Funding Collaborative Research—ARC Perspective
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The Australian Research Council

The ARC is within the Australian Government’s Education portfolio.

The ARC’s main responsibilities are:

• evaluating the quality of research in universities under Excellence in Research for Australia (ERA);
• providing funding for research through the competitive funding schemes of the National Competitive Grants Program (NCGP);
• providing policy advice on research matters to Government; and
• together with the National Health and Medical Research Council (NHMRC), administering the Australian Research Integrity Committee (ARIC).
ARC funding

• The ARC and national research investment
• Discovery, Linkage, Centres of Excellence and LIEF
• ARC grants and collecting organisations/GLAM
• Linkage, impact and infrastructure
• New opportunities and strategic challenges
Strategic challenges

• Tracking knowledge transfer, translation and impact
• Recognising return on investment in time and in kind
• Understanding research outputs and outcomes incl. creative work, exhibitions, reports, performance;
• Open access and national resources: digital platforms, clearing houses, infrastructure;
• Building in research training, internships, exchange
• Co-ordinating international collaboration.
Commonwealth Investment in R&D 2014–15

≈$9b

Industry R&D Tax Measures 26.44%
ARC 9.53%
NHMRC 10.12%
Australian Government R&D 7.50%
CSIRO 8.11%
DSTO 4.44%
Other R&D 1.95%
Energy and the Environment 1.37%
CRCs 1.63%
Other Health 0.63%
Higher Education R&D 0.47%
Block Funding 21.19%
Business Innovation 3.30%
Business R&D 0.02%
Rural 3.30%
Other R&D 1.95%

Source: Budget 2014-2015 Industry and Innovation tables
Discovery Program Funding 2014-15: $549.9 million

Linkage Program Funding 2014-15: $325.8 million
Discovery and Linkage
Aims of the Discovery and Linkage Programs

1. Discovery Program

- Fund excellent, internationally competitive research by individuals and teams that will produce high quality outcomes
- Build Australia’s research capacity through supporting and facilitating research training and career opportunities for excellent Australian and international researchers
- Support research in priority areas that will deliver national benefits
- Enhance research capacity and outcomes through support for international collaboration
Linkage Programs

• Encourage and extend cooperative approaches to research
• Strengthen links within Australia’s innovation system and with innovation systems internationally.
• Promote national and international research partnerships between researchers and business, industry, community organisations and other publicly funded research agencies.
• By supporting the development of partnerships, encourages the transfer of skills, knowledge and ideas as a basis for securing commercial and other benefits of research.
The ARC Centres of Excellence

a) highly innovative and potentially transformational research
b) interdisciplinary, collaborative approaches
c) relationships and new networks
d) building Australia’s human capacity
e) postgraduate and postdoctoral training
f) large-scale problems over long periods
g) points of interaction between unis, business, government, private sector
The Grants Peer Review Process

1. External Reviewer
2. Internal Reviewer
3. Rank
4. Committee Review
5. Recommendation to CEO
6. Minister Approval

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The Grants Peer Review Process

All Disciplines

- Biological Sciences and Biotechnology (BSB)
- Engineering, Mathematics and Informatics (EMI)
- Humanities and Creative Arts (HCA)
- Physics, Chemistry and Earth Sciences (PCE)
- Social, Behavioural and Economic Sciences (SBE)
Multi-Disciplinary Proposals

• Appropriate discussion prior to Panel meeting
Success Rate: Comparison of Schemes

Success Rate in commencement year 2013

- Linkage - Infrastructure Equipment...
- Linkage - Projects
- Discovery Indigenous
- Industrial Transformation Training...
- Discovery - Projects
- ARC Future Fellowships
- Discovery Early Career Researcher...
- Australian Laureate Fellowships

39%
Since 2005 there have been nearly 2200 instances of collaboration with Australian private companies, as partner organisations on linkage grants.
The Partner Organisation must make a significant contribution in cash and/or in kind, to the project that is equal to, or greater than, the ARC funding.
LP Linkages
NSW
2011–14
Higher Education
Government
Commercial
Non-profit/other
Partner Organisation Views: Why use LP scheme?

- **Chance of success is reasonably high**: 47 (important), 10 (not important)
- **Possible to obtain larger grants**: 76 (important), 2 (not important)
- **Access to highly skilled research personnel**: 88 (important), 2 (not important)
- **Opportunity to build long-term relationships with uni researchers**: 92 (important), 2 (not important)

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Collecting organisations and ARC funding
GLAM organisations on ARC-funded projects, 2008 to 2014

Count of unique organisations

- Museums: 45
- Arts organisations: 11
- Botanic gardens: 10
- Galleries: 8
- Libraries: 7
- Archives: 5
- Other: 2
- HEI (overseas): 2
Total ARC funding for projects involving GLAM organisations (2008 to 2014)
Number of projects (all schemes) involving GLAM, by 2-digit FoR code (2008 to 2014)

- Biological Sciences
- History and Archaeology
- Environmental Sciences
- Studies in Creative Arts and Writing
- Earth Sciences
- Language, Communication and...
- Studies in Human Society
- Chemical Sciences
- Physical Sciences
- Philosophy and Religious Studies
- Law and Legal Studies
- Information and Computing Sciences
- Technology
- Built Environment and Design
- Agricultural and Veterinary Sciences
- Engineering
- Commerce, Management, Tourism...
- Psychology and Cognitive Sciences
Collaboration between universities (green) and GLAM organisations (blue) by location
ARC-funded projects with GLAM organisation involvement—countries of collaboration (2008 to 2014)

Number of projects involving overseas GLAM orgs
Most GLAM organisations are involved under Linkage Projects

Some GLAM orgs on three ARC schemes

Some on two ARC schemes
Proportion of ARC-funded projects involving GLAM organisations from Australia (2008 to 2014), by ARC scheme

- Linkage Projects: 71%
- Discovery - Projects: 17%
- LIEF: 11%
- ARC Centres of Excellence: 1%
Total ARC funding for projects involving GLAM organisations from Australia (2008 to 2014, LP 2008 to 2013)
Total success rate of proposals involving GLAM (2008 to 2014)
Relationship and collaboration between GLAM organisations and ARC schemes
Collaboration between universities (green) and GLAM organisations (blue), by location
Total Financial contribution by GLAM sector each year in Linkage Projects

Millions

- $7
- $6
- $5
- $4
- $3
- $2
- $1
- $-

2008 2009 2010 2011 2012 2013

Total Cash
Total InKind
Linkage Projects - ARC funding for projects involving GLAM orgs and financial contributions by GLAM orgs to LP projects involving GLAM (2008-2013)
A focus on WA Museum and SA Museum
Networking of GLAM organisations through ARC projects (2008 to 2014)

Black – GLAM org
Green – LP
Red – DP
Blue - LIEF
WA Museum and other GLAM orgs on the same ARC projects (2008 to 2014)
SA museum and other GLAM organisations on the same projects
Networking between GLAM orgs on funded ARC projects (2008 to 2014)
Linkage, impact and national infrastructure
Strategic challenges

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Research Impact

• Research impact is the demonstrable contribution that research makes to the economy, society, culture, national security, public policy or services, health, the environment, or quality of life, beyond contributions to academia

• It is the showcase for key stakeholders (government, industry and community) of the real benefits of investment in Australian research activities
A simple impact model

Academic activity $\rightarrow$ Impact

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Salaries researchers technicians

Buy equipment, books, ICT

Papers

Books

TRANSLATION

New Government Policy

New Research Paradigm

Spin-off Project
A simple impact model cont..

Case 1:

Case 2:

Case 3:
Why Now? Key issues about impact

• Increasing competition for research budget
• Need to demonstrate the value of research
• Types of Impact (peer, commercial, social, environmental, cultural)
• Diversity of outcomes from research disciplines and sector specificities
• How do you report it cost effectively?
Developing a framework on common understanding of research impact

• The ARC has been working with:
  - CSIRO, NHMRC, AIMS, ANSTO, DSTO, AIATSIS

• We are looking for a set on data commonalities and a common framework for effective and efficient impact reporting
Impact data collection—pathways

CSIRO Impact Framework

Source: CSIRO website > About CSIRO > What we do > How CSIRO ensures it delivers impact
For more information

- www.arc.gov.au > Media > Presentations
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