

Please note: the substantive content of the 2026 NRI Roadmap Survey begins at Question 20 (with prior questions dealing with administrative and other information).

As such all submissions that are published include the responses submitted from Question 20 onwards only.

Q20.

Part 2: Research themes

2.1 NRI comprises the assets, facilities and associated expertise to support leading-edge research and innovation in Australia and is accessible to publicly and privately funded users across Australia and internationally. We are seeking your input on possible directions for future national-level investment - i.e., where the requirements are of such scale and importance that national-level collaboration and coordination are essential.

The [2021 Roadmap](#) used a challenge framework to support NRI planning and investment. With this in mind, consider likely future research trends in the next 5 - 10 years, and with respect to one or more of the 8 challenge areas identified in the 2021 Roadmap as listed below:

- describe emerging research directions and the associated critical research infrastructure requirements that are either not currently available at all, or not at sufficient scale and
- describe current national infrastructure requirements that you anticipate will no longer fit the definition of NRI in 5-10 years.

Do not limit your commentary to NCRIS funded capabilities.

Q21.

Resources Technology and Critical Minerals Processing

Q22.

Food and Beverage

Q23.

Medical Products

1. In the field of dementia, and neurology in general, the trend is toward the increasing use of biomarkers. a. Brain imaging is seeing rapid advances, both in MRI and PET imaging. While there is good MRI capacity in Australia, there are very limited MRI centres with academic and research capacity, and the ability to develop new protocols or to help clinical researchers with cutting edge tools. This is a major deficiency. For PET imaging, there is a dearth of capacity for neuroimaging, and lack of suitable tracers. For example, tracers for amyloid and tau imaging and not readily available in many centres; DAT imaging is not generally available even though clinically applicable, and there is very little research with new ligands. b) The big growth area is in blood biomarkers, with many new molecules being discovered that will become commonplace in the future. A cohesive approach is needed in Australia for both discovery and application. An Australian Biobank that pools resources, and national laboratories that are standardised and can provide novel assays at low cost would benefit the health research community greatly. 2. The WHO Dementia Research Blueprint recommended digital platforms to bring data from various studies together. The UK Biobank is one such platform which has been wildly successful, but platforms could bring data from different studies together. These could be disease specific platforms, or disease agnostic. The idea is to be able to provide researchers with large datasets for secondary analyses and novel exploration of the data. 3. The use of AI is penetrating all aspects of research and it could play a major role in making data more accessible to researchers. An AI strategy needs to be developed.

Q24.

Defence

Q25.

Recycling and Clean Energy

Q26.

Space

Q27.

Environment and Climate

Q28.

Frontier Technologies and Modern Manufacturing

Q29.

2.2 The 2024 statement of National Science and Research Priorities (NSRPs) includes outcomes linked to each priority to assist in identifying critical research needed in the next 5 to 10 years.

Consider the priority statements and, with respect to one or more of the 5 priority areas as listed below:

- describe emerging research directions and the associated critical research infrastructure requirements that are either not currently available at all, or
- not at sufficient scale and describe current national infrastructure requirements that you anticipate will no longer fit the definition of NRI in 5-10 years.

Do not limit your commentary to NCRIS funded capabilities, and where relevant, refer to the underpinning outcomes and research identified in the NSRPs document.

Q30.

Transitioning to a net zero future

Q31.

Supporting healthy and thriving communities

In my field of brain health, there are possibilities of delivering preventative interventions online at a national level for mental health, cognitive health, etc. Australia researchers are in fact leaders in this field, but there is no national strategy to deliver this to the people who need it the most. Infrastructure for such delivery would be very helpful.

Q32.

Elevating Aboriginal and Torres Strait Islanders knowledge systems

Q33.

Protecting and restoring Australia's environment

Q34.

Building a secure and resilient nation

Q35.

2.3 The case for a new NRI capability, or enhancements to existing capabilities, typically emerges through advocacy from research communities clustering around rigorously identified needs and goals. Such a concept could respond to a requirement for novel or expanded capacity within a domain, or across domains, and must be such that it could only be made available with national-level investment.

If you have identified such a requirement, briefly describe the need, the proposed infrastructure capability, the medium-term goals, impacted research communities, and the timeframe over which you advocate its establishment. Your response can include links to relevant existing reports.

I work in the field of ageing and dementia, which is a major challenge for the Australian community now and into the future. I would advocate for a Dementias Platform Australia that brings all the ageing and dementia research together and makes the data accessible to all researchers. I also advocate for infrastructure to deliver interventions for healthy ageing and the prevention of dementia online, which can be accessed by all Australians.

Q36.

Part 3: Industry perspectives

This section is seeking input specifically from industry-based respondents. Other respondents can skip this section.

Recommendation 6 of the [2021 Roadmap](#) related to improvements in industry engagement with NRI. To complement work on this topic that has occurred since then, we are seeking additional advice on NRI requirements as perceived by current or potential industry-based users.

Q37.

3.1 Have you (or your organisation) interreacted with or used Australia's NRI?

☐ Yes

☒ No

Q38.

3.2 If so, please briefly outline the NRI capabilities you (or your organisation) have interacted with or used. Do not limit your response to NCRIS capabilities.

This question was not displayed to the respondent.

Q39.

3.3 Please indicate your (one or more) primary reasons for interacting with NRI:

This question was not displayed to the respondent.

Q40.

3.4 If you answered no, please indicate your (one or more) primary reasons:

- ☒ I did not know about it
- ☐ Other facilities suit my needs better
- ☐ I would like to, but cannot get access due to geographical location
- ☐ I would like to, but believed that access was only available to academic researchers
- ☐ I am not aware of any capability that meets my needs
- ☐ Other (please specify)

Q41.

Part 4: Other comments

4.1 Please elaborate on any of your above responses or add any other comments relevant to the development of the 2026 Roadmap. Your response can include reference or links to existing reports that you recommend be considered during the 2026 Roadmap development process.