



Australian Government

Australian Research Council

Research Excellence and the latest policy context

Central Queensland University Senior Leadership Conference

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Research

Topics for today's presentation

- The research policy context for research in Australia
- ERA outcomes and update
- NCGP – the latest developments
- Quality research proposals
- Research leadership and the importance of mentoring

Research
Workforce
Strategy

Innovation and
Collaboration

Funding and
research
priorities

Fostering research
excellence, capacity
building

Powering Ideas

Mission based
Compacts and
base funding



ERA Update



Research Strengths

Research Gaps

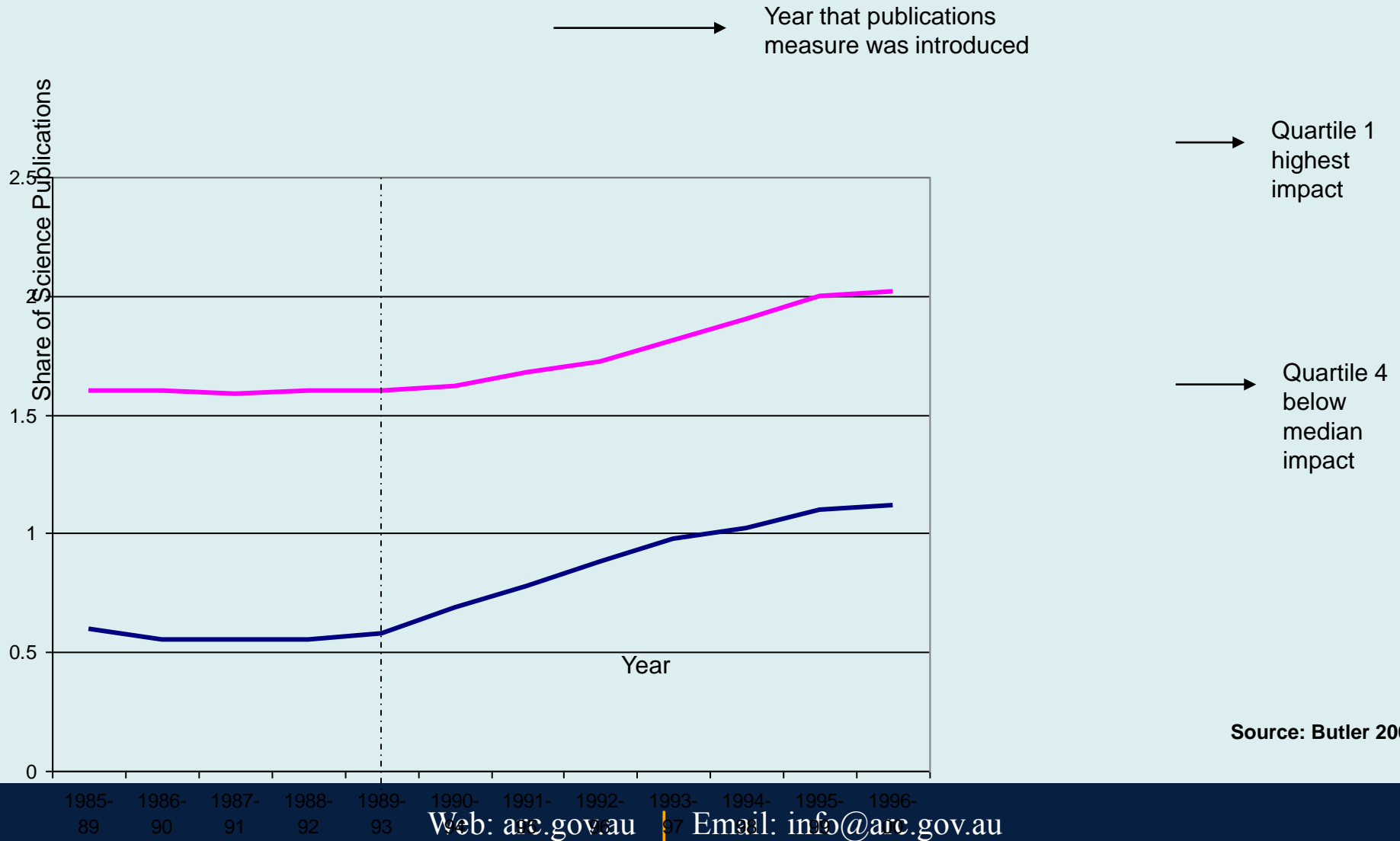
Objectives of ERA

- Establish an *evaluation framework*;
- Provide a *national stock take* of discipline-level research;
- Identify *excellence* across the full spectrum of research performance;
- Identify *emerging research areas* and *opportunities for further development*;
- Allow for *comparison* of Australia's research *nationally* and *internationally* for all discipline areas.

What problem were we trying to solve?

- Demonstrate quality/value of investment in university research to government
- Raise the quality of Australian research effort

Australian academic publishing practices



Excellence in Research for Australia

- 2007 New Government elected with a commitment to replaces RQF with a metrics based approach
- 2008 ARC given responsibility for quality framework
- 2008 Develop policy and case for funding and vice versa
- 2009 ERA Trial in physical sciences and humanities and creative arts
- 2010 ERA Full Evaluation
- 2011 Refinements to framework
- 2012 Next ERA round

Scale of ERA 2010

- All 41 eligible institutions submitted data
- Over 330,000 research outputs
- 55,000 researchers represented
- 2,435 units of evaluation assessed at 2 and 4-digit level
- 149 Research Evaluation Committee (REC) members
- 500+ Peer Reviewers

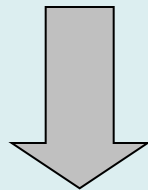
All aggregated data in the *ERA 2010 National Report*.

The ERA 2010 Clusters

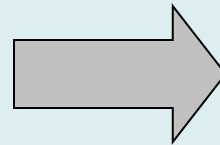
Cluster 1	Physical, Chemical & Earth Sciences
Cluster 2	Humanities and Creative Arts
Cluster 3	Engineering and Environmental Sciences
Cluster 4	Social, Behavioural and Economic Sciences
Cluster 5	Mathematics, Information and Communication Sciences
Cluster 6	Biological Sciences and Biotechnology
Cluster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

ERA Process Overview

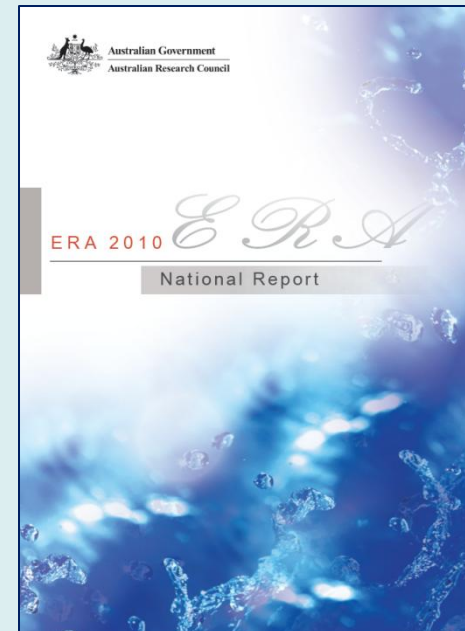
- Volume and Activity
- Journal Quality
- Citation analysis or peer review
- Research Income
- Applied Measures
- Esteem



Research Evaluation
Committee



**Please note –
no weightings**



Strengths in Australian universities

- Astronomical and Space Sciences
- Optical Physics
- Quantum Physics
- Macromolecular & Materials Chemistry
- Physical & Structural Chemistry
- Geology
- Ecology
- Evolutionary Biology
- Plant Biology
- Zoology
- Clinical Sciences
- 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

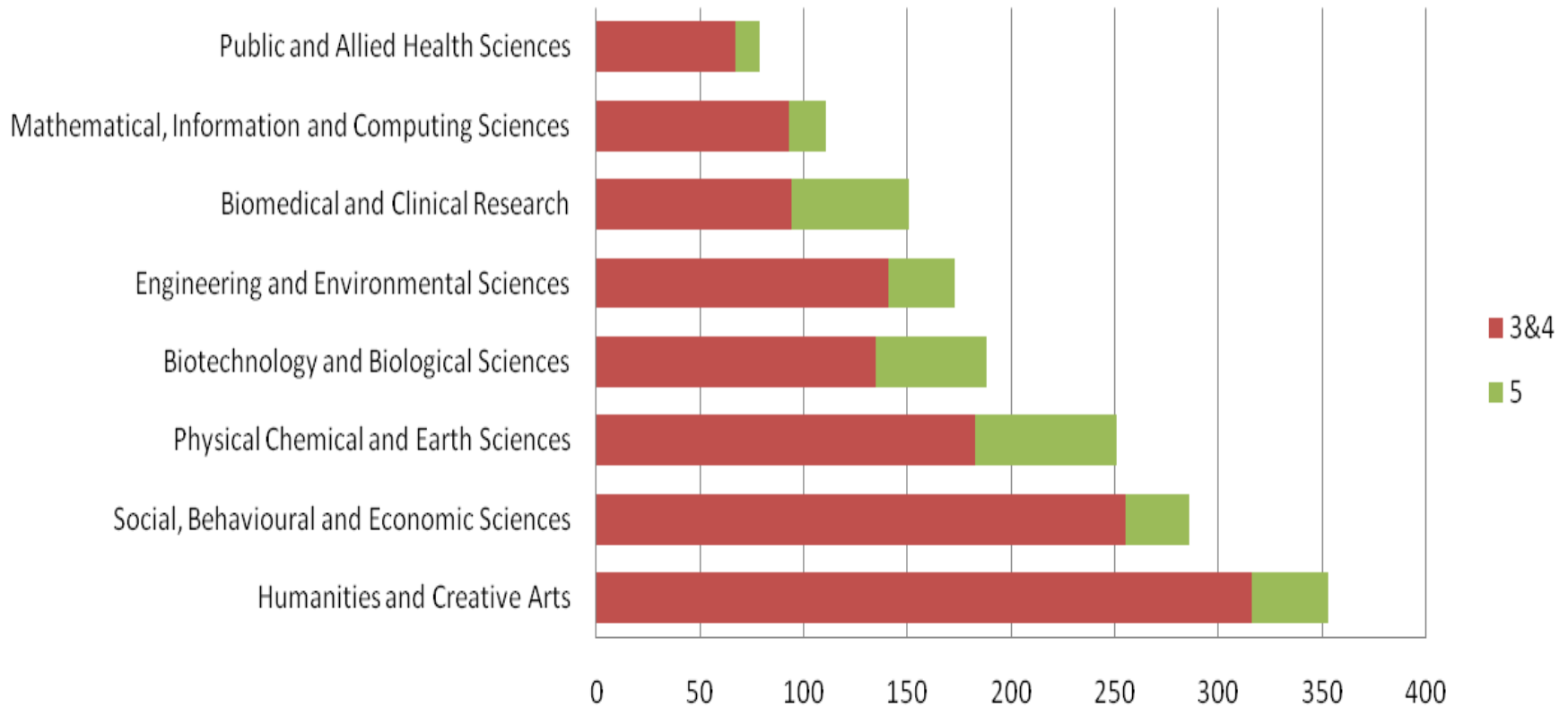
Pockets

- Classical Physics
- Aerospace Engineering
- Transportation and Freight

Strong Applied Research

- Electrical and Electronic Engineering
- Crop and Pasture Protection
- Resources Engineering
- Materials Engineering
- Extractive Metallurgy
- Nursing

ERA 2010 Rating by Cluster - at, above, or well above world standard (i.e. 3s, 4s, & 5s)



How ARC has responded to feedback so far ready for 2012

- Changes to the ranked journals and conferences
- Interdisciplinary Research
- Raising the Threshold
- Eligibility for fractional staff
- Capturing Applied Research

ERA 2012 – still to do

- Expanding peer reviewer pool
- Making peer review more robust (selection of outputs, reviewers)
- Draft Submission Guidelines to be issued to the sector in July 2011 for comment
- System development and testing

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

Australian Research Council – Promoting Excellence

Funding & Investment

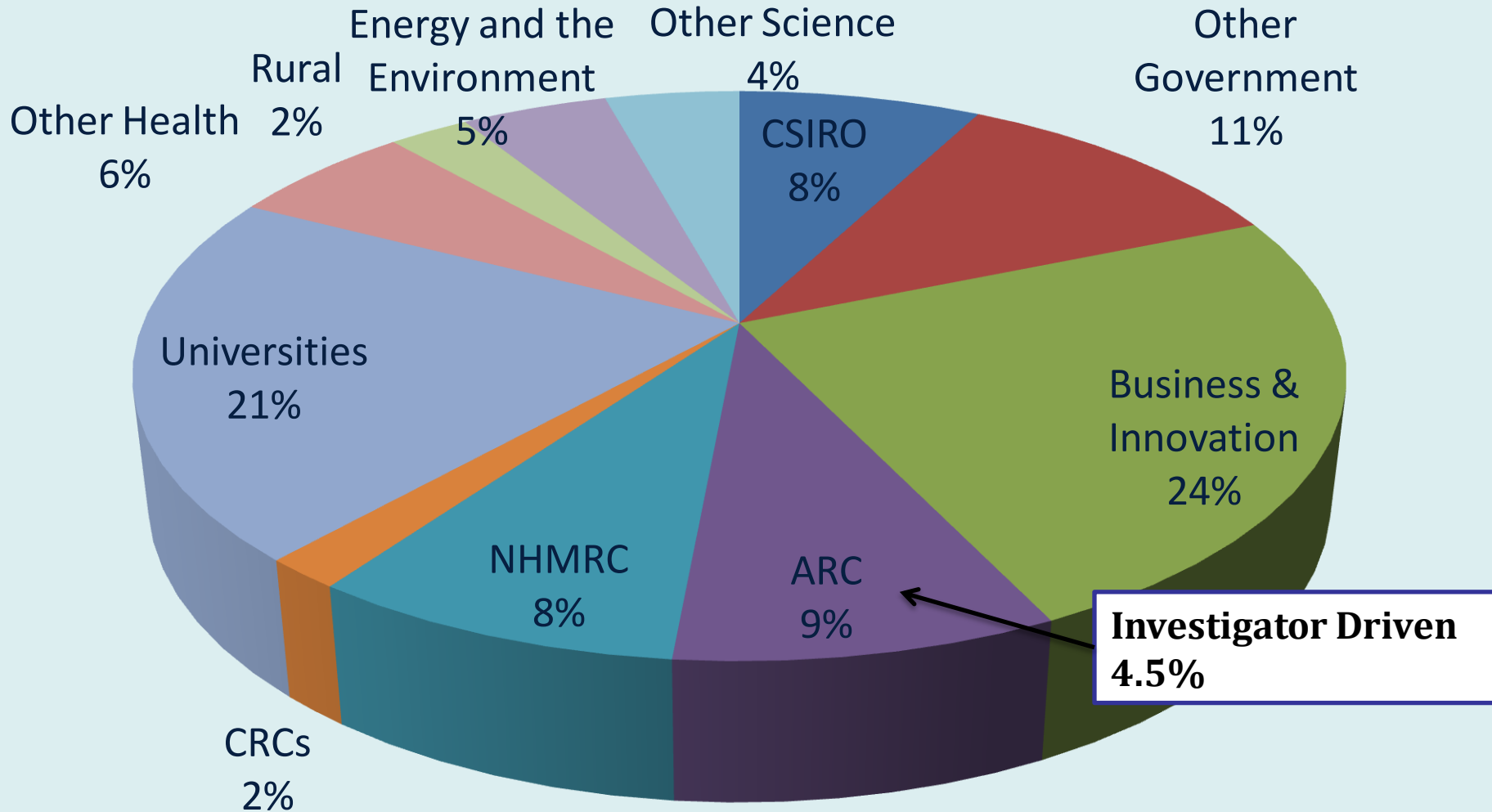
Flexibility

Linking & Developing

Information

Partnerships

Government Investment in Research 2011-12



The ARC

National Competitive Grants Program
\$810M in 11-12

**Evaluation
and Policy**

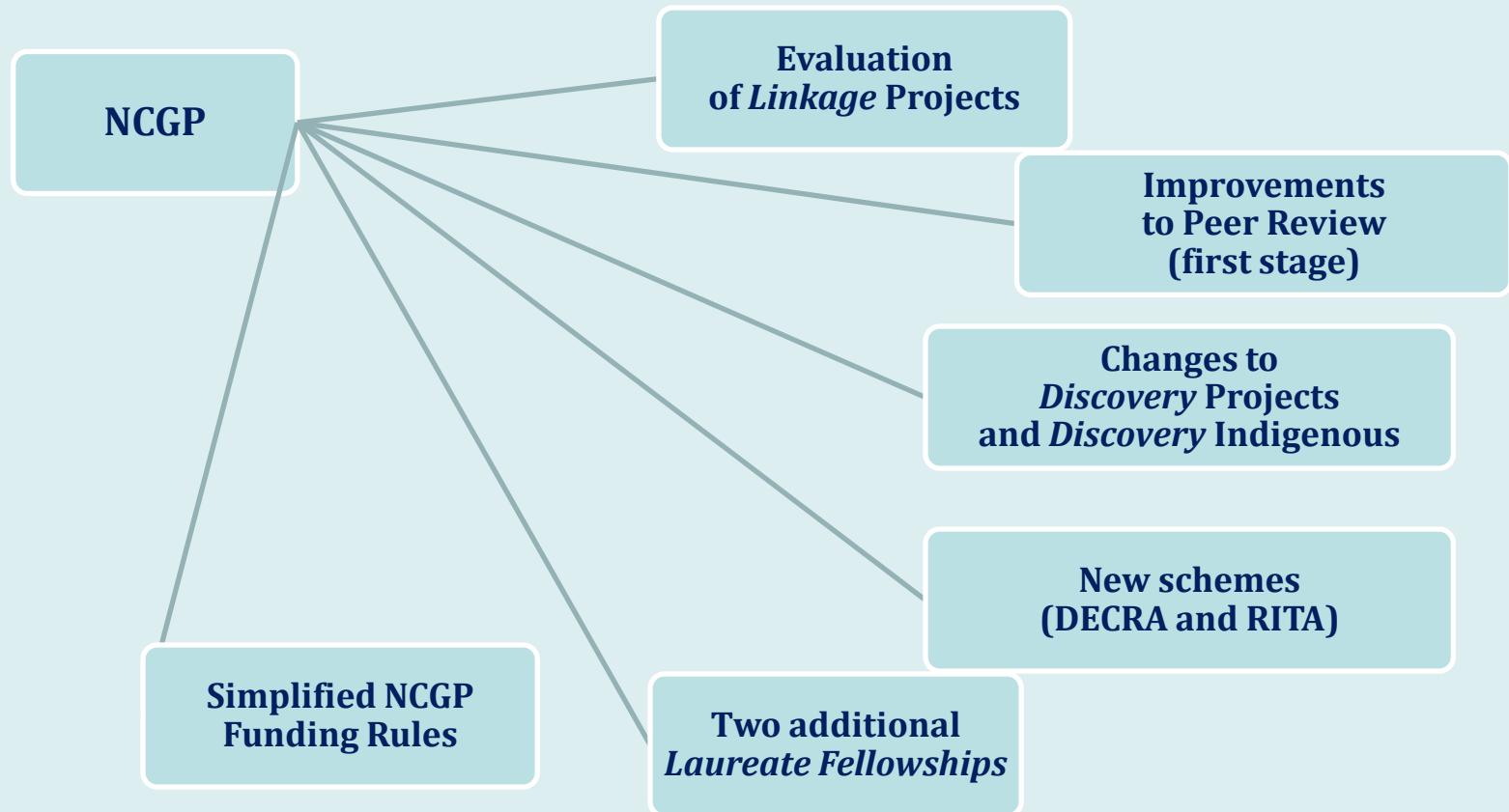
**Discovery &
Fellowships**
\$502 M

Linkage & Centres
\$308 M

**Excellence in
Research for
Australia**

- **Support research excellence**
- **Funding for facilities and equipment that researchers need to be internationally competitive**
- **Support training and develop skills for future researchers**
- **Provide incentives for partnerships and collaboration nationally and internationally**

NCGP– the latest developments



Avoid sense of entitlement

We need to do this because the rest of the world is doing it...

Demonstrate that your research offers a natural advantage for Australia

Tips on writing a quality research proposal

EXERCISE:

- *Write down a 100-word summary of your proposal*
- *Show it to your neighbour and talk about it with them*

TOP RANKED PROPOSALS

- Manage to balance technicality and accessibility
- Present problems and/or controversies and explain how they will solve them
- Explain how the momentum of the subject demands funding now
- Show how Australian work fits into the international picture
- Back up compelling claims with evidence and others' judgments

TOP RANKED PROPOSALS

- Carefully temper ambitious goals with plausible approaches
- Display evidence of responsible but often daring approaches to the problem
- CIs have strong international track records
- Present excellent progress reports on previous grants

LOW RANKED PROPOSALS

- Use too much technical jargon
- Make grandiose and implausible claims about outcomes
- Don't support claims of excellence or progress with evidence
- Relate to research areas without momentum
- Are weakly linked into national and international research networks

LOW RANKED PROPOSALS

- Emphasize the collection of data rather than the solution of controversies
- Set a negative or depressive tone about the state of the subject in Australia
- Contain a high rate of spelling and grammatical errors
- Are badly structured and difficult to follow

Problems of Peer Review

Matthew effect

- The accomplishments of those who have already achieved distinction are overestimated (e.g. do athletes really know about banking?)

Halo effect

- The accomplishments of those associated with successful people are overestimated

Problems of Peer Review

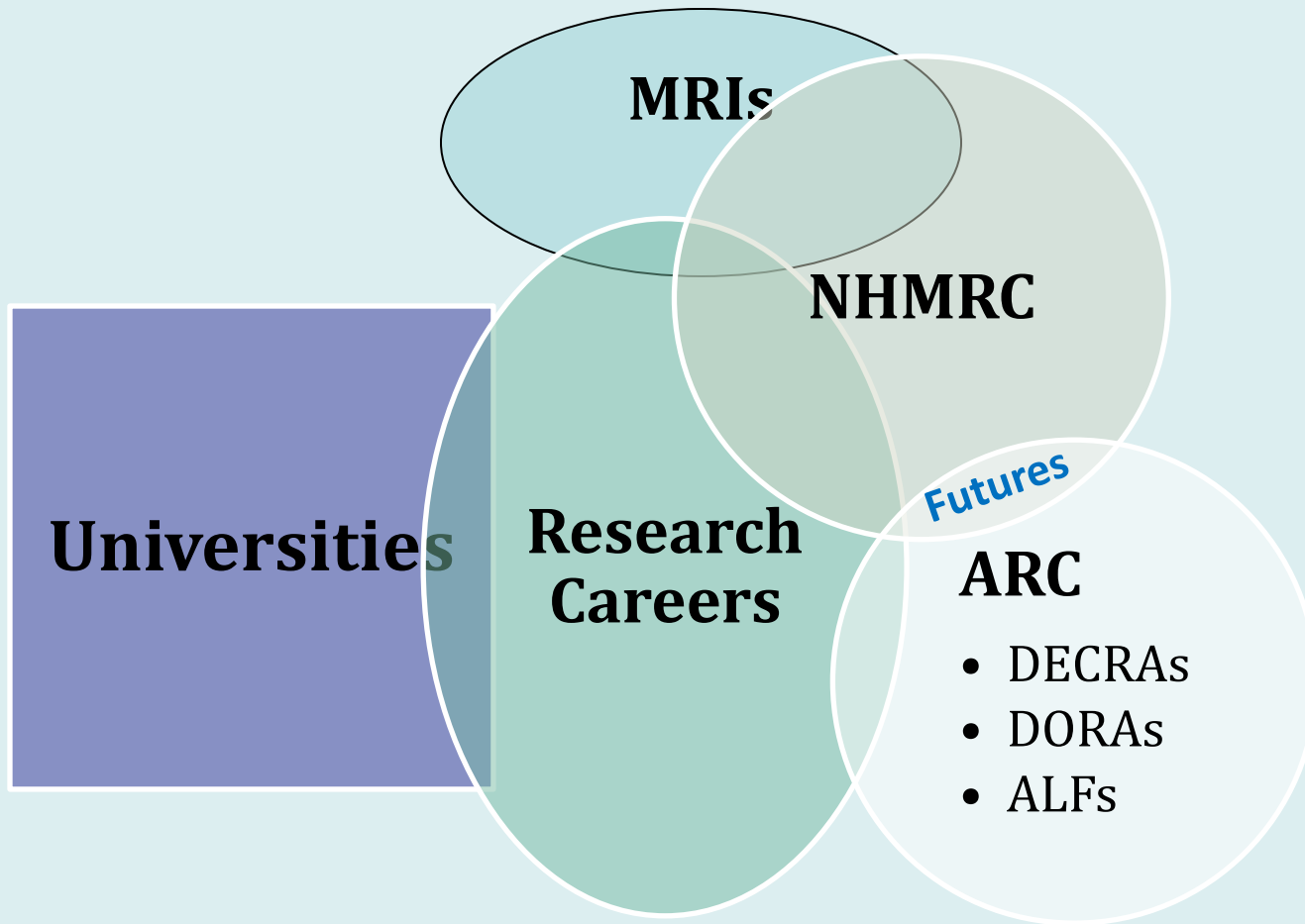
Bias against novelty

- Peer review sometimes fails to respect the value of attacks on the fashionable paradigm

Cronyism

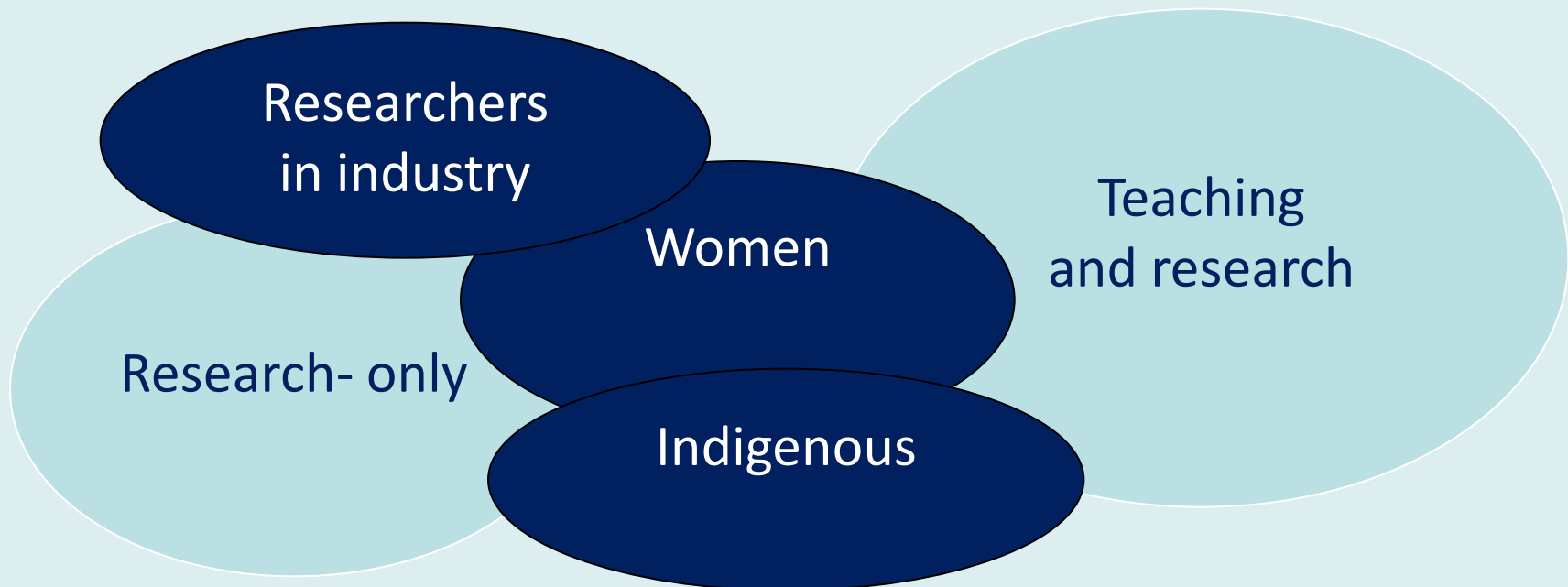
- Assessors may use standards that are narrower than the overt criteria, defined by expectations in a 'social group'

Responsibility for Research Careers



The ARC aims to:

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



Discovery Early Career Researcher Award (DECRA)

- Provide career opportunities for early-career researchers who have been awarded a PhD within five years or, commensurate with significant career interruption, within eight years
- Up to 200, three year Awards will be available each year, commencing in 2012.
- Funding of up to \$125,000 will be provided to support a fixed salary (\$85,000) and project costs.

Researchers in Industry Training Awards (RITA)

- Up to 200 Awards will be available initially, 100 each in 2012 and 2014;
- Each Award will include a minimum research student stipend of \$30,000 per year; to be supplemented by funding from institutions and the industry partner to attract the best researchers.
- The individual Award recipients must spend a substantial period of their candidature working directly with the industry partner(s).

Research leadership and the importance of mentoring

Don't interpret ERA superficially

Secure your own leadership skills

Aim to become an excellent mentor

Exercise care in guiding younger researchers in grant applications

Mentoring and Excellence

Mentors and Role Models

- Leadership
- Guidance
- Bridging gaps

Achieving Excellence

- Applying for grants
- Peer Review process
- Dos and Don'ts

Role Model

An inspiration

You in the *future*?

Personal/Professional

Examples of pathways
or behaviours

Mentors

A guide

You in the *present*

Impartial

Career advice

Secure your own leadership skills and attributes

- #1 Don't cater

Avoid feeding others

Avoid making notes, coffee & copies

- # 2 Be prepared

Don't believe others know more than you

- #3 Learn to let go

Don't look back

Don't do the work of others

Set the example

Encouraging opportunity;
not simply *providing* it



Reinforcing leadership



**Changing the landscape
and the language we use**



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