# Impact of Government Agenda on Innovation and Research in ICT

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# Overview

- Introduction: Australia's position in the world
- Government Innovation Agenda
- Sustainable Research Excellence and ERA
- Role of Research Community
- Concluding Remarks

# Australia's position in the World

- Australia's competitiveness has slipped from 5th to 18th in the World Economic Forum's Global Competitiveness index.
- Government spending on science and innovation as a share of GDP fell by 22% since 1993-94.
- Australia spends 2% of GDP on R&D.
- Austria, Denmark, Germany, Iceland, Switzerland, Taiwan and USA spend more than 2.5%.
- Finland, Japan, Israel, South Korea and Sweden more than 3%
- China and Denmark steadily increasing spending on R&D.

  The government recognises that "investment in science and technology is critical to the growth of knowledge-based economies."

- This requires a sustained and adequate investment in R&D.

# Powering Ideas: Innovation Agenda

- The government has outlined its innovation agenda over the next decade.
- It articulates its innovation priorities:
  - Support high quality research
  - Build a strong base of skilled researchers
  - Foster industries of the future → commercialisation
  - More effective dissemination of new technologies and ideas (in particular, to small and medium enterprises)
  - Encourage a culture of collaboration (among uni's & ind.)
  - International collaboration in R&D
  - Improve policy development and service delivery

# Powering Ideas: Innovation Agenda

- The government vision over the next decade:
  - Increase the number of Australian groups performing at world-class level. How do we do it?
  - Increase international res. collaboration by Aus. Uni's.
  - Significant increase in HDR completions
    - Doubling the number of APA's by 2012.
    - Increasing the APA stipend from $20,427 in 2009 to $22,500 in 2010.
  - Doubling the level of collaboration between business, Universities and publicly funded research agencies
  - A 25% increase in proportion of businesses involved in innovation.
  - Continued improvement in business investment in R&D.

# World-Class University Research

- $703.1M over 5 years, to increase Research capacity:
  - Sustainable Research Excellence ($512M).
    - Australian Competitive Grants (ACG)
    - Negotiated funding agreements (compacts)
    - Implementation of transparent costing (TC)
  - Collaborative Research Networks ($52M) to help smaller and regional universities develop research capacity by partnering with larger uni's ('hub and spoke' model).
  - Joint Research Engagement replaces IGS
  - Excellence in Research for Australia (ERA), ($37.8M)

    ERA will underpin University research funding to drive change and provide benchmarks for measuring excellence.

# Sustainable Research Excellence (SRE)

- The main funding scheme for Univ. Research.
- It comprises 3 pools of funding
  - Base funding. 20% based on current RIBG scheme.
  - Threshold 1 Pool. 13% allocated on a pro-rata basis up to $2.5M of ACG income.
    - Universities that earn < $2.5M of ACG benefit disproportionately.
    - These uni's are excluded from Threshold 2 funding.
  - Threshold 2 Pool. 67% allocated based on ACG income.
    - 50% moderated by transparent costing and compacts (TC pool).
    - 50% based on ERA performance (ERA pool).
    - In 2011 SRE, a proxy measure will be used for research performance

# SRE – TC Pool Funding

- The TC pool is allocated based on ACG income, weighted with a TC rate.
- Three possible ways are being considered:
  - A fixed rate for indirect costs associated with ACG. No incentive for Universities to undertake TC reforms.
  - Specify bands of costs: High, medium and low.
  - Calculate a unique TC rate for each university. More complex and may encourage inefficiences.
  - Compacts will be used to determine the final TC rate of each university

How should the TC results be incorporated, fixed vs variable rate? How should compacts be used?

# SRE – ERA Pool Funding

- In 2011, a nominal measure of performance is used.
- ERA results will be included from 2012 onwards.
- Three possible ways are being considered:
  - ACG income moderated by ERA performance.
  - ERA performance moderated by a volume component:
    - Quantity of research outputs
    - Number of FTE staff submitted as part of ERA evaluation
    - Number of units being evaluated (meets the minimum vol. research).

What Volume measure should be used for ERA?

How about throughput and research training?

# Role of Research Community and Industry

- Monitor government policy and engage in debate:
  - Should we just simply ignore ERA and continue business as usual? Or Should we take steps to correct its deficiencies?
  - Participate in RWS (research Workforce Strategy)
- Improve Science and Technology communication
- Work collaboratively
- Provide Alternate pathways for researchers and better transition to research careers
- Better career Progression for researchers
- Career Mobility (international experience very crucial)

# Concluding Remarks

- ERA and ACG are the main factors in determining research funding for Universities (SRE).
- Benchmarking based on inaccurate information is not going to be very helpful.

ERA – we must get it right!

- How do we improve internationalisation of research? Remove government hurdles.
- How can we improve success rate in ARC & other ACG?

[1] DIISR, Sustainable Research Excellence (SRE) Consultation paper on Options for Threshold 2 funding, May 2010.

[2] Power Ideas: An Innovation Agenda for the 21st Century, Commonwealth of Australia, 2009.