Simplifying and strengthening responsible research practice – the Australian experience

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Overview of today’s presentation

1. Overview of the Australian research landscape and the ARC

2. Australia’s framework for the responsible conduct of research

3. The focus on shared responsibility

4. The role of research funders and the importance of an independent review system.
2018–19 Federal investment in R&D, by portfolio and program (approx. AU$9.6 billion)
Growing knowledge and innovation by funding the highest quality research, assessing the quality, engagement and impact of research and providing advice on research matters.

The ARC is responsible for three main activities:

1. funding excellent research and research training
2. measuring the quality, engagement and impact of research, and
3. providing policy advice on research matters.
ARC NCGP funding by Fields of Research 2009–2018

- Maths
- Physics
- Chemistry
- Earth Science
- Biology
- Engineering
- Health
- Human Society
- Psychology
- History and Archaeology

Fields of Research:
- 01 Mathematical Sciences
- 02 Physical Sciences
- 03 Chemical Sciences
- 04 Earth Sciences
- 05 Environmental Sciences
- 06 Biological Sciences
- 07 Agricultural and Veterinary Sciences
- 08 Information and Computing Sciences
- 09 Engineering
- 10 Technology
- 11 Medical and Health Sciences
- 12 Built Environment and Design
- 13 Education
- 14 Economics
- 15 Commerce, Management, Tourism and Services
- 16 Studies in Human Society
- 17 Psychology and Cognitive Sciences
- 18 Law and Legal Studies
- 19 Studies in Creative Arts and Writing
- 20 Language, Communication and Culture
- 21 History and Archaeology
- 22 Philosophy and Religious Studies
Australia’s framework for the responsible conduct of research

**Ethics guidelines and approval processes**
- National Statement on Ethical Conduct in Human Research
- Research involving Aboriginal and Torres Strait Islander People and Communities
- Australian Code for the Care and Use of Animals for Scientific Purposes

**Compliance and reporting**
- ARC and NHMRC grant guidelines and agreements mandate adherence
- ARC/NHMRC research integrity policies – institutions are required to report breaches of the Code

**Institutions’ policies and procedures**
- Policies required under the Code
- Procedures for managing and investigating complaints

**The Code**
- Australian Code for the Responsible Conduct of Research (2018)
- Other supporting guides

**Review mechanism**
- Australian Research Integrity Committee (ARIC)

**TEQSA**
- Independent national quality assurance and regulatory agency for higher education.

The Code

- Australian Code for the Responsible Conduct of Research (2018)
- Other supporting guides
The Reach of the Code is broad

- Individuals & Groups
- Affiliated research
- Domestic & International partners
- Hospitals
- Industry
- Publicly funded research agencies

AUST. UNIS MRIs
The Code establishes a framework for responsible research conduct in Australia

• ARC, NHMRC and Universities Australia are co-authors of the revised (2018) *Australian Code for the Responsible Conduct of Research* (‘the Code’)

• The 2018 Code is the result of a two-year review of the 2007 Code.

• The 2018 Code distils the principles contained in Part A of the 2007 Code.

• Guidance previously in Part B of the Code is now in a separate *Guide to Managing and Investigating Potential Breaches of the [Code]*

• The 2018 Code:
  ✓ Supports high-quality research
  ✓ Enhances credibility of research
  ✓ Promotes community trust in research
The Code is a principles-based document

Eight Principles

P1 Honesty
P2 Rigour
P3 Transparency
P4 Fairness
P5 Respect
P6 Recognition
P7 Accountability
P8 Promotion

The Code contains 8 Principles and 29 Responsibilities

Responsibilities of institutions

Responsible research conduct is fostered and underpinned by the research culture of the institution. Institutions have an obligation to encourage and support responsible research conduct. They are accountable to funding organisations and the Australian community for how research is conducted. To foster responsible research conduct, institutions will:

R1 Establish and maintain good governance and management practices for responsible research conduct.

... Responsibilities R1 – R13 relate to institutions

... Responsibilities R14 – R29 relate to researchers

Responsible research conduct is fostered and underpinned by the research culture of the institution. Institutions have an obligation to encourage and support responsible research conduct. They are accountable to funding organisations and the Australian community for how research is conducted. To foster responsible research conduct, institutions will:

R14 Support a culture of responsible research conduct at their institution and in their field of practice.

...
The majority of breaches fall into the region that has been termed to relate to ‘questionable research practices’.

Advice on how to determine the seriousness of a breach is provided.

The seriousness of some breaches can be recognised by use of the term ‘research misconduct’.

In considering the seriousness of a breach of the Code, the factors to be considered (without excluding other factors) are:
- the extent of the departure from accepted practice
- the extent to which research participants, the wider community, animals and the environment are, or may have been, affected by the breach
- the extent to which it affects the trustworthiness of research
- the level of experience of the researcher
- whether there are repeated breaches by the researcher
- whether institutional failures have contributed to the breach
- any other mitigating or aggravating circumstances.
The 2018 Code will be supported by supplementary guidance:

- **Authorship** — Consultation finalised; expected release by end-June 2019
- **Data management** — Consultation finalised; expected release by end-June 2019
- **Research Supervision** — under consultation; expected release by end-June 2019
- **Collaborative research across institutions** — under consultation; expected release by end-June 2019
- **Peer review** — under development
- **Conflicts of interest** — under development
- **Publication and dissemination of research findings** — under development
- **Research Funding Proposals** — under development
- **Research Integrity Advisors** — under development
Research integrity is a shared responsibility

• The structure of the Code supports this idea
• In particular, R3:

R3: Develop and maintain the currency and ready availability of a suite of policies and procedures which ensure that institutional practices are consistent with the principles and responsibilities of the Code.

• This is in line with the system of self-regulation in Australia for research integrity, and most suitable for the cultural context of Australia where institutions take responsibility for the research that they conduct.
• This system allows institutions to be proactive when responding to complaints about research integrity matters.
• Guides developed by NHMRC, ARC and UA provide support.
Many Code Responsibilities relate to management of potential breaches

**For institutions:**

- R9 Facilitate the prevention and detection of potential breaches of the Code.
- R10 Provide mechanisms to receive concerns or complaints about potential breaches of the Code. Investigate and resolve potential breaches of the Code.
- R11 Ensure that the process for managing and investigating concerns or complaints about potential breaches of the Code is timely, effective and in accord with procedural fairness.
- R12 Support the welfare of all parties involved in an investigation of a potential breach of the Code.
- R13 Base findings of investigations on the balance of probabilities and ensure any actions are commensurate with the seriousness of the breach.

**For researchers:**

- R29 Report suspected breaches of the Code to the relevant institution and/or authority.

The Code defines a ‘breach’ as:

“A failure to meet the principles and responsibilities of the Code. May refer to a single breach or multiple breaches.”
The ARC’s Research Integrity Policy provides avenues for referring potential breaches of the Code to institutions for investigation, requirements for institutions to report to the ARC on progress and outcomes of investigations, and mechanisms for ARC action.

1. Complaint received by institution or referred by ARC
2. Institution investigates
3. Institution reports to ARC at specific junctures identified in Policy
4. ARC takes action if necessary (precautionary or consequential actions)

Research Integrity and Research Misconduct Policy

Australian Government
Australian Research Council

Version: 2.0
Issued: December 2016
Date for review: December 2017
Owner: Policy and Strategy Branch
Australian Research Integrity Committee (ARIC)

- ARIC is an independent committee established by ARC and NHMRC
- Reviews investigation process upon receipt of a valid request for review
- Does not inquire into substance of allegation or merits of decision
- ARIC Framework is under review to bring into alignment with the 2018 Code.

Concerns about breach of procedural fairness and/or failure to comply with the Code and/or institution’s related policies
### Summary: three features of Australia’s research integrity framework

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<th>Shared responsibility</th>
<th>Consistency</th>
<th>Adaptability</th>
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<td>Self regulated system, with checks and balances built in throughout the interconnected research integrity framework</td>
<td>The Code provides high level principles and responsibilities</td>
<td>The Code’s high-level principles can be adapted flexibly into institutions’ own policies and procedures.</td>
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<td>Institutions, researchers and government all have roles in ensuring research integrity</td>
<td>Applies to all disciplines</td>
<td>The Investigation Guide’s ‘model process’ can be applied equally to minor and major breaches</td>
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<td>Applies to all institutions</td>
<td>The Investigation Guide provides flexibility in who fulfils the different roles during an investigation</td>
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<td>Detail provided in guides where appropriate</td>
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<td>Model investigation process is set out in the Investigation Guide</td>
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Research quality, engagement and impact

- Excellence in Research for Australia
- Engagement and Impact
What is ERA?

• ERA evaluates the quality of the research undertaken in Australian universities against national and international benchmarks.

• ERA is a comprehensive collection. The data submitted by universities covers all eligible researchers and their research outputs.

• ERA assesses the quality of research disciplines at each university—it does not assess or rate individual researchers.
How do we evaluate research quality in ERA?

• The unit of evaluation (UoE) is broadly defined as the **Fields of Research** (FoR) within an institution based on the Australia and New Zealand Standard Classification (ANZSRC).

• UoEs are 2-digit FoRs (22 broad disciplines) and 4-digit FoRs (157 specific disciplines)

• The indicators used in ERA include a **range of metrics** such as citation profiles which are common to disciplines in the natural sciences, and **peer review** of a sample of research outputs which is more broadly common in the humanities and social sciences.

• The outcomes (ratings) are determined and moderated by **committees of distinguished researchers** from Australia and overseas.
State of Australian University Research
2018-19
ERA National Report
2018 ERA Highlights

42 Australian Institutions

2,603 Units of Evaluation (UoEs) assessed

506,294 Unique research outputs submitted

$10.9b Income reported

76,261 Researchers
2018 Percentage of UoEs by rating

- Well above world standard: 36%
- Above world standard: 30%
- World standard: 24%
- Below world standard: 9%
- Well below world standard: 1%

26% of UoEs improved their 2015 rating in 2018
2018 Broad research disciplines

Broad research disciplines in Australia with 5 or more universities performing well above world standard (ERA rating of 5)
Engagement and Impact Assessment

- how well researchers in Australian universities engage with end users beyond academia
- how well Australian universities support their researchers to deliver research which has an impact beyond academia
- What kinds of impacts are occurring outside of academia as result of research undertaken by Australian universities

Thereby encouraging collaboration by university researchers with end-users, driving innovation and entrepreneurship......

Currently without ties to funding
El Impact Studies
Data Portal

El Outcomes

Analysis of:
- Engagement
- Approach to impact
- Impact

Best practice impact studies
EI Outcomes

**Distribution of ratings across all UoAs—Engagement**
- High: 215 UoAs (34%)
- Medium: 317 UoAs (51%)
- Low: 94 UoAs (15%)

**Distribution of ratings across all UoAs—Impact**
- High: 277 UoAs (43%)
- Medium: 284 UoAs (44%)
- Low: 78 UoAs (12%)

**Distribution of ratings across all UoAs—Approach to impact**
- High: 159 UoAs (25%)
- Medium: 325 UoAs (51%)
- Low: 154 UoAs (24%)
Thank you

ARC on the Web:
www.arc.gov.au/research-integrity

Email: researchintegrity@arc.gov.au