



Science & Technology AUSTRALIA

Response to the Draft National Infrastructure Roadmap

16 January 2017

Overview

Science & Technology Australia's mission is to bring together scientists, governments, industry and the broader community to advance the role, reputation and impact of science and technology across the nation.

As the peak body representing Australia's scientists and those working in technology, Science & Technology Australia (STA) strongly commends Dr Alan Finkel and the Expert Working Group on the quality and thoroughness of this Roadmap.

Just as the National Collaborative Research Infrastructure Scheme (NCRIS) was world-leading upon its introduction, STA believes this National Research Infrastructure Roadmap will pave the way for international best-practice management of critical national research infrastructure.

STA strongly supports the key recommendation to establish a Research Infrastructure National Advisory Group to provide independent advice on future planning and investment for a whole-of-government response to national research infrastructure. In particular, we are very pleased to see recommendations that this Group should continually review and update the plan according to shifting national needs and priorities, international capabilities and best practice.

The recommendation to adopt nine focus areas to complement the National Science and Research Priorities and the Industry Growth Centres is also welcome. We believe there is enough flexibility built into these priorities to continue to evolve and meet our nation's changing research, development and technological needs. We're particularly heartened to see e-research included as an important priority area. STA recognises that there is potential for the focus areas to become silos and encourages the authors to include provision for requiring collaboration and cooperation between the focus areas in order to help each area reach its full research potential.

STA recognises that investing in current and relevant infrastructure is crucial to science and technology research and development. Equally crucial is a skilled workforce to maintain and operate the infrastructure, and assist researchers in using it effectively. We urge the Oversight Committee to include a skilled workforce as an element for every priority area for national infrastructure, and to develop NRI responses against this element for every priority area, including attraction and retention, and resourcing STEM education at all levels.

On behalf of STA's Board, please accept our congratulations on a high quality Roadmap. We hope these comments, and the specific comments below, are of use in drafting your final report.

Yours Sincerely,



Kylie Walker
Chief Executive Officer
Science & Technology Australia



Professor Jim Piper
President
Science & Technology Australia

Specific feedback

Science & Technology Australia finds this Roadmap to be of very high quality. We have only limited specific feedback, as follows:

Page 21: Access Principles

The time-critical nature of research requests (if appropriate) should be considered as a guiding category when assessing access to national research infrastructure.

Waiting lists to access research infrastructure can stretch for years. Some research is highly time-critical and we believe this should be considered when prioritising access.

Page 27: High performance computing (HPC)

We strongly support a review of governance arrangements in the HPC landscape.

The Roadmap recommends that tier 2 HPC services should not be considered as part of this review, as they can be 'affordably purchased by institutions from commercial providers'. STA would like to inquire as to the definition of 'affordable' and request that this be reconsidered. What's affordable for a major university may not be for a small research institute.

Furthermore, single institute 'Tier-2' machines can be vital to national research thanks to the advanced software libraries and rapid high quality tech support that is so critical to efficient HPC facilities.

While HASS is not strictly within STA's remit, it is immediately relevant in two senses: one, because HASS researchers assess the impact and effectiveness of the application of STEM and STEM research in society, and two: because HASS researchers have stewardship of the history and philosophy of science.

Consideration should be given to the types of organisations that house archival and other items of historical significance. Many of these are societies or small NFPs and are either financially struggling or on the brink of collapse. Many keep these items in less-than-ideal conditions. Many (including some bigger government agencies) are seriously considering removing their archival and historically significant artefacts off-site but with the National Library, the National Museum, and the National Archives up to 10 years behind in their intake workloads, there is often nowhere to house these items. As a consequence, Australia is at serious risk of losing significant historical artefacts.

Similarly, digitisation is time-consuming and expensive. Smaller organisations are not equipped or resourced to undertake it. As well as the crucial intervention of coordinating and standardising the use of digitisation technologies, consideration should be given to whether digitisation should continue to be considered on a project-by-project basis or if there is a role for a broader nationally coordinated approach.