



Australian Research Council

Excellence in Research for Australia

28 July 2009

University of NSW





Objectives of ERA

1. establish an evaluation framework that gives government, industry, business and the wider community assurance of the excellence of research conducted in Australia's institutions;
2. 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;
3. identify excellence across the full spectrum of research performance;
4. identify emerging research areas and opportunities for further development; and
5. allow for comparisons of Australia's research nationally and internationally for all discipline areas.





ERA Clusters

Cluster 1	Physical, Chemical and 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 Research
Cluster 8	Public and Allied Health Sciences



Research Codes



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- RFCDs codes revised by Australian Bureau of Statistics
- Now ANZSRC codes – both grants and ERA

Two digit codes

- Eg., 21 history and archaeology

Four digit codes

- eg., 2103 Historical studies

Six digit codes

- Eg., 210302 Asian History





The Discipline Matrix

	Volume and Activity Analysis				Ranked outlets		Citation Analysis			Income			
	Eligible researchers profiled by Academic Level	Research Publication outputs by type	Proportion of total publication activity	Proportion of indexed journal articles with international co-authors	Journals	Refereed Conference Publications	Citations per paper against Australian and world Benchmarks	Centile analysis	Distribution of papers against relative citation rate bands	Category 1	Category 2	Category 3 (including sub-categories)	Category 4
02 Physical Sciences													
0201	Astronomical and Space Sciences	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0202	Atomic, Molecular, Nuclear, Particle and Plasma Physics	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0203	Classical Physics	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0204	Condensed Matter Physics	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0205	Optical Physics	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0206	Quantum Physics	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0299	Other Physical Sciences	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
03 Chemical Sciences													
0301	Analytical Chemistry	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0302	Inorganic Chemistry	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0303	Macromolecular and Materials Chemistry	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0304	Medicinal and Biomolecular Chemistry	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0305	Organic Chemistry	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0306	Physical Chemistry (incl. Structural)	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0307	Theoretical and Computational Chemistry	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0399	Other Chemical Sciences	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
04 Earth Sciences													
0401	Atmospheric Sciences	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0402	Geochemistry	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0403	Geology	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0404	Geophysics	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0405	Oceanography	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0406	Physical Geography and Environmental Geoscience	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓
0499	Other Earth Sciences	✓	✓	✓	✓	☐	✓	✓	✓	✓	✓	✓	✓



ERA timeframe



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- Trials in 2009 for two Clusters only
 - PCE submissions opened June and closed July 2009
 - Outcomes in November 2009
 - HCA submissions open and closes August 2009
 - Outcomes in December 2009
- Full ERA process expected in 2010 (will include PCE and HCA again)





2009 - Latest focus points for ERA

- Workshops on other six clusters and indigenous research.
- Development of esteem indicators
- Ranked refereed conference publications (tiered)
- Finalising the journal rankings lists for other Clusters – expert consultation
- Research Evaluation Committees for PCE and HCA being established
- Draft matrices





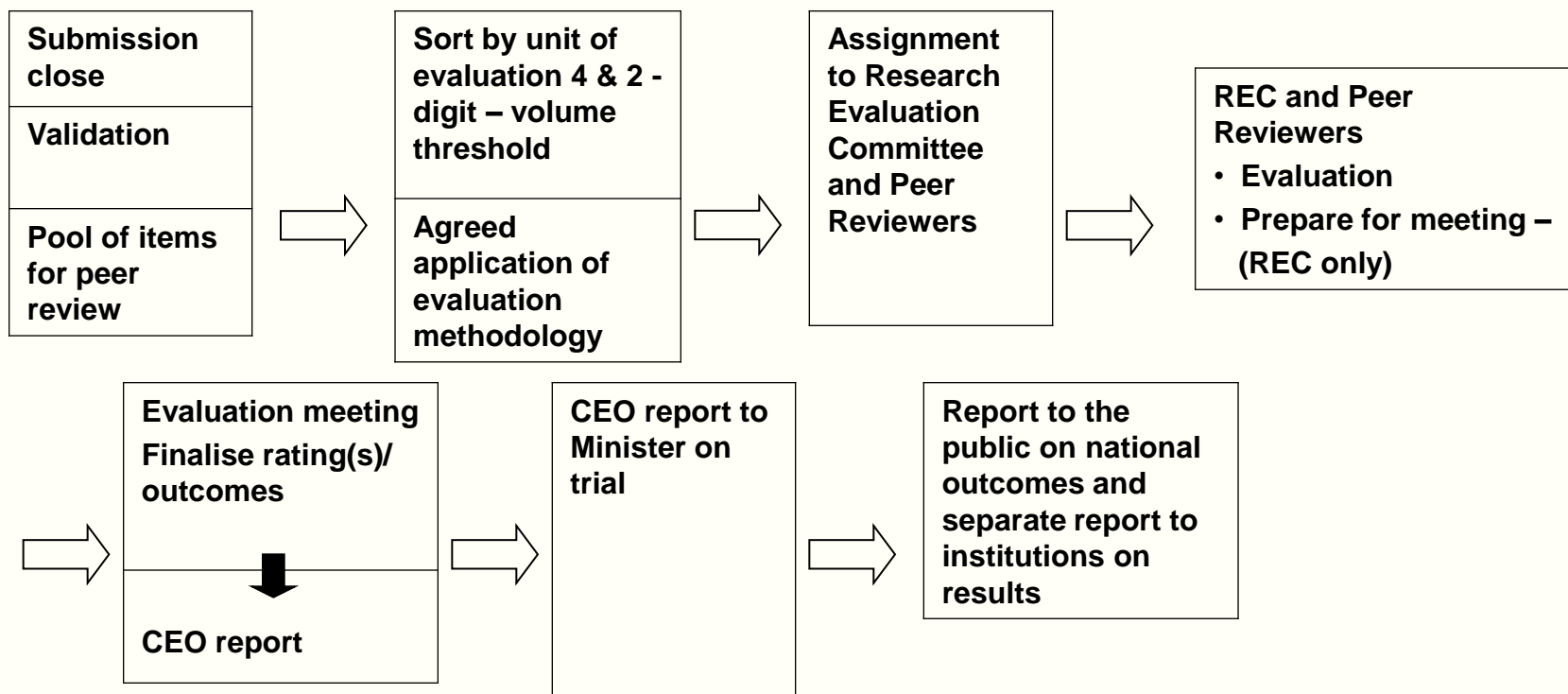
Overview of ERA Evaluation

Key Documents

Submission Guidelines

Indicator Benchmark Methodology

Evaluation Guidelines



Evaluation



Outputs

Ranked Journals

Citation Analysis **or** Peer Review

Supporting Information

Volume and Activity – outputs
and people

HERDC Research Income

Applied Indicators – Patents and
Commercialisation income

2- digit background statement





The ERA “Dashboard”

- A series of quantitative profiles presented to a Research Evaluation Committee as proxies of quality for a Unit of Evaluation.
- Examples of the quantitative profiles are in the Evaluation Guidelines
- Where relevant – Peer Review – access to outputs via repositories or provided by institution to the ARC for the reviewer.





Ranked Journals

- The **portal** used to enter the domain of journal articles
- Only **one** of a number of indicators on the “Dashboard”
- It assists with the assignment of a research output to the appropriate discipline(s) and cluster
- Required for development of discipline-specific benchmarks for citation analysis
- **Note discipline-specific practices**



Peer Review



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- Peer review will be used as an indicator for disciplines that do not have a sufficiently robust range of other indicators, eg HCA.
- Peer review is one “indicator” on the Dashboard
- Institutions select up to 20% of outputs from Units of Evaluation – Four and Two-digit Units
- REC Members will undertake expert review of Dashboard **including** peer review of a sufficient sample of research outputs.
- Peer Reviewers **only** evaluate research quality based sample of outputs and their reports go back to REC Members



Peer Review



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- Sensitivities in evaluation, eg commercial, cultural
- Repository or hard copy outputs - access
- Article XXX – Repository Link
- Book XXX – Repository
- Book XXX – Hard copy to ARC
- Design - Repository
- Computer program - Repository



Esteem



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- In 2008 we received advice on a number of proposed esteem measures for PCE and HCA
- In 2009 the ARC received advice on esteem measures for the other six clusters
- The Minister determined that esteem measures would not be included in 2009 but asked the ARC to conduct further work on esteem measures for 2010
- The ARC has undertaken further work and the proposed esteem measures will be included in the draft matrices for the eight clusters





Interdisciplinary Research

- ERA is a discipline-based evaluation
- Re-assignment of Two-digit and multi-disciplinary outputs
- Discipline Profile and its use
- Institutional tools (not part of evaluation)





Field of Research Re-Assignment

DIVISION 20 LANGUAGE, COMMUNICATION AND CULTURE

2001 Communication and Media Studies	34
2002 Cultural Studies	47
2003 Language Studies	16
2004 Linguistics	83
2005 Literary Studies	46
2099 Other Language, Communication and Culture	38

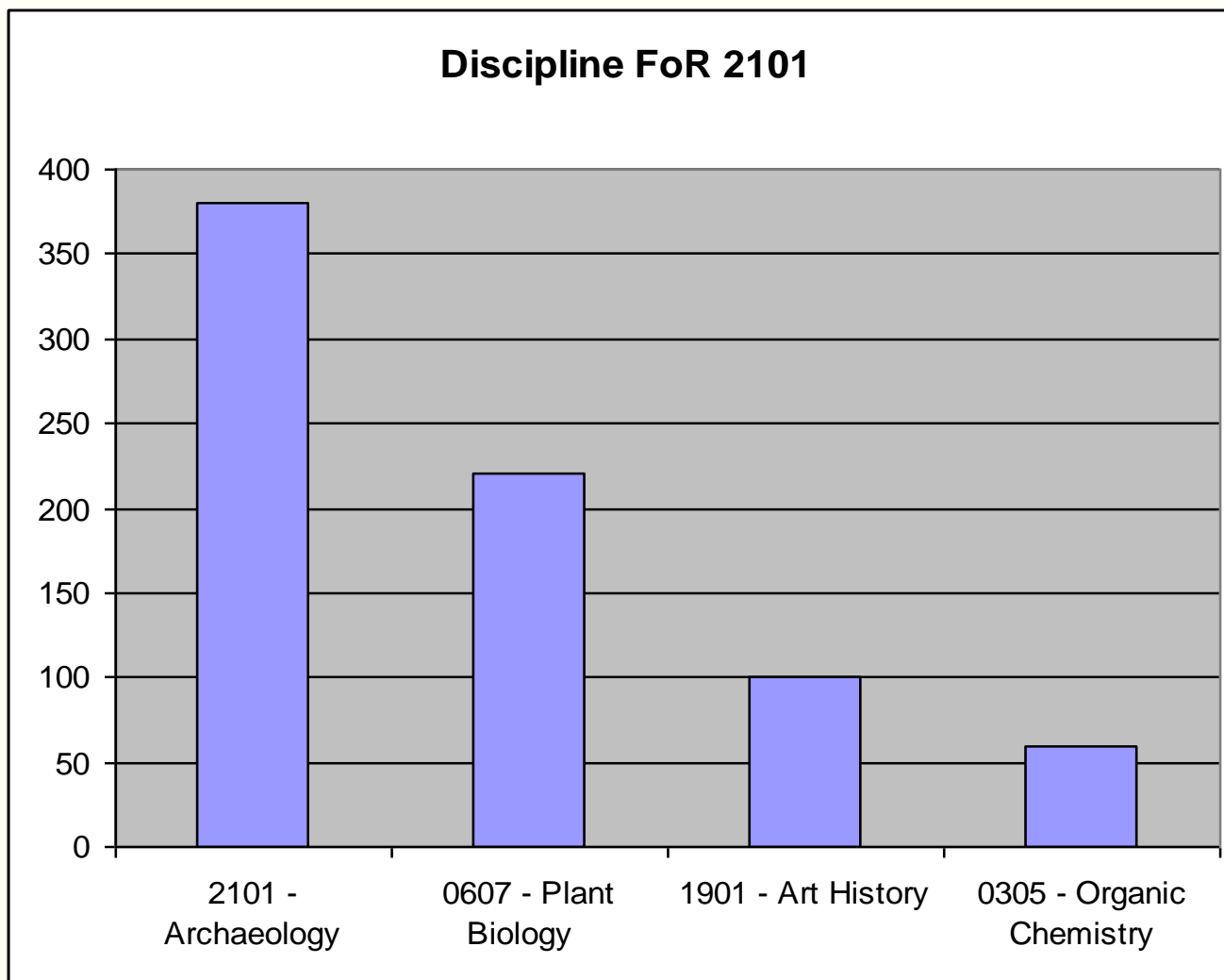
63

63 General Language, Communication and Culture articles to be re-assigned by the ARC





Discipline Profile and its use – 4-digit





Institutional Tools

- Institutions may tag research outputs with two institutional codes and two research theme codes
- This will assist in recompiling data
- The tagging will not be used for ERA evaluation purposes





ARC – outcomes of trial

- institutional reports
- a national outcomes report
- After trial for PCE and HCA – review of process and outcomes
- Lessons learned will inform the full evaluation





Creative Arts issues

- Submission of creative works
- Considerations of research component of research outputs – the statement
- The ANZSRC codings – eg., 1904
- Selecting a variety of outputs for the 20%
- Practice-led research (eg., design)
- Trial – Banded Publishers – Curated Events
- Evaluation – peer review of creative works, and research income

