

Draft 2016 National Research Infrastructure Roadmap Submission Template

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The ATN will provide comment against each of the recommendations in the draft report below.

1. **Adopt Nine Focus Areas** and their priorities to address future needs, fulfil our national interests and build on our existing national capabilities. These focus areas complement the National Science and Research Priorities and the Industry Growth Centres. They are:

- Digital data and eResearch platforms
- Platforms for Humanities, Arts and Social Sciences (HASS)
- Characterisation
- Advanced fabrication and manufacturing
- Astronomy and advanced physics
- Environmental systems
- Biosecurity
- Complex biology
- Therapeutic development

The ATN welcomes the development of the roadmap and associated focus areas for future national research infrastructure investment given the uncertainty and varied support for national research infrastructure in recent times under NCRIS. The Roadmap, building on the funding support announced in NISA (\$2.3 billion over 10 years), provides a significant opportunity for Australia to adopt a strategic, long-term, whole-of-government approach to infrastructure funding.

As per the first recommendation of the [ATN's Innovate and Prosper](#) report, Australia needs to rebalance its national research agenda to underpin our economy and future prosperity. Broad consultation with key stakeholders across industry, research and the state, territory and the national level will ensure that there is minimal duplication of investment. Where possible, the nine focus areas should work closely with Industry Growth Centres to help deliver infrastructure needs as part of each IGC's Sector Competitiveness Plan.



2. **Establish a Research Infrastructure National Advisory Group** to provide independent advice to Government on future planning and investment for a whole of government response to national research infrastructure. It should:
 - advise on priorities for National infrastructure and Global infrastructure
 - make recommendations on Landmark infrastructure
 - review the existing National infrastructure base to enhance, restructure, re-engineer or terminate existing activity and
 - update the ten-year vision of the roadmap every five years.

The ATN supports the proposed function of the Research Infrastructure National Advisory Group and frameworks for governance as set out in the 'National Research Infrastructure Principles' and 'National Research Infrastructure Governance'.

We would suggest that flexibility is built into planning and funding cycles of the roadmaps as some facilities may require longer time horizons.

In terms of membership of the Advisory Group, the ATN supports the structure set out in the 2015 Research Infrastructure Review, namely:

- an independent Chair;
- science and research based members (including members with international expertise);
- industry based members; and
- the Chief Scientist of Australia and the Secretary, Department of Finance, as ex-officio members.

Given there are a broad range of domains covered across the 9 focus areas, thought could be given to how governance structures adequately represents each expertise area.

3. **Develop a Roadmap Investment Plan** that will actively engage with all levels of Federal and State government, universities, industry, philanthropy, research institutions and research agencies. The investment plan must take a portfolio based approach and consider the business case for focus areas including analysis of funding sources for capital and operational needs, access rules, outreach programs and international engagement.

The ATN supports this recommendation. While the ATN acknowledge that the development of specific investment plans fall out of the scope of the 2016 Roadmap, we would encourage Government to reconsider its plans announced in the Mid-Year Economic and Fiscal Outlook to close the \$3.7 billion Education Investment Fund (EIF).

It is also worth noting that Australia's research infrastructure needs will change throughout the lifespan of the roadmap and there should be mechanisms in place to balance investment between supporting existing infrastructure and seeding investment in emerging areas as research needs evolve. We suggest that this be added explicitly into the National Research Infrastructure Principles.

4. **Address the Needs of Complementary Initiatives** such as the newly established Medical Research Future Fund (MRFF) and the Biomedical Translation Fund (BTF). These will increase



demand for research infrastructure and must be considered as an integral part of any roadmap investment plan.

The ATN supports the Roadmap as a key platform of Australia's research and innovation strategy in conjunction with the National Science and Research Priorities, the Industry Growth Centres, the Medical Research Future Fund (MRFF) and the Biomedical Translation Fund (BTF).

5. **Recognise that a Skilled Workforce** is critical to national research infrastructure. Ongoing commitment to training and career progression, not only by the facilities and projects but also by the universities and research institutions that harness them, is essential.

The ATN supports the Roadmap's recognition that human capital is a critical component of infrastructure funding. As the report highlights, the training and development of facility managers and technical staff is critical. Leveraging national research infrastructure to enable enhanced researcher training is a sensible suggestion to create closer links between academia and industry. The ATN strongly supports the inclusion of operational funding for skilled personnel, and secondments, and scholarships for researchers and PhD students.

6. **Note that Existing Landmark Facilities** such as the Australian Animal Health Laboratory (AAHL), Australian Synchrotron, the OPAL Nuclear Research Reactor, and the Marine National Facility (RV Investigator) will require ongoing investment.

Support for existing infrastructure is critical, and the ATN suggests that their ongoing maintenance and investment is made more explicit under the remit of the National Advisory Group. We note that existing landmark facilities also include Tier 1 High Performance Computing, as flagged in Recommendation 9.

7. **Implement a Coordinated Approach to International Engagement** to optimise the benefits of international memberships and partnerships, including access to global facilities and participation in strategic collaborations.

The ATN supports a coordinated, whole-of-government approach to international engagement in global research infrastructure.

8. **Raise Awareness** of national research infrastructure through outreach activities with both national and international collaborators and the end users of research such as industry and business. Future governance arrangements should monitor progress and provide an annual update, including case studies, to promote further engagement.

The ATN supports the Access Principles set out in the draft report. Outreach activities will be critical to ensure that all researchers across industry and academia are able to access infrastructure on a meritorious basis.

9. **Urgently Address National High Performance Computing (HPC)** needs coupled with a review of existing governance arrangements to ensure future positioning is strategic and accessible.



The ATN is pleased that the paper recognises that National High Performance Computing is critical to supporting Australia's international competitiveness, and welcomes a review into existing governance arrangements.

