

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

ANFF, and the broader NCRIS program, is a key competitive advantage for Australian researchers that must be sustainably funded to maintain Australia's position in the international knowledge economy. NCRIS projects have an outstanding track record of empowering innovation and collaborative R&D in Australia. The proactive engagement with our user-base and research trends through our close interaction with our clients and stakeholders enables to us to dynamically target our strategies and investments to ensure Australia researchers remain internationally competitive through access to state-of-the-art fabrication capabilities. The NCRIS capabilities already manage their portfolios to ensure that they are fit-for-purpose and are not supporting things that are more useful being supported at a local level. NRI funding for NCRIS must be maintained, and preferably expanded, so that the world-renowned system Australia has developed, is able to continue to ensure Australian researchers succeed and Australia's economy continues to reap the benefits of innovation. New Research Infrastructure requires new money Proposed new research infrastructure should be achieved by allocating new funding to support the goals of the NRI roadmap, not by redistributing funds away from proven NCRIS capabilities, including ANFF. This is to ensure that Australia does not lose the existing competitive advantages that ANFF/NCRIS delivers.

Q22.

Food and Beverage

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Q23.

Medical Products

The gap between prototype and a minimum viable product for use in initial clinical trials is vast. It requires high level capabilities and investment. However, investment is not always available before the clinical trials have begun. A way to subsidise or fund this part of the process has been identified as something that could fast-track and de-risk many medical products in the early development phase. ANFF, and the broader NCRIS program, is a key competitive advantage for Australian researchers that must be sustainably funded to maintain Australia's position in the international knowledge economy. NCRIS projects have an outstanding track record of empowering innovation and collaborative R&D in Australia. The proactive engagement with our user-base and research trends through our close interaction with our clients and stakeholders enables to us to dynamically target our strategies and investments to ensure Australia researchers remain internationally competitive through access to state-of-the-art fabrication capabilities. The NCRIS capabilities already manage their portfolios to ensure that they are fit-for-purpose and are not supporting things that are more useful being supported at a local level. NRI funding for NCRIS must be maintained, and preferably expanded, so that the world-renowned system Australia has developed, is able to continue to ensure Australian researchers succeed and Australia's economy continues to reap the benefits of innovation. New Research Infrastructure requires new money Proposed new research infrastructure should be achieved by allocating new funding to support the goals of the NRI roadmap, not by redistributing funds away from proven NCRIS capabilities, including ANFF. This is to ensure that Australia does not lose the existing competitive advantages that ANFF/NCRIS delivers.

Q24.

Defence

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Q25.

Recycling and Clean Energy

Many recycling and clean energy systems require new or innovative ways of using existing material systems. The ability to produce and test these material systems can be lacking. Investment into AI/ML systems that can use existing data to provide educated starting points for material discovery could prove to be very useful. These materials can be used in energy storage, energy generation, the characterisation of feedstocks from recycled materials etc. Each of these material types needs its own testing and validation systems, aligned to the industry standards. ANFF, and the broader NCRIS program, is a key competitive advantage for Australian researchers that must be sustainably funded to maintain Australia's position in the international knowledge economy. NCRIS projects have an outstanding track record of empowering innovation and collaborative R&D in Australia. The proactive engagement with our user-base and research trends through our close interaction with our clients and stakeholders enables us to dynamically target our strategies and investments to ensure Australia researchers remain internationally competitive through access to state-of-the-art fabrication capabilities. The NCRIS capabilities already manage their portfolios to ensure that they are fit-for-purpose and are not supporting things that are more useful being supported at a local level. NRI funding for NCRIS must be maintained, and preferably expanded, so that the world-renowned system Australia has developed, is able to continue to ensure Australian researchers succeed and Australia's economy continues to reap the benefits of innovation. New Research Infrastructure requires new money Proposed new research infrastructure should be achieved by allocating new funding to support the goals of the NRI roadmap, not by redistributing funds away from proven NCRIS capabilities, including ANFF. This is to ensure that Australia does not lose the existing competitive advantages that ANFF/NCRIS delivers.

Q26.
Space

The ability to test and qualify materials, devices and systems for use in space or in space systems is needed by this sector. Some capabilities are available but housed in academic environments, not supported by public funding and yet not able to act like a private enterprise to support the needs of industry. Some initial investment to bring these capabilities together and provide a single fit-for-purpose national system would be a game changer. ANFF, and the broader NCRIS program, is a key competitive advantage for Australian researchers that must be sustainably funded to maintain Australia's position in the international knowledge economy. NCRIS projects have an outstanding track record of empowering innovation and collaborative R&D in Australia. The proactive engagement with our user-base and research trends through our close interaction with our clients and stakeholders enables us to dynamically target our strategies and investments to ensure Australia researchers remain internationally competitive through access to state-of-the-art fabrication capabilities. The NCRIS capabilities already manage their portfolios to ensure that they are fit-for-purpose and are not supporting things that are more useful being supported at a local level. NRI funding for NCRIS must be maintained, and preferably expanded, so that the world-renowned system Australia has developed, is able to continue to ensure Australian researchers succeed and Australia's economy continues to reap the benefits of innovation. New Research Infrastructure requires new money Proposed new research infrastructure should be achieved by allocating new funding to support the goals of the NRI roadmap, not by redistributing funds away from proven NCRIS capabilities, including ANFF. This is to ensure that Australia does not lose the existing competitive advantages that ANFF/NCRIS delivers.

Q27.
Environment and Climate

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Q28.
Frontier Technologies and Modern Manufacturing

ANFF, and the broader NCRIS program, is a key competitive advantage for Australian researchers that must be sustainably funded to maintain Australia's position in the international knowledge economy. NCRIS projects have an outstanding track record of empowering innovation and collaborative R&D in Australia. The proactive engagement with our user-base and research trends through our close interaction with our clients and stakeholders enables us to dynamically target our strategies and investments to ensure Australia researchers remain internationally competitive through access to state-of-the-art fabrication capabilities. The NCRIS capabilities already manage their portfolios to ensure that they are fit-for-purpose and are not supporting things that are more useful being supported at a local level. NRI funding for NCRIS must be maintained, and preferably expanded, so that the world-renowned system Australia has developed, is able to continue to ensure Australian researchers succeed and Australia's economy continues to reap the benefits of innovation. New Research Infrastructure requires new money Proposed new research infrastructure should be achieved by allocating new funding to support the goals of the NRI roadmap, not by redistributing funds away from proven NCRIS capabilities, including ANFF. This is to ensure that Australia does not lose the existing competitive advantages that ANFF/NCRIS delivers.

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

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.

Large concepts requires future looking strategies The novel initiatives in the previous NRI roadmap offered great potential but lacked the necessary restructuring for viable delivery. Aspirational visions, such as those of the step-changes in the previous Roadmap, should be matched with longitudinal strategies including increased funding, timelines and talent development to match the scale of the vision. These step-changes may not always fit within existing NCRIS projects and so it is critical that they be funded separately from the Business as usual of the current envied system. Some of the new initiatives that have been advocated for by our community include; - Small scale manufacturing of compound semiconductors (pilot line flexifab capable of servicing numerous clients). While this could be considered a step beyond research infrastructure, it could well be considered 'development' infrastructure. 1-3 years - Clinical trial scale med-tech device manufacturing to move medtech companies towards larger private investment. 1-3 years - Si28 sovereign manufacturing capability to support the development of Quantum technologies on shore. 2 years - Expansion of precision machining capabilities including for precision optics. DSTG have invested heavily in this area and we see this growing as more applications become available. Ongoing - Talent development for non-research roles in the industries being seeded by NRI investment. These include technician roles, technically literate business development and operations staff. Ongoing - Materials discovery, testing and qualification facilities to accelerate the introduction of new materials with specific functionalities. 3-5 years Details on these concepts can be provided as needed.

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.

A key part of the NRI roadmap is to ensure all stakeholders have input and know their expected role in the roll out of the Roadmap. Historically, while the State Gov and Unis have been consulted, their role as funders and strategic partners has not been captured and fully acknowledged. Using the Roadmapping process to bring all sides to the one conclusion 'investment in NRI is a good investment' and back this up with long term provision of support would be a game changer in the day to day running of the nationally significant asset that our NRI is. The impact of AUKUS, Defence export controls and sovereign access to capabilities is also a point that needs to be made within the NRI Roadmap. Consideration should be given to capabilities that are currently provided from overseas that may become problematic as geopolitical shifts occur. All the investments we make in hard infrastructure cannot reach their full potential without the staff and experts we have to support them. We must ensure that the cohorts we build can be maintained long-term and provide a ready supply of highly trained individuals to our national market.

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.