



# *Opportunities and challenges for the new ERA*

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**Research Excellence**





## ERA will...

Assess research quality within Australia's higher education institutions using a combination of indicators and expert review by committees comprising experienced, internationally-recognised experts





## ERA aims to...

Have the confidence of the research community

Identify excellence across all areas of research

Minimise the burden on those making submissions and those doing the evaluations





# Opportunities for Australia

The opportunities for Australia include the ability:

- for Australia to measure its achievements against international peers
- to plan the future of research investment, and
- to build on the work done to date in defining areas of strength.





# Opportunities for institutions and the research community

The opportunities for institutions and the research community include the ability:

- to identify institutions with similar areas of excellence and seek out opportunities for collaboration
- facilitate interdisciplinary research, and
- minimise the burden on individual researchers, institutions and expert assessors





# ERA definition of research

For the purposes of ERA, research is defined as the creation of new knowledge in a new and creative way so as to generate new concepts, methodologies and understandings. This could include synthesis and analysis of previous research to the extent that it is new and creative. This definition of research is consistent with the broad notion of research and experimental development (R&D) as comprising “creative work undertaken on a systematic basis in order to increase the stock of knowledge of humanity, culture and society, and the use of this stock of knowledge to devise applications.”





# Clusters

- Physical, Chemical and Earth Sciences (PCE);
- Humanities and Creative Arts (HCA);
- Engineering and Environmental Sciences (EE);
- Social, Behavioural and Economic Sciences (SBE);
- Mathematics, Information and Communication Sciences (MIC);
- Biological Sciences and Biotechnology (BSB);
- Biomedical and Clinical Research (BCR); and
- Public and Allied Health and Health Services (PAHHS).

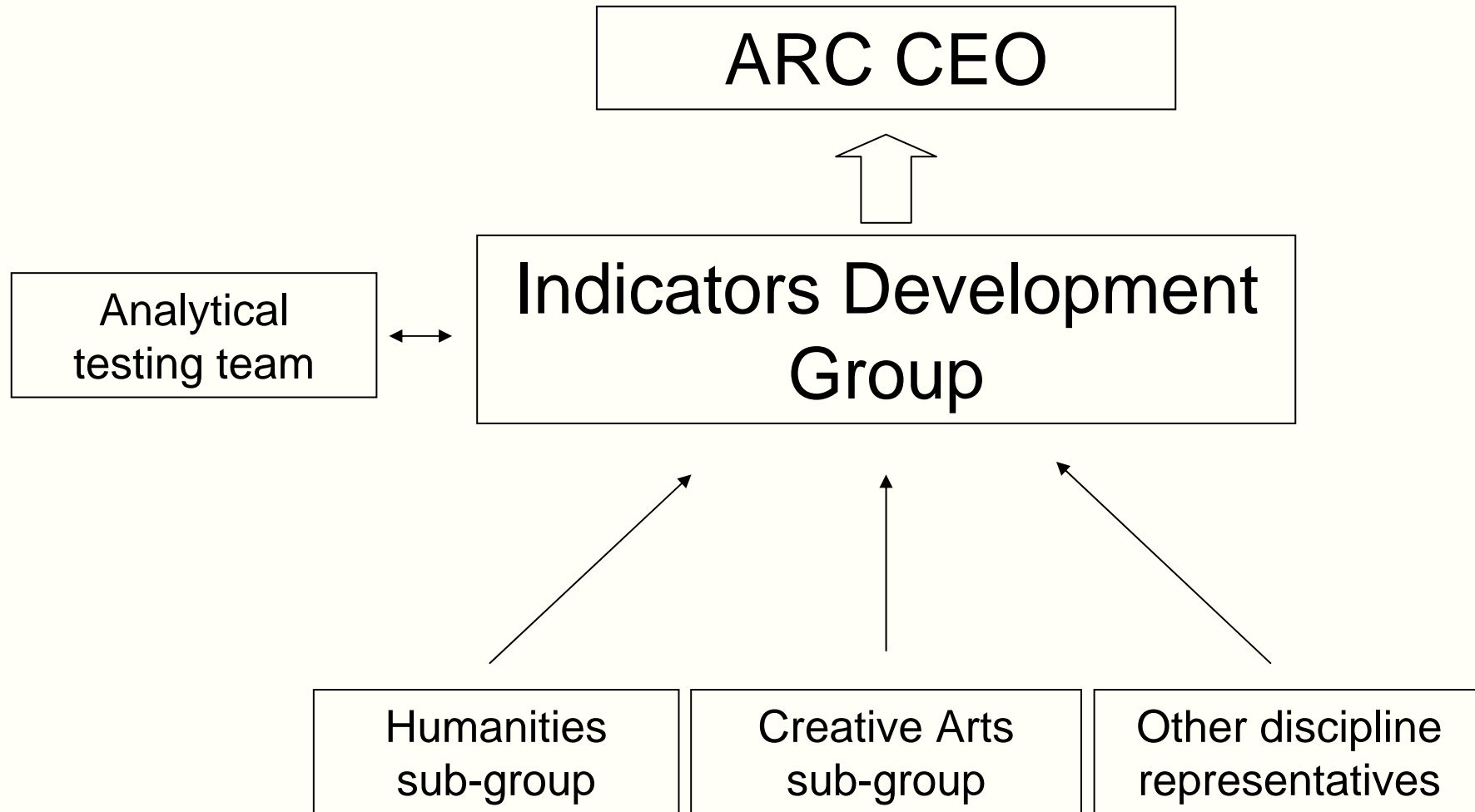




# Challenges

- Appropriate selection of discipline-specific indicators
- Evaluation and reporting of inter-disciplinary research
- Inclusion of staff FTE and its potential use
- The selection and use of appropriate applied research indicators and translation of research outcomes







# Journal Rankings - reviewing feedback

- Data cleansing
- ARC review
- Expert review
- Further review by stakeholders
- Analytical testing
- International review





# Indicators - proposed approach

ERA will use discipline-specific indicators to assess research where appropriate

One of these indicators is discipline-specific tiered outlet rankings, for which consultation has occurred

Indicator methodologies will be developed in accordance with international best practice

ERA indicator development is guided by the Indicators Development Group (IDG)





# Indicators Development Group

Comprises 12 experts to provide advice to the ARC across a range of indicators

Is supported by an analytical testing team, contracted to the ARC, to test various approaches using Australian data

Will make recommendations to the ARC CEO

Will take advice from discipline-specific representatives to ensure appropriate indicators are used for each discipline





Australian Government

Australian Research Council

# Indicators Development Group

| Name                | Institution  |
|---------------------|--|
| Terry Nolan (Chair) | University of Melbourne  |
| Tony Sheil          | Griffith University  |
| Linda Butler        | Analytical Support Team  |
| Ken Richardson      | University of Queensland   |
| Patty Solomon       | University of Adelaide   |
| Max King            | Monash University  |
| Marcus Nichol       | National Health and Medical Research Council (NHMRC)                 |
| Paula Callan        | Queensland University of Technology                                  |
| Tim Yapp            | Commonwealth Scientific and Industrial Research Organisation (CSIRO) |
| Jonathan Adams      | Evidence UK  |
| Paul Hubbard        | Higher Education Funding Council for England (HEFCE)                 |
| Anthony van Raan    | Leiden University  |





# Indicators Development Group - outputs

ERA Indicator Principles

ERA Indicator methodologies

Discipline matrix





# Indicator principles

Multiple citation suppliers

Accrediting an output to institutions and to FoRs

Interdisciplinary research outputs

Where to use peer review

Using expert review - combining indicator profiles to derive an overall 'Excellence Profile'





# Indicator methodologies

Methodology for deriving the citation benchmarks to ensure international benchmarking

Outlines the calculations which will be made for each indicator





# Indicator matrix (example only)

|                       | discipline 1 | discipline 2 | discipline 3 | discipline 4 | discipline 5 | discipline 6 | discipline 7 | discipline 8 | discipline 9 | discipline 10 | discipline 11 | discipline 12 | discipline 13 | discipline 14 |
|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
| Ranked Journals       | █            | █            | █            | █            | █            | █            | █            | █            | █            | █             | █             | █             | █             | █             |
| Ranked Publishers     |              |              |              |              |              |              |              |              |              |               | █             | █             | █             | █             |
| Ranked Conferences    |              |              |              | █            |              | █            |              |              | █            |               |               |               |               |               |
| Ranked Curated Events |              |              |              |              |              |              |              |              |              |               | █             | █             | █             | █             |
| Citation Analysis     | █            | █            | █            | █            | █            | █            | █            |              | █            | █             |               |               |               |               |
| Research Income       | █            | █            | █            | █            | █            | █            | █            | █            | █            | █             | █             | █             | █             | █             |
| Patents               |              |              |              | █            | █            |              |              |              |              |               |               |               |               |               |
| Plant Breeders Rights |              |              |              |              | █            |              |              |              |              |               |               |               |               |               |
| Peer Review           |              |              |              |              |              |              | █            | █            |              |               | █             | █             | █             | █             |





# IDG sub-groups

To ensure that appropriate indicators are identified for the Creative Arts and Humanities, the ARC has established a Creative Arts sub-group and a Humanities sub-group to advise the IDG.





# Humanities sub-group

| Name                     | Institution               |
|--------------------------|---------------------------|
| Stuart Macintyre (Chair) | University of Melbourne   |
| Tim Murray               | La Trobe University       |
| Moira Gatens             | University of Sydney      |
| Cheryl Saunders          | University of Melbourne   |
| Graeme Turner            | University of Queensland  |
| Margaret Harris          | University of Sydney      |
| John Byron               | Academy of the Humanities |
| Cliff Goddard            | University of New England |





# Humanities considerations

The Humanities sub-group is currently considering:

1. Issues relating to peer review.
2. What indicators may be good proxies for research quality.
3. If there are good applied indicators.
4. A range of possible ranked outlets other than ranked journals, including ranked publishers.
5. If there are any quality based esteem measures that are robust and quantitative.





# Creative Arts sub-group

| Name                       | Institution                         |
|----------------------------|-------------------------------------|
| Margaret Seares<br>(Chair) | University of Western Australia     |
| Desley Luscombe            | University of Technology,<br>Sydney |
| Su Baker                   | University of Melbourne             |
| Dennis Del Favero          | University of New South Wales       |
| Huib Schippers             | Griffith University                 |
| Ann Stephen                | Powerhouse Museum                   |





# Creative Arts considerations

The Creative Arts sub-group is currently considering:

1. The research component of the research output.
2. Issues relating to peer review.
3. What indicators may be good proxies for research quality.
4. If there are good applied indicators.
5. A range of possible ranked outlets other than ranked journals, including ranked publishers, curated events and commissioned works.
6. If there are any quality based esteem measures that are robust and quantitative.

