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

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

Alongside the ARDC, the MortarCAPS Higher Learning Data Standard is positioned to support the national research agenda by establishing a robust Research Administration Data Standard focused on persistent identifiers. This initiative, developed alongside over 30 institutions in Australia and Canada an alongside the ARDC, aims to enhance the integrity, interoperability, and accessibility of research administration data across institutions. By addressing critical infrastructure gaps, this standard lays the foundation for a future Research Data Scheme, ensuring the efficient management and utilisation of research assets across the sector. Emerging research in climate science, renewable energy, and carbon management requires seamless integration of research outputs with administrative data to track impact and ensure accountability. The MortarCAPS Higher Learning Data Standard (developed in partnership with ARDC) can: Enable persistent identifiers for researchers, projects, and datasets, ensuring transparent tracking of contributions to net zero initiatives. Improve cross-institutional collaboration by creating a unified framework for research data integration. Support the development of AI-driven insights into carbon reduction strategies by standardising access to administrative research data. Infrastructure Gap: The absence of a standardised national research administration dataset limits the ability to assess the effectiveness of research investments in net zero technologies. This initiative will bridge this gap, allowing data-driven policy and funding decisions. Over the next 5-10 years, several existing national infrastructure systems may become obsolete due to emerging technology and policy shifts: Fragmented Research Administration Systems: Current siloed approaches will no longer fit the definition of NRI as interoperability and persistent identifiers become central to research administration. Legacy Data Management Platforms: Without adherence to modern data standards, outdated platforms will hinder research efficiency. Static Research Funding Models: As real-time impact tracking becomes possible, traditional grant reporting methods may be replaced by dynamic funding assessments linked to persistent research identifiers. The development of a Research Administration Data Standard, as proposed through the collaboration between ARDC and MortarCAPS Higher Learning Data Standard, is a critical step toward creating a powerful national research infrastructure. By enabling persistent identifiers before launching a Research Data Scheme, Australia can ensure that its research ecosystem is efficient, equitable, and future-ready. Investing in this infrastructure now will provide long-term benefits across all priority areas, ensuring that research administration data supports innovation, collaboration, and national strategic objectives.

Q31.

Supporting healthy and thriving communities

Alongside the ARDC, the MortarCAPS Higher Learning Data Standard is positioned to support the national research agenda by establishing a robust Research Administration Data Standard focused on persistent identifiers. This initiative, developed alongside over 30 institutions in Australia and Canada an alongside the ARDC, aims to enhance the integrity, interoperability, and accessibility of research administration data across institutions. By addressing critical infrastructure gaps, this standard lays the foundation for a future Research Data Scheme, ensuring the efficient management and utilisation of research assets across the sector. Health and social research is increasingly interdisciplinary, requiring secure and consistent research administration data. The MortarCAPS standard will: Facilitate tracking of health research impact by linking clinical studies with social determinants of health. Ensure ethical and standardised reporting of health-related research initiatives. Enable integration with emerging health informatics platforms for better decision-making. Infrastructure Gap: Current fragmented research administration systems hinder collaboration between public health researchers and policymakers. Persistent identifiers will ensure continuity and traceability in long-term health research. Over the next 5-10 years, several existing national infrastructure systems may become obsolete due to emerging technology and policy shifts: Fragmented Research Administration Systems: Current siloed approaches will no longer fit the definition of NRI as interoperability and persistent identifiers become central to research administration. Legacy Data Management Platforms: Without adherence to modern data standards, outdated platforms will hinder research efficiency. Static Research Funding Models: As real-time impact tracking becomes possible, traditional grant reporting methods may be replaced by dynamic funding assessments linked to persistent research identifiers. The development of a Research Administration Data Standard, as proposed through the collaboration between ARDC and MortarCAPS Higher Learning Data Standard, is a critical step toward creating a powerful national research infrastructure. By enabling persistent identifiers before launching a Research Data Scheme, Australia can ensure that its research ecosystem is efficient, equitable, and future-ready. Investing in this infrastructure now will provide long-term benefits across all priority areas, ensuring that research administration data supports innovation, collaboration, and national strategic objectives.

Q32.

Elevating Aboriginal and Torres Strait Islanders knowledge systems

Alongside the ARDC, the MortarCAPS Higher Learning Data Standard is positioned to support the national research agenda by establishing a robust Research Administration Data Standard focused on persistent identifiers. This initiative, developed alongside over 30 institutions in Australia and Canada an alongside the ARDC, aims to enhance the integrity, interoperability, and accessibility of research administration data across institutions. By addressing critical infrastructure gaps, this standard lays the foundation for a future Research Data Scheme, ensuring the efficient management and utilisation of research assets across the sector. The recognition and incorporation of Aboriginal and Torres Strait Islander knowledge into national research require culturally respectful data management. The MortarCAPS framework can: Establish persistent identifiers for Indigenous research initiatives to ensure proper attribution and control over data. Provide a mechanism for Indigenous communities to manage access and consent for knowledge sharing. Support initiatives aligning with the CARE (Collective Benefit, Authority to Control, Responsibility, and Ethics) Principles for Indigenous Data Governance. Infrastructure Gap: Existing national infrastructure does not sufficiently support Indigenous data sovereignty. A research administration data standard will allow for structured inclusion of Indigenous-led research projects. Over the next 5-10 years, several existing national infrastructure systems may become obsolete due to emerging technology and policy shifts: Fragmented Research Administration Systems: Current siloed approaches will no longer fit the definition of NRI as interoperability and persistent identifiers become central to research administration. Legacy Data Management Platforms: Without adherence to modern data standards, outdated platforms will hinder research efficiency. Static Research Funding Models: As real-time impact tracking becomes possible, traditional grant reporting methods may be replaced by dynamic funding assessments linked to persistent research identifiers. The development of a Research Administration Data Standard, as proposed through the collaboration between ARDC and MortarCAPS Higher Learning Data Standard, is a critical step toward creating a powerful national research infrastructure. By enabling persistent identifiers before launching a Research Data Scheme, Australia can ensure that its research ecosystem is efficient, equitable, and future-ready. Investing in this infrastructure now will provide long-term benefits across all priority areas, ensuring that research administration data supports innovation, collaboration, and national strategic objectives.

Q33.

Protecting and restoring Australia’s environment

Alongside the ARDC, the MortarCAPS Higher Learning Data Standard is positioned to support the national research agenda by establishing a robust Research Administration Data Standard focused on persistent identifiers. This initiative, developed alongside over 30 institutions in Australia and Canada an alongside the ARDC, aims to enhance the integrity, interoperability, and accessibility of research administration data across institutions. By addressing critical infrastructure gaps, this standard lays the foundation for a future Research Data Scheme, ensuring the efficient management and utilisation of research assets across the sector. Biodiversity conservation, ecosystem restoration, and climate adaptation require robust data-sharing frameworks. The MortarCAPS Higher Learning Data Standard will: Facilitate linking research projects with long-term environmental monitoring efforts through persistent identifiers. Enhance reproducibility and accountability in environmental research. Enable cross-sector collaboration between universities, government agencies, and conservation organisations. Infrastructure Gap: Current national infrastructure does not systematically link research administration data with environmental monitoring datasets. Establishing a research data standard will enable long-term tracking of conservation efforts. Over the next 5-10 years, several existing national infrastructure systems may become obsolete due to emerging technology and policy shifts: Fragmented Research Administration Systems: Current siloed approaches will no longer fit the definition of NRI as interoperability and persistent identifiers become central to research administration. Legacy Data Management Platforms: Without adherence to modern data standards, outdated platforms will hinder research efficiency. Static Research Funding Models: As real-time impact tracking becomes possible, traditional grant reporting methods may be replaced by dynamic funding assessments linked to persistent research identifiers. The development of a Research Administration Data Standard, as proposed through the collaboration between ARDC and MortarCAPS Higher Learning Data Standard, is a critical step toward creating a powerful national research infrastructure. By enabling persistent identifiers before launching a Research Data Scheme, Australia can ensure that its research ecosystem is efficient, equitable, and future-ready. Investing in this infrastructure now will provide long-term benefits across all priority areas, ensuring that research administration data supports innovation, collaboration, and national strategic objectives.

Q34.

Building a secure and resilient nation

Alongside the ARDC, the MortarCAPS Higher Learning Data Standard is positioned to support the national research agenda by establishing a robust Research Administration Data Standard focused on persistent identifiers. This initiative, developed alongside over 30 institutions in Australia and Canada an alongside the ARDC, aims to enhance the integrity, interoperability, and accessibility of research administration data across institutions. By addressing critical infrastructure gaps, this standard lays the foundation for a future Research Data Scheme, ensuring the efficient management and utilisation of research assets across the sector. Research into cybersecurity, disaster preparedness, and critical infrastructure resilience demands robust research administration frameworks. The MortarCAPS initiative will: Improve the management of research projects related to national security through standardised data governance. Ensure better coordination between research entities addressing security challenges. Support predictive analytics for national resilience by integrating research administration datasets with threat monitoring systems. Infrastructure Gap: Without a national research administration data standard, research contributions to security and resilience are difficult to assess and coordinate. This initiative will create a structured pathway for integrating research efforts into national security frameworks. Over the next 5-10 years, several existing national infrastructure systems may become obsolete due to emerging technology and policy shifts: Fragmented Research Administration Systems: Current siloed approaches will no longer fit the definition of NRI as interoperability and persistent identifiers become central to research administration. Legacy Data Management Platforms: Without adherence to modern data standards, outdated platforms will hinder research efficiency. Static Research Funding Models: As real-time impact tracking becomes possible, traditional grant reporting methods may be replaced by dynamic funding assessments linked to persistent research identifiers. The development of a Research Administration Data Standard, as proposed through the collaboration between ARDC and MortarCAPS Higher Learning Data Standard, is a critical step toward creating a powerful national research infrastructure. By enabling persistent identifiers before launching a Research Data Scheme, Australia can ensure that its research ecosystem is efficient, equitable, and future-ready. Investing in this infrastructure now will provide long-term benefits across all priority areas, ensuring that research administration data supports innovation, collaboration, and national strategic objectives.

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.

Research administration data is highly fragmented across institutions, funding bodies, and government agencies, making it difficult to track research activity, collaborations, and outcomes over time. The absence of a unified persistent identifier (PID) framework creates inefficiencies in data management, limits interoperability between systems, and restricts the ability of researchers and policymakers to generate insights from national research data. A national PID scheme, developed in collaboration between MortarCAPS Higher Learning Data Standard and the Australian Research Data Commons (ARDC), would provide a structured and interoperable framework to link research administration data at scale. This initiative would enhance data integrity, reduce duplication, and improve the long-term usability of research metadata, driving greater efficiency and impact in research funding, collaboration, and policy decision-making. Proposed PID Infrastructure Capability A national research administration PID scheme would: Establish Unique Identifiers Across the Research Ecosystem Implement persistent identifiers for researchers, research projects, funding grants, institutional affiliations, and datasets to enable seamless tracking and interoperability. Align with global PID systems such as ORCID (researchers), DOI (datasets and publications), RAiD (research activities), and ROR (institutional affiliations) while extending their application to research administration records. Enhance Data Interoperability and Linkage Create a nationally consistent data structure for research administration that connects funding data, institutional records, and research outputs. Enable automatic reconciliation of research activity across multiple agencies, institutions, and jurisdictions, reducing administrative burden. Support AI-Driven Research and Policy Analysis Improve machine-readability of research administration data, enabling AI-driven insights into funding impact, researcher mobility, and collaboration networks. Support advanced analytics for tracking research productivity, interdisciplinarity, and global engagement. Reduce Administrative Overhead and Increase Efficiency Automate compliance reporting for funding agencies and institutions, reducing manual data reconciliation efforts. Improve tracking of research career pathways by linking researcher mobility, funding, and publication records over time. Medium-Term Goals (3–5 Years) Phase 1 – Infrastructure Design & Pilot Implementation (Years 1–2) Define a national PID framework aligned with existing global standards (e.g., ORCID, DOI, ROR, RAiD). Establish technical protocols for integrating PIDs into research administration systems. Pilot PID adoption within a subset of Australian universities and funding bodies. Phase 2 – National Adoption & Interoperability Expansion (Years 3–5) Scale implementation across all major research institutions, funding bodies, and government agencies. Develop automated research impact assessment tools leveraging linked PID data. Integrate with international research infrastructure (e.g., UKRI, SSHRC Canada). Phase 3 – Global Research Collaboration & Policy Alignment (Year 5+) Enable cross-border research data interoperability between Australia, Canada, and the UK. Develop policy frameworks for long-term governance and sustainability of the PID system. Enhance predictive analytics capabilities to inform national research priorities and funding strategies. Impacted Research Communities Research Administrators & Funding Bodies: Streamlined data management, enhanced reporting, and reduced duplication of effort. Higher Education Institutions: Improved tracking of research outputs, funding impact, and institutional performance. Policy Analysts & Government Agencies: Data-driven decision-making on research investment and national innovation strategies. Data Science & AI Researchers: Enhanced datasets for modelling research networks, collaboration trends, and funding impact. Timeframe for Establishment A national research administration PID scheme could be piloted within 12–18 months, with full-scale national adoption targeted within five years. This aligns with ARDC's National Persistent Identifier Strategy, supporting a cohesive, efficient, and research-driven national data infrastructure. By investing in a PID-enabled research administration framework, Australia would establish itself as a leader in interoperable, AI-ready research data, setting a precedent for global best practices in research management and policy.

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) We are a new organisation.

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 establishment of a national Persistent Identifier (PID) framework for research administration data is not just an incremental improvement—it is the essential baseline for a more ambitious and transformative initiative: a secure, structured, and interoperable research data scheme akin to Open Banking. Just as Open Banking enables seamless, permissioned data exchange across financial institutions while preserving privacy and security, a Research Data Scheme built upon PIDs would create a trusted, interconnected ecosystem for research administration data across universities, funding bodies, and government agencies. Why a Research Data Scheme Needs PIDs as the Foundation Interoperability & Data Linking PIDs create the structured, standardised backbone needed to link research projects, grants, affiliations, and outputs across institutions. Without a robust PID framework, research data remains fragmented, making it difficult to implement cross-institutional and multi-agency data sharing. Secure & Permissioned Data Access Open Banking operates on a consent-driven model where users grant permission for data access; a Research Data Scheme could follow a similar approach, enabling controlled access to research administration data for authorised stakeholders. By leveraging role-based access control (RBAC), researchers, institutions, and policymakers could retrieve specific datasets while ensuring compliance with privacy regulations and ethical guidelines. Automation & Real-Time Research Insights Open Banking enables real-time financial data exchange—similarly, a Research Data Scheme could support real-time updates on research funding, collaboration networks, and project outcomes. Researchers and institutions could automate compliance reporting, removing manual reconciliation processes that currently slow down funding and impact assessment. Enhanced Research Impact Assessment By linking PID-enabled datasets, this scheme would allow dynamic tracking of research outcomes in ways that are currently impossible due to siloed data. National and international comparisons of funding efficiency, research productivity, and collaboration networks could be conducted at scale, supporting evidence-based decision-making. AI-Enabled Predictive Analytics With an Open Banking-style research data scheme, machine learning models could identify emerging trends in research, predict areas of high-impact funding, and detect gaps in interdisciplinary collaboration. Governments and institutions could proactively allocate resources to priority research areas, strengthening national innovation capacity. With a PID-based Research Data Scheme, Australia can position itself as a leader in data-driven research management, setting a global benchmark for efficient, transparent, and AI-ready research administration. By building upon trusted, secure, and interoperable identifiers, this scheme would not only streamline research administration.

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.