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Hunter Medical Research Institute

Principles for prospective research impact assessment in health and medical research:
Embedding research quality within RIA

NHMRC Symposium - Ensuring Value in Research

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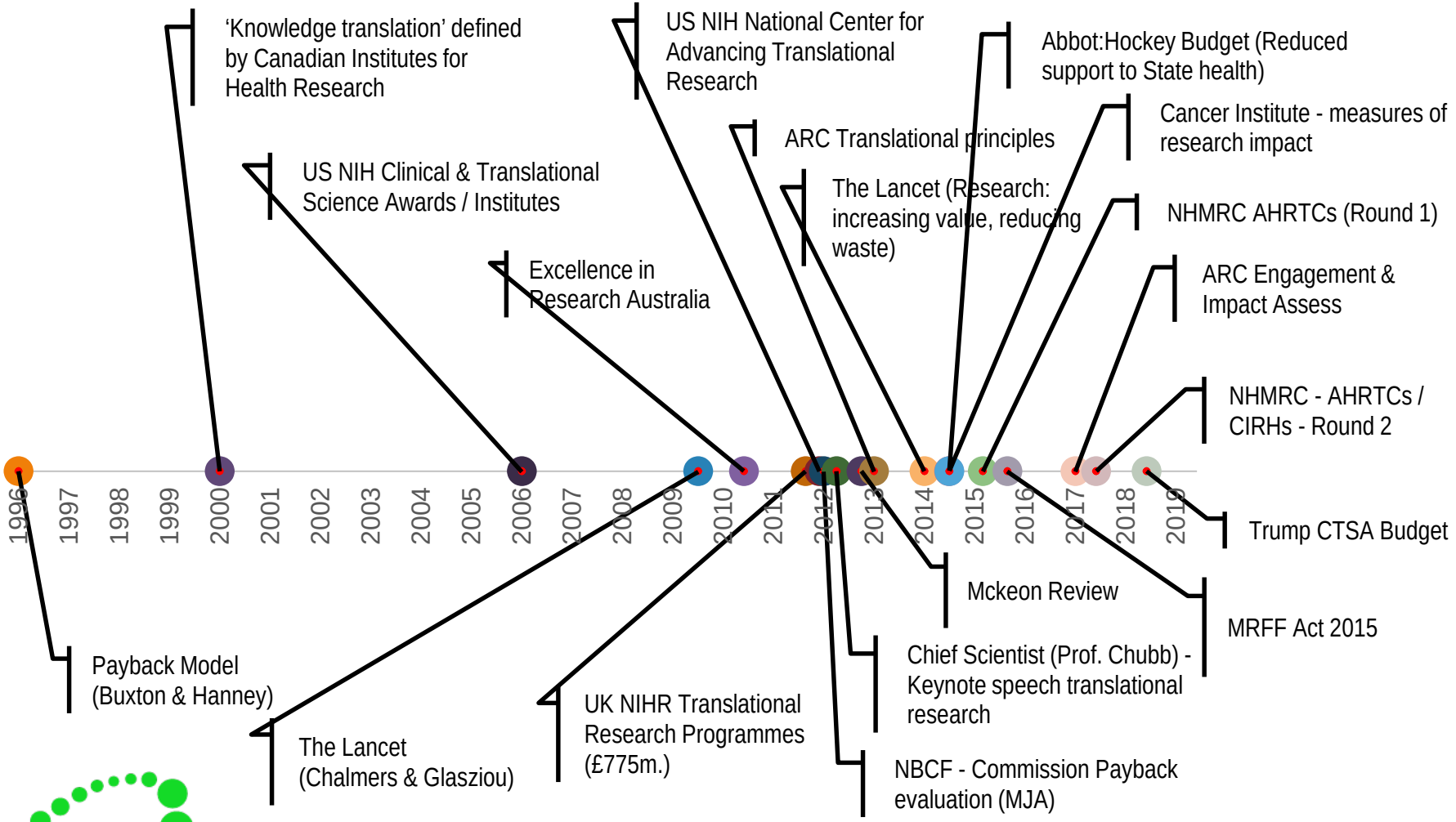
27th November 2018

In partnership with our community

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

NSW GOVERNMENT Health
Hunter New England Local Health District

Accelerating policy interest…
INTRODUCTION



Health-economic imperatives / Goals for RIA

- Budget pressure: Justify MHR
- Productivity issues for MHR (McKeon, MRFF)
  - Efficiency: Innovation to improve health outcomes / identify low value care (Health service)
  - Growth: Optimise commercial innovations (economic)
- Encourage high value, low waste research: Research practice (Lancet papers: Chalmers, Glasziou, Grimshaw, Ioannidis et al)

Institutional Retrospective RIA vs Project/Team-level Prospective RIA
INTRODUCTION

- Australian RIA policy initiatives to date:
  - NHMRC Translation Symposiums…capability development
  - Australian Research Council Engagement and Impact Assessment (EIA)
  - Different, but similar in scale to UK Research Excellence Framework (REF)

- Top-down Institutional/Program-level RIA
  - Retrospective; Methods – case studies, metrics &/or economic analysis
  + Positives: Longer term; Strategic; Accountability, advocacy & management guidance
  - Negatives: Influence upon research activity? Admin burden? Lessons from failure – Case studies?

- Prospective Project/Team-level RIA
  - Opportunity to apply prospectively; Nearer term; Methods – **no case studies**, **metrics**, economics?
  - \+ Positives: Productivity-focussed; Drives speed of translation; Data for top-down; Valuable for researchers? Reduced admin burden?
  - \- Negatives: No long term strategic management guidance/funding allocation

Health-economic imperatives / Goals for RIA:

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- **Encourage high value, low waste research: Research practice**
  (Lancet papers: Chalmers, Glasziou, Grimshaw, Ioannidis et al)

Guiding principles for Prospective Project / Team-level RIA

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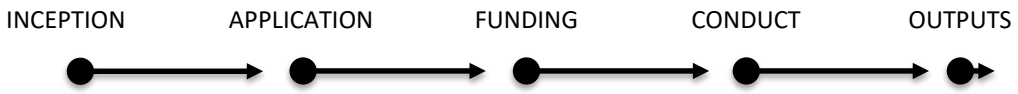
A focus upon researchers and the research process
GUIDING PRINCIPLES FOR RIA

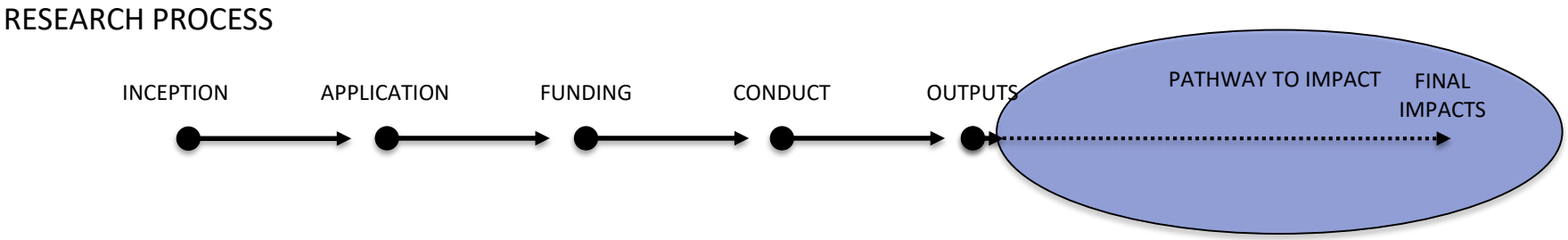
RESEARCH PROCESS



Source: Deeming et al 2018 (pending), Development upon Trochim et al 2011

- To influence research activity…
- Necessitates **a focus upon researchers and the research process**
- Implications:
  - Unit of analysis – Research project or Research team
  - Be valuable for the researcher in exchange for their time…

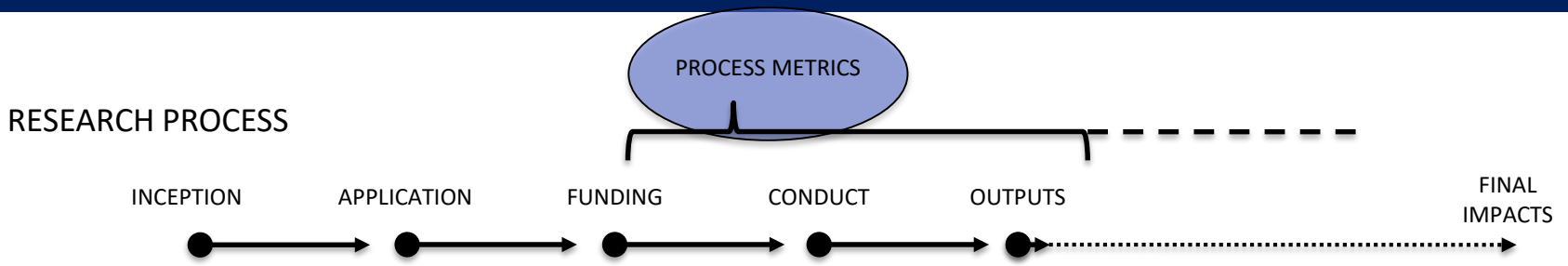
A pathway to impact
GUIDING PRINCIPLES FOR RIA



Source: Deeming et al 2018 (pending), Development upon Trochim et al 2011

- **A line of sight to the main anticipated benefits (final impacts)**
- Needs-driven vs Investigator-led research
- Example: Quality of Life for patients with Rheumatoid Arthritis
- Illustrates patient relevance even for early-stage (T0 or T1) science

GUIDING PRINCIPLES FOR RIA

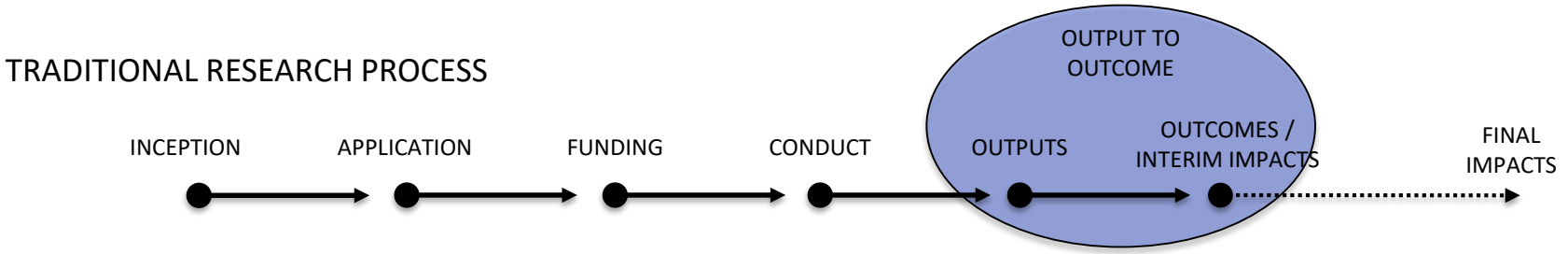


Source: Deeming et al 2018 (pending), Development upon Trochim et al 2011

- **Inclusion of process metrics that provide for interim targets** on the pathway to these impacts
- Time-lag between most MHR investigations and impact
- Demands justification of contribution to pathway e.g. Diabetes
- Infers a combination of tailored and standardised measures

Users & utilisation - Critical transition from outputs to outcomes

GUIDING PRINCIPLES FOR RIA

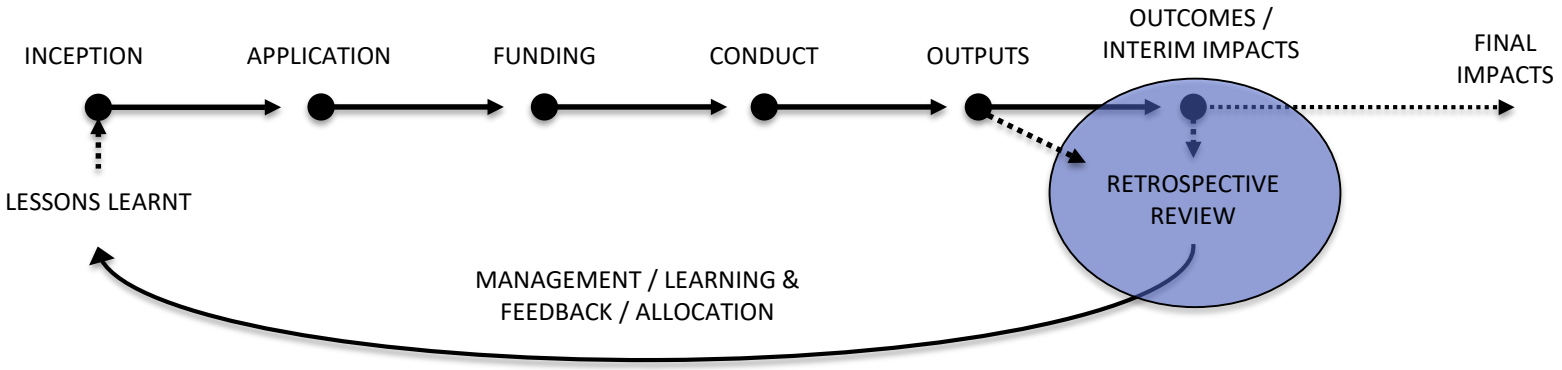


Source: Deeming et al 2018 (pending), Development upon Trochim et al 2011

- **A logic model component - Embeds users, usage necessary to generate outcomes / interim impacts from outputs** along the pathway
- Optimising speed of translation
- Irrespective of: forward (T2 to T3); backwards (publication of insignificant results); or sideways (replication)
- Definition of ‘end-users’
- Implications:
  - Inclusion of end-users in research team / co-production
  - Metrics should reflect utilisation e.g. replication

Prospective orientation of research
GUIDING PRINCIPLES FOR RIA

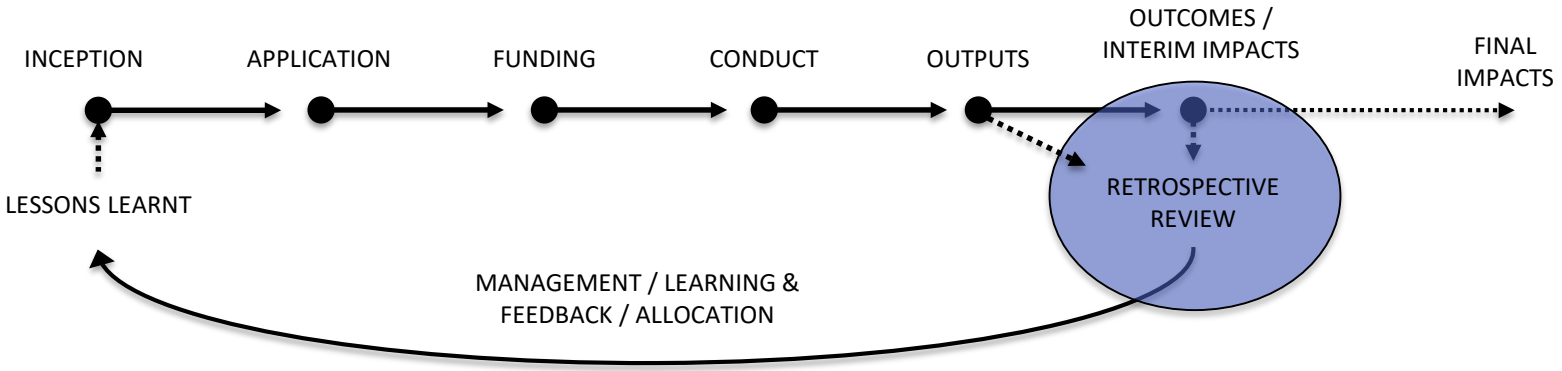
RESEARCH PROCESS – RETROSPECTIVE REVIEW



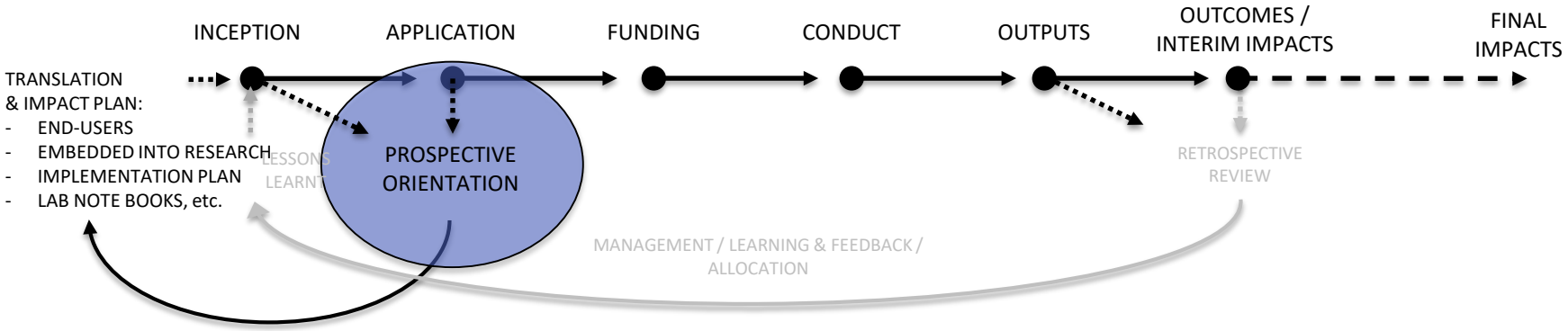
Source: Deeming et al 2016 (pending), Adaptation from Trochim et al 2011

Prospective orientation of research: ASF Example
GUIDING PRINCIPLES FOR RIA

RESEARCH PROCESS – RETROSPECTIVE REVIEW



RESEARCH PROCESS – PROSPECTIVE ORIENTATION (Improved speed of translation)



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So what? Implications from Prospective Team/Project-level RIA
CONCLUSION

- Researchers are human…current practice reflects existing incentives

"What drives any research; it's survival."

- An over-arching objective to enhance productivity across whole system by **increasing probability** of translation & impact **from each research project**

- Q. How to positively incentivise?
  1. Include principles within funding applications
  2. Extend to track records, academic promotion criteria, etc.

- Value in Research example (prospective RIA metrics):
  - Milestone metrics for experimental design - Publish protocol; Place data & code in repository; Publish findings

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THANK YOU

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