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.
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 Process Overview

## Indicator Suite

<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

## Evaluation Stages

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

---

Web: arc.gov.au  |  Email: info@arc.gov.au
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
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
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

- At World Standard
- Above World Standard
- Well Above World Standard

<table>
<thead>
<tr>
<th>FoR Code</th>
<th>Field</th>
<th>At World Standard</th>
<th>Above World Standard</th>
<th>Well Above World Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Mathematical Sciences</td>
<td>11</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>02</td>
<td>Physical Sciences</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>03</td>
<td>Chemical Sciences</td>
<td>15</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>04</td>
<td>Earth Sciences</td>
<td>4</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>05</td>
<td>Environmental Sciences</td>
<td>10</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>06</td>
<td>Biological Sciences</td>
<td>15</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>07</td>
<td>Agricultural and Veterinary Sciences</td>
<td>9</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>08</td>
<td>Information and Computing Sciences</td>
<td>9</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>09</td>
<td>Engineering</td>
<td>12</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>Technology</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Medical and Health Sciences</td>
<td>13</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>12</td>
<td>Built Environment and Design</td>
<td>13</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>Education</td>
<td>11</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>Economics</td>
<td>7</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>15</td>
<td>Commerce, Management, Tourism and Services</td>
<td>5</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>Studies In Human Society</td>
<td>11</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17</td>
<td>Psychology and Cognitive Sciences</td>
<td>11</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>18</td>
<td>Law and Legal Studies</td>
<td>10</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>19</td>
<td>Studies In Creative Arts and Writing</td>
<td>15</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>20</td>
<td>Language, Communication and Culture</td>
<td>15</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>21</td>
<td>History and Archaeology</td>
<td>12</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>22</td>
<td>Philosophy and Religious Studies</td>
<td>12</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Number of Australian Universities

Web: arc.gov.au | Email: info@arc.gov.au
Output by Staff Classification

03 Chemical Sciences

- % Staff
  - Level E: 12
  - Level D: 11
  - Level C: 15
  - Level B: 22
  - Level A: 28
  - Other FTE: 12

- % Outputs
  - Level E: 32
  - Level D: 14
  - Level C: 12
  - Level B: 12
  - Level A: 8
  - Other FTE: 21

13 Education

- % Staff
  - Level E: 9
  - Level D: 12
  - Level C: 27
  - Level B: 39
  - Level A: 7
  - Other FTE: 7

- % Outputs
  - Level E: 21
  - Level D: 19
  - Level C: 26
  - Level B: 17
  - Level A: 2
  - Other FTE: 15
Collaboration

Research Output patterns - all output types
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

Web: www.arc.gov.au/era

Email: era@arc.gov.au

Hotline: 02 6287 6755