

AeRO Forum 2015 – Keynote summary

Dr Susan Pond Australian National Research Infrastructure Review

This is a 3rd-party summary of Dr Pond's speech.

Thanks to the various scribes – Anne Kealley (CAUDIT), Peter Elford (AARNet), Loretta Davis (AeRO)

About the scope of the review

- Focus is on national collaborative infrastructure, institutional infrastructure is being reviewed separately
- Assessing the existing infrastructure provisioning and requirements to inform future investment.
- Considering the role of public funding to support research infrastructure
- Investigating how to maximise the productivity of funding (in the form of on-going NCRIS investment).
- Examining the feasibility of alternate funding arrangements (e.g. private sector partnerships).
- Conducting an inventory of infrastructure, across all sectors and agencies; this is proving very challenging
- To include data collections and eResearch facilities
- To include operating expenses and the 'knowledge infrastructure', i.e. people.

Definition of national research infrastructure:

- Facilities to support a diverse user base – supporting multiple institutions, or cross-sector collaboration using nationally distributed networks.
- These include unique collections that are increasingly being digitised, resulting in increased importance of curation and management as well as the staff and facilities to support all the above.

The Review process

The panel consulted widely, with input largely via submissions, meetings and site visits. This was assisted by reviews of literature of other international bodies and their approaches.

Some findings

The key finding was an environment of uncoordinated planning spanning many years across many government departments and agencies.

1. There is a strong case for investing in (vs funding) research infrastructure. Excellent research is only possible with excellent research infrastructure.
2. Current funding models and arrangements not working well. There is no single body providing strategic direction, and there are many players.
3. Considerable concern regarding long term projects being managed on short term funding cycles.
4. The importance of e-Infrastructure is obvious – radically changing how research is conducted.
5. New disciplined, coordinated, and perhaps consolidated approach is needed.
6. We could achieve greater alignment of national research support with strategic research priorities as outlined by Chief Scientist.
7. Infrastructure is and should be used collaboratively.
8. Government must lead investment. Industry will not do this on its own.
9. Human capital must be included in the planning, for operations and skills-base
10. We should seek to avoid unhelpful separation of capital and operational investments.

Key principles – used to frame the recommendations

1. Excellent research requires excellent infrastructure.
2. Research infrastructure includes physical infrastructure as well as human capital.
3. Need to move from ad hoc to sustained funding.
4. A move from the current piecemeal to coordinated Whole-of-Government approach is required.
5. Research funding should be matched to additional funding for research infrastructure to support it.
6. We should focus on research strengths and priorities.
7. There should be a focus on collaboration, as per NCRIS.
8. e-Research Infrastructure is a fundamental capability.
9. We need to increase the effectiveness of industry engagement, measured by outcomes not input.
10. Commit to investing in international consortia and facilities.
11. Regularly and robustly assess the impact, including on industry.

Summary of some of the recommendations

1. Government must prioritise and structure investment in research infrastructure through National Research Infrastructure Fund
2. Investment must be coordinated, through whole of government.
3. Undertake regular road-mapping to determine infrastructure needs, non-competitively as per NCRIS. 5 phases across lifecycle (planning, development, construction, operation, renewal/decommissioning). Use international reference points such as UK, US and Nordic countries.
4. 7 year funding cycle for facilities, reviewed after each 4 years, with a 20 year horizon. This should be ring-fenced from the annual government budget cycle.
5. Establish Research Infrastructure Australia – high level independent Board to manage infrastructure and strategic roadmapping and make funding recommendations.
6. Additional 8-10% funding should always be allocated to national research infrastructure for consistency with other international efforts. This is not asking for more money. The Australian Government is currently investing about 8% of its research spend, or \$500-700M per annum, in national research infrastructure.
7. Need a detailed investigation into industry co-investment.
8. Recognise e-Infrastructure as fundamental to all research.
9. Develop an investment model for stable investment to eliminate 1-2 year funding cycles. Important for retention of human capital.
10. Focus on Australian research strengths, Strategic Research Priorities
11. Merit-based access, including for industry if their research aligns (i.e. not commercial benefit only).

Next steps

Review will go to Department in late July/early August.

Optimistic that many recommendations will be accepted – but cannot guarantee.