RESEARCH *in the national interest – enabling the future*

Australian Government

Australian Research Council

Foundation for Inorganic Chemistry

Monday 7 March 2011

Promoting Research Excellence

Professor Margaret Sheil

CEO, Australian Research Council

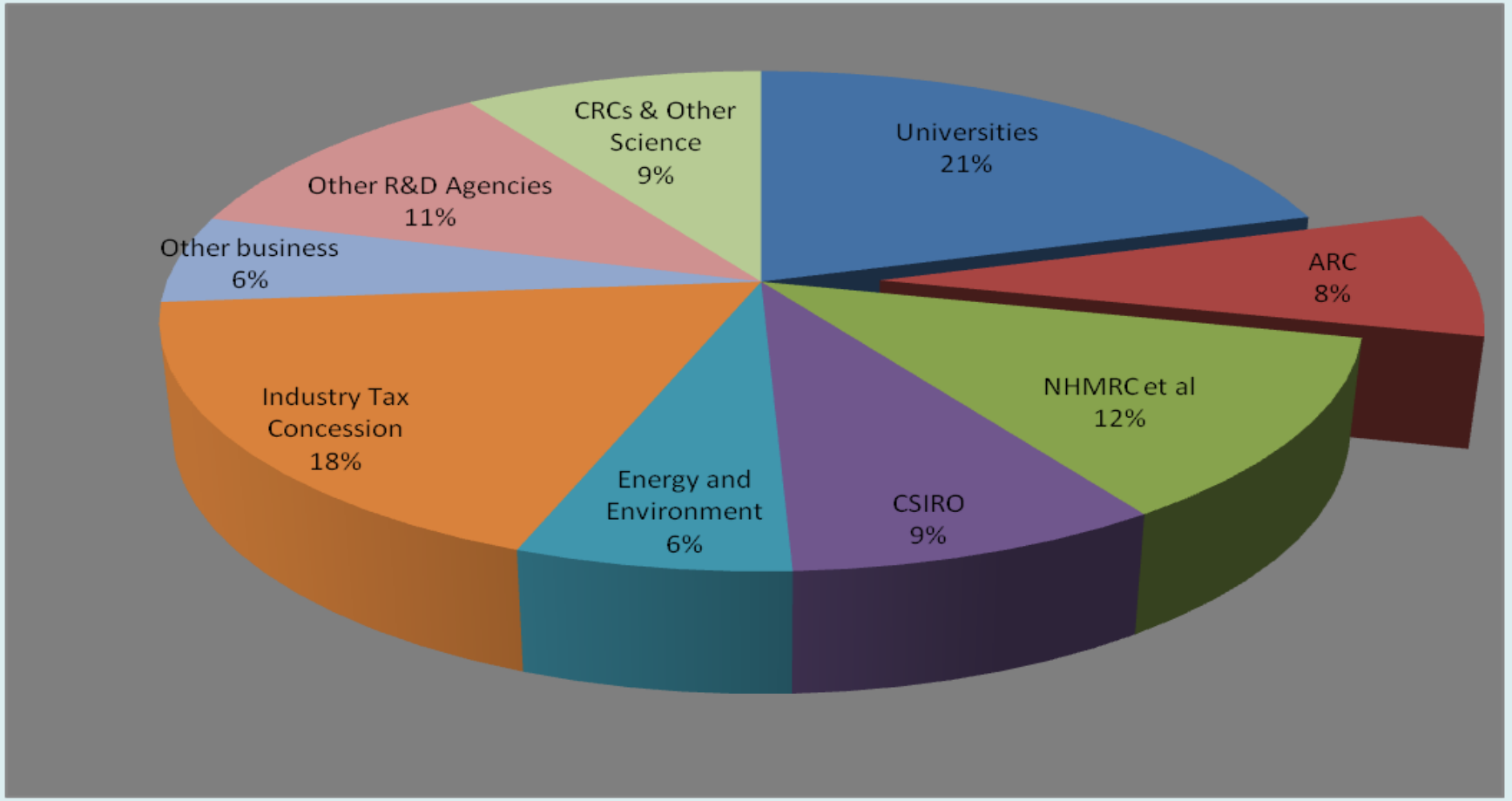
Australian Research Council Strategic Objectives

- 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

Australian Research Council – Promoting Excellence

- **Funding & Investment**
- Flexibility
- Linking & Developing
- Information
- Partnerships

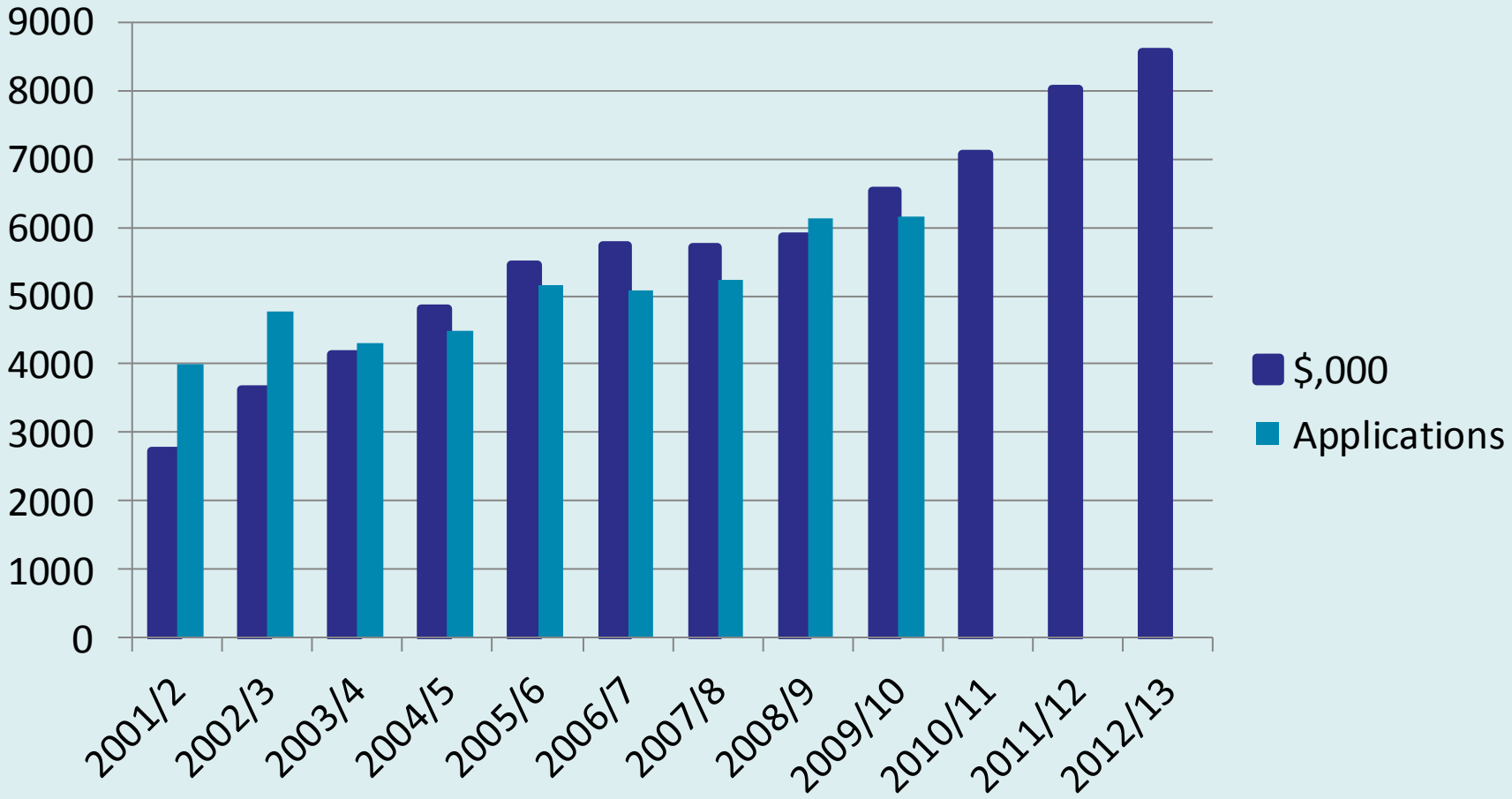
Government Investment in Research 2010-11



ARC Investment in Research (2010-11)

- 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

ARC Funding 2002 – 2010 and Application Numbers



National Competitive Grants Program (NCGP)

- Highest-quality research
- New ideas, advancement of knowledge
- Facilities and equipment
- Internationally competitive researchers
- Building research capacity
- Industry links and internationalisation

NCGP Funding

- NCGP funding (2010-11) = $708,733 million
- $376 million – Major Grants supporting 1126 innovative projects
- $255.9 million – 13 new *ARC Centres of Excellence*

NCGP Programs & Schemes

Discovery Program

- Discovery Projects
- Discovery Indigenous Researcher Development
- Future Fellowships
- Australian Laureate Fellowships

Linkage Program

- Linkage Projects
- Linkage Infrastructure, Equipment and Facilities
- Linkage Learned Academies Special Projects

NCGP Programs & Schemes (cont'd)

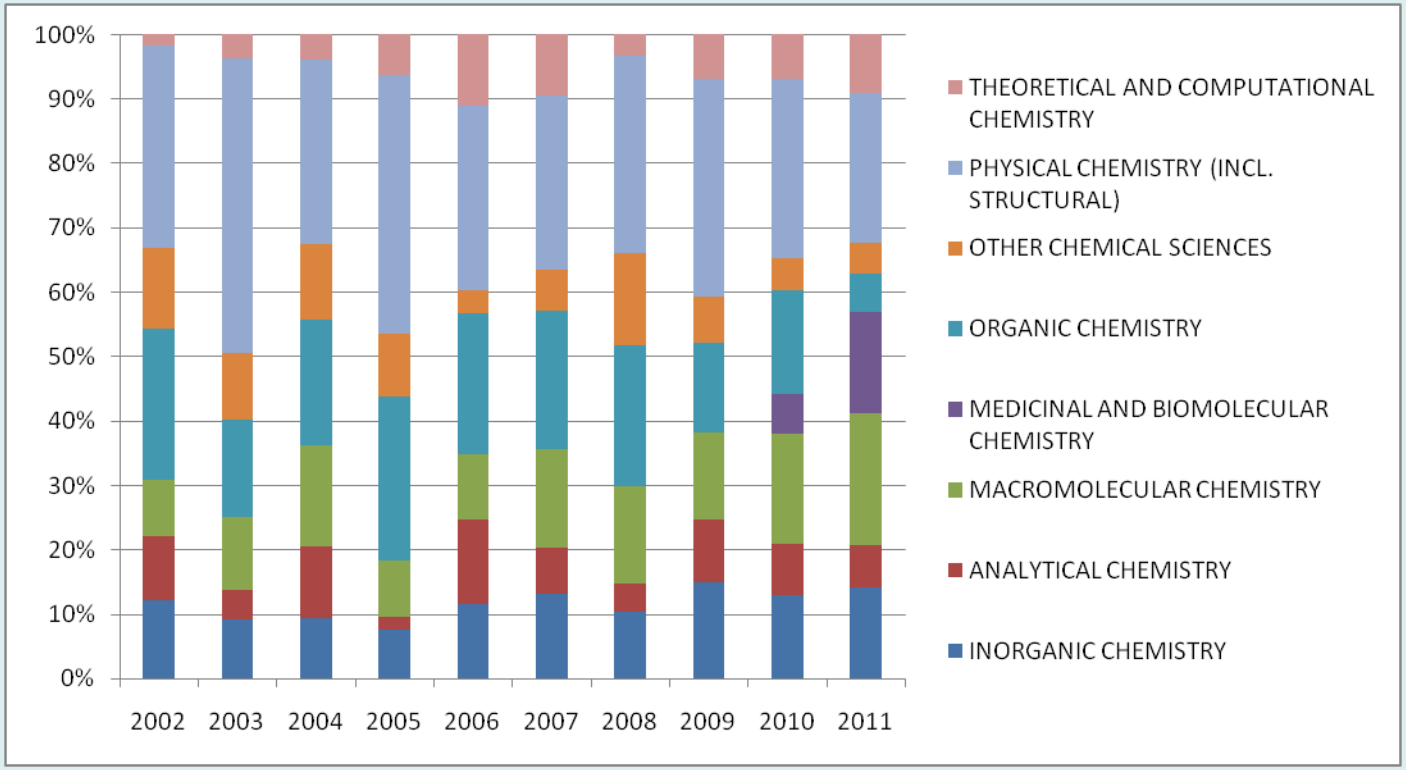
Centres

- ARC Centres of Excellence
- ARC Special Research Centres
- Co-funded Centres of Excellence

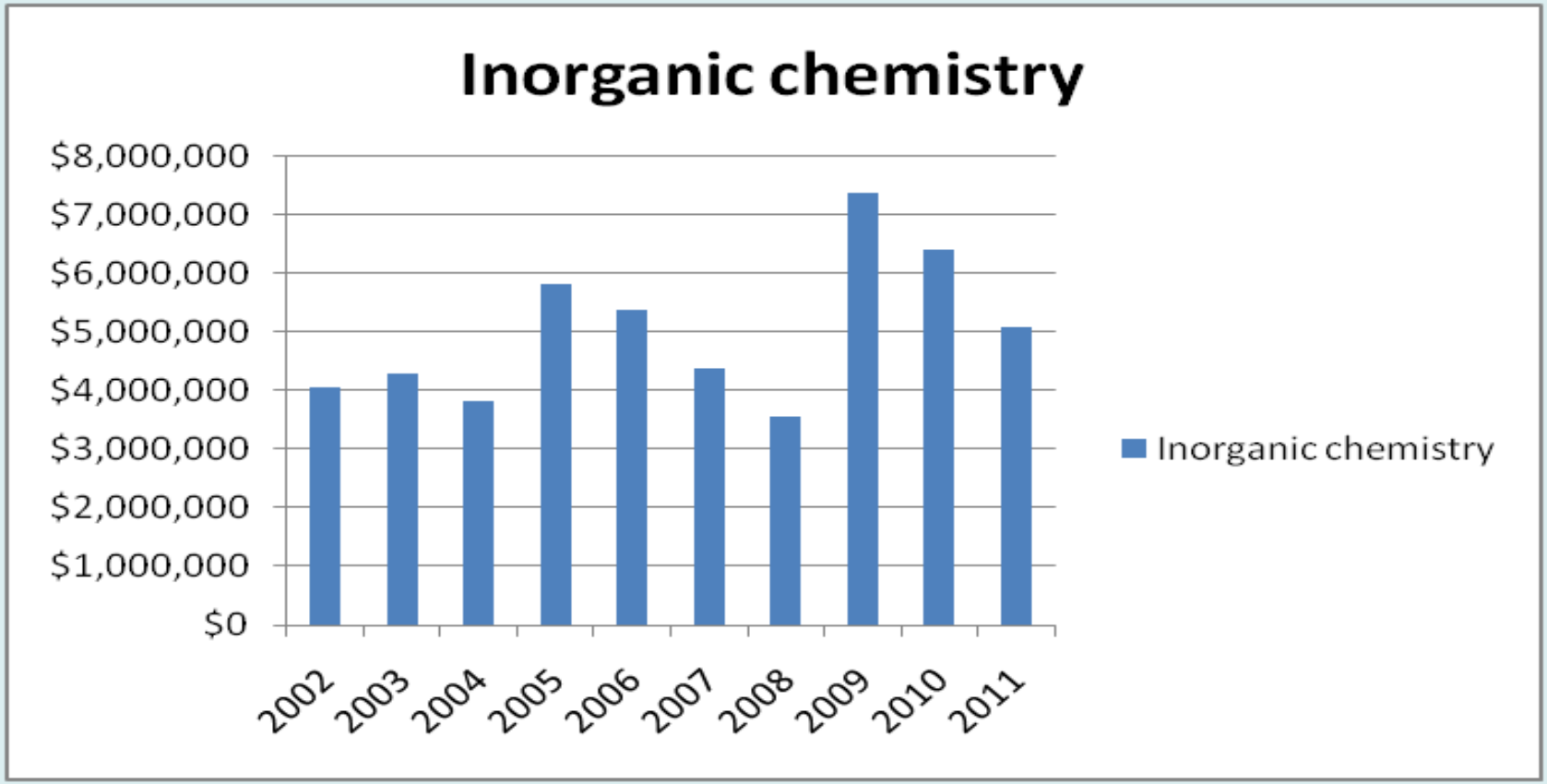
Special Research Initiatives

- Research in Bionic Vision Science and Technology
- Stem Cell Science
- Thinking Systems
- EMBL
- AAO Fellowships

Funding of the Chemical Sciences

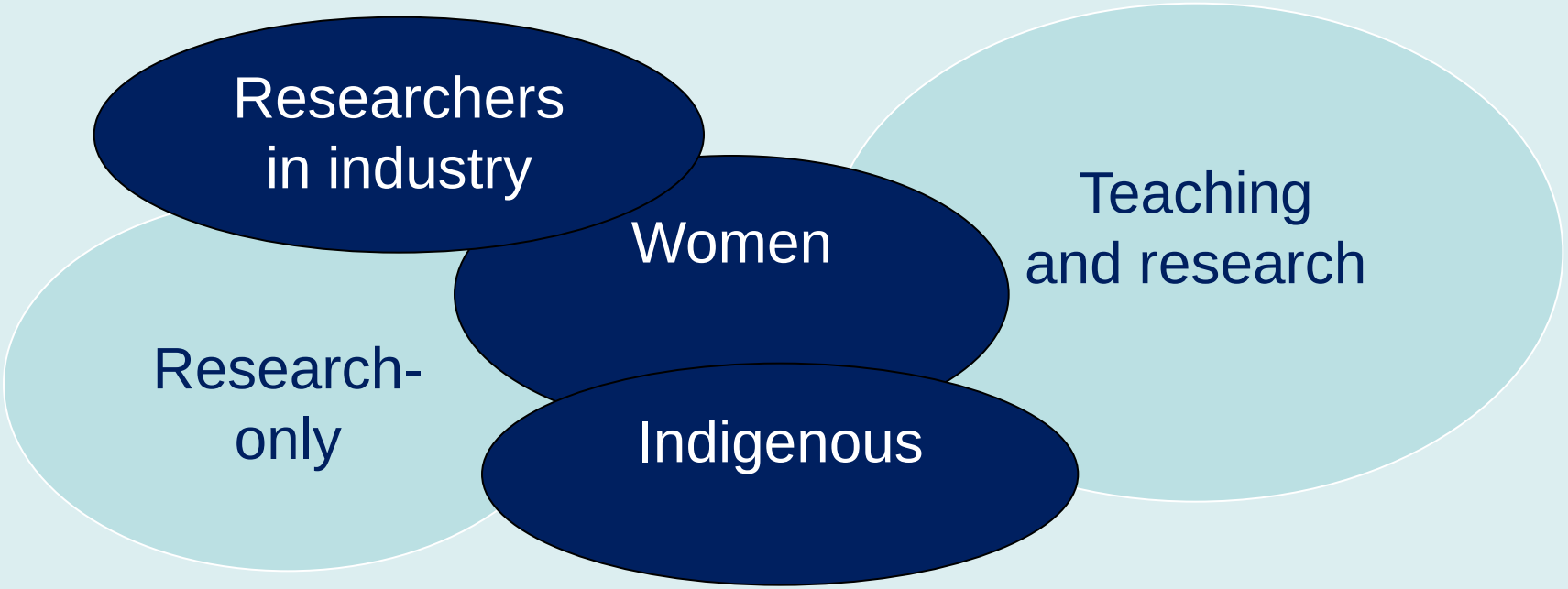


Funding of the Chemical Sciences



The ARC aims to .....

- Provide opportunities for researchers at every career stage
- Foster a range of different cohorts



The ARC does not .....

- employ researchers directly
- aim to provide a complete externally funded career structure
- fund all the excellent research proposals it receives

Australian Research Council – Promoting Excellence

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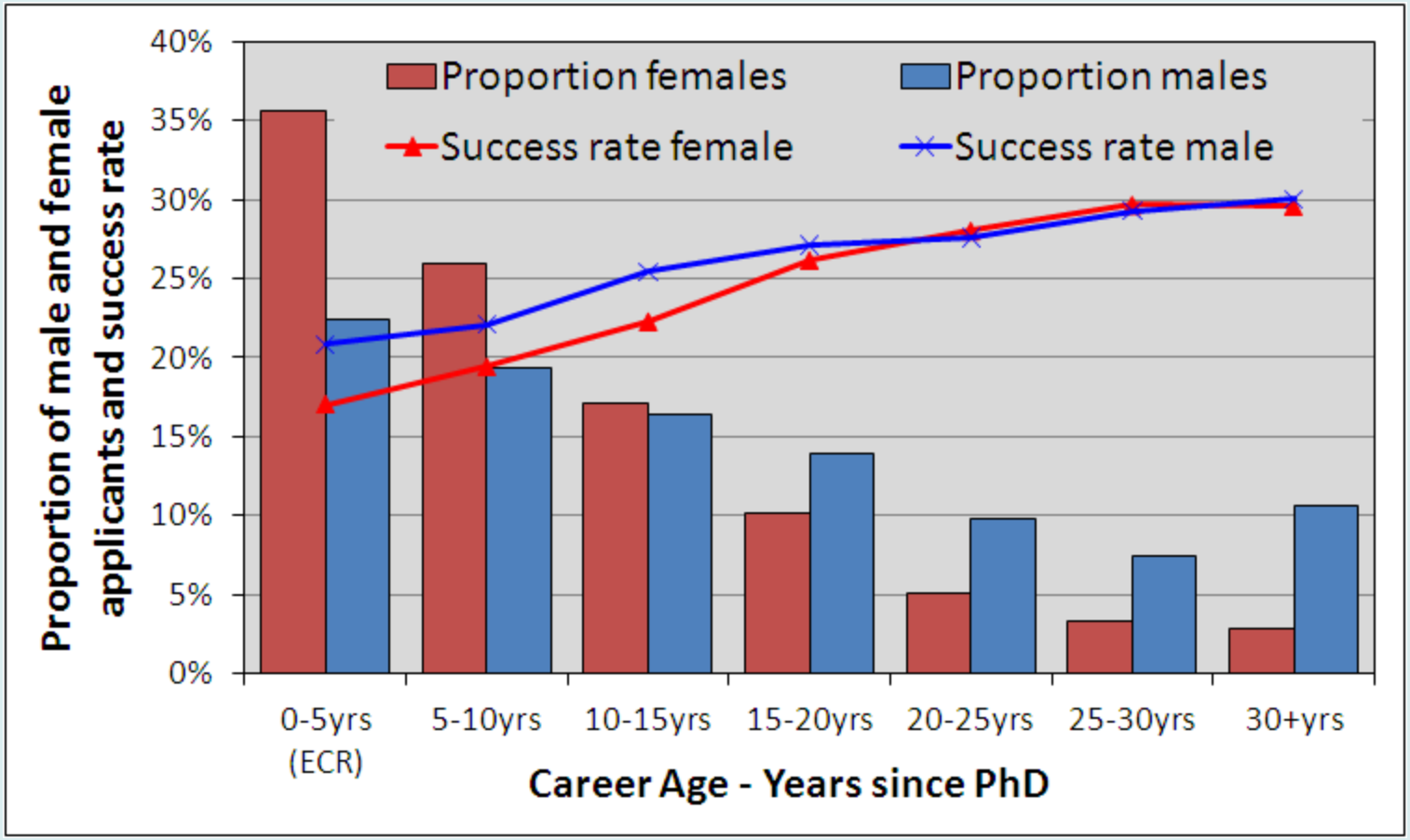
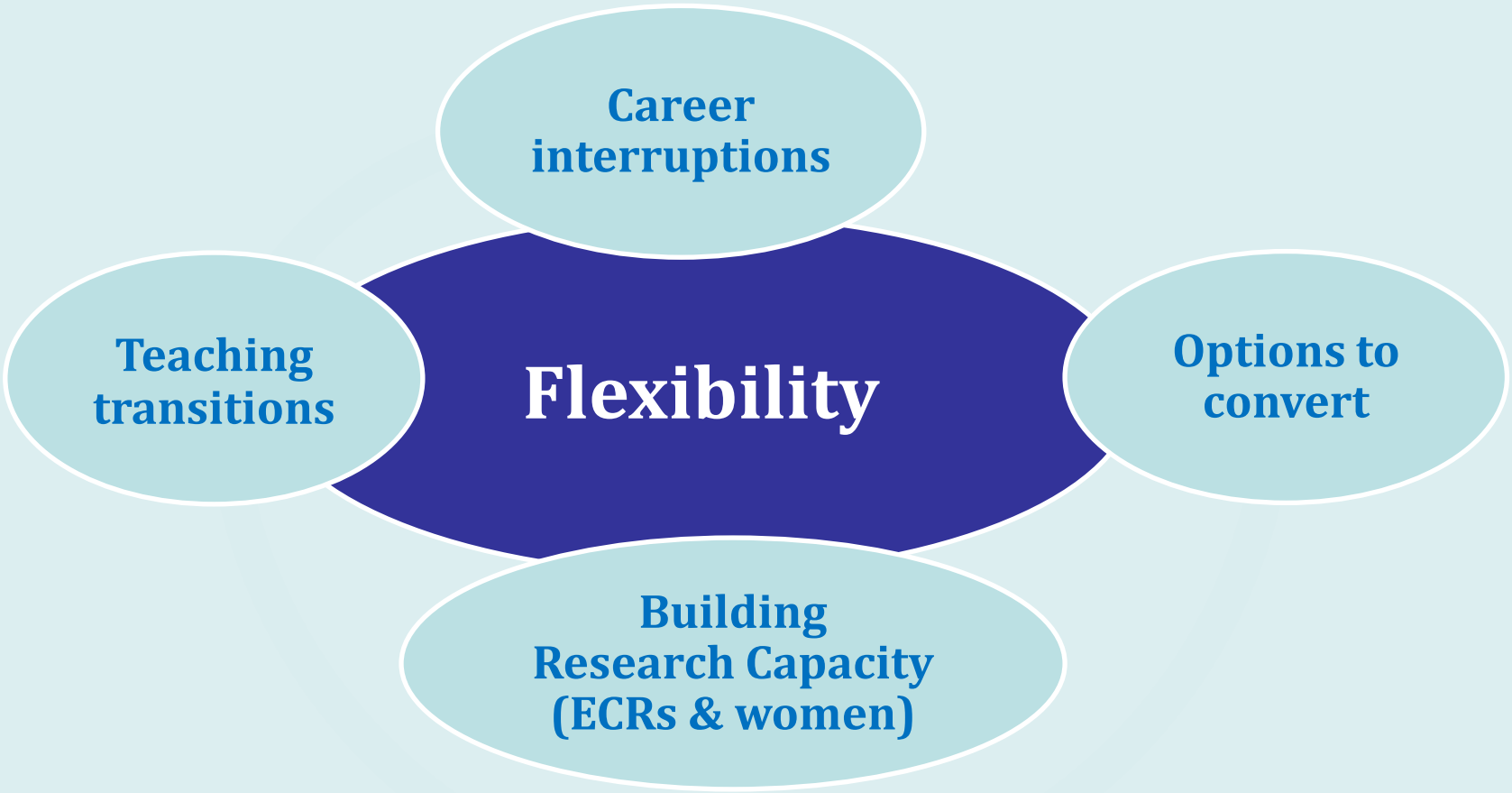
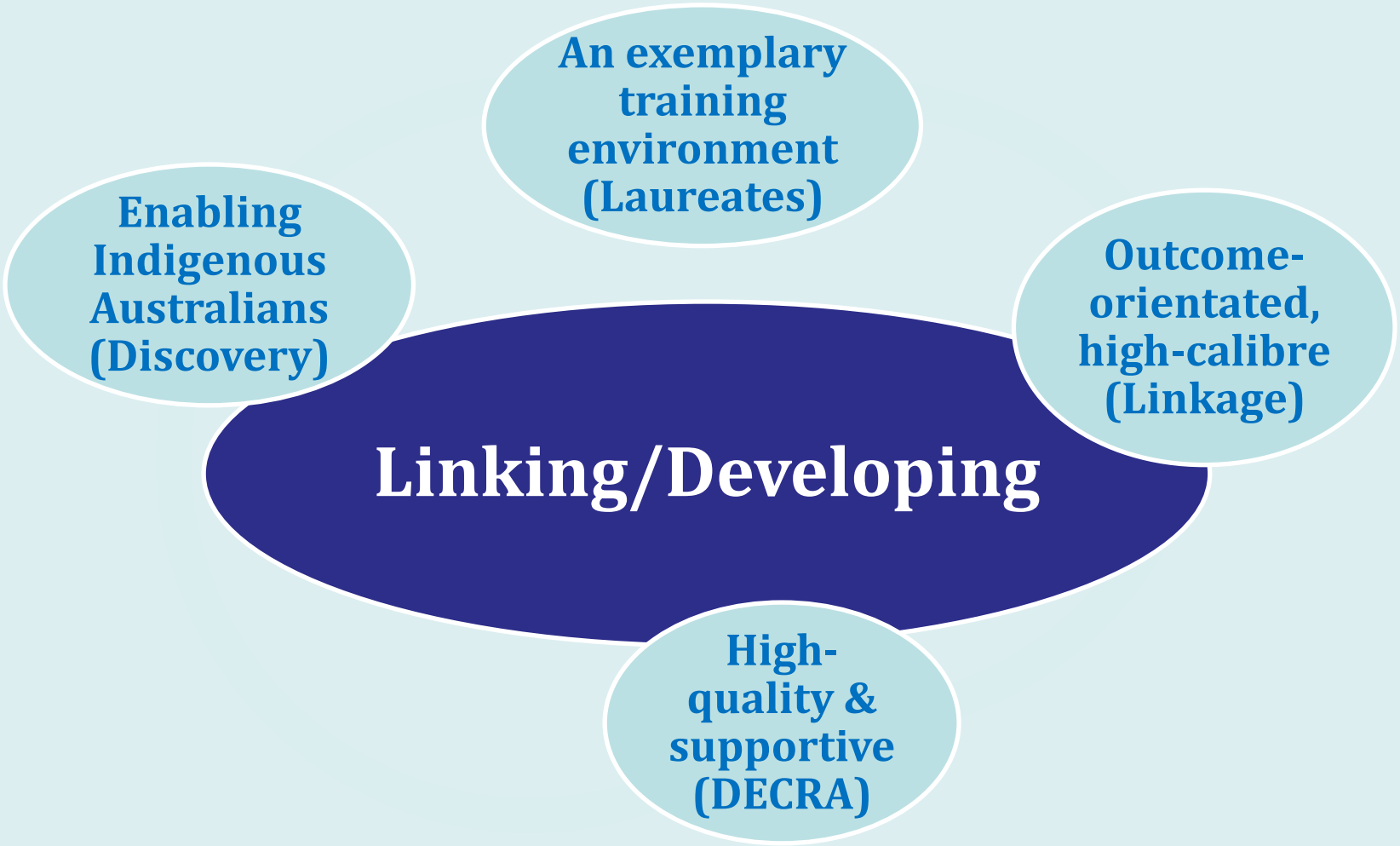
Discovery Projects – Male & female applicants and corresponding success rates by career age




Career interruptions
Teaching transitions
Flexibility
Options to convert
Building Research Capacity (ECRs & women)

Australian Research Council – Promoting Excellence

- Funding & Investment
- Flexibility
- **Linking & Developing**
- Information
- Partnerships


An exemplary training environment (Laureates)
Enabling Indigenous Australians (Discovery)
Outcome-orientated, high-calibre (Linkage)
Linking/Developing
High-quality & supportive (DECRA)

Building Research Capacity

Australian Laureate Fellowships

- 2x PhD
  2x Post-Doc
- 17
  5-year
  awards

Discovery Early Career Research Awards (DECRA)

- $125,000
- 200 p.a.
  3-year
  awards

Researchers in Industry Training Awards

- $30,000
- 100
  3-year
  awards
  (bi-annual)

Future Fellowships

- Up to
  $143,00
- 200 p.a.
  4-year
  fellowships

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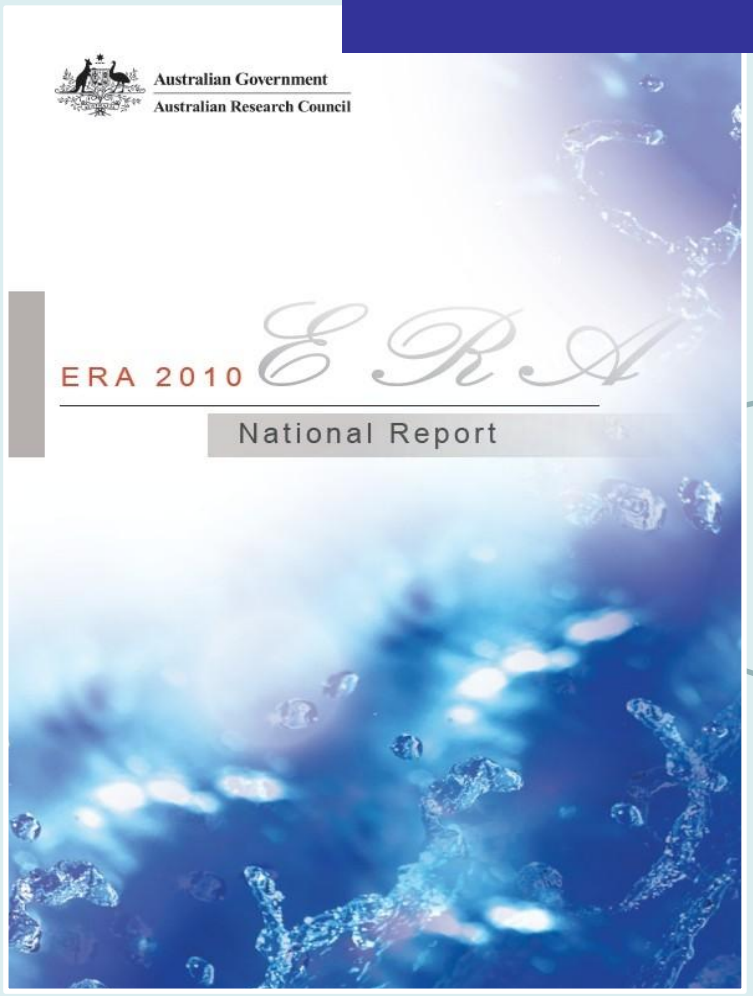
Information



Research Strengths

Research Gaps

ERA will inform

- Government
- Universities
- Research agencies
- Innovation system
- Business
- Postgraduate students
- International partners

Quality assessment exercises overseas

1986—The United Kingdom

1993—Hong Kong

1997—Germany

1998—Ireland

2002—The Netherlands

2003—New Zealand

2005—France

General ERA Principles

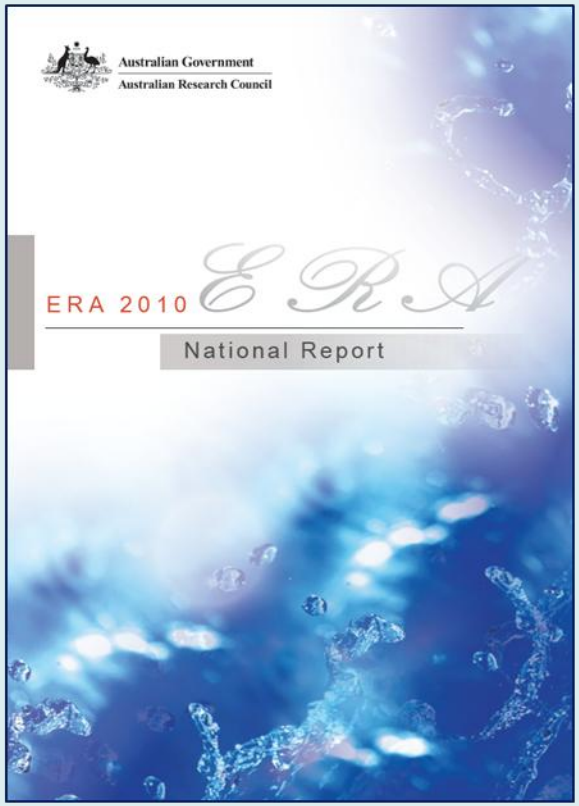
1. Unit of Evaluation is the four-digit ANZSRC Field of Research code (i.e.. 157 possible Units of Evaluation); evaluation occurs at the two-digit level as well
2. Evaluation by Research Evaluation Committees in discipline clusters; eight clusters in total
3. There is a minimum level of output for a discipline to be considered 'research active' for evaluation in ERA
4. Evaluations informed by a 'dashboard ' of discipline-specific indicators
5. Some peer review of outputs accessed through institutional repositories in some clusters

ERA Process Overview

Volume & Activity	Ranked Outlets
Citation Analysis	Esteem
Research Income	Applied Measures
Peer Review	

International Benchmarks

Research Evaluation Committees

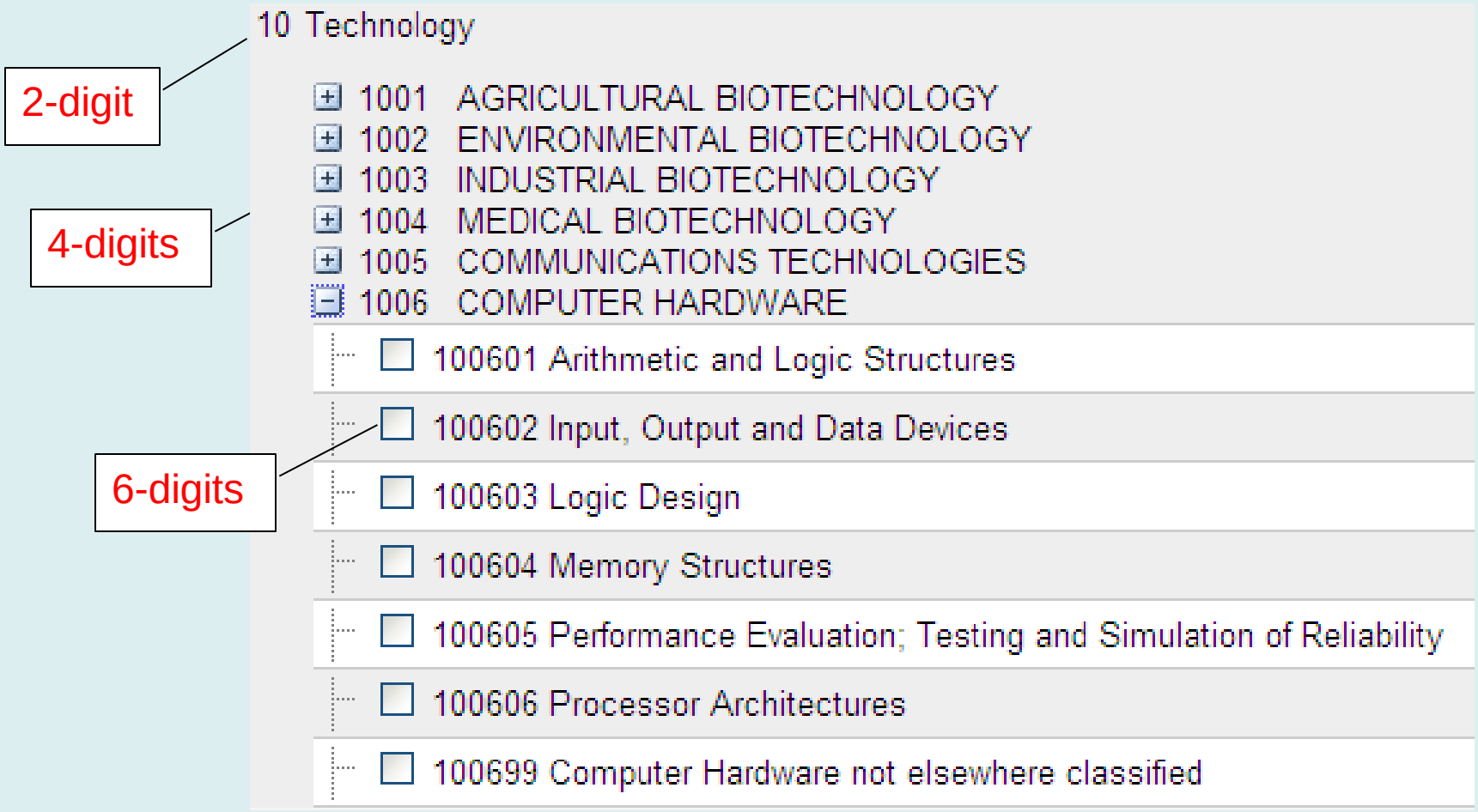


ERA

Background Statement

- Volume and Activity
- Ranked Outlets
- Peer Review
- Citation Analysis
- Esteem Measures
- Research Income
- Applied Measures

ERA Unit of Evaluation – the FoRs



The ERA Unit is not the department nor the individual researcher

Why a matrix approach to indicators?

- Not all indicators are suitable for all disciplines
- Pick and choose what is right for each discipline
- The indicator suite must ensure comparable quality across a range of indicator types
- Journal Rankings are not THE indicator

The ERA Clusters

Cluster 1	**Physical, Chemical & Earth Sciences**
Cluster 2	**Humanities and Creative Arts**
Cluster 3	Engineering and Environmental Sciences
Cluster 4	Social, Behavioural and Economic Sciences
Cluster 5	Mathematics, Information and Communication Sciences
Cluster 6	Biological Sciences and Biotechnology
Cluster 7	Biomedical and Clinical Research
Cluster 8	Public and Allied Health, and Health Sciences

The ERA 2010 reference periods

- Publications reference period
  1 January 2003 – 31 December 2008

- Non-publication reference period (income, applied, esteem)
  1 January 2006 – 31 December 2008

- Staff census date
  31 March 2009

- Citation reference period
  1 January 2003 - 1 March 2010

ERA 2010 – the data….

The ERA 2010 Rating Scale

Rating	Descriptor
5	The Unit of Evaluation profile is characterised by evidence of outstanding performance **well above world standard** presented by the suite of indicators used for evaluation.
4	The Unit of Evaluation profile is characterised by evidence of performance **above world standard** presented by the suite of indicators used for evaluation.
3	The Unit of Evaluation profile is characterised by evidence of average performance **at world standard** presented by the suite of indicators used for evaluation.
2	The Unit of Evaluation profile is characterised by evidence of performance **below world standard** presented by the suite of indicators used for evaluation.
1	The Unit of Evaluation profile is characterised by evidence of performance **well below world standard** presented by the suite of indicators used for evaluation.
NA	Not assessed due to low volume. The number of research outputs does not meet the volume threshold standard for evaluation in ERA.

National Strengths

- Astronomical and Space Sciences
- Optical Physics
- Quantum Physics
- Macromolecular & Materials Chemistry
- Physical &Structural Chemistry
- Geology
- Ecology
- Evolutionary Biology
- Plant Biology
- Zoology
- Electrical and Electronic Engineering
- Historical Studies
- Cardiovascular Medicine and Haematology
- Human Movement and Sports Science
- Immunology
- Oncology and Carcinogenesis
- Pharmacology and Pharmaceutical Sciences
- Medical Physiology

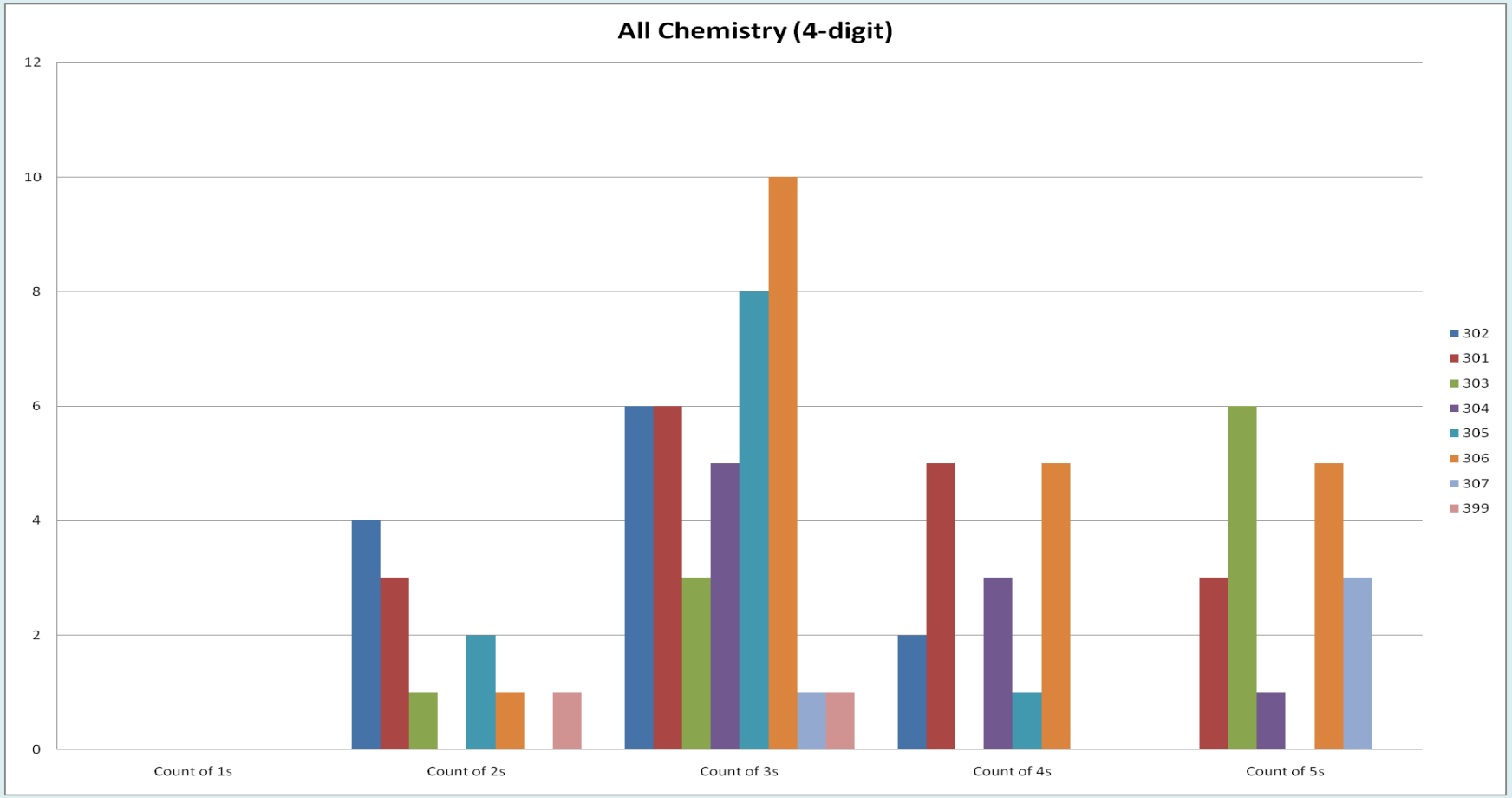
Gaps

- Agriculture, Land and Farm Management
- Automotive Engineering
- Maritime Engineering
- Engineering Design
- Complementary and Alternative Medicine

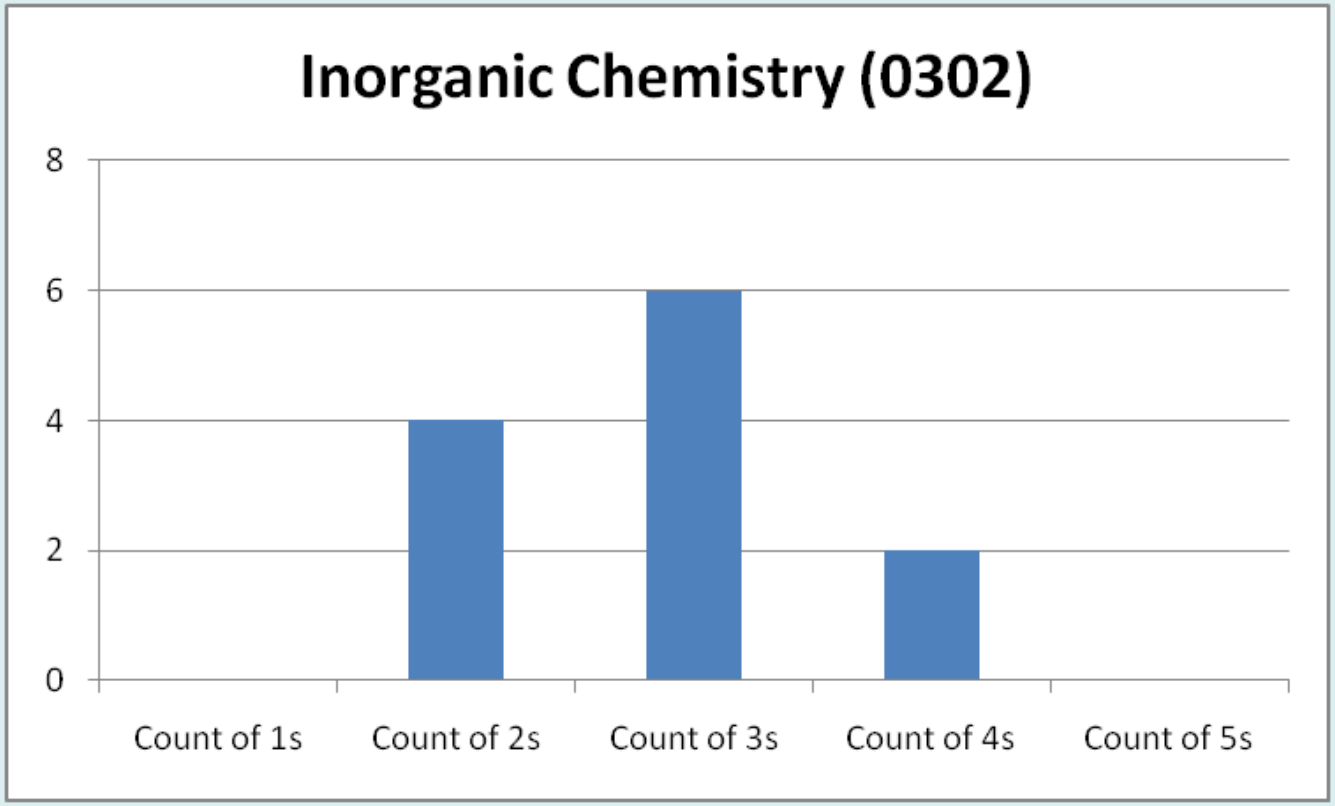
Pockets

- Classical Physics
- Aerospace Engineering
- Transportation and Freight

Research Excellence in Chemical Sciences



Research Excellence in Inorganic Chemistry



Australian Research Council – Promoting Excellence

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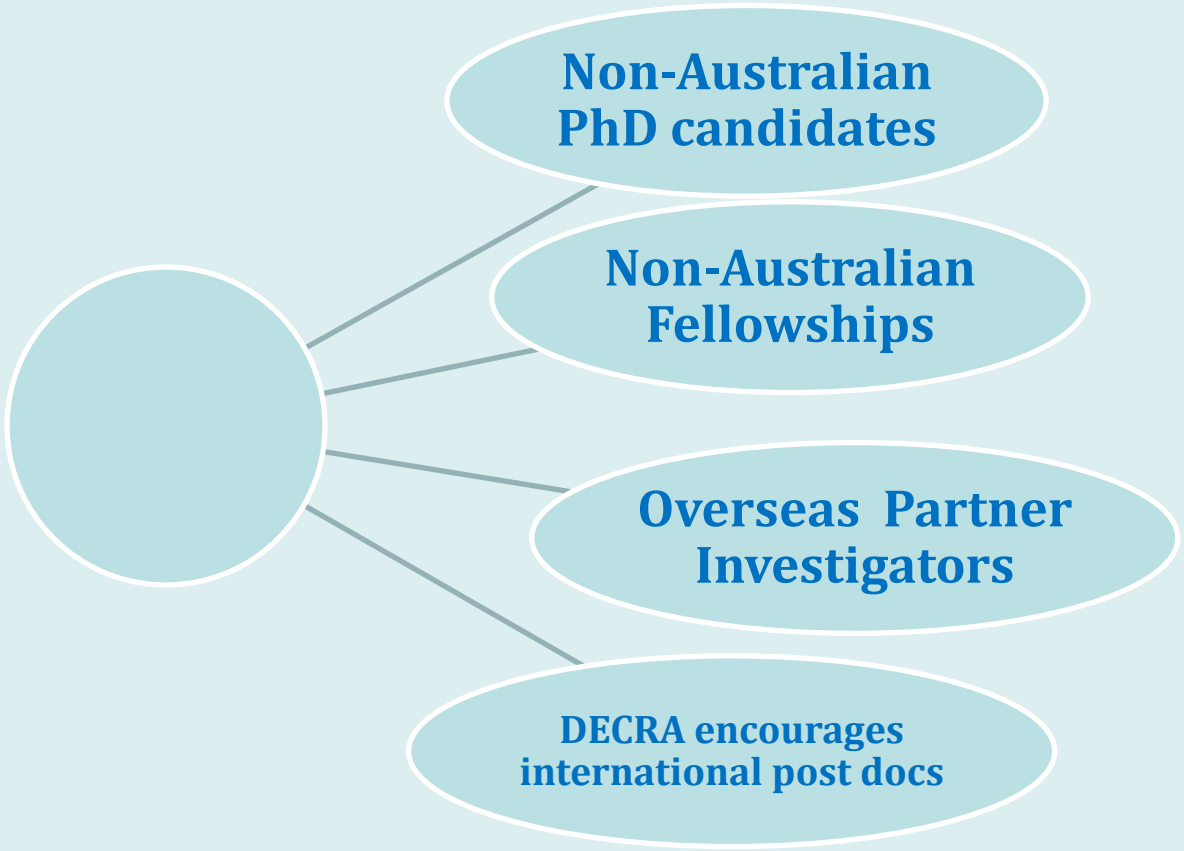
- **Partnerships**

Partnerships (International)



International Strategy

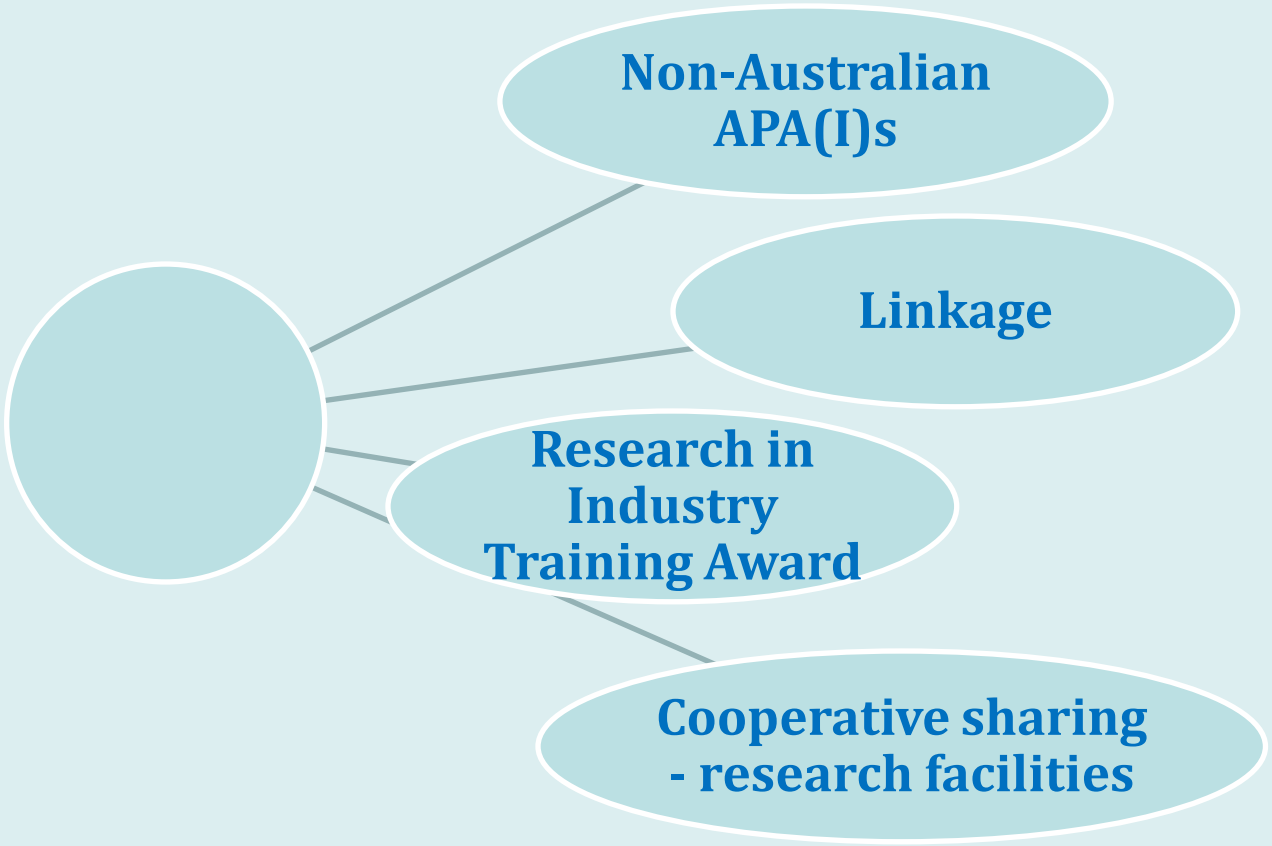
To ensure Australia benefits from and makes a strong contribution to international research developments, partnerships, collaboration and policy.

- Objective 1: Build on existing ARC support for international research collaboration through the NCGP schemes
- Objective 2: Facilitate new opportunities for international research collaboration
- Objective 3: Maintain strong linkages with overseas research funding agencies on international research collaboration opportunities
- Objective 4: Allow for comparisons of Australia's research nationally and internationally for all disciplines areas

Our focus on internationalisation

- Early-2008, the Minister announced that all fellowships will be open to international applicants to work in Australia
- *Discovery Projects*
  - new internationalisation objective
  - restrictions on the use of ARC funds for Partner Investigators living overseas have been lifted
- Significant changes to *Linkage Projects* Scheme
  - International organisations
  - *From 2009* citizenship/residency requirements for postgraduate students removed

Partnerships (Industry)



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Examples of Partner Organisations

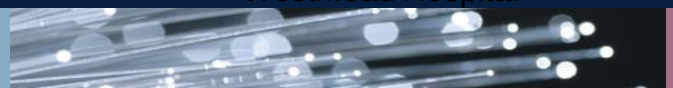
Alcoa
BAE Systems Australia
BHP Billiton Ltd
BlueScope Steel Ltd
Brisbane City Council
CSL Limited
GlaxoSmithKline Aust Pty Ltd
Hydro Tasmania
Rio Tinto Ltd
Telstra Corp Ltd

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



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