

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

The following comments relate to all 8 'challenges'. While the mechanism of a 'Challenge' framework is useful to direct some investment, there are more challenges facing Australia than just the 8 identified. NRI should support and facilitate all types of research endeavor, not just those addressing these identified immediate challenges. Also, research addressing any identified 'challenge' should be undertaken holistically to ensure that social, economic, environmental and cultural benefits accrue. Emerging research directions that are either not currently available at all, or not at sufficient scale for these 8 challenges include:

- Greater focus on an integrated NRI ecosystem including functions that address the legal, regulatory and policy framework.
- Improving industry engagement and the recognition that successful research translation must include legal, governance, business and social licences.
- Enhanced capacity for cutting edge national digital research infrastructure that addresses these challenges, particularly with regard to Australia's sovereign capability. It is noted that the National Digital Research Infrastructure (NDRI) Strategy begins to outline a way to address some of these shortcomings. It is pleasing that the Strategy vision requires "Australian researchers, from all disciplines, should have access to cutting-edge, sovereign NDRI capabilities to continue delivering world-class research and innovation."

Q22.

Food and Beverage

Q23.

Medical Products

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

Q32.

Elevating Aboriginal and Torres Strait Islanders knowledge systems

Q33.

Protecting and restoring Australia's environment

Q34.

Building a secure and resilient nation

1. Large Language Models (LLM) and Generative Artificial Intelligence (GenAI) The application of Large Language Models to develop applications of Generative AI is the most significant development in disruptive digital technology in the period since the last Roadmap was developed. This technology is now recognised as one of the most significant technological and computing developments since the introduction of the World Wide Web in the early 1990s. The growing application of Gen AI technologies will impact both the 8 identified challenges and all 5 of the National Science and Research Priorities (NSRPs). However, there are a number of cautions and caveats that much be recognised in the utilization of this technology. Among the most significant of these are: a. Information accuracy b. Confidentiality c. Privacy d. Copyright and Intellectual Property NRI that is responsive to the risks and challenges of AI will be essential to building a secure and resilient nation. 2. Rules as Code (RaC) Rules as Code is a field of research into making human-made rules usable by machines, to perform useful results. The rules to which RaC can be applied include statutes, regulations and many other types of law-related rules, as well as organisational rules such as codes of practice, codes of conduct and business procedures. RaC is the activity of creating or converting a legal text which is in a natural language (legislation, regulations, or other legal instruments – generically, 'law' or 'rules'), in or into a representation in a computer-processable form (code). One application of this allows a human user to input data on a particular fact situation and thereby produce conclusions which are an accurate statement of the legislative intent of the legal text when applied to that data. Other applications include the embedding of rules in automated systems and to facilitate the communication between systems to determine such matters as design and compliance. The 'conversion' into code may be simultaneous with the creation of the natural language text (drafting law as code) or retrospective (converting existing laws from a back-set into code). RaC is also often referred to as the creation of machine-consumable ('executable') versions of laws and other type of rules, or 'creating machine-interpretable regulation'. Governments are exploring the concept of machine-consumable legislation, regulation, and policy, and looking at how to approach creating and delivering better, machine-consumable rules. NRI facilitating research into and the practical application of RaC will contribute to building a secure and resilient nation. The application of RaC to the policies, laws and rules which apply to all the National Science and Research Priorities (NSRPs) will ensure that the rules governing these priorities are applied in an open, transparent and consistent manner.

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 current 2021 Roadmap does not identify specific non-STEM initiatives such as legal research infrastructure that should qualify for investment under the NRI principles. It is submitted that Law should be explicitly recognised as a research infrastructure priority. In a society based on the rule of law, citizens must have the right to be able to access the law for free. Citizens are bound by the law and have private and public rights under the law, and so for the rule of law to be effective they must be able to know what the law is, and what it means. Free access to legal information is a human right. AustLII provides free access to public legal information to everyone, irrespective of their means. This supports the effective functioning of the rule of law and provides essential legal information that is necessary for all Australians. The legal system underpins all aspects of the Australian economy and society. Improved access to the law and increased capacity to research and understand it will impact upon: the Australian economy, the social structures and well-being of all Australians, and Australian responses to critical national and international challenges. In one sense 'the law' constitutes an entity distinct from other research domains, being neither STEM nor HASS. Because of the authoritative status of primary legal information infrastructure (legislation, case law, treaties, etc.) the law is essential to the operation of all other aspects of the economy and society, and effective and efficient access to the law, by means as sophisticated as possible should constitute a significant part of the NRI Strategic Framework. National investment in legal research infrastructure will help to maximise the contributions of the research and development system to foster innovation, economic development, national security, social wellbeing and environmental sustainability. Legal Information, as critical national research infrastructure, supports and enables effective translation of research outcomes into law and policy for the benefit of Australia, including provision of an essential sovereign capability. Providing free and anonymous access to the law eliminates barriers for those undertaking research. In advocating for the recognition of Law as a National Research Infrastructure priority it is suggested that this would add a new dimension to NRI and that it would assist the research ecosystem to drive innovation, develop the digital economy, and facilitate world leading research by underpinning the structures that enable civil society and democratic government. It ensures that the legal system operates effectively and efficiently, supports access to justice and helps to enable the rule of law for Australia and internationally. Australia already has a world leading and globally significant legal research infrastructure that should be incorporated into the NRI and funded under NCRIS – the Australasian Legal Information Institute (AustLII), operated by the AustLII Foundation Limited. AustLII is critically important to Australia, supporting the operation of the legal system, ensuring access to justice, providing critical research infrastructure, supporting good public policy, the economy and society and helping to promote Australia's international leadership. AustLII should be funded as National Research Infrastructure because it supports all the NRI Principles and meets the criteria outlined in the NRI Investment Principles. (see attached document for details)

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) interacted 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.

In 2020 AustLII, via its host universities UNSW and UTS, received funding from the Australian Research Data Commons (ARDC), under its Public Sector Bridges Program, to provide free access to coronial findings with recommendations available in digital form, from all Australian jurisdictions, in one central location on AustLII and to gather and link responses made by agencies to coronial recommendations. The ARDC is funded by the National Collaborative Research Infrastructure Strategy (NCRIS). The Australian Coronial Law Library, as developed, provides an expansive perspective on the coronial function over at least the past twenty years and provides free access to legislation, case law, scholarship and law reform materials relating to coronial law. It consists of 67 databases, made up of 14 coronial databases and 53 virtual databases (of related cases, legislation and articles) and includes 24,570 searchable items. Nearly 10,000 coronial findings, recommendations and responses have been processed and metadata extracted to enable a seamless integration with all other primary legal resources on AustLII (such as other court decisions referring to coronial findings, or legislation implementing them).

Q39.

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

☐ For expertise or advice

- ☐ Access to research resources or products
- ☐ Access to equipment for research
- ☐ Access to equipment for operational reasons
- ☐ Help in translating research
- ☐ Access to data
- ☐ Support for clinical trials

☒ Other (please specify)

Funding to provide national data

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.

The attached Document outlines in detail how AustLII addresses the NRI Principles and Investment Principles.

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.

[NCRISSurvey_AustLII as NRI.pdf](#)

132.5KB
application/pdf