ARC and Industry Relationships

Professor Margaret Sheil
• About the ARC
• Recent developments
• Linkages to Mining/Minerals Industry
• Effective Partnerships
• Statutory Agency established 2001
• Mission: *to deliver policy and programs that advance Australian research and innovation globally and benefit the community*
• Fund direct costs to Universities and partners
• All disciplines except clinical medicine & dentistry
Government Investment in R&D

- Universities
- ARC
- NHMRC et al.
- CSIRO
- Energy and Environment
- Industry Tax Concession
- Other Business
- Other R&D Agencies
- CRCs & Other Science
ARC Funding 2002-2012

Web: arc.gov.au  |  Email: info@arc.gov.au
...... Application Numbers

<table>
<thead>
<tr>
<th>Year</th>
<th>Applications</th>
<th>$,000</th>
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<tbody>
<tr>
<td>2001/2</td>
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<td>2002/3</td>
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Excellence in Research For Australia (ERA)

- Establish an evaluation framework that gives government, industry, business and the wider community assurance of the excellence of research conducted in Australia’s institutions;

- Provide a national stocktake of discipline-level areas of research strength in Australia’s higher education institutions;

- Identify excellence across the full spectrum of research performance;

- Allow for comparison of Australia’s research nationally and internationally for all discipline areas.
General ERA Principles

• All eligible research outputs within the assigned reference period for 41 higher education providers

• Each Cluster evaluated using its ‘dashboard’ of indicators

• Unit of Evaluation is 2-digit and 4-digit FOR code
  
  04 = earth sciences
  
  0402 geochemistry
  
  0403 geology
  
  0404 geophysics

• Evaluation by Cluster with 8 Clusters in total
## ERA Process Overview

<table>
<thead>
<tr>
<th>Metrics Profile 1</th>
<th>Metrics Profile 2</th>
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<tbody>
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<td>Metrics Profile 3</td>
<td>Metrics Profile 4</td>
</tr>
<tr>
<td>Metrics Profile 5</td>
<td>Peer Review</td>
</tr>
</tbody>
</table>

Note - There are no weightings!

Research Evaluation Committee → Final report
Attracting and retaining excellent people

**Internationalisation**
removing any impediments to internationalisation in all schemes
opening fellowships to international applicants
provisions for international collaboration within all our programs

**Future Fellowships (200 pa)**
mid-career researchers
earth sciences a priority in 2010

**Australian Laureate Fellowships (15 pa)**
world-class research leaders

**Super Science Fellowships (50 pa)**
Space science and astronomy
Marine and climate science
Future industries research – biotechnology and nanotechnology
ARC PARTNERSHIPS

University, $4.0
SA Govt, $2.5
ARC, $8.6
AMIRA, $7.5

Graeme Jameson

John Ralston

Australian Mineral Science Research Institute (AMSRI)
LINKAGE PROJECTS

- Monitoring Hazards in Mines
- UNSW and Newcrest Mining

- Chris Fowler
Linkage Projects Objectives

• development of strategic research alliances between higher education organisations and other organisations, including industry and end-users

• production of pool of world-class researchers to meet the needs of the Australian innovation system
Partner organisations

• private sector
• private non-profit organisations
• Government organisations with funds not committed to internal research or any other purpose of research, evaluation and/or consultancy
• must make a significant contribution in cash and/or in kind
Partner organisations contributions

Commitment Required

- <$500K pa 20% Cash plus in-kind = $ARC
- >$500K 50% cash plus in-kind = $ARC

Ahead for 2011

- Maintain two rounds
- Simplify student administration
- Minimum ARC $30K
Examples of Partner Organisations

Alcoa
BAE Systems Australia
BHP Billiton Ltd
BlueScope Steel Ltd
Brisbane City Council
CSL Limited
GlaxoSmithKline Aust Pty Ltd
Hydro Tasmania
Rio Tinto Ltd
Telstra Corp Ltd

Bartlett Grain Pty Ltd
Gold Coast City Council
lastek Pty Ltd
Leica Geosystems
Micronisers Pty Ltd
National Australia Bank Ltd
Native Seeds Pty Ltd
Orica Australia Pty Ltd
Ridley Aqua-Feeds Ltd
Ronin Films
Saltgrow Pty Ltd
Santos Ltd
Sialon Ceramics Pty Ltd
Suncorp General Insurance
Tissue Therapies Ltd
Ulan Coal Mines Ltd
Williams Boag Architects
Wind Prospect Pty Ltd

Dupont-Pioneer
Kaltim Prima Coal
Microsoft Pty Ltd
Optus Networks Pty Ltd
Sprint Advanced Technology Labs
Yokogawa Electric Corp

Aged Care Queensland Inc
Agricultural Producers Commission
AIDS Council of NSW
Australian Football League
Australian Macadamia Society
Australian Institute of Sport
Brotherhood of St. Laurence
Delfin Lend Lease
Diabetes Australia
Electoral Council of Australia
Flora Hill Secondary College
Forestry TAS
Greening Australia Ltd
Illawarra Retirement Trust
Lifeline Australia Inc
Linux Australia Inc
Macquarie Library Pty Ltd
McDonalds Australia Ltd
National Heart Foundation
Neporendi Aboriginal Forum Inc
Oxfam Australia
QLD Health

Australian Museum
Barwon Health
Bawaninga Aboriginal Corp
Boulia State School
Bureau of Sugar Experiment Stations Ltd
Central Darling Shire Council
City of Greater Geelong
City of Rockingham
WA Dept of Environment
Geological Survey of VIC
Gippsland Coastal Board
Goulburn Murray Water
Healthy Waterways
Hunter Water Corp
Legal Aid QLD
Maribyrnong City Council
Midland Redevelopment Auth
Museum VIC
NSW Fisheries
NSW Police
Perth Zoo
Powerhouse Museum
Royal Flying Doctor Service
St Vincent de Paul Society
SA Museum
Timbercorp Ltd
Unions WA
VIC Dept of Education
Westmead Hospital
Partner Organisation Participation
Linkage Projects Scheme

% of Total Cohort

Funding Year

New Business-Funded
Repeat Business-Funded
Repeat Business-All
New Business-All
Effective partnerships

• balancing short term issues with longer term strategy (degree of innovation)
• finding the right researchers
• putting together the most effective teams (role of PhD students, availability of CI)
• intellectual property issues
• collaboration cost vs leverage ....
Other options for funding research collaboration

- Direct engagement
  - Consultancy
  - Contract research

- Co-operative Research Centres
  
  https://www.crc.gov.au
Industry R &D Expenditure

9% Minerals, Mining and Energy

Source: OECD, ANERD Expenditure 2006
ARC Funding Mining and Energy

2.7% of total ARC
In Conclusion

• ARC funding driven by excellence of applicants
• Research capacity important (*Future Fellows* earth science a priority)
• Effective partnerships require careful planning and nurturing