Australian Government

Australian Research Council

# Inquiry into Funding Australia's Research

**The House Standing Committee on Education, Employment and Training**

**Submission by the Australian Research Council**

## Executive Summary

The Australian Research Council (ARC) is the research funding agency responsible for a major component of the Australian Government's policy and investment in research and innovation across all disciplines beyond clinical medicine.

Through the provision of competitive research grants, research supported by the ARC and conducted at universities leads to innovation and technologies that produce economic benefits and address many of the social, cultural and environmental challenges facing Australia and the world.

Ensuring that competitive research funding to universities is allocated on the basis of excellence underpinned by competitive peer review and administered cost-effectively is crucial in maximising the benefits of research for the nation. The peer review mechanisms for grants and outputs is a shared worldwide academic standard.

The ARC Excellence in Research for Australia assessment of university research initiative clearly demonstrates the high standard of research in Australia, both in terms of quantity and quality.

The ARC is a lean and efficient agency, with operating costs as proportion of administered funding below that of comparable funding agencies.

Applying for competitive grants necessarily involves effort on the part of researchers and institutions to meet the high standards of research excellence core to the ARC mission defined in the ARC Act 2001. The ARC continues to implement a range of initiatives aimed at streamlining the grant application process, enhancing data re-use, and focussing the time spent by researchers in preparing grant proposals on preparing for excellent research conduct, whilst still ensuring the ARC exercises the due diligence required in administering public funding under its competitive schemes and collects the data required to meet national needs.

While unsuccessful applications are disappointing for the applicants, it would be inaccurate to dismiss that the effort put into them has been wasted, as the articulation of ideas produced in their development often informs applications to other funding sources, or bids for internal institutional funding.

## 1. Introduction

The Australian Research Council (ARC) welcomes the opportunity to provide a submission to The House Standing Committee on Education, Employment and Training Inquiry into Funding Australia's Research.

A strong research sector is critical in addressing the economic, social, cultural and environmental challenges facing the world. Past research funded by the Commonwealth has produced dramatic advances in knowledge, providing benefits in every sphere of life and producing technology and products that are used every day, such as Wi-Fi, solar technology and the cochlear implant. Commonwealth funding has also produced excellent research driving a range of socially significant outcomes for Australia as diverse as contributing to the first Macquarie Dictionary, Indigenous language preservation and improving foster care placement. The ARC and grant recipients routinely collaborate across a number of commonwealth, state and international agencies and partners to maximise the research outcomes from basic research through to innovation realisation.

The comments within this submission address both the Terms of Reference and Aim of the Review, reflecting the legislative remit and expertise of the ARC in:

- funding excellent research
- administering competitive research grant funding
- evaluating the quality of research
- providing advice on research matters.

### The unique role of the ARC

Noting the Committee's interest in "*the diversity, fragmentation and efficiency of research investment across the Australian Government, including the range of programs, guidelines and methods of assessment of grants*", this section is designed to introduce the unique role of the ARC.

The ARC is a Commonwealth entity within the Education and Training portfolio of the Australian Government. The ARC operates within the parameters of the ARC Act 2001. It has a grants budget of $775.3 million in 2018-19, and is currently responsible for allocating approximately 11.5%[1] of the Australian Government's direct investment in research (see Figure 1).

The purpose of the ARC is to grow knowledge and innovation for the benefit of the Australian community. In doing so, it competitively funds Australian universities to undertake research in all academic disciplines, except Medicine. Indeed the role of the ARC is unique, as it is responsible for funding excellence across the spectrum of research from basic to applied, notably being the largest supporter of basic research in Australia. It is also one of the few sources of funding for research in disciplines beyond science and engineering, such as in social and community services, government policy, the legal sector and the cultural industries.

In 2017, 79.7% of ARC grant funding was allocated to research in STEM (Science, Technology, Engineering and Maths) disciplines and 18.9% was allocated to HASS (Humanities, Arts and Social Sciences) disciplines, with application success rates of 20.0% and 18.8% respectively. In 2017, a total of 5830 applications for funding were received. Examples of specific nationally important research funded by the ARC are shown in Table 1.

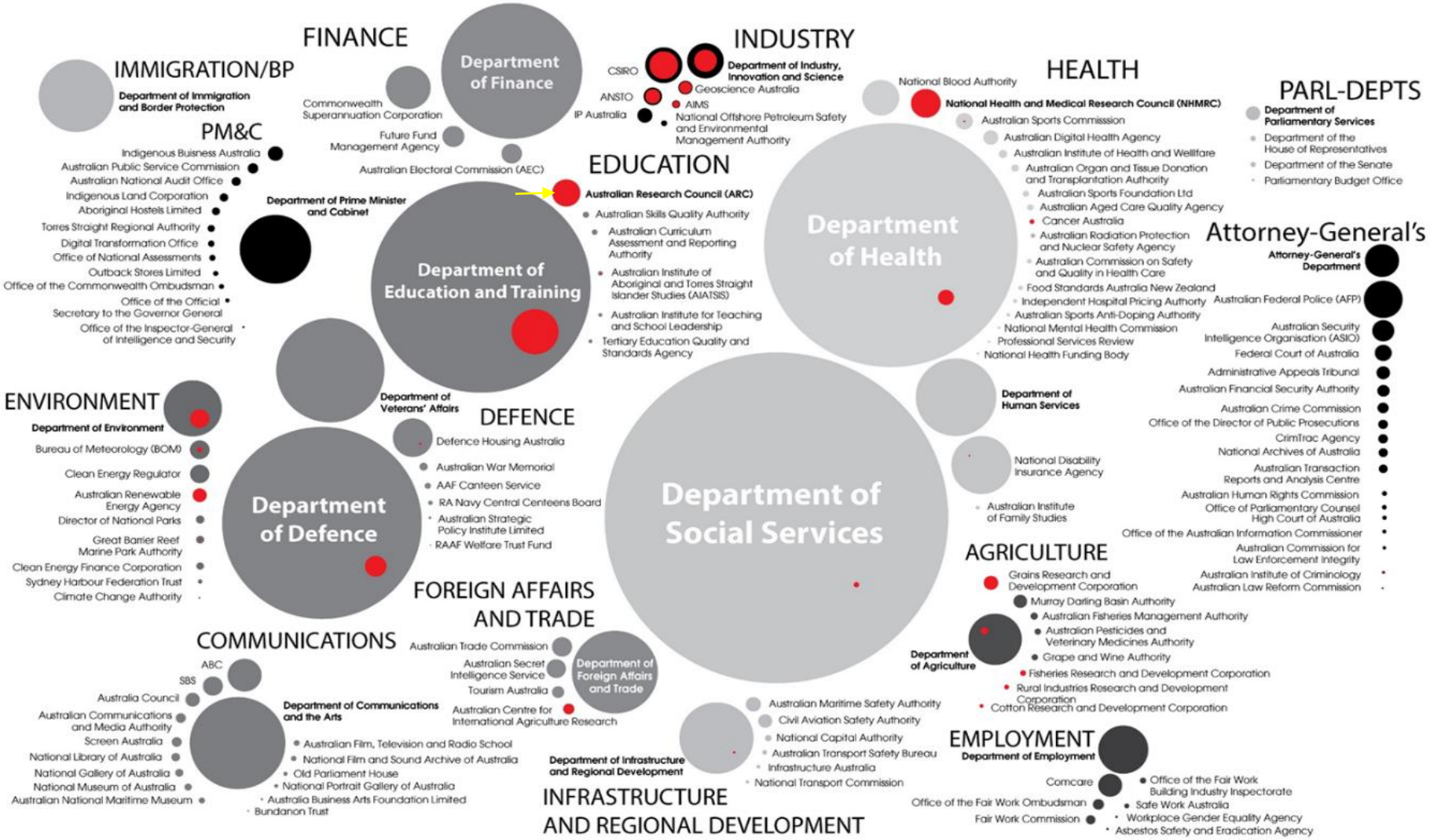
[1] https://industry.gov.au/innovation/reportsandstudies/Documents/2017-18-SRI-Budget-Tables-Snapshot.PDF

**Table1. Examples of research initiatives funded by the ARC**

| *Area of research* | *$ million funding* |
|---|---|
| Space industries, systems, space enabled services and support | $73 million since 2011 |
| Agriculture, mining, national security/biosecurity | $63 million since 2015 |
| Antarctic research | $60.6 million since 2013<br>$56 million from 2020 |
| Indigenous research | $166 million since 2013 |
| PFAS (fire retardant chemical) remediation | $13 Million in 2017-18 |
| Tropical health and medicine | $42 million in 2014 |
| Coral reefs | $51.99 million since 2013 |

**Figure 1: Dispersed Commonwealth Government investment in R&D**

*Government portfolios, size proportional to budget.*
*Australian Research Council*
*Research agencies in portfolios, size proportional to budget (Medical Research Future Fund excluded)*
*(Source: ARC analysis of 2017-18 Budget Tables)*



The ARC is Australia's sole member on the Global Research Council, an international organisation of science research funding agencies. Through this membership, and its strong connections internationally, the agency ensures that the Australian research sector remains at the forefront of world best practice for research funding programs, grant administration and peer review. The ARC's processes and systems have also proven to be a blueprint for many new research funding bodies, such as those in Indonesia and Papua New Guinea, wishing to establish robust and leading-edge competitive funding processes and grant management systems.

Significantly, the ARC is an agency that administers a major grants program budget with a relatively small departmental allocation. The ARC had a staff of 134.5 FTE in January 2018 (including 6.8 FTE senior executives), supported by an operating budget of $21.4 million. A 2012 benchmarking exercise against comparable international research funding agencies[2], found the cost of grants administration by the ARC was only 1.31 per cent of the value of the grants awarded, compared to an average of 4.26 per cent for the benchmarking organisations.

## Grants Administration

The ARC administers a range of project and program grants as part of its National Competitive Grants Program (NCGP), which consists of two elements—Discovery and Linkage. Within these elements are a range of schemes structured to provide a suite of incentives and support for researchers to build the scope and scale of their work and collaborative partnerships. Together, the schemes span basic and applied research across disciplines and are designed to:

- support the generation of new knowledge, technologies, products and innovations
- support the development of highly-trained research personnel
- provide incentives for researchers to partner with each other, business, the public sector and community organisations to undertake research in areas of importance to the end-users of research outcomes
- build the scale and focus of research in areas of national priority.

A brief summary of the NCGP components is shown in Figure 2 below.

**Figure 2. ARC NCPG Grant Programs**

| **Discovery Program**<br>*(more basic in nature)* | **Linkage Program**<br>*(more applied in nature)* |
|---|---|
| Australian Laureate Fellowships | Centre of Excellence |
| Future Fellowships | Special Research Initiatives |
| Discovery early Career Researcher Awards | Industrial Transformation Research Program |
| Discovery Projects | Linkage Infrastructure and Equipment Fund |
| Discovery Indigenous | Linkage Projects |
| | Learned Academies Special Projects |

[2] Benchmarking organisations: National Health and Medical Research Council, The National Sciences and Research Council of Canada, Research Council of Norway, The National Sciences and Research Council of Canada, Swiss National Science Foundation

Funding allocated through the NCGP supports the direct costs of research, which are the costs that can be specifically attributed to an approved research project, such as research personnel, fieldwork, equipment and infrastructure. Success rate trends for the NCGP Program are shown in Appendix 1.

### Evaluation of Research Excellence and Impact

The ARC has a unique role in administering two Commonwealth Government assessments of university research, thus providing a coherent view to government of the continuing outcomes and benefits of this investment.

The ARC evaluates the quality of research undertaken in all Australian universities through the Excellence in Research for Australia (ERA) program. ERA is an established evaluation framework that identifies research excellence by comparing Australia's research effort against international benchmarks. The ARC's model for assessing the quality of research is highly regarded internationally. ERA as a form of performance measurement has been recognised as state-of-the-art, with the OECD stating 'performance-based research funding systems using peer judgment based on indicators seems to be the state of the art and is being implemented in ERA'.[3]

The ARC is also responsible for developing and implementing a new Engagement and Impact assessment which will examine the engagement of researchers with research end-users beyond academia, and show how universities are translating their research into economic, social, environmental and other impacts.

## 2. Australia produces world class research

The ERA 2015 assessment of university research quality indicates that Australia is producing world-class research. A comparison of the results between the 2010 and 2015 assessments demonstrate an overall improvement in research quality in the Australian higher education and research sector with the number of units of assessment (research disciplines at individual universities) rated 'well above world standard' increasing from 308 to 659.[4]

The processes supporting ARC's competitive schemes help to ensure that a capped funding pool is directed where it can be most effective. The competition through the NCGP is essential to maintaining the vitality of the Australian higher education research system and the strength of its universities generally. It enables smaller players in the innovation space to compete on a level playing field with major research enterprises. As all three ERA exercises have identified, pockets of research excellence exist across the entirety of the Australian university system–from our smaller regional universities to our major research-intensive universities.

While it is not the role of the ARC to comment on the current dual funding system for university research that the Committee is tasked with considering, we note that the strength and suitability of a key metric in the Block Grants formulae is reliant on the robustness of the competitive grant selection processes in agencies like the ARC. The efficiency and effectiveness in allocating block

[3] OECD (2010): *Performance-Based Funding for Public Research in Tertiary Education Institutions*, *Workshop Proceedings*, OECD Publishing, p43

[4] In addition to driving improvements in research quality and identifying Australia's research strengths by rating the quality of research, ERA also provides information to universities to enable them to make strategic decisions about their research effort, and provides assurance that the public investment in research is valuable.

grant funding *relies* on the rigour (and associated burden) of competitive grants processes such as the ARC's which enables the use of Category 1 grant income as a metric that represents, among other things, research excellence.

## 3. Continuous grants management improvement

### Ensuring Efficiency of Grant administration process

This section is designed to particularly address the Committee's interest in "*Opportunities to maximise the impact of funding by ensuring optimal simplicity and efficiency for researchers and research institutions while prioritising delivery of national priorities and public benefit.*"

The ARC's extensive experience in the management and administration of competitive research funding programs is recognised both nationally and internationally. Domestically, the recognition of the ARC's expertise in the delivery of competitive research funding grants has led to the Government requesting the ARC develop initiatives in emerging priority areas, such as the Per- and Poly-Fluoroalkyl Substances (PFAS) Remediation Research Program. Similarly the recent Clarke Review of Antarctic Science requires that the ARC peer review grants assessment process be used to assist decision making around what research to fund. The ARC Special Research Initiative in Excellence in Antarctic Science is being made to ensure Antarctic investments are effective, joined-up and fit-for-purpose. Other ARC investments in Marine Science are contributing to an understanding of management of the Barrier Reef ecosystem. Utilisation of the ARC's specialist services ensure an effective use of Government funding through an established competitive process.

In line with Government requirements, the ARC works on an ongoing basis to streamline its grant application process with the aim of reducing complexity and the time required to complete an application.

Since 2013, the ARC has undertaken a number of initiatives designed to streamline and simplify the format and content of grant application forms, grant guidelines and grant agreements, as well as increasing transparency and fairness of the grants assessment process. Specific initiatives include:

- development of a state-of-the-art Research Management System (RMS) to enable electronic creation, submission and assessment of grant applications, as well as post-award management of progress reports, increasing efficiency of the grants process (more information shown below)
- creation of a searchable public portal accessed via the ARC website onto which awarded grants information is published, increasing transparency of grants outcomes
- use of sophisticated text matching technology to assist ARC academic staff in assignment of appropriate assessors to applications during the peer review process, based on research content, increasing efficiency of the assessment process
- introduction of a continuous assessment process for Linkage Grant applications as a recommendation of NISA, to increase responsiveness to industry (note this initiative is yet to be evaluated)
- introduction of Research Opportunity and Performance Evidence (ROPE) as a way of enabling assessors to fairly consider the track records of researchers with diverse career paths, particularly for female researchers who have had career breaks, increasing successful workforce participation

- publication of guidelines on GrantConnect, the Australian Government's grants information system, as part of transparency and efficiency measures
- introduction of flexibility of grant duration (up to five years funding) in some funding schemes, to reduce the frequency with which researchers are required to submit funding proposals and to increase capacity for achieving significant outcomes for more complicated problems and support industry engagement
- introduction of a two stage process for Centre of Excellence applications, involving a brief expression of interest at stage one, thus lessening the burden in crafting unsuccessful applications.

Major initiatives currently underway as part of continuous improvement include:

- Working with the international research data collection agency ORCID on the introduction of unique numerical identifiers (ORCID numbers) for researchers that will enable automated harvesting of publication information and auto-population of data into grant applications, thus decreasing the burden of assembling curriculum vitae, which has been identified by researchers as an area needing greater efficiency.
- Leadership of a major project with the Australian Bureau of Statistics, Statistics New Zealand and the New Zealand Ministry of Business, Innovation and Employment to undertake a root and branch revision of the Australian and New Zealand Fields of Research. This will provide all of government with increased ability to categorise and oversight its investment in disparate research programs across agencies in a more contemporary way.
- Consulting with ARC College of Experts to understand what information is essential for their assessment of applications, with a view to streamlining information requirements in applications, whilst meeting due diligence and government compliance requirements. This builds on previous work undertaken in 2013.

The ARC also has a number of future projects that could significantly add to efficiency of its grants processes, though these are beyond the current funding of the agency and require careful scheduling to minimise the impost on universities' time in providing responses:

- Development of an archiving capacity that would enable researchers to re-use personal and curriculum vitae information across applications and over time, thus substantially easing the burden of application crafting
- Trialling a two-stage application process to lessen the initial information in applications submitted by researchers. Rather than establishing an additional "expression of interest" process for researchers, the focus would instead use modern IT systems to enhance "blind assessment" of projects prior to consideration of researcher teams, lessening perceived prejudice, aimed at lessening the burden involved in application preparation, and broadening the spectrum of innovation supported.
- Creation of a public facing portal containing plain English summaries of all Engagement and Impact Assessment case studies, to enable greater accessibility for industry, facilitating the easier establishment of links between industry and researchers.

## New Technologies

The integration of new technologies within the ARC's systems has also supported researchers in timely submission processes. The ARC's purpose built IT system, the Research Management System

(RMS), has received international attention as a best practice system that is tailored and fit for purpose to meet the requirements of the ARC, with flexibility to respond to the needs of the sector to deliver a modern and efficient research application experience.

In response to feedback from the sector, the ARC has invested substantially in developing information technology measures to support streamlining processes within the agency. This has provided improved tools and processes to allow more efficient submission of grant applications with increased standardisation and auto-population. Effective post-award management and reporting is further supported by a range of new internal functionalities in RMS to streamline processing of grant agreements, payments and variations for grant agreements. Our view is that the RMS could act as an exemplar system supporting better research grants administration across government.

### Engagement and efficiency across portfolios

The ARC works closely with the National Health and Medical Research Council (NHMRC, Department of Health), the Cooperative Research Centres Program (Department of Industry) and other agencies across government to share best practice in research grant delivery, to ensure scheme timelines are staggered to minimise the impost on the sector and to facilitate a consistent approach to data collection.

To ensure the efficient creation and use of data by Government agencies and further reduce the administrative load for universities, following the ERA 2018 round, the ARC will work with the Department of Education to consider the possible alignment of data submission for ERA (undertaken every three years) and the Higher Education Research Data Collection (HERDC) (submitted annually). In doing so the agencies will look to ascertain the feasibility of a single submission of data for multiple uses. This would automate part of the national research assessment process, significantly simplifying it and thus easing the burden of submission assembly for participating universities. One further option could be to enable research excellence assessment to be broadened beyond universities to provide Government with a more consolidated view of its research investment. The new Engagement and Impact framework has also been designed to minimise the data collection burden for universities, including by reusing ERA submission data for key engagement indicators.

### Working with the sector to ensure high quality applications

Funding outstanding research for the nation’s benefit requires a collective effort involving funding agencies, research institutions and individual researchers. High quality research demand for ARC schemes from the sector is extremely high. For funding commencing in 2017, 5830 applications were submitted to the ARC. While there are more competitive applications than there is the capacity to fund within the ARC budget, there are, however, also a large number of uncompetitive applications.

Actual success rates for grant applications are a function of the available ARC budget, combined with the numbers of applications received from eligible institutions for that round. Universities and research organisations act independently to determine the number and discipline areas of applications submitted to the ARC for funding. The ARC has a significant role working with them as employers of researchers, encouraging internal quality assurance processes prior to submission to efficiently manage and vet proposals and educate applicants. The aim of this work is to ensure some triaging of applications is done at institutional level rather than during the ARC peer review process, and that the highest quality applications are submitted in each funding round. The positive impact of recent engagement is suggested by an improvement in success rates from the most recent rounds of

funding indicating that a smaller number of higher quality proposals are being submitted. 2017 success rates for some key ARC programs are 15.2% for Laureate Fellowships, 18.9% for Discovery projects, and 25% for Linkage projects.

It is important to note that working on grant applications is a time when thinking about plans in detail can facilitate the crystallizing or maturing ideas as researchers think of tangible and feasible ways in which they can be investigated. While unsuccessful applications are disappointing for the applicants, it would be inaccurate to suggest that time has been wasted, as the articulation of ideas that they have produced can find its way into other applications to other funding sources, or to applications for internal institutional funding. The latter is often provided through institutional block grants and can enable the institution to make a strategic choice to fund preliminary work.

## 4. Best practice peer review

To ensure public funding is expended accountably on research of the highest quality, a comprehensive and robust process of expert (peer) merit review of grant proposals, underpinned by experience and expertise, is operated by the ARC. The principles of this process represent international best practice for competitive research funding programs, as recently endorsed by members of the Global Research Council in Moscow, Russia in May 2018. Signatories amongst the approximately 100 international research agencies represented at that meeting included The National Science Foundation USA, the National Science and Engineering Research Council Canada, Research UK, The European Science Council, the Japan Science and Technology Agency, the National Research Foundation Singapore, and the National Natural Science Foundation of China.

> *"Rigorous and transparent scientific merit review helps to assure that government funding is appropriately expended on the most worthy projects to advance the progress of science and address societal challenges"*[5].

Peer review is the bedrock of all academic research. The ARC peer review process harnesses the expertise of Australian and international researchers, as well as specialists from industry and other end-user organisations, to ensure that the ARC funds the highest quality proposals with strong potential to achieve beneficial outcomes for the nation.

For funding commencing in 2017, approximately 7100 assessors provided nearly 19,000 assessments of applications submitted to the ARC. With the exception of 195 assessors who undertook a coordinating role as members of the ARC College of Experts, the remainder provided their time and effort without remuneration, thus demonstrating the sector's support for peer review. The resultant assessment model is competitive, transparent and provides in-depth consideration of proposal content, as well as an opportunity for applicants to rebut assessments before proposals are finally ranked in order of merit. This acts to improve the quality of research by focussing the research early through peer review. The processes of recommending grants through a thorough merit review assessment of applications by experts in the field is fundamental to the ARC, its risk management and to the accountability for publicly funded research.

[5] Global Research Council (2017): *Statement of Principles for Scientific Merit Review* accessed 20 June 2018

## 5. Conclusion

In conclusion, the ARC continues to provide a merit-based, highly competitive system for funding excellence in Australia's research. It has a unique remit to fund across the range of academic areas and across the spectrum from pure to applied research. Assessments show the quality of the funded research is excellent. Current and future work of the agency is aimed at continuous improvement of ARC systems and processes, providing researchers with a superior experience and enabling them to concentrate on their research, delivering important innovation outcomes for the benefit of the nation.

## NATIONAL COMPETITIVE GRANTS PROGRAM—STATISTICS

### Discovery Projects

| Start Year | Proposals received (no.) | Proposals withdrawn (no.) | Proposals total (no.) | Projects awarded (no.) | **Success rate (%)** | **Total funding ($m)** | Average grant size ($) |
|---|---|---|---|---|---|---|---|
| 2018 | 3152 | 16 | 3136 | 594 | **18.9** | **225.7** | 379,901 |
| 2017 | 3552 | 12 | 3540 | 630 | **17.8** | **234.7** | 372,477 |
| 2016 | 3600 | 16 | 3584 | 635 | **17.7** | **244.9** | 385,669 |
| 2015 | 3689 | - | 3689 | 665 | **18.0** | **250.0** | 376,007 |
| 2014 | 3547 | 13 | 3534 | 703 | **19.9** | **257.6** | 366,475 |
| 2013 | 3431 | 6 | 3425 | 732 | **21.4** | **254.0** | 346,970 |

### Discovery Early Career Researchers Award (DECRA)

| Start Year | Proposals received (no.) | Proposals withdrawn (no.) | Proposals total (no.) | Projects awarded (no.) | **Success rate (%)** | **Total funding ($m)** | Average grant size ($) |
|---|---|---|---|---|---|---|---|
| 2018 | 1217 | 5 | 1212 | 197 | **16.3** | **70.9** | 360,104 |
| 2017 | 1203 | 6 | 1197 | 200 | **16.7** | **71.7** | 358,503 |
| 2016 | 1220 | 14 | 1234 | 200 | **16.4** | **70.7** | 353,500 |
| 2015 | 1394 | - | 1394 | 200 | **14.3** | **70.6** | 352,837 |
| 2014 | 1468 | 4 | 1472 | 200 | **13.6** | **75.7** | 378,946 |
| 2013 | 1281 | 5 | 1286 | 200 | **15.6** | **72.3** | 361,609 |

**Australian Laureate Fellowships**

| Start Year | Proposals received (no.) | Proposals withdrawn (no.) | Proposals total (no.) | Projects awarded (no.) | **Success rate (%)** | **Total funding ($m)** | Average grant size ($) |
|---|---|---|---|---|---|---|---|
| 2017 | 112 | 0 | 112 | 17 | **15.2** | **47.0** | 2,766,233 |
| 2016 | 124 | 0 | 124 | 16 | **12.9** | **44.1** | 2,757,715 |
| 2015 | 115 | 0 | 115 | 15 | **13.0** | **42.0** | 2,801,667 |
| 2014 | 90 | - | 90 | 16 | **17.8** | **42.2** | 2,634,470 |
| 2013 | 112 | 0 | 112 | 17 | **15.2** | **47.4** | 2,790,166 |

**Future Fellowships**

| Start Year | Proposals received (no.) | Proposals withdrawn (no.) | Proposals total (no.) | Projects awarded (no.) | **Success rate (%)** | **Total funding ($m)** | Average grant size ($) |
|---|---|---|---|---|---|---|---|
| 2017 | 295 | 1 | 294 | 91 | **30.9** | **77.0** | 846,199 |
| 2016 | 325 | 1 | 324 | 100 | **30.9** | **77.0** | 770,236 |
| 2015 | 318 | 3 | 315 | 50 | **15.9** | **38.6** | 772,000 |
| 2014 | 840 | 10 | 830 | 150 | **18.1** | **114.9** | 766, 129 |
| 2013 | 1236 | 2 | 1234 | 201 | **16.3** | **152.2** | 757,675 |

## Discovery Indigenous

| PROJECTS | | | | | | | |
|---|---|---|---|---|---|---|---|
| Start Year | Proposals received (no.) | Proposals withdrawn (no.) | Proposals total (no.) | Projects awarded (no.) | **Success rate (%)** | **Total funding ($m)** | Average grant size ($) |
| 2018 | 38 | - | 38 | 13 | **34.2** | **7.2** | 554,619 |
| 2017 | 31 | - | 31 | 11 | **35.5** | **4.6** | 421,354 |
| 2016 | 31 | - | 31 | 10 | **32.3** | **4.0** | 405,936 |
| 2015 | 32 | - | 32 | 10 | **31.3** | **4.4** | 439,261 |
| 2014 | 26 | - | 26 | 10 | **38.5** | **4.8** | 488,614 |
| 2013 | 32 | - | 32 | 10 | **31.3** | **4.3** | 432,000 |

Note - the scheme was previously called *Discovery Indigenous Researcher Development* (2007 to 2011). From 2012 it was named *Discovery Indigenous* following changes to the scheme in response to sector consultation.

| DISCOVERY INDIGENOUS AWARDS | | | |
|---|---|---|---|
| Start Year | Requested | Awarded | Success rate |
| 2018 | 12 | 4 | 33.3% |
| 2017 | 15 | 4 | 26.7% |
| 2016 | 14 | 3 | 21.4% |
| 2015 | 14 | 3 | 28.6% |
| 2014 | 13 | 5 | 38.5% |
| 2013 | 18 | 7 | 38.9%] |

**Linkage Projects**

| Start Year | Proposals received (no.) | Proposals withdrawn (no.) | Proposals total (no.) | Projects awarded (no.) | **Success rate (%)** | **Total funding ($m)** | Average grant size ($) |
|---|---|---|---|---|---|---|---|
| 2018** | 410 | 0 | 410 | 130 | **31.7** | **52.1** | 400,804 |
| 2017 | 220 | 0 | 220 | 87 | **39.5** | **33.5** | 385,000 |
| 2016* | 754 | 0 | 754 | 235 | **31.2** | **83.1** | 353,589 |
| 2015 | 711 | 1 | 710 | 252 | **35.5** | **86.9** | 344,949 |
| 2014 | 699 | - | 699 | 251 | **35.9** | **88.2** | 351,214 |
| 2013 | 787 | 2 | 785 | 306 | **39.0** | **101.8** | 332710 |

*Data Includes proposals in both continuous and non-continuous proposals in Linkage Projects 2016.

**Data includes proposals that have been approved for funding an announced up until 15/06/2018.

Note: Continuous Linkage Projects start years are based on funding commencement not scheme round year.

**Industrial Transformation Training Centres**

| Start Year | Proposals received (no.) | Proposals withdrawn (no.) | Proposals total (no.) | Projects awarded (no.) | **Success rate (%)** | **Total funding ($m)** | Average grant size ($m) |
|---|---|---|---|---|---|---|---|
| 2017 | 26 | - | 26 | 9 | **34.6** | **37.0** | 4.1 |
| 2016 | 27 | - | 27 | 6 | **22.2** | **22.0** | 3.7 |
| 2015 | 17 | - | 17 | 5 | **29.4** | **20.9** | 4.2 |
| 2014 | 13 | - | 13 | 7 | **54.0** | **15.6** | 2.3 |
| 2013 | 13 | - | 13 | 4 | **30.8** | **9.3** | 2.3 |

**Industrial Transformation Research Hubs**

| Start Year | Proposals received (no.) | Proposals withdrawn (no.) | Proposals total (no.) | Projects awarded (no.) | **Success rate (%)** | **Total funding ($m)** | Average grant size ($m) |
|---|---|---|---|---|---|---|---|
| 2017 | 5 | 0 | 5 | 3 | **60.0** | **9.6** | 3.2 |
| 2015 | 11 | - | 11 | 5 | **45.4** | **15.7** | 3.1 |
| 2014 | 15 | - | 15 | 4 | **26.7** | **18.7** | 4.7 |
| 2013 (Rd 2) | 16 | 1 | 15 | 7 | **46.7** | **24.0** | 3.4 |
| 2013 (Rd 1) | 6 | - | 6 | 3 | **50.0** | **10.6** | 3.53 |
| 2012 | 12 | - | 12 | 4 | **33.3** | **14.5** | 3.6 |

**Centres of Excellence**

| Start Year | EOIs | Invited to submit | Received | Centres awarded (no.) | **Success rate (%)** | **Total funding ($m)** | Average grant size ($) |
|---|---|---|---|---|---|---|---|
| 2017 | 97 | 20 | 20 | 9 | **45.0** | **283.5** | 31,500,000 |
| 2014 | 103 | 22 | 22 | 12 | **54.5** | **285.0** | 23,750,000 |

**Linkage Infrastructure, Equipment and Facilities**

| Start Year | Proposals Received (no.) | Proposals withdrawn (no.) | Proposals total (no.) | Projects Awarded (no.) | **Success Rate (%)** | **Total funding ($)** | Average Grant Size ($) |
|---|---|---|---|---|---|---|---|
| 2018 | 171 | - | 171 | 50 | **29.2** | **28.6** | 571,528 |
| 2017 | 179 | - | 179 | 48 | **26.8%** | **28.6m** | 596,431 |
| 2016 | 173 | - | 173 | 54 | **31.2%** | **37.9m** | 701,852 |
| 2015 | 159 | - | 159 | 66 | **41.5%** | **29.0m** | 439,325 |
| 2014 | 148 | - | 148 | 63 | **42.6%** | **31.9m** | 507,651 |
| 2013 | 169 | - | 169 | 72 | **42.6%** | **29.0m** | 403,125 |