ERA 2012 and beyond

Presentations at Griffith University, University of Queensland, and QUT

16-17 January 2013
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.
Introduction to ERA

• ERA is a *retrospective evaluation* of research performance: 2005-2010 for research outputs, 2008-2010 for other data.

• The *ERA unit of evaluation* (UoE) 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 ERA Unit of Evaluation (UoE)

- The *Unit of Evaluation* for ERA is the research discipline for each institution as defined by FoR codes.
- 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
Low Volume Thresholds

- The low volume threshold was 50 apportioned journal articles
- In cases of low volume at the four-digit level, analysis can still occur at the two-digit level if it reaches the threshold
- Note books weighted 5:1 in peer review disciplines for threshold calculation, not for evaluation
History of ERA

- Consultation 2008–2010
- ERA 2009 Trial
- ERA 2010
- ERA 2012
- Future ERA - 2015
Consultations for ERA 2012

- *ERA Public Consultation* – open consultation on issues including reporting, indicators, eligibility, discipline matrix
- *Outreach sessions* with institutions and peak bodies
- Detailed *feedback from ERA 2010 REC members and peer reviewers*
- *Feedback from institutions* on processes
Consultation Topics

- Metrics methodology – expert committees
- Discipline-specific indicators
- Ranked journals and conferences
- Low volume threshold
- Submission rules including researcher eligibility
- Reporting of outcome data
Key changes for ERA 2012

- Expansion and strengthening of *Peer Review*
- *Reassignment Exception*
- Consistent *Low Volume Threshold* for Peer Review Disciplines
- *Ranked journals and conferences* not used
- *Movement* from Citation Analysis to Peer Review Disciplines
- *Non-traditional* Research Outputs in social sciences
- Restructure of *clusters*
- Attribution of *Applied Measures* to individuals and institutions
ERA 2012 Reference Periods

- 2005-2009: Outputs Reference period
- 2010: Additional 14 month period for citations
- 2011: Citations derived (March 1st)
- 2012

Income, applied, esteem period (March 31st)
### ERA Process Overview

<table>
<thead>
<tr>
<th>Citation Analysis and/or Peer Review</th>
<th>Publishing Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume and Activity</td>
<td>Research Income</td>
</tr>
<tr>
<td>Applied Measures</td>
<td>Esteem</td>
</tr>
</tbody>
</table>

Note - There are no weightings

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The **ERA 2012 National Report** presents data submitted as part of a comprehensive assessment by discipline of the research quality and research activity within Australia’s higher education institutions.
Stages of Evaluation

Stage 1
REC Members evaluate assigned material and record preliminary evaluations in SEER

Stage 2A
REC Members are given access to the preliminary evaluation outcomes for 4-digit UoEs from other REC Members and Peer Reviewers’ evaluations for moderation. REC Members complete preliminary evaluation of 2-digit UoEs.

Stage 2B
REC Members are given access to the preliminary evaluation outcomes for 2-digit UoEs from other REC Members and Peer Reviewers’ evaluations for moderation.

Stage 2C
REC Members are given view only access to moderated 2- & 4-digit evaluations to prepare for Stage 3 meeting.

Stage 3
REC Members meet to finalise all UoEs

Peer Reviewer

Stage 1
ERA Peer Reviewers evaluate assigned material and record evaluations in SEER

ERA National Report
ERA 2012 Evaluation Process

• Evaluation of data submitted for ERA 2012 was undertaken by eight Research Evaluation Committees (RECs), broadly representative of eight discipline clusters.

• The ERA 2012 RECs were comprised of 147 distinguished and internationally recognised researchers from Australia and overseas, with expertise in their fields and in research evaluation.

• Further details concerning the ERA 2012 Evaluation process, including moderation and conflict of interest procedures, can be found in the ERA 2012 Evaluation Handbook.
Peer Review

- Peer review is used for some disciplines
- In 2012 peer review was identified as an indicator for EHS, EC, HCA, parts of MIC and EE
- Peer review is only one "indicator" on the Dashboard
- Institutions identify 30% of outputs for the peer review pool – best works for the discipline
- REC Members undertake expert review of the Dashboard including peer review of research outputs.
- Peer Reviewers only evaluate research quality based on peer review outputs, and their reports go back to REC Members
- No ratings on individual research outputs
- Peer Reviewer Handbook is available online
# The ERA Rating Scale

<table>
<thead>
<tr>
<th>Rating</th>
<th>Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>The Unit of Evaluation profile is characterised by evidence of outstanding performance <strong>well above world standard</strong> presented by the suite of indicators used for evaluation.</td>
</tr>
<tr>
<td>4</td>
<td>The Unit of Evaluation profile is characterised by evidence of performance <strong>above world standard</strong> presented by the suite of indicators used for evaluation.</td>
</tr>
<tr>
<td>3</td>
<td>The Unit of Evaluation profile is characterised by evidence of average performance <strong>at world standard</strong> presented by the suite of indicators used for evaluation.</td>
</tr>
<tr>
<td>2</td>
<td>The Unit of Evaluation profile is characterised by evidence of performance <strong>below world standard</strong> presented by the suite of indicators used for evaluation.</td>
</tr>
<tr>
<td>1</td>
<td>The Unit of Evaluation profile is characterised by evidence of performance <strong>well below world standard</strong> presented by the suite of indicators used for evaluation.</td>
</tr>
<tr>
<td>NA</td>
<td>Not assessed due to low volume. The number of research outputs does not meet the volume threshold standard for evaluation in ERA.</td>
</tr>
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</table>
Key ERA 2012 Documents

The following ERA 2012 documents are all publicly available and provide detailed information about various aspects of the ERA 2012 evaluation:

- ERA 2012 Evaluation Handbook
- ERA 2012 Peer Reviewer Handbook
- ERA 2012 Submission Guidelines
- ERA 2012 Discipline Matrix
- ERA 2012 Journal List
- ERA Rating Scale
- ERA Indicator Principles
- ERA-SEER 2012 Technology Pack
- ERA-SEER 2012 Business Rules
ERA 2012 outcomes
Scale of ERA 2012

- All **41 eligible institutions** submitted data
- Over **413,000 unique research outputs** and **60,000 researchers** represented **2,323 units of evaluation** assessed at the two- and four-digit level
- **147 Research Evaluation Committee (REC) members** and close to **900 Peer Reviewers** contributed evaluations
- All aggregated data presented in the **ERA 2012 National Report**.
2010 to 2012: Growth

Bigger and more productive

↑ research publications/outputs (up 24%)
↑ researchers and related staff (up 9%)
↑ patents (up 16%) and esteem measures (up 11%)
↑ Competitive grant ($3.75 billion, up 18%) and other public sector income ($2.39 billion, up 25%)
ERA 2012: All Broad Fields of Research (Two Digit FoR codes)
Number of Universities Rated at World Standard or Higher

<table>
<thead>
<tr>
<th>FoR Code</th>
<th>FoR Description</th>
<th>At World Standard</th>
<th>Above World Standard</th>
<th>Well Above World Standard</th>
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<tbody>
<tr>
<td>01</td>
<td>Mathematical Sciences</td>
<td>11</td>
<td>8</td>
<td>3</td>
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<tr>
<td>02</td>
<td>Physical Sciences</td>
<td>10</td>
<td>4</td>
<td>6</td>
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<tr>
<td>03</td>
<td>Chemical Sciences</td>
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<td>5</td>
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<td>10</td>
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<td>10</td>
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<td>4</td>
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<tr>
<td>06</td>
<td>Biological Sciences</td>
<td>15</td>
<td>10</td>
<td>3</td>
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<tr>
<td>07</td>
<td>Agricultural and Veterinary Sciences</td>
<td>9</td>
<td>10</td>
<td>4</td>
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<tr>
<td>08</td>
<td>Information and Computing Sciences</td>
<td>12</td>
<td>5</td>
<td>2</td>
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<tr>
<td>09</td>
<td>Engineering</td>
<td>9</td>
<td>8</td>
<td>5</td>
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<tr>
<td>10</td>
<td>Technology</td>
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<td>4</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>Medical and Health Sciences</td>
<td>4</td>
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<td>8</td>
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<tr>
<td>12</td>
<td>Built Environment and Design</td>
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<tr>
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<td>11</td>
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<tr>
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<tr>
<td>15</td>
<td>Commerce, Management, Tourism and Services</td>
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<td>2</td>
</tr>
<tr>
<td>16</td>
<td>Studies In Human Society</td>
<td>17</td>
<td>3</td>
<td>4</td>
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<tr>
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<td>3</td>
<td>4</td>
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<tr>
<td>18</td>
<td>Law and Legal Studies</td>
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<td>8</td>
<td>5</td>
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<tr>
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<td>Studies In Creative Arts and Writing</td>
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<td>9</td>
<td>2</td>
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<tr>
<td>20</td>
<td>Language, Communication and Culture</td>
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<td>8</td>
<td>6</td>
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<tr>
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<td>History and Archaeology</td>
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<td>3</td>
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<tr>
<td>22</td>
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Output by Staff Classification

03 Chemical Sciences

<table>
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<tr>
<th>% Staff</th>
<th>% Outputs</th>
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<tr>
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<td>Level D</td>
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<td>Level A</td>
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<td>Other FTE</td>
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</table>

13 Education

<table>
<thead>
<tr>
<th>% Staff</th>
<th>% Outputs</th>
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<tbody>
<tr>
<td>Level E</td>
<td>9</td>
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<tr>
<td>Level D</td>
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<tr>
<td>Level C</td>
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<tr>
<td>Level B</td>
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<tr>
<td>Level A</td>
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<tr>
<td>Other FTE</td>
<td>7</td>
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Web: arc.gov.au  |  Email: info@arc.gov.au
ERA – The future
ERA – Looking Ahead

- Minister has announced *ERA 2015*
- Expand ERA metrics: research application, knowledge exchange and collaboration
- Expand eligible research outputs to include a greater range of applied outputs
- Focus on pathways to impact
- As with existing ‘quality’ indicators, approaches must be tailored to fit the field of research concerned
- Consultation with the sector will be critical
Further information

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