary data, or new theoretical frameworks.
End-user	An individual, community or organisation external to academia that will directly use or directly benefit from the output, outcome or result of research. This may include industry, not-for-profit, government and community sectors.
Indigenous Data Sovereignty	The right of Indigenous peoples to govern the collection, ownership and application of data about Indigenous communities, peoples, lands, and resources.
Indigenous Forum	A designated committee, established by the Minister to assist the Board to determine priorities, strategies and policies for the ARC. The ARC Indigenous Forum is made up of a cross-section of eminent Indigenous members with significant experience in research.
Linkage Program	The Linkage Program includes the following schemes: ARC Centres of Excellence, Linkage Projects, Early-Career Industry Fellowships, Mid-Career Industry Fellowships, Industry Laureate Fellowships, Industrial Transformation Research Hubs, Industrial Transformation Training Centres, Linkage Infrastructure Equipment and Facilities, Learned Academies Special Projects, and Special Research Initiatives. Information on each scheme is at Appendix B.
Mid-career researcher	A researcher within 5 to 15 years of the conferral date of their PhD, equivalent research higher degree or professional equivalent.
National Competitive Grants Program (NCGP)	The National Competitive Grants Program comprises 2 funding programs Discovery and Linkage, which support the highest quality fundamental and applied research and research training through national competition.

Term	Definition
Project	An application approved by the ARC Accountable Authority to receive funding from the ARC.
Pure basic research	Basic research carried out for the advancement of knowledge, without seeking long-term economic or social benefits or making any effort to apply the results to practical problems or to transfer the results to sectors responsible for their application.
Research Opportunity and Performance Evidence (ROPE)	An ARC policy that enables the research achievements of applicants to be evaluated in the context of their career and life opportunities and experiences, including, where relevant, significant career interruptions.
	The creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies, inventions and understandings. This could include synthesis and analysis of previous research to the extent that it is new and creative.
Research	This definition of research is consistent with a broad notion of research and experimental development comprising "creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge" OECD (2015), Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development (p.378).
Research infrastructure	The assets, facilities, services, and coordinated access to major national and/ or international research facilities or consortia which directly support research in higher education organisations and more broadly and which maintain the capacity of researchers to undertake excellent research and deliver innovative outcomes.
Strategic basic research	Experimental and theoretical work undertaken to acquire new knowledge directed into specified broad areas in the expectation of practical discoveries. It provides the broad base of knowledge necessary for the solution of recognised practical problems.
	standard-research-classification-anzsrc/latest-release
Strategic Examination of Research and Development	A strategic examination of Australia's research and development system being undertaken by the Department of Industry, Science and Resources and the Department of Education, as part of the government's Future Made in Australia plan.
Technology Readiness Levels (TRL)	A method for estimating activity in the innovation sector from research through development and commercialisation.