

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

Critical public research and development compute infrastructure in Australia, which services a variety of industries and applications, is currently essentially limited to NCI and Pawsey compute infrastructure availability. Sharon AI, a certified NVIDIA Cloud Partner, as we understand it has the largest deployment of publicly available latest generation NVIDIA (H100, L40s, A40) and AMD (MI300X) GPU's, deployed in Tier IV data centres, located in Australia. Sharon AI is building one of Australia's most advanced supercomputers, the Sharon AI Supercluster - a 1016 x H200 GPU cluster built on NVIDIA Reference Architecture, inside NEXTDC's Tier IV data centre in Melbourne, Australia, in collaboration with NVIDIA, Lenovo, NEXTDC and VAST Data. The Sharon AI Supercluster is a key enabling technology for Australia's technological advancement, including but not limited to the development of sovereign AI capabilities. We would love to be part of the conversation around Australia's future compute requirements, and welcome engagement with the National Research Infrastructure Advisory Group.

Q22.

Food and Beverage

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Q23.

Medical Products

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Q24.

Defence

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Q25.

Recycling and Clean Energy

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Q26.

Space

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Q27.

Environment and Climate

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Q28.

Frontier Technologies and Modern Manufacturing

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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

Critical public research and development compute infrastructure in Australia, which services a variety of industries and applications, is currently essentially limited to NCI and Pawsey compute infrastructure availability. Sharon AI, a certified NVIDIA Cloud Partner, as we understand it has the largest deployment of publicly available latest generation NVIDIA (H100, L40s, A40) and AMD (MI300X) GPU's, deployed in Tier IV data centres, located in Australia. Sharon AI is building one of Australia's most advanced supercomputers, the Sharon AI Supercluster - a 1016 x H200 GPU cluster built on NVIDIA Reference Architecture, inside NEXTDC's Tier IV data centre in Melbourne, Australia, in collaboration with NVIDIA, Lenovo, NEXTDC and VAST Data. The Sharon AI Supercluster is a key enabling technology for Australia's technological advancement, including but not limited to the development of sovereign AI capabilities. We would love to be part of the conversation around Australia's future compute requirements, and welcome engagement with the National Research Infrastructure Advisory Group.

Q31.

Supporting healthy and thriving communities

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Q32.

Elevating Aboriginal and Torres Strait Islanders knowledge systems

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Q33.

Protecting and restoring Australia's environment

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Q34.

Building a secure and resilient nation

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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.

In order for Australia to remain competitive across all strategically important industries it is essential the nation has latest generation accelerated computing resources (hardware and software) to encourage and enable innovation, research and development and to keep highly skilled technology workers in country. The proposed infrastructure capability is a '1K GPU Cluster' built on NVIDIA Reference Architecture. This highly advanced compute infrastructure is critical for Australia to remain competitive across multiple industries (defence, medical research, technology, space) as well as maintaining sovereign AI capability. Sharon AI is building this compute infrastructure in Australia, for Australian businesses and would love to be part of the conversation with the National Research Institute Advisory Group.

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.

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