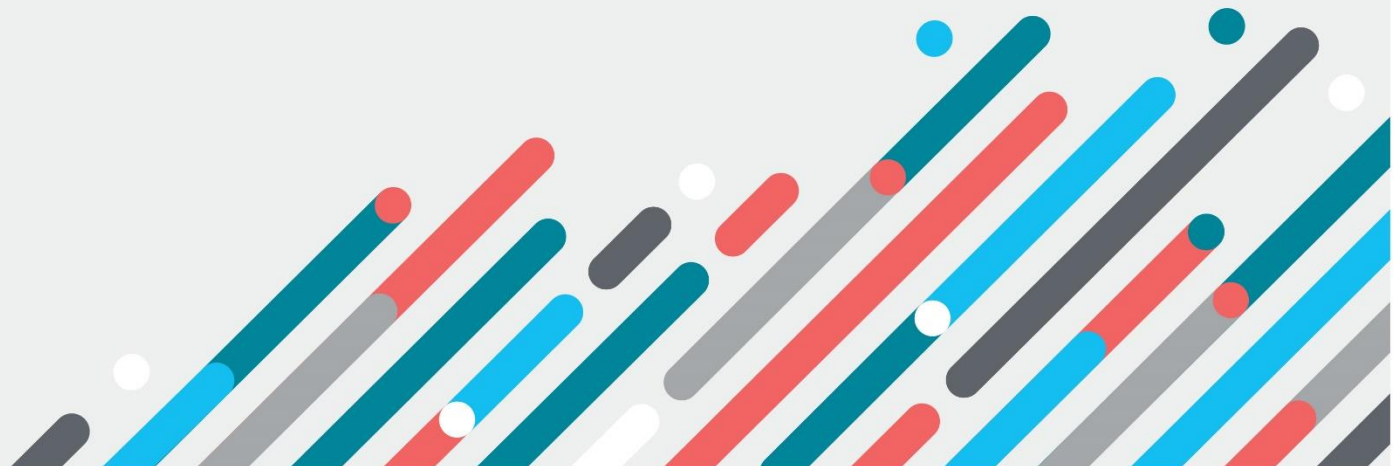




**Australian Government**  
**Department of Education**

# NDRI Investment Plan Consultation Survey Summary

Aboriginal and Torres Strait Islander Peoples NDRI



**Q15 - What investments are needed to make NDRI more culturally appropriate and aligned? Priority Reform 4 from the 2023 Closing the Gap Report highlights some key actions for Aboriginal and Torres Strait Islander Peoples Data.**

- Skills development and training, and research software engineering/technical workforce career paths designed to train, recruit, and retain Aboriginal and Torres Strait Islander people technology experts.
- Research sector - industry - government ('triple helix') funding aimed to develop capabilities in Aboriginal and Torres Strait Islander people data sovereignty but also local (community-based) forms of technology design and maintenance.
- Embed culturally appropriate values in national data sharing and access platforms and secure data repositories.
- Develop culturally responsive data governance frameworks.
  - Establish partnerships between Aboriginal and Torres Strait Islander representatives to guide data collection, access management and use.
    - Noting significant work has been done by the Lowitja Institute, The Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS), and other research organisations on Indigenous Data Sovereignty (IDS) and Indigenous Data Governance (IDG) principles.
  - Embed culturally appropriate mechanisms and IDS from the design stage.
  - Establish metadata schemas that reflect Aboriginal and Torres Strait Islander people perspectives.
- Aboriginal and Torres Strait Islander people should lead governance structures.
  - NDRI should establish a dedicated cross-NCRIS Aboriginal and Torres Strait Islander people led steering/oversight group.
    - Counter point - Development of tailored IDG frameworks within the NDRI, recognising that a "one size fits all" approach is insufficient due to the unique requirements of different NRI.
  - Funding for meaningful and respectful engagement with Aboriginal and Torres Strait Islander communities.
  - Expand the pattern of partnering with Indigenous Language Centres and Traditional Knowledge holder (for example, the model used in Atlas of Living Australia's Indigenous Ecological Knowledge Program) to other NRI.
- Access to data.
  - Develop Aboriginal and Torres Strait Islander people-designed and hosted secure data enclaves/repositories
  - Any repositories must be user-friendly.
  - Improve access to data by making it transparent and available to Aboriginal and Torres Strait Islander communities. This includes sharing the same data that governments use for decision-making, subject to privacy and security requirements.
  - Support digitisation of clinical trial and research systems, language resources, cultural records and materials of significance while enabling access pathways respecting Aboriginal and Torres Strait Islander people data sovereignty.
  - Geocode data so that communities can access data specific to their location.
  - Challenge reluctance of data providers to share and comprehensively explore data over reputational fears/backlash.



**Q16 - What NDRI investments would support Aboriginal and Torres Strait Islander Peoples knowledge systems?**

- Funding and staff support to record, capture, custodian and save (where appropriate to culture) traditional teachings, languages and behaviours to be handed down.
  - Example of this is the State Library of Western Australia’s online Indigenous repository Storylines, University of Melbourne’s The Historical Frontier Violence project.
- Scoping of an Aboriginal and Torres Strait Islander people node of the All Sky Virtual Observatory with initial work to focus on cultural engagement in astronomy.
- Skills:
  - Support in the form of scholarships and grants that are open specifically to Aboriginal and Torres Strait Islander researchers to enhance participation and leadership in research, including career progression.
  - Aboriginal and Torres Strait Islander people internship program.
- Tools:
  - Investment in AI/ML to utilise state-based treaties and truth-telling archives to create culturally sensitive metadata for future research.
  - An institutional offering that empowers communities to manage and share digital cultural heritage data in line with protocols for protecting and sharing traditional knowledges.
  - Trust and Identify mechanisms to support the implementation of data governance policies developed through CARE Principles.
- Investment to prioritise culturally appropriate data management strategies and Aboriginal and Torres Strait Islander people data strategies.
- Long-term, secure data storage solutions that enable communities to retain ownership of and control over their data
- NDRI investments should include Aboriginal and Torres Strait Islander people-led governance structures that ensure their communities are decision-makers regarding their data.
- Indigenous Cultural and Intellectual Property (ICIP) should be recognised and protected within data systems.
- The 1:1 cash co-investment principle under NCRIS must be reconsidered, especially in relation to Aboriginal Community Controlled Organisations (ACCOs), to ensure it does not create barriers to participation by Aboriginal and Torres Strait Islander organisations, ensuring equitable involvement in the NDRI landscape.



**Q17 - What are the priority NDRI investments to support Aboriginal and Torres Strait Islander Peoples, including researchers, and enhance Australia's broader research efforts?**

- NDRI could auspice work that provides a framework to connect Aboriginal and Torres Strait Islander names that have stood for thousands of years with modern catalogues produced by Australian instruments.
- Investing in Aboriginal and Torres Strait Islander people-controlled data and archival repositories and platforms.
  - Development of cultural appropriate data and software platforms to support Aboriginal and Torres Strait Islander people-led natural resources management programs, for example those administered by Indigenous Ranger Groups.
  - Local publishing platforms, such as libraries, NDRI providers, and community groups, is crucial for supporting knowledge diversity and mitigating the post-colonial gatekeeping effects of dominant US and UK publishing houses.
  - Determine ways to provide community members outside of research organisations with ways to securely access data related to them and make decisions on how it should be shared.
  - Currently, there isn't infrastructure in place which allows for Aboriginal and Torres Strait Islander people data to be stored in a culturally appropriate way (IDSov, CARE, governance, etc) at scale.
- Appropriate, sovereign and Aboriginal and Torres Strait Islander people-led data governance protocols.
  - Including local data governance, research institution data frameworks and brokerage mechanisms between the levels.
- Investment to increase the number of Aboriginal and Torres Strait Islander people leading and working in research from early career, mid-career to experienced researchers.
- Investments to strengthen IDG and knowledge systems to promote self-determination including development of a skilled workforce across research institutions, government, GLAM sectors, and Community-controlled organizations, aligned with the principles of IDG.
- Ensure Aboriginal and Torres Strait Islander people are represented in research data collections (for example, initiatives such as fellowship programs).
- Internet connectivity and reliability is paramount. Investment in satellite internet for all remote communities and a large portion of regional communities should be undertaken.



**Q18 - How can investments support the recent Australian Government's Framework for the Governance of Indigenous Data?**

- Governance:
  - Establish partnerships between Aboriginal and Torres Strait Islander representatives and government organisations to guide data collection, access, management, and use.
    - Aboriginal and Torres Strait Islander partners and communities to be appropriately compensated and cited, and data ingress/egress/sharing.
  - Identifying appropriate data custodians and stewards and supporting them to ensure that knowledge is recorded, not lost and passed on.
  - Funding projects that seek to enhance Aboriginal and Torres Strait Islander community participation in data governance, ensuring that their perspectives and needs are considered in any data-related decisions.
  - Develop flexible governance models that accommodate the unique requirements of different data types while respecting Aboriginal and Torres Strait Islander people data governance.
  - Set-up data governance review workflows as part of the data management plan for new research projects.
  - The Framework for the Governance of Indigenous Data is for the Australian Public Service (APS) data, and a similar framework is needed for institutions.
- Skills and training:
  - Invest in frameworks that support IDS, ensuring that Aboriginal and Torres Strait Islander communities have control over their data.
  - Provide funding for training programs to build the capability and expertise of Aboriginal and Torres Strait Islander communities in collecting, using, and interpreting data.
  - Training provided to APS staff on CARE/FAIR data principles, data sovereignty, cultural sensitivity, and community outcomes.
- Most research institutions lack the structured metadata and systems needed to manage Aboriginal and Torres Strait Islander people research data to align with data custodians' expectations. Implementing a national standard for metadata collection is required to allow management of research data at scale.
- Ensure that data is collected, handled, and reported at sufficient levels of disaggregation.
- Data access:
  - Improve access to data by making it transparent and available to Aboriginal and Torres Strait Islander communities.
  - Develop easy to use interfaces with role-based security, so that elders and authorised community members can easily access their data, and apply levels of access from public to secret data.



**Q19 - How can training, education and professional development be used to improve data in the Aboriginal and Torres Strait Islander Peoples NDRI space?**

- Training for all researchers (not just Aboriginal and Torres Strait Islander researchers) and professional staff involved in the management of data on protocols related to handling culturally sensitive data.
  - NCRIS needs to adopt a coordinated approach that focuses on outreach and engagement activities with Aboriginal and Torres Strait Islander people to understand their knowledge systems and how the Australian research sector can support and deliver the CARE principles.
  - There is a paucity of knowledge of IDS and Aboriginal and Torres Strait Islander people Knowledge Systems in the broader research data sector, and investment should aim to improve this through training and education.
  - Make training in Strategic Indigenous Awareness a requirement for all staff in NCRIS facilities that hold Aboriginal and Torres Strait Islander people data.
  - To date, data has been used to victim-blame, demonstrate weakness, assign racialised flaws, criminalise children and demonise Aboriginal and Torres Strait Islander families. Non-Aboriginal and Torres Strait Islander people need to be supported to recognise and stop these behaviours.
  - A barrier to realising IDS is researchers not realising that they create or use Aboriginal and Torres Strait Islander people data.
- Training must be driven by Aboriginal and Torres Strait Islander people.
- Develop and fund capacity building programs that enhance digital literacy and data management skills within Aboriginal and Torres Strait Islander communities including:
  - The range of data types that they have the intellectual property rights and the right to sovereignty over their data.
  - How to access and control level of access to data.
- Provide scholarships, mentorship, and career development opportunities for Aboriginal and Torres Strait Islander researchers.
  - The Carpentries-certified, funded Aboriginal and Torres Strait Islander people NDRI trainers play a crucial role in providing consultation and training. Existing training resources should be made freely available to Aboriginal and Torres Strait Islander researchers, ensuring they have access to valuable knowledge and skills.
  - Supporting Aboriginal and Torres Strait Islander people-led training hubs as centres of data skills excellence and capacity-building within the NDRI ecosystem.
  - Enhancing Aboriginal and Torres Strait Islander people capability in this way could lead to lasting and meaningful engagement, improved environmental stewardship and culturally appropriate practices. Aboriginal and Torres Strait Islander people leadership at these early stages of the data lifecycle can accelerate the integration of their perspectives and knowledges into research and research infrastructure.



**Q20 - Is there a case for establishing a new NCRIS capability focused on supporting Aboriginal and Torres Strait Islander Peoples knowledge systems within the national research infrastructure system? If so, in what timeframe, and what preparatory and transition steps would you recommend?**

- Arguments in favour and potential models:
  - High quality repository infrastructures should also be capable of supporting Aboriginal and Torres Strait Islander people and culturally sensitive data.
  - Builds upon work of the Indigenous Data Network and HASS and Indigenous Research Data Commons (at ARDC).
  - Consider a distributed system with a core facility (for example, a ‘hub-and-spoke’ model).
  - Would need long timeframes and appropriate scoping (timeframes range from 1-2 years for scoping to 5-15 years to fully actualise).
  - Must be Aboriginal and Torres Strait Islander people designed and led.
  - A new capability for Aboriginal and Torres Strait Islander knowledge should in no way diminish the responsibilities that existing NCRIS capabilities have in addressing their own IDG obligations.
  - There is currently no easy way to provide Aboriginal and Torres Strait Islander people outside of research organisations easy access to their data to provide true data sovereignty. As data related to Aboriginal and Torres Strait Islander people is housed within various systems, all with different access requirements across multiple organisations a central national system needs to be developed where data can be stored, accessed, and tracked for data providence, ensuring transparency and accountability in the use and management of Aboriginal and Torres Strait Islander peoples data.
  - Rather than a dedicated capability focussed on knowledge systems, it is better to have this capability embedded within all NCRIS capabilities, However, there is a case for establishing a new NCRIS capability specifically focussed on developing infrastructure to store, govern, manage, analyse and share Aboriginal and Torres Strait Islander peoples data.
- Potential issues and concerns:
  - The breadth and depth of traditional knowledge systems are such that it would be challenging to amass and retain the breadth of knowledge necessary into a single new NCRIS project. It might be preferable to embed requirements into each NCRIS project (or group of projects) to properly consider knowledge systems and resource this consideration.
  - Risk of siloing.
  - There is already the foundation for an Indigenous NCRIS capability, based in the HASS and Indigenous Research Data Commons, AIATSIS and other bodies.

