AFR Higher Education Conference

Elements of a national research and innovative framework

The ERA Initiative

Professor Margaret Sheil
Chief Executive Officer
Defining our strengths,

identifying opportunities…
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 higher education 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. allow for comparisons of Australia’s research nationally and internationally for all discipline areas; and

4. assist with the development of future national strategies and policies and links with the government’s broader research and innovation agenda.
Key Elements

- Discipline clusters (eight) by institution
- Successive evaluation
- Research Assessment Committee to evaluate
- Cluster Reports to consolidate evaluations.
By institution and discipline

- Level of activity
  - FTE, Income, HDR Students, Outputs, Engagement.

- Quality of the activity
  - Publications and other outputs of research

- Performances against benchmarks
  - International citations proportion of internationally competitive publications, performances, etc
  - National benchmarks (income/FTE, publications/FTE etc.) compared with the rest of the sector
Proposed Panel Structure & Membership

- Evaluations will be carried out by Research Assessment Committees from the ARC and the NHMRC.

- RACs will include experienced internationally-recognized researchers with expertise in research assessment.

- External expertise will be used to analyse the metrics including, where available, comparing them to international benchmarks.
Timing

- Consultation during 2008
- Trials in latter half of 2008
- First cluster evaluation in early 2009
Measures of Research Activity

- Research Publications
- Research Income
- Research Training
- Others?
Metrics Approaches vs Peer Evaluation

- Metrics will only be used where there is broad acceptance from the affected disciplines and where it is possible for participating institutions to replicate the calculation process used in the evaluations.

- Examples of metrics include citation and other bibliometrics and numbers of publications in rankings/bands of publishers, journals or other outlets.

- Peer Evaluation of the outputs themselves?
  - are there cases where there are no metrics, no tiered outlets or other proxies for quality
Possible Rating Scales

1. Quality profiles for publications
   - A* the top 5%
   - A  the next 15%
   - B   the next 30%
   - C   the bottom 50%

2. Research Income and Research Training benchmarks?

3. Overall discipline excellence ratings
   - Internationally competitive
   - Nationally competitive
   - Emerging or developing
   - Not competitive
   - Not assessed/submitted
Comparison of A* and A ranked research outputs by discipline

Please Note - Artificial Data
Gundaroo Citation Analysis

Please Note - Artificial Data
Publications Profile?

Geology

<table>
<thead>
<tr>
<th>Institution</th>
<th>Perth</th>
<th>Illawarra</th>
<th>Keating</th>
<th>Fraser</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
<td>10%</td>
<td>40%</td>
<td>35%</td>
<td>45%</td>
</tr>
<tr>
<td>A</td>
<td>20%</td>
<td>25%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>B</td>
<td>30%</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>C</td>
<td>40%</td>
<td>20%</td>
<td>45%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Please Note - Artificial Data
Research Income

- Use existing categories for reporting research income in the Higher Education Research Data Collection.

- Research income will be collected for the same evaluation period as used for publications to ensure alignment between the activities for reporting purposes.

- What other forms of “research income”? How would we capture Australia Council grants for example?

- What about patents, licence income, consultancies, etc?
A verage grant value per FTE (Physical Sciences)
2002-2007

Please Note - Artificial Data
Research Students

- Draw on information related to student load and completions already collected.

- Incorporate student outcomes and experience through amended graduate surveys.

- What issues are associated with these collections?

- Explore the feasibility in the longer term of introducing an evaluation of research training quality through quality assessment of the student’s major output.
HDR Completions by Discipline

Astronomy  Geosciences  Chemistry  Physics

Please Note - Artificial Data
Possible measures of engagement

- Citation indices in a diverse range of databases (e.g. government reports)
- Numbers of grants awarded in collaboration with end users
- Number and total of other research income (e.g. contracts, consultancies, community organisations)
- Patents
- Licence income
## National Scorecard?

<table>
<thead>
<tr>
<th>Institution</th>
<th>Geology</th>
<th>Chemistry</th>
<th>Geosciences</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perth</td>
<td>international</td>
<td>national</td>
<td>international</td>
<td>not competitive</td>
</tr>
<tr>
<td>Illawarra</td>
<td>not competitive</td>
<td>emerging</td>
<td>international</td>
<td>international</td>
</tr>
<tr>
<td>Keating</td>
<td>not competitive</td>
<td>not competitive</td>
<td>not competitive</td>
<td>national</td>
</tr>
<tr>
<td>Fraser</td>
<td>international</td>
<td>national</td>
<td>n/a</td>
<td>not competitive</td>
</tr>
<tr>
<td>Geelong</td>
<td>national</td>
<td>not competitive</td>
<td>emerging</td>
<td>not competitive</td>
</tr>
</tbody>
</table>

Please Note - Artificial Data
Questions