



Australian Government

Australian Research Council

Excellence in Research for Australia



ERA 2010 Outcomes
University of Wollongong
4 March 2011

Objectives of ERA

- Establish an **evaluation framework** that gives government, industry, business and the wider community assurance of the excellence of research conducted in Australia's institutions;
- Provide a **national stocktake** of discipline-level areas of research strength and areas where there is opportunity for development in Australia's higher education institutions;
- 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.

General ERA Principles

1. Unit of Evaluation is the four-digit ANZSRC Field of Research code (ie. 157 possible **Units of Evaluation**); evaluation occurs at the two-digit level too
2. Evaluation by **Research Evaluation Committees** in discipline clusters; eight clusters in total
3. There is a minimum level of output 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 disciplines

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 Computing Sciences
Cluster 6	Biological and Biotechnological Sciences
Cluster 7	Biomedical and Clinical Health Sciences
Cluster 8	Public and Allied Health Sciences

ERA Development 2008-2010

- Several major rounds of consultation
- Indicator Development Group (specialist sub-groups)
- Ranked journals and conferences consultation
- Discipline specific indicators
- Full trial in 2009 of PCE and HCA
 - test of systems, processes
 - feedback from sector, RECs, peer reviewers
- Esteem indicators

The ERA Unit of Evaluation

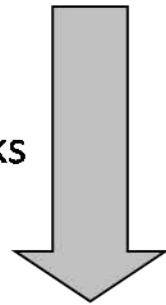
- The **baseline** - the Discipline in an institution = Four-digit Field of Research Code (ANZSRC) eg.,
2101 Archaeology
- The **higher perspective** – the division in an institution = Two-digit Field of Research Code (ANZSRC) eg.,
21 History and Archaeology
- The ERA Unit is not about the department nor the individual researcher



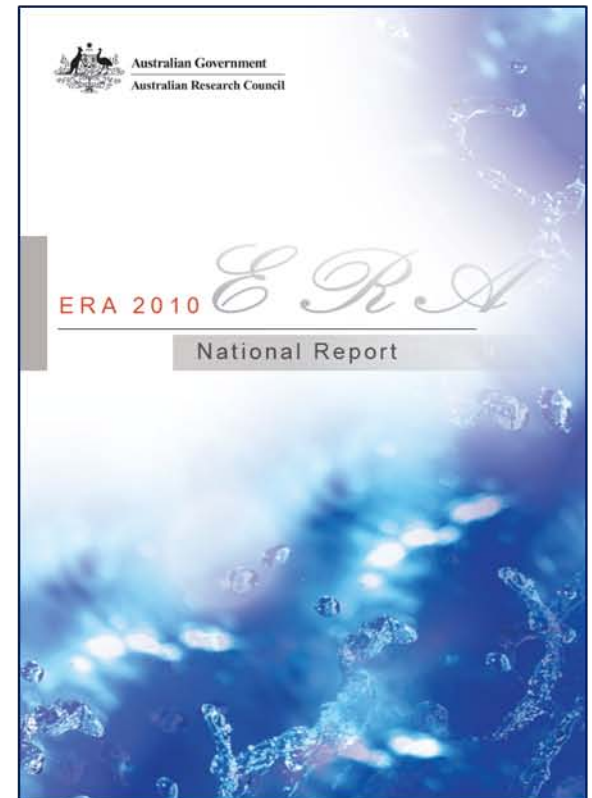
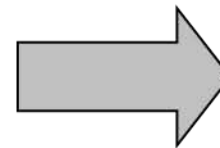
ERA Process Overview

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

International Benchmarks



Research Evaluation
Committees



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

ERA 2010 Reviewers

- Expert review and specialist disciplinary knowledge were essential – not a mechanical process
- 8 Research Evaluation Committees
- 149 Australian and international REC members
- 500+ Peer Reviewers from Australia and overseas
- REC members also conducted peer review

Stages of evaluation

- Every UoE evaluated by at least three REC members (plus peer reviewers)
- Independent evaluation in the first instance followed by exchange of views
- All evaluations were advice to the full Committee
- All UoEs discussed at the final evaluation meeting
- All final ratings decisions of the Committee as a whole

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.

ERA

Background Statement

Volume
and
Activity

Ranked
Outlets

Peer
Review

Citation
Analysis

Esteem
Measures

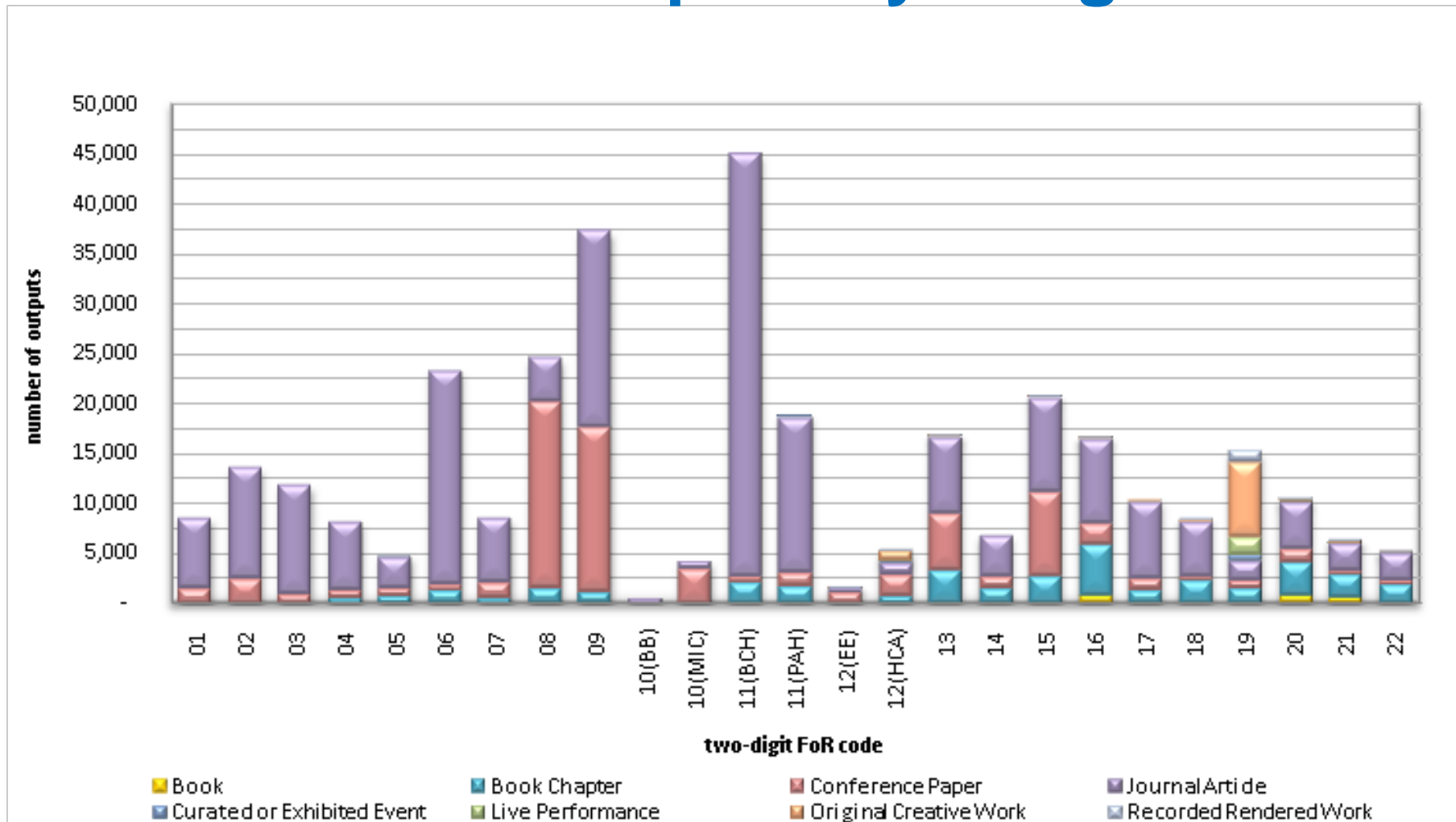
Research
Income

Applied
Measures

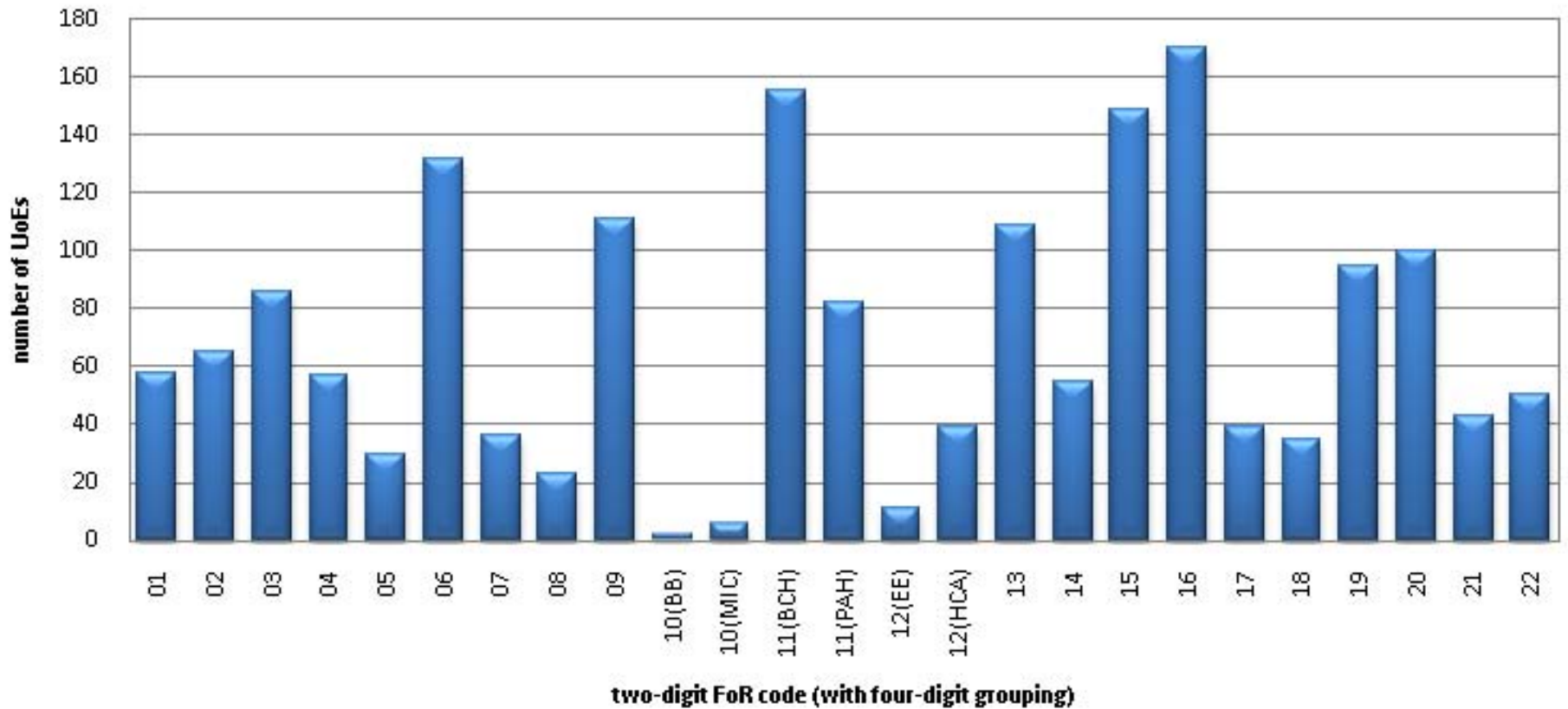
ERA 2010 at a glance

- All 41 eligible institutions participated
- 2435 units of evaluation assessed at the two- and four-digit level
- Over 330,000 research outputs and 55,000 researchers represented

Research outputs by 2-digit code



UoEs by 2-digit code





ERA 2010 – the results....

Research

ERA 2010 outcomes: context

- ERA is a **retrospective** evaluation of research performance: 2003-2008 for research outputs, 2006-2008 for other data
- The ERA unit of evaluation is the discipline within the institution, **not** individual researchers or institutional units
- ERA does not rank institutions or units; each UoE is evaluated on its merits against the rating scale

The National Report

- http://www.arc.gov.au/era/outcomes_2010.htm
- National profile of research activity
- Evaluation outcomes by FoR and institution
- Searchable results on-line by institution and by FoR

Reading the national results

86% of assessed UoEs received a rating at or above world standard (i.e. rating of 3 or above).

Of all assessed UoEs at the four-digit FoR code level (58 UoEs), the average rating is 3.4. See **Section 1** for two-digit FoR code average rating.

Mathematical, Information and Computing Sciences							
01 Mathematical Sciences							
% assessed UoEs rated at or above world standard 86%	FTEs	880	Esteem count(s)			106	Average National Rating 3.4
	Research outputs	8,659	Patent(s)			1	
	Research income \$	104,624,740	Research commer. income \$			22,368,469	
	UoEs assessed	58					
	Rating:	1	2	3	4	5	Total
	Distribution:	1	7	25	16	9	58

There were seven UoEs which received a rating of 2.

A total of 58 UoEs were assessed for Mathematical Sciences at the four-digit FoR code level.

Feedback on submissions

- Institutional data submission smoother than in the Trial
- Institutional repositories generally functioned well
- Definition of research – still outputs being submitted which did not meet the definition in the view of the Committees; these are **not** eligible and should not be submitted
- Selection of peer review items – breadth of work in the 20%
- Supporting statements for NTROs and Portfolios

2010 results – where to from here?

- Great deal of information in the National Report
- Citation and benchmark information provided in confidence to institutions
- Extra SRE funding was contingent upon ERA 2010 participation
- ERA is informing mission-based compact negotiations between the Government and institutions

ERA 2012

- A new ERA 2012 section has been added to the ARC website – developments will be posted there
- Ranked journal and conference lists public consultation has commenced – see ARC website – includes open tender process to involve peak bodies in Stage 2
- ARC will review 2010 processes and seek feedback from the sector – keep an eye on the website

Further information?

- **www.arc.gov.au/era**
- **Email: era@arc.gov.au**
- **Hotline: 02 6287 6755**