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

Biobanks support future research across multiple disciplines, including genomics, personalised medicine and disease prevention by providing researchers high quality and well curated biological samples and associated data. Without robust biobank support, Australia risks missing valuable opportunities to lead or contribute to medical innovation. For example, during the COVID-19 pandemic, biobanks played a crucial role in facilitating the rapid development and testing of diagnostics test, vaccines and treatments.

Q24.
Defence

Preserving biological samples is essential for future research and response efforts during pandemics and defence against emerging infectious diseases. Biobanks play a crucial role in biosecurity and defence by providing resources to allow quick sharing of knowledge to counteract biological threats. For instance, the Busselton Health Study Biobank collected and stored data and biospecimens as part of the Busselton Respiratory Survey. This cohort represents one of the few international contemporary community respiratory studies conducted in a population unexposed to COVID-19. As one of the longest-running population health research programs, the Busselton Health Study Biobank also offers valuable and unique longitudinal data and biospecimen on a wide range of health conditions to help understand the prevalence and risk factors of diseases, guiding public health policies and interventions. Properly supported biobanks ensure long-term ethical governance, data security and responsible sharing of these valuable biological materials and data.

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

Biobanks collect and store data and biospecimen. This saves researchers time and money and enable rapid scientific discoveries such as personalised treatment plans for more effective treatment with fewer side effects. Longitudinal studies such as the Busselton Healthy Ageing Study also contributes to public health through providing biospecimen and data to track health trends, understand disease progression and identifying risk factors. The study also engages community members in their research efforts and thereby increasing awareness and participation as well as fostering a sense of collaboration and trust. The study and its biobank also act as research and training enabling platform to provide professional development opportunities for junior doctors and nurses, as well as hands-on training and internships for undergraduate and postgraduate students.

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.

The need National investment in longitudinal biospecimen management and tracking is essential to allow readily available specimen and its associated data to support real-time research. A national network will also reduce duplication, increase efficiency, quality and collaborations. Investing in biobank infrastructure will ultimately attract more funding, both nationally and internationally, thereby enhancing innovation-driven economic growth. Urgency of action: - Immediate government and institutional recognition of biobanks as a national research priority, with dedicated funding commitment. - Implementing regulatory frameworks to sustain and protect biobank resource with a plan in establishing a fully integrated National virtual (data) and physical (biospecimen) biobank network. - Establishing Australia as a global leader by collaborating and participating in international biobanking consortia, positioning Australia as a global research hub. The future of research across multiple disciplines relies on the urgent advancement of a strong biobanking model. Biobank is essential but their development remains a long-standing unmet national priority. Australia will risk falling behind in the global research landscape without proper investment or strategic support and establishment of a strong national biobanking network.

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
- [x] 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.

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.