University of Technology, Sydney
ERA Strategy Meeting and Forum
21 July 2011

Professor Margaret Sheil
CEO, Australian Research Council

Government Investment in R&D 2011-12

- Energy and the Environment: 5%
- Rural: 2%
- Other Science: 4%
- CSIRO: 8%
- Business & Innovation: 24%
- ARC: 9%
- NHMRC: 8%
- Universities: 21%
- CRCs: 2%
- Other: 6%
- Other Government: 11%
- Investigator Driven: 4.5%
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

Year that publications measure was introduced
Quartile 1 highest impact
Quartile 4 below median impact

Source: Butler 2002
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.
ERA Process Overview

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

Please note – no weightings

Research Evaluation Committee

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

- 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 myths

RICS and Rankings

ERA does not evaluate individual outputs

☑ ERA does not evaluate individual outputs
☑ Ranked Journals did not drive ERA ratings
☑ ERA evaluations utilised metrics and peer review moderated by expert judgement

Web: arc.gov.au | Email: info@arc.gov.au
Changes for 2012

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

Unintended consequences-journal rankings

- Journals only easily accessible information
- Rapid response time
- Codified existing behaviour/practice
- Simplified application
The refined journal indicator

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<tr>
<th>University of Y</th>
<th>FoR0201</th>
<th>Astronomical and Space Sciences</th>
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<tbody>
<tr>
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<td>1</td>
<td>Advances in Space Research</td>
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<td>Nature</td>
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<td>Astronomy and Astrophysics: a European journal</td>
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<td>5</td>
<td>Geophysical Research Letters</td>
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<td>Mathematics and Computers in Simulation</td>
<td>27</td>
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Please note that this is not based on any university’s submission to ERA 2010

ERA 2012 – still to do

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

- Research Income
- Research Student Completions and Load
- Publications
- ERA
- APAs
- IPRS
- Research Training Scheme
- Joint Research Engagement
- Sustainable Research Excellence
- CTS

ERA Outcomes

- Changes in research culture (focus on excellence)
- Sustainable Research Excellence (from 2012)
- Compacts and Institutional Planning
- Tertiary Education Quality and Standards Agency ??
- Research Training Scheme (from 2013)
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