AUSTRALIAN TECHNOLOGY NETWORK OF UNIVERSITIES

BUILDING PARTNERSHIPS
FINDING SOLUTIONS

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Measuring the Innovation Dividend: 2005 ATN/Murdoch Research Quality Framework (RQF) Trial

Curtin University of Technology
Murdoch University
Queensland University of Technology
RMIT University
University of South Australia
University of Technology, Sydney

Innovation Dividend

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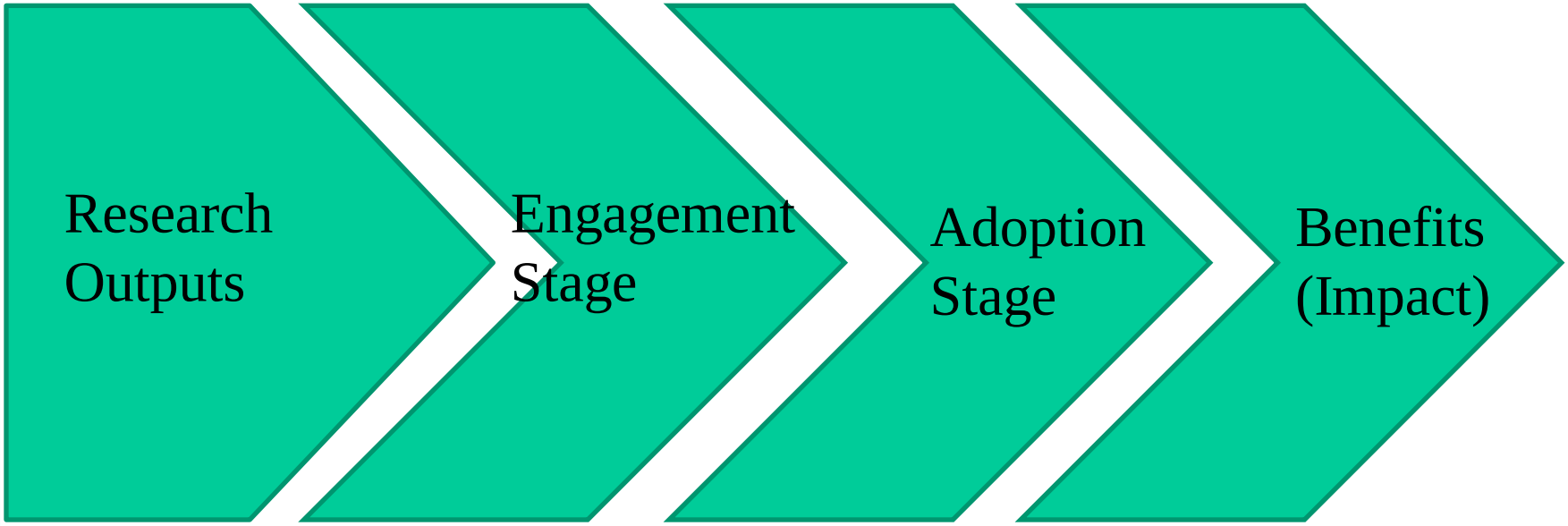

Indicators/Evidence?

Innovation Pathway

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Research Outputs

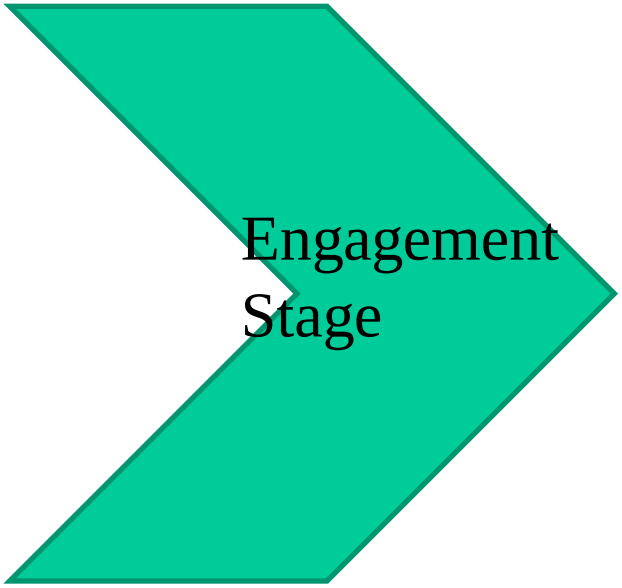
Publications/other outputs

Citations

Patents/IP

Quality measured in ERA by discipline

Innovation Pathway



Joint *research* projects

Consultancies

Pilots, prototypes

Appointments to Boards

Innovation Pathway

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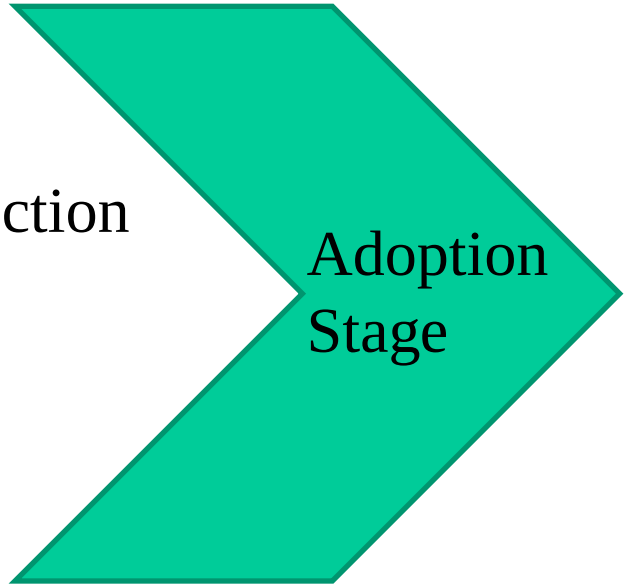
Licences, options

Start up/spin off/VC injection

Clinical trial

Standards

Policy development



Innovation Pathway

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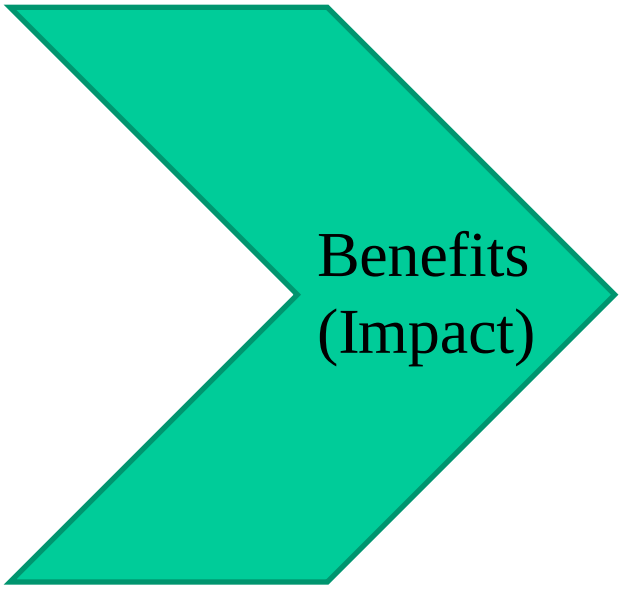
Return on Investment

Environmental benefit

Community impact (policy outcomes)

Employment or health outcomes

Product sales, process savings etc.



ERA/EIA vs RQF

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1. EIA would be a separate exercise to ERA
2. ERA evaluates *disciplines* not *institutionally designed clusters*
3. EIA would also require a methodology to allow for
   i. Institutional impact beyond each (ERA assessed?) discipline
   ii. Latency in the impact of research
   iii. Additive effect of other inputs over time
   iv. Attribution to institutions and alignment with ERA evaluation
   v. Robust metrics for economic, environmental, social, cultural, other benefits?
4. Issues with RQF methodology
   i. Efficacy of case studies
   ii. Economical data gathering for metrics

Objectives of 2005 Trial

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1. To obtain valuable information and data on research quality across key research groups in participating universities;
2. **To explore methods for assessment of research impact appropriate to the mission and objectives of the participating universities;**
3. To develop and test a robust and efficient mechanism for the assessment of research quality **and impact** across the participating universities and one which is informed by relevant national and international approaches;
4. To assist research groups in meeting the challenges of the RQF which is planned for implementation nationally towards the end of 2007.

Assessment Structure

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- Institutionally-defined research "clusters"
- 70 clusters, comprised of approximately 100 researchers from each University
- Qualitative information and quantitative data at both cluster and individual level
- 7 discipline-based panels chaired by PVCs
- **Panels included academics and end-users**

Assessment Guidelines

- QUALITY (1 – 5 Rating Scale)
  - Outputs: Significance, Originality, Rigour
  - Esteem: Recognition, Influence, Benefit
  - Environment: Strategy, Sustainability, Capacity
- IMPACT (A – E Rating Scale)
  - Demonstrable influence beyond discipline: Economic, Environmental, Social, Cultural
  - Adequate evidence from end-users required

Fundamental Differences

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- **ERA: QUALITY (1 – 5 Rating Scale)**
  - Measures performance relative to a benchmark world standard of academic excellence
  - Has both above and below world standard outcomes
- **EIA: INNOVATION (A – E Rating Scale)**
  - Measures performance along the innovation pathway (A=early engagement to E=realised end-user benefit)
  - Outcomes depend on the extent to which progress is being made towards realised end-user benefit
  - Some research may (by choice or otherwise) not even lead along an innovation pathway

Assessment Feedback

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- Ratings based on actual documentation
  - accuracy therefore dependent upon completeness of submissions
  - hindered by tight timelines
- Panels rated lower rather than higher
  - learning exercise/encourage improvements
- All assessors asked a series of 11 questions following completion of assessments

Findings in relation to Impact

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- Case studies useful, important and influential
- Often inadequate evidence provided to support claims (ie. need for better metrics)
- Insufficient understanding of differences between measures
- Understanding of impact on discipline against broader application/uptake demonstrated
- Five scale rating can be used
- Need clearer explanations of how benefits are related to research (issue of augmentation)

Impact Case Study Examples

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- Best Practice Recommendation:
  - Title of impact case study example
  - Brief history of the cluster and its staffing profile
  - Publication data over a longer period at cluster level
  - General statement on impact of cluster as a whole
  - Outline each specific aspect of impact – academic, community and/or industry impact
  - Provide details of beneficiaries
  - Explain level of impact i.e. actual application or general influence with adequate evidence

Conclusions

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- Innovation dividend can (and should) be measured against a *range of outcomes* (economic, environmental, social, cultural, other benefits)
- A *transparent and efficient* process needs to be developed for evaluating the level of innovation and benefit
- Clear guidelines are required for discipline based metrics and evidence to form an *innovation dashboard*
- Need to establish a process for linking ERA rated quality and EIA rated benefits for each discipline
- Need to consider the nature and scale of an EIA submission