

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

Big data Centre to support new type of AI-based societies. Data security capability need to be built for protecting Australia's nature resources and intelligent resources.

Q22.

Food and Beverage

Q23.
Medical Products

Q24.
Defence

The infrastructure and manufacturing facility and manufacturing capacity will be required for special materials and devices, as well as technology development. Also this type of capability and capacity will provide the ability to for high value technology development.

Q25.
Recycling and Clean Energy

Q26.
Space

It is critical to have Australia's capability to design and fabricate extreme materials and associate device manufacturing for broad space technology. This will also offer the Australian manufacturing capability for niche high value products for export.

Q27.
Environment and Climate

Q28.
Frontier Technologies and Modern Manufacturing

Quantum materials, informatic materials, photonic materials, new generation ferroelectric/multiferroic/magnetic materials, soft functional materials and associate nanoscale-device characterization and fabrication facilities need to be provided for emerging quantum, photonic, high-speed communication, AI and big data technologies, creating a smart/intelligent society. This can be a part of or the extension of continual National nanofabrication facility scheme. This is critical to have sustainable support for future high-technologies and high value-return technologies and industry.

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

Many research have been supported for decarbonization. however, the most important is to develop ultra-low energy-consumption technology for sustainable future, especially in big data and high-speed computing and Commuication.

Q31.

Supporting healthy and thriving communities

Build national capability and regulation system to speed up the process of the technology transfer from Lab to clinic.

Q32.

Elevating Aboriginal and Torres Strait Islanders knowledge systems

Q33.

Protecting and restoring Australia’s environment

Build wearable, portable, in-field sensing and monitoring Australia' water, soil, food and agricultural products to eliminate pollutants.

Q34.

Building a secure and resilient nation

Create an Australia's space and defense technology incubator, that will target future technologies which may potentially extend the application for general applications in general socialites.

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.

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:

This question was not displayed to the respondent.

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.

Q49.

4.2 Optional Document Attachment.

Note: Our strong preference is that answers are provided against the relevant questions in the survey. However, this file upload option is available for submissions in file format, where needed. Please ensure the document includes your name or organisation.