University of the Sunshine Coast
“Current Issues in the Research Sector”
16 January 2013

Professor Aidan Byrne
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Research Sector Changes and Challenges

- ARC
- Current landscape
  » Programs
  » ERA
  » Near to long-term issues
Government Investment in R&D 2011-12

- Business & Innovation: 24%
- Universities: 21%
- ARC: 9%
- NHMRC: 8%
- CRCs: 2%
- Rural: 5%
- Other Health: 6%
- Energy and the Environment: 5%
- Other Science: 4%
- CSIRO: 8%
- Other Government: 11%
ARC funding awarded by program – last 5 years

Futures ...

- Discovery - Projects: 41%
- Linkage - Projects: 18%
- ARC Future Fellowships: 16%
- Centres of Excellence: 7%
- Australian Laureate/Fed Fellowships: 5%
- Linkage - Infrastructure Equipment and Facilities: 4%
- Discovery Early Career Researcher Award: 3%
- Special Research Initiatives: 4%
- Other: 2%
What are the Programs?

**Discovery**
- Australian Laureate Fellowships
- Discovery Early Career Researcher Award (DECRA)
- Discovery Indigenous
- Discovery Projects (includes DORAs)
- Future Fellowships

**Centres**
- ARC Centres of Excellence
- Co-funded Centres

**Special Research Initiatives**
- e.g. Science of Learning

**Linkage**
- Linkage Infrastructure, Equipment and Facilities (LIEF)
- Linkage Learned Academies Special Projects
- Linkage Projects
- Industrial Transformation Research Program
National Competitive Grants Program

**Discovery Projects**
- Australian Laureate Fellowships
- Future Fellowships
- Discovery Indigenous
- Discovery Early Career Researcher Award

**Linkage Projects**
- Centres of Excellence
- Co-funded Centres and Special Research Initiatives
- Industrial Transformation Research Hubs
- Industrial Transformation Training Centres

Web: arc.gov.au  |  Email: info@arc.gov.au
National Competitive Grants Program

Making applications easier

- Success rates vs grant size
- Grant duration
- Panels
- DECRA
- DORAs
ERA 2012

- A larger and more productive research sector than in 2010
  - 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%)
Income and quality

HERDC income Cat 1-3 by rating - 2010

- Category 1
- Category 2
- Category 3
Income and quality

HERDC income Cat 1-3 by rating - 2012

- Category 1
- Category 2
- Category 3
ERA 2012: All Broad Fields of Research (Two Digit FoR codes)
Number of Universities Rated at World Standard or Higher

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

Number of Australian Universities
What ERA can tell us about training – Ratio of Snr/Jnr FTE indexed against average
Collaboration

Research Output patterns - all output types
ERA – Future Directions

• Expand ERA metrics: research application, knowledge exchange and collaboration
• Expand eligible research outputs to include a greater range or 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 and its stakeholders will be critical
Open Access

- Starting in January 2013, it is mandated by ARC funding rules that completed projects must make their publications available on an open access repository.
- This recognises the changing dynamic in research publishing brought on by the internet, which enables new insights from research to be widely and rapidly shared.
- Open access is an evolving area and we are ready to listen to researchers and administrative institutions’ individual circumstances in making this policy work.
Other Near-Long term issues

- Health & medical research
- Evaluating Impact
- Defence Trade Control Bill
- International linkages (Asian White Paper)
- National Research Priority Areas
- Budgets & Politics
  » timelines
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