University of New South Wales

Collaborative Research
Linkage Projects Scheme

November, 2008

Dr Ian D R Mackinnon
Executive Director, Engineering and Environmental Sciences
Australian Research Council
Co-ordinator: Linkage Projects and Linkage Infrastructure, Equipment and Facilities Schemes
email: ian.mackinnon@arc.gov.au
Australian Research Council
Overview

• Federal Government agency supporting all R&D
  ▪ except medical and dental research
  ▪ competitive, peer-reviewed proposals by investigators
  ▪ limited strategic direction in specific fields

• Annual funding to University sector ~$600m (FY08/09)
  ▪ about 10% of total Federal spend on R&D
  ▪ increase from ~$250m in FY02/03
  ▪ by FY10/11 will increase to ~$750m/yr
  ▪ assess >5,500 proposals per year
  ▪ 35 Centres of Excellence, Special or Co-funded Centres
  ▪ 25 Research Networks

• Mission
  ▪ to advance Australia’s research excellence to be globally competitive
    and to deliver benefits – public good and commercial – to the community
## Research Partnerships

### Competitive Schemes

<table>
<thead>
<tr>
<th></th>
<th>CRC Programme</th>
<th>ARC Centres of Excellence</th>
<th>ARC LP Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration (years)</strong></td>
<td>Min: 7</td>
<td>Min: 5</td>
<td>Min: 1</td>
</tr>
<tr>
<td></td>
<td>Max: 14 to ?</td>
<td>Max: 8-9</td>
<td>Max: 5</td>
</tr>
<tr>
<td><strong>C’wth $/Centre</strong></td>
<td>$2m to $4m per year</td>
<td>Min: ~$1m/yr</td>
<td>Min: $20k/yr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max: ~$3m/yr</td>
<td>Max: $2m/yr</td>
</tr>
<tr>
<td><strong>No of Industry Partners</strong></td>
<td>Required Av: 7-9 per CRC</td>
<td>Not Required Av: 4-6 per CoE</td>
<td>Required Av: 2 per grant</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td>programmatic, thematic</td>
<td>programmatic, thematic</td>
<td>project, thematic</td>
</tr>
<tr>
<td><strong>Call Frequency</strong></td>
<td>2 years</td>
<td>2-3 years</td>
<td>6 months</td>
</tr>
<tr>
<td><strong>Success Rate</strong></td>
<td>10%-20%</td>
<td>&lt; 10%</td>
<td>40%-50%</td>
</tr>
<tr>
<td><strong>C’wth $/year</strong></td>
<td>~$200m</td>
<td>~$65m</td>
<td>~$120m</td>
</tr>
</tbody>
</table>
Importance of Co-Funding

• Co-funding is a “revealed preference”
  – confirmation of research need
  – “pre-selection” process

• Co-funding is quantifiable
  – $ ARC + $ co-funder = $ project

• Happy co-funders are influential spokespersons
  – to whom others really listen
Linkage Projects

• Primary aim
  – Encourage and extend cooperative approaches to research by strengthening links within Australia’s innovation system and within innovation systems internationally
  – Economic, social, environmental, policy or scientific benefit

• Participant roles
  – Chief Investigator, Partner Investigator
  – APAI (Aust. Postgraduate Award, Industry)
  – APDI (< 3 years from PhD),
  – Linkage Industry Fellowships (LIF)

• Partners
  – Private sector; private non-profit organisation; a Govt org with funds not committed to internal research or any other purpose of research, evaluation and/or consultancy.
  – Does not fund medical and dental research & training
Linkage Projects – 2009 Funding Rules

Major Changes

• Upper limit to each proposal - $2m per year
• Support for CI to be relieved of other duties – limit of $66k pa per CI. Justify in proposal; maximise interaction of CI with project and Partner Organisation

• Overseas higher education organisations are eligible to be Partner Organisation; requires at least one Australian Partner Organisation with proposal
• Citizenship requirement for APAIs (post-grads) removed
• Travel requests clarified
## Linkage Projects

<table>
<thead>
<tr>
<th>Funding Year</th>
<th>Proposals received</th>
<th>Requested ($M)</th>
<th>Number Funded</th>
<th>Allocated ($M)**</th>
<th>Success Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>742</td>
<td>125.0</td>
<td>345</td>
<td>50.6</td>
<td>46.5</td>
</tr>
<tr>
<td>1999</td>
<td>873</td>
<td>130.0</td>
<td>407</td>
<td>51.7</td>
<td>46.6</td>
</tr>
<tr>
<td>2000</td>
<td>982</td>
<td>152.0</td>
<td>458</td>
<td>58.9</td>
<td>46.6</td>
</tr>
<tr>
<td>2001</td>
<td>1,085</td>
<td>168.8</td>
<td>485</td>
<td>62.1</td>
<td>44.7</td>
</tr>
<tr>
<td>2002</td>
<td>908</td>
<td>146.6</td>
<td>470</td>
<td>72.7</td>
<td>51.8</td>
</tr>
<tr>
<td>2003 (R1&amp;R2)</td>
<td>1,175</td>
<td>231.0</td>
<td>588</td>
<td>101.1</td>
<td>50.0</td>
</tr>
<tr>
<td>2004 (R1&amp;R2)</td>
<td>1,047</td>
<td>225.3</td>
<td>532</td>
<td>115.2</td>
<td>50.8</td>
</tr>
<tr>
<td>2005 (R1&amp;R2)</td>
<td>1,048</td>
<td>255.8</td>
<td>488</td>
<td>111.4</td>
<td>46.6</td>
</tr>
<tr>
<td>2006 (R1&amp;R2)</td>
<td>1,106</td>
<td>308.1</td>
<td>400</td>
<td>110.5</td>
<td>36.2</td>
</tr>
<tr>
<td>2007 (R1&amp;R2)</td>
<td>957</td>
<td>333.2</td>
<td>425</td>
<td>119.7</td>
<td>44.4</td>
</tr>
<tr>
<td>2008 (R1&amp;R2)</td>
<td>911</td>
<td>323.3</td>
<td>410</td>
<td>125.9</td>
<td>45.0</td>
</tr>
</tbody>
</table>
Linkage Projects

• Selection Criteria
  – Investigators’ Track Record 20%
  – Project significance and innovation 25%
  – Project approach and training 20%
  – Project national benefit 10%
  – Partner Organisation commitment 25%
Assessment Process(es)

• Specialty Readers (not for LP Scheme)
  – match with sub-discipline or field
  – read a small number per round

• General Readers
  – strong experience of discipline or field
  – read between 10 and 20 per round

• College of Experts
  – leaders of discipline or field; expert researchers
  – read many proposals per round

RFCD or FOR Codes
Project Summary
Eligibility Checks: All Schemes

• ARC conducts a range of checks based on requirements described in the scheme Funding Rules
  ➢ as proposals are logged into system
  ➢ prior to Panel/SAC meetings (by ARC staff &/or College members)
  ➢ during Panel/SAC meetings
  ➢ prior to recommendations to Minister

• Eligibility checks may occur any time during the assessment process

• Two committees evaluate potential ineligible applications
  ➢ convened by the ARC
  ➢ Panel/SAC during meetings

• A third committee hears appeals
Common Reasons for Ineligibility

• Incomplete applications
  – Pages/sections missing - Signatures missing
  – Letters missing - Reports missing
  – Current/past funding list inaccurate/incomplete

• Centre overlap – letter not included or explanation not accepted

• NH&MRC Overlap

• Eligibility criteria for particular investigator roles
• Limits on numbers of projects or applications
If RO/Researcher is unsure

Eligibility Rulings
• Most ARC Schemes have formal processes to request ruling(s)
  – Apply for an exemption or ruling
  – Scheme ‘Eligibility Ruling Request Form’

Seek clarification
• Contact your Research Office
  ➢ Assistant Director for Scheme in ARC

The closing time is THE closing time
• Last minute additions/replacements
  - emails and faxes will not be accepted
6.6.1  ...the ARC does not fund Medical and Dental Research

- **Medical and Dental Research** means research and/or training which, in the opinion of the ARC, has a significant focus on clinical medical (including dental) outcomes.

For LP Scheme:

9.4.2  Notwithstanding subsection 9.4.1 and Section 6.6, a Proposal which focuses on the development of novel materials, technologies, tools and other innovative applications may be recommended and approved for funding if, in the opinion of the ARC, the Proposal has demonstrated that the expected outcomes are likely to have significant relevance or application beyond the medical and dental context.

9.4.3  The ARC reserves the right to determine at its absolute discretion conclusively whether:

a. proposed research involves Medical and Dental Research; and
b. the expected outcomes of a proposed project are likely to have significant relevance or application beyond the medical and dental context.
Conflict of Interest

• Clarification of CoI responsibility
  – All parties involved in or associated with proposals
  – Required to disclose to the ARC and to all other parties on proposal
  – Disclose manner/methods to manage the CoI
• Common with LP Scheme due to other affiliations and/or POs
• Eligibility exemption request can be sought
Strategies to Manage Cols

- If on a Board, absent the CI/PI from the meeting while decision is made
- Depending on size of project, form a management committee with clearly defined representation for all parties (note key CI may also absent from decisions)
- Use an independent third party to negotiate key issues for agreement between AO and PO; follow above
- Extreme case: CI resign from Board of PO
Common Responses in EERs

Type 4: Conflict of interest exemption
Q2. Please outline mechanisms/actions planned to address……

“….Prof. Xs association with the Partner Organisation complies with the Funding Rules……”

“….a committee will be formed between senior management (CEO) of XYZ Company and the University or their appointed representatives to resolve CoI issues. The CI will……”

“….to avoid the potential for conflict of interest at management committee meetings…it is proposed that Prof Y will be present during scientific discussions…..but if decisions are to made that have potential to give Prof Y a personal financial benefit, then s/he will absent from the meeting…..”

“….should the application be successful, the CIs will remove themselves from the room when the Board has to make decisions or discuss the project, including funding and other Board members’ involvement…..”
Common Responses in EERs

Type 5: Partner Organisation

A: PO eligibility

Provide sufficient information to make a decision on PO eligibility (i.e. re-read Appendix 2)

B: PO minimum cash exemption

Q B3 Please provide detailed financial information and justification for why the organisation does not have ready access to sufficient cash reserves to meet ….

“…the organisation…. does not have dedicated funds for research activities.”

“…does not have the cash reserves to meet the above requirements as they are a small organisation.”

“… is not currently funded by any government body and relies on member subscriptions for…. as noted in the financial statement……”
ARC Collaborative Projects
(All Fields)

![Graph showing the number of applications and funded applications over years, with categories for All Applications and Funded Applications, highlighting specific schemes like SPIRT and Collab+APAI.](chart.png)
Partner Organisation Commitment
(Cash + In-kind)

SPIRT and Linkage Projects Schemes

<table>
<thead>
<tr>
<th>Submit Year</th>
<th>Total PO Pledged</th>
<th>Total PO Funded</th>
<th>Total ARC Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>$100</td>
<td>$50</td>
<td>$200</td>
</tr>
<tr>
<td>1999</td>
<td>$150</td>
<td>$75</td>
<td>$225</td>
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<td>2000</td>
<td>$200</td>
<td>$100</td>
<td>$300</td>
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<td>2001</td>
<td>$250</td>
<td>$125</td>
<td>$375</td>
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<td>2002</td>
<td>$300</td>
<td>$150</td>
<td>$450</td>
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<td>2003</td>
<td>$350</td>
<td>$175</td>
<td>$525</td>
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<tr>
<td>2004</td>
<td>$400</td>
<td>$200</td>
<td>$600</td>
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<tr>
<td>2005</td>
<td>$450</td>
<td>$225</td>
<td>$675</td>
</tr>
<tr>
<td>2006</td>
<td>$500</td>
<td>$250</td>
<td>$750</td>
</tr>
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</table>
Linkage Projects Scheme
Gender by Submit Year

Success Rate

Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male

Linkage Projects Scheme
Collaboration

Number of CIs per Funded LP Proposal

Funding Year

2002 2003 2004 2005 2006 2007 2008

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

CI = 1 2 to 5 CI > 5
Linkage Projects Scheme
Collaboration
Number of POs per Project

![Bar chart showing the number of POs per project by funding year.]
Partner Organisation Profile
2005-2008

LP Scheme
Partner Organisation Cash Commitments

Funding Year

2008

2007

2006

2005

Private-Australian
Private-International
Government-Commonwealth
Government-International
Government-State&Local
NonProfit-Australian
NonProfit-International

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
<table>
<thead>
<tr>
<th>Sector</th>
<th>Cash</th>
<th>%</th>
<th>In-kind</th>
<th>%</th>
<th>Total</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td><strong>Private Sector</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Australian</td>
<td>$89.8</td>
<td>36.5%</td>
<td>$164.5</td>
<td>37.1%</td>
<td>$254.3</td>
<td>36.9%</td>
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<tr>
<td>Overseas</td>
<td>$46.9</td>
<td>19.1%</td>
<td>$68.6</td>
<td>15.5%</td>
<td>$115.6</td>
<td>16.8%</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td>$136.7</td>
<td>55.6%</td>
<td>$233.1</td>
<td>52.6%</td>
<td>$369.9</td>
<td>53.7%</td>
</tr>
<tr>
<td><strong>Government Sector</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Australian</td>
<td>$17.2</td>
<td>7.0%</td>
<td>$21.3</td>
<td>4.8%</td>
<td>$38.5</td>
<td>5.6%</td>
</tr>
<tr>
<td>State &amp; Local</td>
<td>$58.9</td>
<td>23.9%</td>
<td>$126.1</td>
<td>28.5%</td>
<td>$184.9</td>
<td>26.8%</td>
</tr>
<tr>
<td>Overseas</td>
<td>$5.1</td>
<td>2.1%</td>
<td>$5.1</td>
<td>1.2%</td>
<td>$10.2</td>
<td>1.5%</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td>$81.2</td>
<td>33.0%</td>
<td>$152.4</td>
<td>34.4%</td>
<td>$233.7</td>
<td>33.9%</td>
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<tr>
<td><strong>Non-Profit Sector</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australian</td>
<td>$23.7</td>
<td>9.6%</td>
<td>$50.9</td>
<td>11.5%</td>
<td>$74.6</td>
<td>10.8%</td>
</tr>
<tr>
<td>Overseas</td>
<td>$4.3</td>
<td>1.8%</td>
<td>$6.5</td>
<td>1.5%</td>
<td>$10.9</td>
<td>1.6%</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td>$28.1</td>
<td>11.4%</td>
<td>$57.4</td>
<td>13.0%</td>
<td>$85.5</td>
<td>12.4%</td>
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<tr>
<td><strong>Totals</strong></td>
<td>$246.0</td>
<td>100.0%</td>
<td>$443.0</td>
<td>100.0%</td>
<td>$689.0</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Total ARC Commitment: $467.5m
Partner Organisation Participation
Linkage Projects Scheme

- Funded Partners
- All Partners
- New Partners

*New Partners: first occurrence as Partner Organisation on any project (since 1995)
Total for Period: 3,118 (funded)
Partner Organisation Participation
Linkage Projects Scheme

Number of Partners

Funding Year

Repeat Customers-Funded
New Customers-Funded
Repeat Customers-All
New Customers-All

Australian Government
Australian Research Council
Partner Organisation Participation
Linkage Projects Scheme

![Graph showing Partner Organisation Participation over funding years from 1999 to 2009. The graph tracks the percentage of total cohort funded annually, distinguishing between New Business-Funded, Repeat Business-Funded, Repeat Business-All, and New Business-All categories.]
Partner Organisation Participation
Linkage Projects Scheme

More than 70% of “2 proposals” cohort resubmit within 3 years
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

Worthington Di Marzio Research Pty Ltd, 2006
Linkage Projects Scheme
Multiple Partnerships

E Org Uni 4 Overseas ➔ P Org 4 Overseas
E Org Uni3 ➔ P Org 3
E Org Uni2 ➔ A Org Uni1 ➔ P Org 1 ➔ P Org 2 ➔ P Org 3 ➔ P Org 4 Overseas

Universities ~ 39
P Orgs in 1999 ~ 1,400
P Orgs in 2008 ~ 6,600

Building Capacity
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
Du Pont-Pioneer
Kaltim Prima Coal
Microsoft Pty Ltd
Optus Networks Pty Ltd
Sprint Advanced Technology Labs
York 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
Elector 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
Bouli 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
Where & Why “Outcomes”?

Real outcomes from ARC-funded research are a reasonable expectation of Government and the tax-payer.
Types of “Outcomes”

• Economic
  – generate wealth; create employment in sustainable industries

• Social and Cultural
  – improve equity, quality of life; reduce social risk

• Environmental
  – protect/restore environment; sustainable development

• Policy & Administration
  – improve decision making & governance

• Scientific Advancement
  – understanding ourselves & nature!
Example: Environmental & Economic

- A 2000-2002 SPIRT project (ARC $125,897 + industry co-funding)
  UNSW, ANU and SCU researchers studied chemistry and soil/water behaviour in cane farms w/ acid sulphate soil acidity

- Modified land management practices
  - decreased drains, laser levelled fields, retained surface trash, harvested green cane, etc

- Implemented best practice guidelines via co-operative

- 30% increase in production
- Decreased acidic flux during one in two year floods by 90%
- After two years, 100% compliance w/ best practice

- 2xLP projects + other funds from industry
- William McKell Award
- Practice became whole of government policy
Summary

• Linkage Projects Scheme
  ➢ trend toward increased collaboration
  ➢ Partner Org cohort is diverse and committed
  ➢ 50%-60% of total PO cohort is private sector
  ➢ 20%-25% of total PO cohort is international
  ➢ > 3,000 new POs in R&D between 2000–2008
  ➢ repeat business >30% for past seven years
  ➢ PO : ARC requirement has been exceeded since 1999

• Partner Organisations look to build relationships
  ➢ LP proposals may take longer to prepare
  ➢ long-term strategic R&D & understanding
  ➢ plan in terms of outputs and outcomes
  ➢ establish fundamentals of contract(s) early
Thank You