The ARC Linkage program; LP, ITRP, Centres of Excellence and insights into the grants process
5 August 2014

Dr Fiona Cameron, Executive Director Biological Sciences and Biotechnology
Australian Research Council
Topics for Today

- Overview of the ARC and its funding schemes
  - LP
  - ITRP
  - Centres of Excellence
- The grant lifecycle
- Insights into the grants process
ARC - Strategic Objectives

- To support excellence in research
- To build Australia’s research capacity
- To provide informed high quality policy advice to government
- To enhance research outcomes through effective evaluation
- To raise the profile of Australia’s research effort and be an effective advocate for its benefits
Commonwealth Investment in R&D 2013-14

ARC: 10.2%
NHMRC: 9.9%
Other health: 1.0%
Block Funding to Higher Ed: 21.9%

CSIRO: 8.8%
DSTO: 4.9%
Other Govt R&D: 7.4%
Industry R&D Tax Measures: 19.4%
Other Industry R&D Support: 0.1%
Other Innovation Support: 5.0%
Multisector Science Support: 2.4%
Energy and the Environment: 2.4%
CRCs: 1.7%
Rural: 3.9%
Other Higher Ed R&D Support: 0.9%

Source: Budget 2013-2014 Industry and Innovation tables
ARC NCGP Programs & Schemes

Discovery Program
- Discovery Projects
- Discovery Indigenous Researcher Development
- Discovery Early Career Researcher Award (DECRA)
- Future Fellowships
- Australian Laureate Fellowships

Linkage Program
- Linkage Projects
- Linkage Infrastructure, Equipment and Facilities
- Linkage Learned Academies Special Projects
Types of ARC Centres

- ARC Centres of Excellence
  - Industrial Transformation Research Program
- Special Research Initiatives
  - Co-funded Centres
The **Linkage Projects** scheme objectives

- initiation and/or development of long-term strategic research **alliances** between higher education organisations and other organisations, including industry and end-users, in order to apply advanced knowledge to problems and/or to provide opportunities to obtain national economic, social or cultural benefits;

- scale and focus of research in **Strategic Research Priorities**;

- opportunities for researchers to pursue internationally competitive research in **collaboration** with organisations outside the higher education sector, targeting those who have demonstrated a clear commitment to high-quality research; and

- growth of a **national pool** of world-class researchers to meet the needs of the broader Australian innovation system.
Modern History of the Linkage Scheme

- Ongoing Feedback from sector
- Split of Linkage (LP) into LP + ITRP
  - Provides a continuum in size, focus and timing
Average ARC funding, PO contribution and number of PO on each LP project

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.
Some Linkage Stats: Funding and Success Rates

Since 2005 there have been nearly 2200 instances of collaboration with Australian private companies, as partner organisations on linkage grants.
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 longterm relationships with uni researchers: 92 (important), 2 (not important)
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%
ARC Linkage Program

Summary of Significant Changes to the Linkage Projects Scheme (LP13):

The Linkage Program has had two major changes in recent years:

1. The establishment of the Industrial Transformation Research Program (i.e. Industrial Transformation Research Hubs and Industrial Transformation Training Centres).

ITRP
2. Revision of the *Linkage Projects* scheme to complement the introduction of the Industrial Transformation Research Program, and to incorporate feedback from ARC consultation and the formal evaluation of the scheme.
ARC Linkage Program; LP 13 ongoing changes

In Detail:

- the minimum funding request from the ARC has been increased from $30,000 to $50,000 per annum,

and the maximum has been decreased from $500,000 to $300,000 per annum.

- A single annual round of LP
FOR Network mapping..
[Fruchterman reingold]

STEM disciplines highlighted

Source data:
http://www.arc.gov.au/general/searchable_data.htm
FOR Network mapping..
[Fruchterman reingold]
HASS disciplines highlighted

Source data:
http://www.arc.gov.au/general/searchable_data.htm
Mapping Engagement:

Linkage Projects vs. Discovery Projects

Linkage: $112m
Discovery: $50m
Strength in scheme: avg. p.a. $LP + $DP

QLD
NSW
VIC
TAS
ACT
SA
WA
NT
LP14

Number approved and partner contributions
LP14 Outcomes by Administering Organisation

- Curtin University of Technology: $3,236,657
- Edith Cowan University
- Murdoch University
- The University of Western Australia: $5,009,605

Chart showing proposals considered and approved.
Instances of international collaboration on approved proposals in *Linkage Projects 2014*
Details of the Industrial Transformation Research Program – the Schemes

Overall objectives:

- foster important partnerships between business and universities;
- support researchers (higher degree by research & post doctoral fellows) to gain ‘hands-on’, practical skills and experience in important priority areas.

Consists of two schemes:

- Industrial Transformation Research Hubs
- Industrial Transformation Training Centres
Industrial Transformation Research Hubs – Objectives

- encourage collaborative R&D projects to address challenging industry issues solved through innovative research relevant to the Industrial Transformation Priorities;
- leverage local and international investment in targeted industry sectors.
Industrial Transformation Research Hubs

Opportunities for universities and industrial partners to focus on significant collaborative R&D projects with outcomes beyond their independent endeavours.

- The ARC will invest up to $1 million per year in each Research Hub with matching investment by industry partners up to a maximum of five years
Industrial Transformation Training Centres – Objectives

• foster opportunities for Higher Degree by Research candidates and postdoctoral fellows to pursue industrial training and to enhance competitive research in collaboration between universities and organisations outside the Australian higher education sector; and

• Strengthen Australia’s Industrial Transformation Priorities to supplement the capabilities of industries and other research end-users.
Industrial Transformation Training Centres (ITTC)

To foster close partnerships between university-based researchers and industry to provide innovative training for early career researchers vital to Australia’s future industry.

Over the life of the five year program the ARC will enable:

- establishing Training Centres nationwide
- support Higher Degree by Research candidates and postdoctoral researchers in gaining real-world practical skills through placement in industry
- provide a minimum of $650,000 and a maximum of $1 million per year for three years for each Training Centre.
Industrial Transformation Priorities 1

- Industrial Transformation Priorities for round one addressed challenges in all areas of Australia’s food industry:
  - future food storage
  - food processing
  - manufacturing capabilities
  - product opportunities, and
  - other food related research

- Research priorities - flexibility in each round to meet identified priorities
### ITRP: Hubs 2013.2

<table>
<thead>
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<th>Funding year</th>
<th>Proposals considered</th>
<th>Proposals approved</th>
<th>Success rate</th>
<th>Total requested funds (over project life)</th>
<th>Requested funds (over project life) of approved proposals</th>
<th>Funds allocated (over project life)</th>
<th>Allocation as a percentage of request</th>
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funded *Industrial Transformation Research Hubs in “2013”* (Round 2)

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<th>Hub Director</th>
<th>Approved funds over project life</th>
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<tr>
<td>ARC Research Hub for transforming the mining value chain</td>
<td>University of Tasmania</td>
<td>Prof David Cooke</td>
<td>$3,966,350.00</td>
</tr>
<tr>
<td>ARC Research Hub for Basin GEodyNamics and Evolution of Sedimentary Systems (GENESIS)</td>
<td>The University of Sydney</td>
<td>Prof Dietmar Muller</td>
<td>$2,748,358.00</td>
</tr>
<tr>
<td>ARC Research Hub for advanced breeding to transform prawn aquaculture</td>
<td>James Cook University</td>
<td>Prof Dean Jerry</td>
<td>$4,979,922.00</td>
</tr>
<tr>
<td>ARC Research Hub for transforming waste directly in cost-effective green manufacturing</td>
<td>The University of New South Wales</td>
<td>Prof Veena Sahajwalla</td>
<td>$2,181,756.00</td>
</tr>
<tr>
<td>ARC Research Hub for genetic diversity and molecular breeding for wheat in a hot and dry climate</td>
<td>The University of Adelaide</td>
<td>A/Prof Sigrid Heuer</td>
<td>$4,308,668.00</td>
</tr>
<tr>
<td>ARC Research Hub for Advanced Technologies for Australian Iron Ore</td>
<td>The University of Newcastle</td>
<td>Prof Kevin Galvin</td>
<td>$3,273,780.00</td>
</tr>
<tr>
<td>ARC Research Hub for Australian Copper-Uranium</td>
<td>The University of Adelaide</td>
<td>Prof Stephen Grano</td>
<td>$2,526,617.00</td>
</tr>
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Overview of ARC Centres of Excellence

- The ARC Centres of Excellence scheme was originally established in 2002 to support research intended to build national capability in areas of national importance and develop the scale and focus necessary for Australia to achieve international standing in those areas.

- The scheme funds world class, internationally competitive research teams investigating, and finding solutions to, challenging and important Australian and international problems.
Overview of ARC Centres of Excellence

ARC Centres of Excellence involve significant collaboration with:
- universities
- publicly funded research organisations
- other research bodies
- governments and
- businesses
in all fields of research (except Medical and Dental Research).
The ARC Centres of Excellence – objectives

a. highly innovative and potentially transformational research
b. interdisciplinary, collaborative approaches
c. develop relationships and build new networks
d. build Australia’s human capacity
e. postgraduate and postdoctoral training
f. large-scale problems over longer periods
g. points of interaction between unis, business, govt, private sector
NCGP Grants Lifecycle

- Development of Funding Rules
- Eligibility Exemption Request
- Proposal Submission
- Request Not to Assess
- Assessment Process
- Rejoinder
- Selection Meeting
- Approval of Outcomes
- Funding Agreements and Appeals
- Post Award
- Development of RMS
- Recruitment of College of Experts or Selection Advisory Committee
- Eligibility
- Announcement
- End of Year and Progress Reports
- Final Report
The Grants Peer Review Process

- Information flow
The Grants Peer Review Process

- External Reviewer
- Internal Reviewer
- Rank
- Committee Review
- Recommendation to CEO
- Minister Approval

$ $$
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)
Insights into grants process – the ARC perspective

- Where to apply for funding, and choosing a scheme.
- Pay attention to eligibility and ARC cross scheme limits
- The scheme objectives and the selection criteria - address every one of them
- Choosing Field of Research Codes – assisting the ARC choose the right assessors
- Track Record – career interruption – the ROPE provision
- The scale of assessment
  - The external assessor – 1-2 proposals
  - The ARC panel member – 10-50
  - The ARC Panel – 150-400
- The rejoinder - how to address it effectively
Insights into grants process – your perspective

- Understanding the research field and international context. Developing your ideas to solve a research problem.
- Importance of networking with leaders in the field. Consider the research environment when applying too. A centre is a great place.
- Applying by yourself. Applying as a team member....
- Career interruptions – making a case for ROPE
- Seek mentors on writing good grant applications
- Your first grant application
  - Writing for your peers – write so that someone broadly in your field will understand your project
  - Writing for the public – write a plain English statement
- Don’t over-inflate authorship claims but don’t undersell yourself either
- Key elements of a good grant proposal
Responding to a rejoinder

- Read the assessments then wait at least a day before starting the rejoinder
- Approach it constructively
- The rejoinder is to help College of Experts to seek applicant’s views on constructive criticisms made by peers