

# Improving Indigenous Research Capabilities: Building an Aboriginal and Torres Strait Islander Data Commons Phase 2

Draft Project Plan for Public Feedback

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## REVISION HISTORY

Version	Date	Editor	Summary of changes
2.0	12 Mar 2024	M LANGTON	Added the content in the sections
2.1	12 March 2024	K Smith	Updated the Deliverables and Milestones section

## 1. PROJECT INFORMATION

<b>PROJECT TITLE</b>	Improving Indigenous Research Capabilities: Building an Aboriginal and Torres Strait Islander Data Commons Phase 2
<b>PROJECT START AND END DATES</b>	1 July 2024 to 30 June 30 2028
<b>CONTRACTING ORGANISATION</b>	University of Melbourne
<b>Project Lead Contact Person</b>	Professor Marcia Langton
<b>PROJECT MANAGER</b>	Levi Murray
<b>FOCUS AREA and ACTIVITY</b>	Improving Indigenous Research Capabilities, HASS and Indigenous Research Data Commons, ARDC

### 1.1. Project aims, scope and outcomes

#### Background: The Indigenous Data Network

The Indigenous Data Network (IDN), led by Redmond Barry Distinguished Professor Marcia Langton AO FASSA FTSE, is a unique initiative that supports and enhances the capabilities of Aboriginal and Torres Strait Islander peoples, communities and researchers at the interface of research data science and Indigenous knowledge systems. Based at the University of Melbourne, the IDN connects individuals, communities, corporations, organisations, institutions and academic partners, nationally and internationally. The IDN partners recognise that Indigenous data are more than resources; they constitute a body of knowledge in digital and other forms, which

when used ethically and in accordance with human rights and accepted best practice standards, are critical to shaping Indigenous self-determined priorities for research and beneficial outcomes for communities and populations, and embody information that is an integral part of Indigenous identity, history and cultural heritage.

### **Project Aims and Scope**

Representing the interests of Aboriginal and Torres Strait Islander researchers, corporations, organisations and communities across Australia, this project will build and extend on the work of national and international frameworks of Indigenous Data Governance (IDG) and Indigenous Data Sovereignty (IDS) to collectively strengthen the foundations of Aboriginal and Torres Strait Islander data governance, use, accessibility and management principles. Phase 2 of the IIRC project will extend the foundations developed in Phase 1, Indigenous Data Catalogue, resources and extensions, foundational Indigenous research data tools and infrastructure developed in the first phase. The Indigenous Data Network (IDN) and project partners will continue to build the Indigenous research capability program to enable Aboriginal and Torres Strait Islander peoples and researchers at the interface of research data science and Indigenous knowledge systems to have access to effective research data tools. The project will achieve this by working with Aboriginal and Torres Strait Islander data custodians, focusing on how Aboriginal and Torres Strait Islander communities engage with, and what they aspire to, in the governance of their data.



Figure 1: Project Plan Work Packages

The project will be delivered by a Foundation Stream (FS) focusing on Indigenous Data Governance and Sovereignty, and four parallel Sub-Streams (SS) of activities:

**Foundation Stream (FS): Aboriginal and Torres Strait Islander data governance and sovereignty**

The central objective of the FS is to promote collaboration among leaders in Indigenous Data Governance, Aboriginal and Torres Strait Islander communities, and others within the five categories of Indigenous data custodians (as defined in the Glossary). The FS activities in this work package have been designed to evaluate, enhance, and activate the use of Aboriginal and Torres Strait Islander Data Governance principles by IDCs. The activities will also intersect with, and inform all four sub-streams of activities.

The primary goal of the Foundation Stream (FS) continues to facilitate collaboration among Indigenous Data Governance leaders and stakeholders from Aboriginal and Torres Strait Islander communities across the five defined categories of Indigenous data custodians (see Glossary). Combined these activities continue to enable the assessment, improvement, and implementation of a distinctive set of Aboriginal and Torres Strait Islander Data Governance principles. These principles continue to guide the entirety of the project's streams and activities for Phase 2. This will also extend their influence beyond the project's duration, fostering a culturally secure and

respectful national research data ecosystem. In this process, due recognition will be given to the AIATSIS Code of Ethics and other publicly accessible relevant scholarship.

### FS IN SCOPE

#### *FS.1: Contextualised Indigenous Knowledge and research data governance*

Phase 2 will continue to support the ongoing development of an Indigenous Knowledge and Research Data Governance Group for the Yirrkala township in Northeast Arnhem Land. This phase will prioritise Yolŋu leadership, in collaboration with the Yirrkala School, Djalkirri Foundation and Dhimurru Aboriginal Corporation in the contextualisation and data governance principles to refine a governance framework, processes and protocols for the appropriate collection, use (security, licensing and authentication), distribution (e.g. publication, media, other platforms), and storage of Indigenous research data within their region.

#### *FS.2: Development and implementation of Indigenous Data Governance frameworks and processes for nationally significant IDCs*

Indigenous data custodians (IDCs) across Australia require continued support in the development and embedding of Indigenous Data Governance Frameworks within their organisations, institutions and agencies. Current cataloguing, metadata labelling and other data management processes of many IDCs continue to have compliance issues with both the FAIR and CARE principles. Phase 2 will require maintaining attention to ensure that they are able to enhance their Indigenous data management. Working with key national IDCs (government agencies and Aboriginal community-controlled organisations), this activity will provide continuing support to IDCs in their develop and implementation of IDG frameworks. The following organisations will remain partnering with the IDN on this activity: Australian Institute of Indigenous Studies (AIATSIS), Australian Institute of Health and Welfare (AIHW), Australian Bureau of Statistics (ABS), Northern Australia Aboriginal Justice Agency (NAAJA), National Film & Sound Archive (NFSA), and National Imaging Foundation (NIF).

#### *FS.3: Traditional Knowledge and Biocultural Labels for Aboriginal and Torres Strait Islander Data*

This stream will continue the work of the IIRC Phase 1, working alongside partner organisations and other IDCs. This set of activities aims to: (1) assess current practices in Australian collections with regard to the use of Indigenous data governance principles to describe and make Indigenous data appropriately discoverable and accessible and available for re-use including through use of metadata tools such for traditional knowledge (TK-L and TK-N) and biocultural knowledge Labels and Notices (BC-L and BC-N); and, (2) identify gaps and opportunities for building capabilities associated with Indigenous data governance in Australia. This set of activities will develop and undertake a qualitative survey and in depth interviews to develop an evidence base about the current state of policies and practice associated with Indigenous data governance in Australia amongst diverse types of collections (e.g., artistic, archival, scientific). A report detailing this evidence base will be produced, along with proposals for how to promote and embed Indigenous data governance practices in Australian collections and institutions including strategies for training and capability building within institutions and in Indigenous communities

### FS OUT OF SCOPE

Provision of IDS/IDG guidance for individual IDCs (e.g. organisations, research projects, government agencies) beyond those nominated. It is intended that the NIDG Framework and resources developed by the IIRC project will support individual IDCs.

## Sub-Stream 1 (SS1): Indigenous research data catalogue resources and extensions

Building on the Indigenous data catalogue resources and tooling developed in the first Phase of the IIRC project, Phase 2 will continue to review, refine, and expand the IDN catalogue resources by capturing ongoing and more comprehensive metadata, developing data sharing methodologies and exploring additional use cases to apply the IDN catalogue profile and tools to a diverse range of Indigenous research data collections.

SS1 will ensure the inclusion of cases across multiple IDCs to refine and extend the Indigenous Data Network Catalogue Profile. Overarching aims of SS1 include:

- a. The expansion & refinement of the IDN catalogue (e.g., ongoing metadata capture).
- b. The ongoing development and application of data sharing methodologies and further use cases to apply the IDN catalogue Profile and tooling to a variety of Indigenous research data holdings.
- c. Strengthening security & authentication processes for Indigenous research data nationally
- d. Assessing the complexities of the different catalogue tooling under development, ensuring their adaptability across different sites and contexts.
- e. Maintenance, expansion & adaptation of catalogue tooling drawing on use cases within the Indigenous research community, including Aboriginal and Torres Strait Islander communities.

### SS1 IN SCOPE

#### *SS1.1: Expansion of the Indigenous Data Network Data Catalogue (IDNC)*

Building on the Indigenous Data Network Demonstration Catalogue developed in Phase 1 of the IIRC Project, Phase 2 will expand this catalogue, adding metadata of nationally significant datasets held by the five IDCs, in the first instance, prioritising project partners and other Aboriginal Community Controlled Organisations (ACCO).

The Indigenous Data Network Catalogue (IDNC) is currently hosted on the IDN portal (idnau.org). In this second phase of the project, the IDNC will be linked to the IDN data repository, ARDC HASS-I repository, partner catalogues and repositories in a federated profile. The IDNC is not intended to be a central repository of raw data, nor a standalone catalogue. The IDNC will not replicate other catalogues, instead it will provide outward links to other catalogues to support their data findability. The IDNC will centralise the importance of a national, federated Indigenous research data commons by improving Indigenous research data findability; supporting the uptake of the IDN Catalogue Profile by other IDCs; supporting Indigenous data governance via IDC tooling and embedded frameworks.

#### *SS1.2: Cataloguing Indigenous data held by Australian universities & development of supporting policy*

This activity will include the development and/or extension of the IDN catalogue Profile and tooling, and IDN catalogue of data holdings within the following three Australian universities:

SS1.2.1: Led by The University of Melbourne the team will extend on the work of Phase 1 of the project, cataloguing Indigenous data held across the University, creating an UoM Indigenous Data Catalogue, applying the IDN catalogue Profile. This will include data held by Museums & Collections, the University Library (Scholarly Services) and research data collections across all departments, faculties and Institutes. Further, an Indigenous Data Governance policy framework will be developed and implemented within the University.

SS1.2.2: Led by The University of Queensland the team will extend on Phase 1 of the project, working with Queensland Aboriginal & Torres Strait Islander communities and UQ Anthropology Museum, to explore institutional Indigenous RDM in iterative relationship with the partnered communities; metadata improvements on special and research collections; exploration of, scoping, co-design and piloting developments in relation to new discovery methods and layers to enable ease of use for community partners; consideration of RDM systems and researcher practices new and future UQ research collections.

SS1.2.3: Led by the Australian National University: Continuations and extensions of the work undertaken in Phase 1 of the project, led by the ANU First Nations Portfolio, Indigenous Data Governance for ANU data cataloguing.

This exploratory work across all three tertiary education institutions will include co-written publications outlining the different approaches, challenges and pathways forward, and include further extensions to the IDN catalogue Profile.

*SS1.3: Contextual application of the Indigenous Data Catalogue profile and tooling: Yirrkala School Language Production Centre community case study*

The LPC archive houses an irreplaceable and endangered archive of half a century of bilingual education materials and other rare historical resources from diverse clan groups and Yolŋu organisations within the North East Arnhem Land region. The collection is vast and varied, encompassing fragile photographic negatives, thousands of photographs dating back to the 1930s, extensive and unique cartographic materials, multimedia recordings across five formats, scarce local publications, and other priceless artefacts, each reflecting the rich cultural and historical tapestry of the region. This activity will continue the work commenced in Phase 1, working with the LDaCA project in a shared package to support the digitisation and cataloguing of the Yirrkala Bilingual School Literature Production Centre (LPC) archive in Northeast Arnhem Land.

*SS1.4: Maintenance, enhancement and extensions of the IDN catalogue resources and tooling*

Unique to stage 2, the vocabularies, AgentsDB, IDN Catalogue Profile and Scores calculator and information form are providing the set of reference material for Indigenous cataloguing. While established in Phase 1 of the Project, this material will require further maintenance across Phase 2. Extending enhancements to the Reference Material for Indigenous cataloguing will also need to be undertaken, including adding new assessment methods for Indigenous data, expanding Indigenous categories for semi-standardised representation reference data. The Agents Database and Indigenous reference spatial datasets will also be further expanded. Further, the User Interface for the IIRC central domain will be upgraded and refined via broad consultations with different user groups from IDC communities.

### SS1 OUT OF SCOPE

Digitisation and cataloguing of Indigenous data of universities beyond those set out in SS1.2. The methodologies developed and refined will be made publicly available and are intended to provide support and guidance to other research institutions to undertake their own digitisation and cataloguing of Indigenous data.

Supporting the development of bespoke guidelines/standards for individual organisations and institutions beyond the case studies articulated in SS1.

Place-based consultations for user interface upgrade and refinements (beyond identified case studies with IDCs).

## **Sub-Stream 2 (SS2): Indigenous spatio-temporal frameworks and infrastructure**

Place carries significant social, cultural, and economic value for Aboriginal and Torres Strait Islander communities. During Phase 1 of the IIRC project, an Indigenous Spatio-temporal Framework was created to prioritise and make decisions for these communities. SS2 intends to expand the Framework's application by testing new methodologies and developing advanced geospatial research tools. The goal is to make the Framework accessible to a wide range of organisations, institutions, and agencies throughout the nation, enabling better decision-making and understanding of Indigenous landscapes.



## SS2 IN SCOPE

### *SS2.1: Enhancement of Indigenous data representations: Fuzzy mapping*

In Phase 1 of the IIRC project, some novel forms of data were trialled, including representations of fuzzy geometries for Indigenous areas and multi-language representations of Indigenous place names. Key activities will include:

- Demonstrating spatial reference datasets that use fuzzy geometries within existing spatial datasets
- Tests the utility of a fuzzy spatial reference dataset to determine if its visualisation and querying support Indigenous research capabilities
- Testing the inclusion of Indigenous names within a jurisdictional Gazetteer

### *SS2.2: Ongoing ingestion and stratification of geospatial components of data and data assets.*

Continuing the work of Phase 1, this activity will continue to increase the number and quality of the spatial reference datasets at <https://data.idnau.org/s/datasets>

By doing so, this activity will:

- Bring more Indigenous reference data into machine-readable form (e.g. AIATSIS, AIHW, ABS data).
- Allow for better assessment of Indigenous status of data, as there will be additional Indigenous locations to cross check data's metadata and content against.
- Improve cataloguing search skill due to more spatial objects for data to be associated with and spatial intersections searching.

### *SS2.3: (Re)Mapping Indigenous geospatial boundaries: Indigenous Knowledges and linguistic methods*

Significant ongoing work with Indigenous communities and knowledge holders will continue with the application of linguistic methods, enabling the mapping and re-mapping of Indigenous geospatial boundaries. The inclusion of Aboriginal and Torres Strait Islander songs, dance and ceremonies continues to test new methodologies that are critical in the development of tools and resources.

## SS2 OUT OF SCOPE

The implementation and rollout of Indigenous data mapping interface that includes multiple layers: socioeconomic, education, cultural, social indicators is out of scope in this phase, the technical architecture will have the mechanisms to facilitate this functioning in the future.

## **Sub-Stream 3 (SS3): Data capability building for Indigenous digital futures in Indigenous Australia**

Indigenous data capability building involves strengthening the ability of Indigenous communities and organisations to collect, manage, analyse, and utilise data that is relevant to their needs. Its purpose is to empower Indigenous peoples by giving them control over their data for decision-making, policy development, and community advancement. By building data and digital capacity, the principles of Indigenous Data Sovereignty are also supported, ensuring that Indigenous communities have access to resources, training, and support for data management and analysis to self determine their digital and data capability.. In the context of SS3, training will be developed and provided to various Indigenous research communities, researchers working with Indigenous data, and the five categories of IDCs.

## SS3 IN SCOPE

### *SS3.1: Researcher upskilling in Indigenous data governance*

Underpinning the work of Phase 1 of the IIRC Project, this activity will focus on systematic identification of barriers and enablers to building sustainable pathways for educational and career pathways for Indigenous peoples and professional development for non-Indigenous people, focusing on early career researchers and IDCs.

This will include exploring a multimodal delivery and pedagogical approaches to ensure best practice and outreach regardless of location.

### *SS3.2: Supporting research data literacy and management within Aboriginal and Torres Strait Islander communities and organisations*

Fostering empowerment, self-determination, and informed decision-making, the development of research data literacy and management resources will continue to be expanded through:

- The ongoing digitisation and Indigenous data catalogue training program for Aboriginal community-controlled sector: Yolŋu use case
- Capacity building for data management in the Aboriginal community-controlled sector with a focus on building operational ability: NAAJA Use Case
- Development and delivery of Aboriginal community data literacy resources, focused on South East Queensland Aboriginal and Torres Strait Islander communities.

### *SS3.3: International Indigenous data upskilling: Global classrooms initiative*

The Global Classrooms Initiative is an educational program developed by the United Nations Association of the USA (UNA-USA). The initiative aims to promote global citizenship and international cooperation among students and educators worldwide. It provides resources, training, and curriculum support to schools and teachers to integrate global issues and the work of the United Nations into their classrooms.

SS3.3 will extend on Phase 1 to continue the fostering of global collaborations particularly within Asia - Pacific universities. It will look to extend the current delivery of local Indigenous Studies programs, offering the UoM MPH Indigenous Data Governance course in low, medium and high touch, and hybrid modes of the Global Classrooms initiative. It will also explore the development of a global collaborative educational network including a collaboration with Hokkaido University for the Ainu engagement within the annual ARDC computational summer skills school.

### SS3 OUT OF SCOPE

Embedding training and capacity-building into other training.

Adoption of a mainstream open-source CMS framework.

### **Sub-Stream 4 (SS4): Indigenous data repositories and data repatriation**

Repatriation is a concept commonly used in Indigenous contexts, referring to the process of returning, restoring, and repatriating data, cultural materials, artefacts, and knowledge to Indigenous communities. When applied to Indigenous data, repatriation involves transferring control and ownership of the data back to the Indigenous communities from which it was originally collected or stored. This recognises that Indigenous data is not merely a resource but an integral part of Indigenous identity, cultural heritage, and self-determination. SS4 will also investigate various types of data repositories needed for diverse Indigenous data custodians, with future plans to

expand data holdings. This sub-stream prioritises refining, developing, and utilising data repository services to support critical and at-risk Indigenous data holdings identified during Phase 1 of the project.

#### SS4 IN SCOPE

##### *SS4.1: Culturally appropriate and sustainable data storage options for Indigenous data collections*

Ensuring Indigenous data collections are stored in a manner that is both culturally relevant and sustainable is paramount. It recognises the sovereignty and critical importance of Indigenous knowledge, safeguarding their autonomy over data management and control. The continued development of robust, usable and sustainable storage methods will provide the conservation of precious traditional knowledge for posterity. Developing and implementing community-led governance models to safeguard sensitive information will enhance collaboration between Indigenous groups and academic researchers. Such practices underscore self-determination, honour Indigenous principles, and facilitate the development of a data management framework that is inclusive and fair. This activity will work in partnership with Indigenous community groups and organisations (e.g. Mulka Project, Milingimbi Art and Cultural Centre, Southern West Yiradyuri Clans Land, Water and Sky Country Aboriginal Corporation) to support their RDM.

##### *SS4.2: Indigenous data governance, cataloguing and repatriation across international borders.*

Indigenous data governance, cataloguing, and repatriation can be complex when working across international borders. Data collected by researchers, institutions, or governments in one country may pertain to Indigenous communities spanning multiple nations. In such cases, collaboration, partnerships, and respectful engagement are crucial to ensure cross-border data governance and management. It requires navigating legal frameworks, respecting different jurisdictional systems, and establishing agreements to honour Indigenous rights and community preferences. For this activity, we will continue to develop IDG protocols for legacy and new Indigenous research data focusing on two case studies:

###### *SS4.2.1: Yolŋu-Makassan historical and contemporary data sharing*

Historical and contemporary data sharing relies on the critical relationships between Yolŋu people of Arnhem Land and the Makassans (South Sulawesi, Indonesia). These relationships enable significant cultural exchanges (which historically were developed over centuries of trade and interaction). Continued collaboration with Yolŋu researchers and UoM investigators, in collaboration with Makassan Museums, archives and experts from Universitas Hassanuddin, is enabling the exploration and development of IDG protocols that bring together the data held in Makassar and Arnhem Land. This focus will result in a shared repository to enable better understandings of our shared past and its possible impacts on the future.

###### *SS4.2.2: Karel Kupka Collection: Repatriation*

Playing a key historical role in Australian arts both in Australia and Europe, the collections assembled in Arnhem Land by the Czech-born French artist and anthropologist Karel Kupka (1918-1993) are evidence of the figurative practices of Aboriginal groups in Arnhem Land. Continued work in the development of international collaborations will enable the creation of a data digital archive that is robust, sustainable and enduring which preserves the legacy of this history. Working with Milingimbi Art and Culture Centre (MACAC) and the national and international institutions holding Kupka's collections, continued activity will work to bring together Kupka's materials (art collections, personal archives, publications, photographs) to make them virtually accessible to the communities of origin across Arnhem Land. This activity will include supporting MACAC to develop their technical architecture, including its bespoke Djalkari Keeping Place database and associated data management systems by providing that supports their data access, governance and sovereignty priorities.

#### SS4 OUT OF SCOPE

Any additional case studies.

### **Project Outcomes**

The Improving Indigenous Research Capabilities project will facilitate the strengthening and extension of the foundational components of Indigenous social, technical and spatio-temporal research data architecture built in the first phase of the project. This second phase will dynamically refine, strengthen and extend on the work packages and activities via a process of ongoing testing and application to make them widely available to communities, organisations and government agencies nationally. Collaborations with Aboriginal and Torres Strait Islander communities and organisations in different cultural and geographical contexts across the nation via a series of co-designed case studies will ground the project outcomes, centralising Indigenous Data Governance & Sovereignty principles across the work.

The FS will govern all aspects of the project's streams and activities but will also have an enduring impact beyond the life of the project by cultivating a culturally secure and respectful national research data ecosystem.

This project will align with and inform broader policy and regulatory priorities, including the National Closing the Gap Partnership Agreement (in particular, Priority Reform 4<sup>[1]</sup>). The project will also address the regulatory environment, enabling institutions, agencies and entities to embed Indigenous data governance and sovereignty in practical and functional ways. Indigenous Data Custodians (IDCs) across all sectors are increasingly aware of the imperative of embedding Indigenous Data Governance within their practices and policy yet have limited knowledge or understanding of how to do so. Thus, the work undertaken within this project has the potential for broad national impact for research communities, in the first instance, but also for Indigenous data custodians across all sectors. This ambitious, innovative project further has the potential to locate Australia as the leader of Indigenous Data Governance and Sovereignty application on an international stage. Cumulatively the project team, project partners and work packages outlined in this Project Plan represent novel and progressive approaches to improving Indigenous research capabilities that will inform Indigenous research data custodians internationally.

## **1.4. Project Partners**

The Improving Indigenous Research Capabilities project is a collaborative effort involving multiple project partners. These partners include leading Australian universities, research institutions, Indigenous organisations and government agencies dedicated to enhancing data capacity and capabilities of Indigenous communities in Australia. The project aims to address the unique challenges faced by Indigenous peoples in accessing and utilising research data and technologies. The project partners will work together to develop innovative approaches, tools, and resources that empower Indigenous research communities to engage with and benefit from data-driven research. By fostering strong partnerships between academia, Indigenous organisations, government agencies and research communities, the project seeks to bridge the gap between Indigenous knowledge and data science, contributing to the advancement and self-determination of Indigenous peoples in Australia. All project partners are Indigenous data custodians or are stakeholders with significant interests in building Indigenous research data capabilities.

ORGANISATION	SUBCONTRACTOR (Select box if YES)	SUMMARY
The University of Melbourne		<p>The University of Melbourne (UoM) is an international leader in Indigenous research with a strong track record of both Australian competitive research grants and public sector research. The University is committed to respectful partnerships and collaborations with Indigenous communities and organisations across our research activities. The University prioritises Indigenous research and invests in flagship Indigenous research initiatives.</p> <p>The most recent of these is the Indigenous Knowledge Institute, which launched in 2020 with unprecedented core funding support of \$6 million over an initial five years to help sustain and advance research into Indigenous knowledge systems. The University’s other flagship Indigenous research initiatives include the Indigenous Studies Unit (responsible for the coordination of the Indigenous Data Network), Onemda Aboriginal and Torres Strait Islander Health and Wellbeing; Research Unit for Indigenous Languages; Research Unit for Indigenous Arts and Cultures; and Indigenous Studies Program, School of Culture and Communication. The University’s leading Indigenous researchers also work in collaboration with the Melbourne Institute of Applied Economic and Social Research, and the Evaluation and Implementation Science Program in the Centre for Health Policy.</p> <p>The University of Melbourne is the lead contracting organisation for this project.</p>

<p>Australian National University</p>	<p><input checked="" type="checkbox"/></p>	<p>As Australia’s national university, one of Australian National University’s (ANU) defining roles is to contribute to the advancement of Australia’s Indigenous peoples. We host some of the nation’s best Indigenous academics who are enthusiastic about nurturing and mentoring the next generation of academic leaders from across the country and around the world. ANU is a place where First Nations peoples and cultures are respected, celebrated and reflected in our research and education. As a branch of the University’s executive, the First Nations Portfolio works across the University to ensure the ANU is a world leader in teaching and research of First Nations issues as well as ensuring that the University makes a leading contribution to national policy in the relationship between Indigenous Australians and the nation. The University is committed to research excellence and supports meaningful collaboration with Indigenous communities through a range of Centres and initiatives including the Tjabal Indigenous Higher Education Centre, the Centre for Aboriginal Economic Policy Research, the Australian Centre for Indigenous History, The National Centre for Indigenous Genomics, Mayi Kuwayu: The National Study of Aboriginal and Torres Strait Islander Wellbeing, and the ANU Grand Challenges - Indigenous Health and Wellbeing project. The ANU will make contributions to the Foundation Stream and Sub-stream 1.</p>
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<p>Queensland University of Technology</p>	<p><input type="checkbox"/></p>	<p>The Queensland University of Technology (QUT) Centre for Data Science encompasses about a hundred researchers from across the University, with a vision of developing methods for better use of data to benefit the world. Their core research focus includes fields of data management and governance, data analysis and visualisation, human-focused data science, and data-focused decision-making. Their researchers bring expertise in a wide range of areas of potential relevance to the IDN, including statistics and machine learning, information science, health, environment, business, industry, digital media and more. The CDS is also a lead node in the Australian Data Science Network, which connects around 25 research centres in data science across the country. CDS also works with the Carumba Institute for Indigenous research and education. Professor Peter Anderson is the Institute's Director and the CDS and CI are currently working on a number of joint research projects as well as student centred research programs. QUT will make contributions to the Foundation Stream and Sub-stream 3.</p>
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<p>University of Queensland</p>	<p><input checked="" type="checkbox"/></p>	<p>The University of Queensland (UQ) has the Indigenous leadership and researcher context necessary for such project activity. Forty (40) Indigenous academics teach and/or research at UQ, a dozen of whom are in the Faculty of Humanities and Social Sciences. UQ HASS also manages unique collections of Indigenous cultural data, most notably in its Anthropology Museum led by Indigenous Director, researcher and Aboriginal anthropologist, Michael Aird. HASS also trains future Indigenous researchers across 16 higher degree by research candidatures. Creative Industries researcher and Wakka Wakka and Gooreng Gooreng woman, Sandra Phillips as HASS Associate Dean (Indigenous Engagement) maintains a strongly collaborative ethos across the faculty and through seminars and frequent consultation promotes robust dialogue and exchange about researcher practice. Public health researcher, Bronwyn Fredericks as PVC (IE) leads UQ-wide and challenges all of us to be better. The UQ environment is one that can lead and produce Indigenous data commons project activity that leverages the best of emerging standards including those of compatibility and interoperability and the best of long-held values and priorities of Indigenous peoples to improve Indigenous researcher capability. UQ will make contributions to the Foundation Stream and Sub-stream 1.</p>
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<p>University of Adelaide</p>	<p><input type="checkbox"/></p>	<p>The University of Adelaide (UoA), located in South Australia, is renowned for its commitment to fostering Indigenous education, programs, and strategies. Recognising the importance of promoting Aboriginal and Torres Strait Islander knowledge, cultures, and perspectives, the University has developed comprehensive initiatives to support Indigenous students and communities. Through its Indigenous Education Strategy, the University aims to provide culturally appropriate learning environments, increase Indigenous student participation and success rates, and enhance engagement with Indigenous communities. The University of Adelaide offers a range of academic and support services tailored to meet the unique needs of Indigenous students, including access to Indigenous Tutorial Assistance Scheme (ITAS) and culturally sensitive mentoring programs. By actively engaging with Indigenous communities and incorporating Indigenous knowledge into its curriculum, the University of Adelaide strives to create an inclusive and respectful educational environment that celebrates and empowers Indigenous cultures and peoples. UoA will make contributions to the Foundation Stream.</p>
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<p>Griffith University</p>	<p><input type="checkbox"/></p>	<p>Griffith University (GU) recognises and values the rich cultural heritage and contributions of Indigenous peoples, and actively works towards fostering reconciliation and creating positive change in Indigenous communities. Griffith University has established various initiatives and programs to support Indigenous students, enhance their educational opportunities, and promote cultural understanding. These include the Gumurrii Student Support Unit, which provides personalised assistance and guidance, as well as the Deadly Choices program that focuses on improving health outcomes for Aboriginal and Torres Strait Islander peoples. Through research, collaborations, and partnerships, Griffith University strives to empower Indigenous voices, preserve traditional knowledge, and address the socio-economic disparities faced by Indigenous communities.</p> <p>GU will make contributions to the Foundation Stream and Sub-stream 3.</p>
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<p>Australian Institute of Aboriginal and Torres Strait Islander Studies</p>	<p><input type="checkbox"/></p>	<p>The Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) is Australia’s national Institute dedicated to Aboriginal and Torres Strait Islander peoples’ knowledge, societies and cultures. We are both the custodian and repository of Australia’s national collection of Aboriginal and Torres Strait Islander heritage materials and one of Australia’s publicly funded research agencies. Among AIATSIS statutory responsibilities are to provide leadership in Aboriginal and Torres Strait Islander research, research ethics and use and protocols for collections related to Aboriginal and Torres Strait Islander peoples., AIATSIS published the Code of Ethics for Aboriginal and Torres Strait Islander Research in 2020 which includes guidance on ethical practice in relation to Indigenous data. AIATSIS contributes to meta data standards, through AIATSIS language thesaurus/Austlang. In 2018 AIATSIS established the Indigenous Research Exchange. The purpose of the Indigenous Research Exchange is to connect people and ideas, build the evidence base to support Aboriginal and Torres Strait Islander peoples’ decision making and inform policy and practice. A key element of the Indigenous Research Exchange is the Knowledge Exchange Platform, a portal that aims to provide a central discovery point for Indigenous research and data that:</p> <ul style="list-style-type: none"> <li>● showcase and support Indigenous knowledge translation.</li> <li>● is a powerful resource for Indigenous leadership and community-led decision making</li> </ul>
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		<ul style="list-style-type: none"> <li>● support nation-building through specific nation-based data</li> <li>● promote IDG, IDS and self-determination</li> <li>● change the narrative on Indigenous data collection, use and ownership; and</li> <li>● provide links and networks to other data sources and knowledge repositories, including the wide range of information available within AIATSIS.</li> </ul> <p>AIATSIS will make key contributions to the Foundation Stream and all Sub-streams.</p>
Empowered Communities	<input type="checkbox"/>	<p>First established in 2013, Empowered Communities (EC) is a nation-wide initiative designed and led by Aboriginal people to shift the ‘top-down’ approach to Indigenous affairs in Australia. The EC approach focuses on supporting Aboriginal empowerment, development, and productivity to address issues of social and economic disadvantage. EC shifts away from an Indigenous affairs agenda to a ‘comprehensive Indigenous Empowerment agenda’ that includes long-term reforms in partnership between Indigenous leaders, governments, corporations.</p> <p>EC will play a key role in the governance of the project and provide advice regarding community consultations and use case communities.</p>

<p>Commonwealth Scientific and Industrial Research Organisation</p>	<p><input type="checkbox"/></p>	<p>As Australia’s national science agency, the purpose of the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is to solve the greatest challenges through innovative science and technology. These challenges can only be met through collaborative action involving the community, industry, government and research sectors. CSIRO operates through three lines of business: Impact science: Nine national research business units with focus on the biggest challenges facing the nation; National Facilities and Collections: managing infrastructure and biological collections for the benefit of research and industry; CSIRO Services: Commercial, customer-centric products and services for industry, government and the community. CSIRO has also established a whole of organisation Indigenous Science and Engagement Program, which includes the Office of Indigenous Engagement, and sits within CSIRO Office of the Chief Scientist. CSIRO also has a strong Indigenous STEM education program, including the Young Indigenous Women’s STEM Academy. CSIRO acknowledges the extraordinary contributions Aboriginal and Torres Strait Islander people have made, and continue to make, to our culture, the economy, and science. CSIRO is working with Indigenous communities and organisations to create Indigenous-driven science solutions that support sustainable futures for Indigenous peoples, cultures and Country. See here for examples of CSIRO Indigenous Science - <a href="https://www.csiro.au/en/research/indigenous-science">https://www.csiro.au/en/research/indigenous-science</a>.</p> <p>CSIRO will play a key role in the Geospatial sub-stream and Indigenous Data Governance and Sovereignty foundation stream of activities.</p>
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<p>Kimberley Aboriginal Health Research Alliance</p>	<p><input type="checkbox"/></p>	<p>Kimberley Aboriginal Health Research Alliance (KAHRA) is an influential alliance led by Aboriginal people, for Aboriginal people, and our overarching goal is to improve and promote the health and wellbeing of Aboriginal people in the Kimberley through the development and application of practical health research. KAHRA are working to fundamentally change the model of regional and remote Aboriginal health research in the Kimberley, having communities and researchers engaged as equal partners at every step of the way.</p> <p>KAHRA will be involved in the Sub-stream 3 activities and provide advice regarding community consultations and/or case studies in Western Australia.</p>
<p>Australian Bureau of Statistics</p>	<p><input type="checkbox"/></p>	<p>The Australian Bureau of Statistics (ABS) is the national statistical agency of Australia responsible for collecting, analysing, and disseminating official statistical information about the country. In its commitment to inclusivity and recognition of the importance of Indigenous data, the ABS has dedicated efforts to improve its work with Indigenous communities. The ABS conducts various surveys and data collection initiatives tailored to better understand the social, economic, and cultural aspects of Indigenous Australians. This involves collaborating closely with Indigenous representatives to ensure data collection methods are culturally sensitive and respectful of Indigenous values. By engaging in this ongoing effort, the ABS aims to provide accurate and comprehensive statistics that reflect the diverse experiences and needs of Indigenous peoples, contributing to better policy-making and promoting understanding and recognition of Australia's First Nations peoples. The ABS will make contributions to the Foundation Stream of the Project.</p>

<p>Australian Institute of Health and Welfare</p>	<input type="checkbox"/>	<p>The Australian Institute of Health and Welfare (AIHW) is a renowned organisation dedicated to collecting, analysing, and disseminating health and welfare data in Australia. The AIHW plays a crucial role in understanding and addressing the health disparities faced by Indigenous Australians. Through its Indigenous work, the AIHW collaborates with Indigenous communities, government agencies, and other stakeholders to gather comprehensive data on various health indicators, including mortality rates, chronic diseases, mental health, and social determinants of health. By providing accurate and up-to-date information, the AIHW enables evidence-based policy development and targeted interventions to improve the health outcomes and wellbeing of Indigenous Australians. Its commitment to engaging Indigenous voices, respecting cultural protocols, and promoting data sovereignty ensures that the Indigenous work conducted by the AIHW is culturally sensitive and meaningful. The AIHW will make contributions to the Foundation Stream and Substream 3 activities for the Project.</p>
<p>National Film and Sound Archive</p>	<input type="checkbox"/>	<p>The National Film and Sound Archive (NFSA) preserves documents and artefacts that tell the stories behind Australian audio-visual industries and culture. The collections date back to 1935, making it one of the first audio-visual archives in the world. NFSA has been working to repatriate Indigenous cultural knowledge in the form of audio-visual material over the last few years. This includes establishing a hub in the town of Alice Springs to ensure that Aboriginal Australians can access material in a culturally safe manner. The NFSA is interested in data integration and the identification of people and places in their collection practices. Including the</p>

		<p>potential of AI analytics across large data sources to reduce labour intensive work. The NFSA will make contributions to the Foundation Stream and Substream 1 activities for the Project.</p>
<p>National Imaging Facility</p>	<p><input checked="" type="checkbox"/></p>	<p>The National Imaging Facility (NIF) of Australia is a key player in advanced imaging, offering expansive resources including equipment, expertise, and data analysis to support the nation's scientific and research endeavours. It operates a network across 14 nodes, providing unique capabilities in health, agriculture, materials science, and cultural heritage, to foster innovation and address research challenges. NIF is backed by significant investment from the Australian government and various state governments under the National Collaborative Research Infrastructure Strategy (NCRIS), ensuring Australia's leadership in the field of imaging. Its commitment to open access and collaboration with industry and academia aims to yield improvements in healthcare, product development, and knowledge discovery. The NIF will make contributions to activities in the Foundation Stream.</p>
<p>KurrawongAI</p>	<p>x</p>	<p>KurrawongAI is a small, Australian-based company enabling organisations to take control of their data. They use data modelling, data governance and data systems implementation expertise all based on Semantic Web and Knowledge Graph principles to ensure data is in the richest, most open and most extensible form it can be.</p> <p>KurrawongAI use knowledge graphs for data storage, as a transfer format, when serialised, and as inputs to advanced reasoning and data processing tasks, such as for Machine Learning and Artificial Intelligence applications. Kurr</p>



## 1.5. Project team roles and responsibilities

[redacted for publication]

## 1.6. Governance

A Project Steering Committee is required and is accountable for assessing project performance. The Terms of Reference for the Steering Committee should be attached to this project plan ([ARDC will provide a Terms of Reference template](#)). At least one ARDC representative must be included in the Steering Committee.

## 1.7. Milestones and Deliverables

The following are the agreed milestones and deliverables for the project.

DELIVERABLE / WORK PACKAGE	RESPONSIBILITY (Org)	ARDC RESOURCES REQUIRED	START DATE	FINISH DATE
<b>Foundation Stream (FS): Indigenous Data Governance and Sovereignty</b>				
<i>FS.1: Contextualised Indigenous Knowledge and research data governance</i>				
<i>FS.1.1</i> Implement a co-designed Yolŋu-led Data Governance framework that aligns with Yolŋu governance systems, working with clan leadership.	UoM		1 July 2024	30 January 2027
<i>FS.1.2</i> Hold a 2-day workshop in Yirrkala with clan leaders in late 2024 to progress the Yolŋu Data Governance (YDG) framework.	UoM		1 October 2024	30 December 2024

FS.1.3 Consultations with broader Northeast Arnhem Land community members on outcomes of 2-day workshop: including travel to relevant Homelands. Timeline and content to be directed and led by Yolŋu clan leaders.	UoM		1 January 2025	30 December 2025
FS.1.4 Work with Northeast Arnhem Land Yolŋu leadership to advocate for Indigenous Data Sovereignty of the LPC digital archive: consultations with Northern Territory Department of Education.	UoM		1 January 2025	28 April 2028
FS.2.1 Continuing development and implementation of Indigenous Data Governance frameworks and processes for nationally significant partnering IDCs. This will include consultations, workshops, staff and management training.	UoM, AIATSIS, AIHW, ABS, NAAJA, NFSA, NIF		1 July 2024	28 April 2028
FS.2.2 Hold annual workshops with Northern Australia Aboriginal Justice Agency (NAAJA) to embed and implement IDG measures across the organisation.	UoM, NAAJA		1 July 2025	28 April 2028
FS.3.1 Write and submit human research ethics application for FS.3.2	UniAdel, CSIRO		1 July 2024	30 November 2024
FS.3.2 Undertake interviews and survey to develop an evidence base on use of IDG principles through use of metadata tools such as TK and BC labels and notices amongst diverse types of collections (e.g., artistic, archival, scientific).	UniAdel, CSIRO		1 December 2024	30 September 2025
FS.3.3 Analyse survey & in-depth interviews and write a report detailing findings.	UniAdel, CSIRO		1 September 2025	30 February 2026
FS.3.4 Refine & adjust consistent and interoperable metadata conventions for appropriate discoverability, accessibility and use (e.g. TK & BC- labels and notices, vocabs, agreed terms etc.)	UniA, CSIRO, UoM		1 March 2026	31 December 2026

incorporating qualitative findings from FS.3.3				
FS.3.5 Use cases of metadata conventions trialled with 2-3 Indigenous communities and refinement of conventions.	UniA, CSIRO, UoM		1 Jan 2027	31 November 2027
FS.3.5 Development of resources and strategies for training IDGs how to apply metadata conventions.	UniA, CSIRO, UoM		1 December 2027	15 May 2028
<b>Sub-stream 1 (SS1): Indigenous Data Catalogue Resources &amp; Extensions</b>				
SS1.1 – Expansion and ongoing maintenance of the Indigenous Data Network Data Catalogue (IDNC): continue ingesting metadata of Indigenous datasets held across Australia by IDCs, connecting to other relevant catalogues & adding to Agents Database.	UoM, KurrawongAI		1 July 2024	28 April 2028
SS1.2.1 Continue the cataloguing of Indigenous data held at the University of Melbourne using and refining the Indigenous Data Catalogue Profile. This will include metadata searching, triangulation, and Natural Language Processing techniques.	UoM, KurrawongAI		1 July 2024	28 April 2028
SS1.2.2 UQ Museums & Libraries will continue to undertake metadata improvements on their ID collections, partnering with Queensland Indigenous communities to explore, scope, co-design and develop pilots.	UQ, KurrawongAI		1 July 2024	28 April 2028
SS1.2.3 Continue with the cataloguing of Indigenous data held at the Australian National University using and refining the Indigenous Data Catalogue Profile.	ANU, KurrawongAI		1 July 2024	28 April 2028
SS1.3.1 Finalise digitisation Literature Production Centre Archive at Yirrkala, including digitisation of all non-standard documents, objects, materials in Archive.	UoM		1 July 2024	30 March 2025

SS1.3.2 Co-write and publish a resource with Yolŋu collaborators and Yirrkala School leadership, detailing the digitisation methods, including innovative methods developed as examples of adaptability.	UoM		1 January 2025	30 November 2025
SS1.3.3 Work with Yolŋu knowledge holders and technical team to refine metadata categories.	UoM		1 July 2024	30 November 2024
SS1.3.4 Metadata development and entry with Yolŋu knowledge holders (e.g. Prof Yalmay Yunupiŋu).	UoM		1 December 2024	30 November 2025
SS1.3.5 Complete documentation of how to structure a spreadsheet to create RO-Crates from files-on-disk.	UoM/LDACCA		1 July 2024	30 January 2025
SS1.3.6 Use Crate-O to package files-on-disk with metadata and natural-language licences.	UoM/LDACCA		1 December 2025	30 March 2026
SS1.3.7 Develop, test and implement a discovery portal on a local area network. Set up distributed licensing using REMS.	UoM/LDACCA		1 April 2026	1 May 2027
SS1.4 .1 Extending idnau.org (IIRC Project website) to incorporate resources, publications, project news & updates and information, outputs for all project streams and activities, tracking registrations, active users and uptake. Ongoing content delivery.	UoM		1 July 2024	28 April 2028
SS1.4.2 Broad consultations with IDCs and other user groups to enhance the user interface and UX of idnau.org	UoM		1 January 2025	30 November 2026
<b>Sub-stream 2 (SS2) Indigenous Spatio-temporal Frameworks &amp; Infrastructure</b>				

SS2.1 Enhancement of Indigenous data representations: Fuzzy mapping extensions with ingestion of new geospatial assets.	UoM, KurrawongAI		1 July 2024	30 May 2025
SS2.2 Ongoing ingestion and stratification of geospatial components of data and data assets: Growing the number and quality of the spatial reference datasets started in Phase 1. Minimum of 5 datasets per year. <a href="https://data.idnau.org/s/datasets">https://data.idnau.org/s/datasets</a>	UoM, KurrawongAI		1 July 2024	28 April 2028
SS2.3 Extraction and stratification of Indigenous geospatial data to establish reference points and polygons for digital mapping and referencing	UoM, KurrawongAI		1 July 2024	1 July 2026
<b>Sub-stream 3 (SS3) Data capability Building for Digital Futures in Indigenous Australia</b>				
<i>SS3.1 Researcher upskilling in Indigenous data governance</i>				
SS3.1.1 Scoping and testing multimodal delivery and pedagogical approaches to ensure best practice and outreach regardless of location.	UoM		1 July 2024	28 April 2028
SS3.1.2 Continuation of ARDC/IDN 12-month Indigenous Internship program: ARDC supported placement of Indigenous interns with IDN, building pathways to RDM careers.	UoM, ARDC		1 July 2024	28 April 2028
SS3.1.3 Develop Indigenous Data Catalogue Model & tooling training modules for the research community (produced in variety of formats: video, audio, text)	UoM, KurrawongAI		1 July 2025	1 July 2027

SS3.2 Supporting research data literacy and management within Aboriginal and Torres Strait Islander communities and organisations				
SS3.2.1 Continue the delivery of Indigenous data catalogue model training program for Aboriginal community-controlled sector: Yolŋu case study	UoM, QUT, AIHW		1 July 2024	1 June 2025
SS3.2.2 Continue capacity building for data management in the Aboriginal community-controlled sector with a focus on building operational ability: NAAJA Case Study	UoM		1 July 2024	28 April 2028
SS3.2.3 Continue the development and delivery of Aboriginal community data literacy resources, focused on South East Queensland Aboriginal and Torres Strait Islander communities.			1 July 2024	28 April 2028
SS3.3 : International Indigenous data upskilling: Global classrooms initiative				
SS3.3.1 Delivery of UoM IDG Master of Public Health subject course in low, medium and high touch, and hybrid modes of the Global Classrooms initiative.	UoM		1 July 2024	30 November 2026
SS3.3.2 Scoping and exploratory development of a global collaborative educational network, including a collaboration with Hokkaido University for the Ainu engagement within the annual ARDC computational summer skills school.	UoM		1 July 2024	28 April 2028
SS.3.3 Survey of IDCs to determine usefulness of data capability building resources to inform refinements/improvements.	UoM		1 Jan 2026	30 October 2027

<b>Sub-stream 4 (SS4): Indigenous data repositories and repatriation</b>				
SS4.1.1 Continue scoping and testing culturally appropriate and sustainable data storage options for Indigenous data collections with Indigenous community partners.	UoM		1 July 2024	28 April 2028
SS4.1.2 Develop open access resources in different formats (e.g. video, audio,text) offering advice and recommendations on a variety of data repository options for Aboriginal and Torres Strait Islander communities and community organisations.	UoM		1 July 2024	28 April 2028
SS4.1.3 Provide hosting options to Indigenous communities requiring repository storage for at-risk data within the IDN data repository (including extraction, cleaning, reformatting and merging).	UoM		1 July 2024	28 April 2028
SS4.1.4 Case Study 1: support Southern West Yiradyuri Clans Land, Water and Sky Country Aboriginal Corporation to co-develop a data repository, with a co-designed Indigenous Data Sovereignty framework.	UoM		1 July 2024	28 April 2028
SS4.1.5 Case Study 2: Support Indigenous businesses managing community data repository options: Kowa Collaborations (BDAC – 10+ collections)	UoM, Kowa Collaborations		1 July 2024	28 April 2028
SS4.2.1 Case Study 3: Continue development of shared Yolŋu-Makassan data repository to enable better understandings of our shared past and its impacts on the future, including development of data sharing protocols and licensing.	UoM		1 July 2024	30 November 2026

SS4.2.2 Hold Workshop held in Arnhem Land with Makassan experts and Yolŋu leaders to co-design and contribute to a shared data repository.	UoM		1 March 2025	1 May 2025
SS4.2.3 Investigation of legislative, regulatory and data governance requirements to enable both-way repatriation of legacy and contemporary data.	UoM		1 January 2025	30 November 2026
SS4.2.4 Publication as a result of Case Study 3 of shared Yolŋu-Makassan data repository				
SS4.3.1 Case Study 4: Consultations with the Karel Kupka collection holding institutions (NMA, NGA, MQB-JC, Museum der Kulturen, MEG) and Milingimbi Arts & Culture to develop online. Research trips (Indigenous knowledge holders from Milingimbi/Yirrkala) to Canberra, Paris and Geneva-Basel for scoping, consultations and negotiations.	UoM		1 September 2024	30 March 2025
SS4.3.3 Provision of database specific advice & support to Milingimbi Art and Culture Centre on issues such as hosting, storage, backups and exploring how they can use the Djalkiri database technology for the public Kupka database.	UoM, KurrawongAI	Data and system architecture; storage and compute infrastructure.	1 July 2024	30 October 2027
SS4.3.4 Whole-of-system IT assessment of how the Djalkari database is situated within the broader Milingimbi Art and Culture Centre IT ecosystem to ensure IT systems are cohesive, efficient and sustainable.	UoM, KurrawongAI	Data and system architecture; storage and compute infrastructure	1 July 2024	30 November 2024
SS4.3.2 Systematic inventory of all artworks and documents related to Kupka's collections kept in Australia and Europe.	UoM		1 July 2025	30 March 2027



## 1.8. Visual Summary Overview

*Still in development.*

## 1.9. Assumptions

The following assumptions are made in order to deliver successful project outcomes.

ITEM #	CATEGORY (Scope/cost/quality)	DESCRIPTION
1	Data availability	Assuming that the necessary data required for the project is accessible and can be collected or obtained within a reasonable timeframe.
2	Resource Availability	Assuming that the required resources such as funding, equipment, software, and specialised personnel will be available to carry out the research effectively.
3	Stakeholder Cooperation	Assuming that relevant stakeholders, including participants, collaborators, or organisations, will actively participate and provide the necessary support throughout the research project.
4	Time constraints	Assuming that the research project can be completed within the allocated timeframe, considering potential delays, unforeseen challenges, and the availability of researchers and participants.
5	Research Design Validity	Assuming that the research design, methodology, and analysis techniques are appropriate and valid for addressing the research.
6	External Factors	Assuming that external factors, such as changes in legislation, political climate, or economic conditions, will not significantly impact the research project or its outcomes.
7	Generalisability	Assuming that the findings and conclusions drawn from the project can be generalised to a broader Indigenous research communities and data custodians.
8	Technological reliability	Assuming that any technological tools, platforms, or systems used for data collection, analysis, or dissemination are reliable, secure, and will function as intended.

## 1.10. (Inter)dependencies

DEPENDENCY	RELATIONSHIP TO / IMPACT ON PROJECT	HOW AND WHO WILL MANAGE THE DEPENDENCY
ARDC cloud computer and storage resources	Potential utilisation	Data Manager will engage with ARDC cloud computing and storage if necessary.
ARDC services	Potential utilisation of communications and engagement services & IDN intern	Project Manager will engage with ARDC Senior Science Communicator and Director of HASS & I Program.
Access to skilled staff to support the infrastructure	See Section 1.10	See section 1.10
Access to ARDC expertise	May request ARDC expertise as the need arises	Project Manager will liaise with Director of HASS & I Program
LDACA shared packages	See SS1.3.5, SS1.3.6 and SS1.3.7 in Section 1.7	Project Manager and Leadership will liaise with LDaCA Project Manager and Leadership

## 1.11. Risks

In the Controls/Mitigation Strategy section include what preventative actions you plan to take and/or actions you might take should the preventative actions fail to control the risk (i.e. what's your plan B?). These might include applying other in-kind resources, reviewing the plan and reducing scope etc.

### Risk Rating Key

		Consequence				
		Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Significant (5)
Likelihood	Almost certain (5)	5	10	15	20	25

	Likely (4)	4	8	12	16	20
	Possible (3)	3	6	9	12	15
	Unlikely (2)	2	4	6	8	10
	Rare (1)	1	2	3	4	5

RISK	IMPACT TYPE AND HOW WILL IMPACT PROJECT (Scope/cost/quality/schedule)	CONTROLS/MITIGATION STRATEGY	RESIDUAL RISK RATING (after controls are in place)	RISK OWNER
Ability to achieve all deliverables of the Project	Scope/Quality	Quarterly reviews will be conducted to assess progress, strengths and gaps that exist across the Streams by IDN and partner institutions. A specific template will be tabled at EPGC quarterly meetings to track progress and outcomes of the Activities of each Stream. Where barriers exist actions will be put in place to mitigate the risk to the Project.	2	Lead Investigator
Filling project positions: delays in recruitment.	Resource	Multiple avenues of advertising, actively searching for qualified staff using specialist recruitment agencies.	6	All Project Partner organisations recruiting for the project.
Deprioritisation and/or unavailability of Indigenous community participants for relevant co-designed,	Quality	Open, transparent and ongoing communications with community representatives participating in the project and ongoing outreach via IDN and Empowered Communities networks across Australia to ascertain other groups	9	Project team members collaborating with community participants, IDN & EC.

community-led case studies and activities impacting on schedule and costs.		potentially interested in participating.		
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*\*Only include risks that have a rating of greater than 14 to the project.*

## 1.12. Outputs and Outcomes Monitoring and Evaluation Plan

The indicators below specify what will be measured in the project M&E process in order to assess whether, and to what extent, the project’s key intended outputs outcomes have been achieved.

**End of Project Outputs** are the deliverables achieved as part of the project.

OUTPUT	INDICATOR/S	MEASURE	DATA SOURCE/S	TIMELINE FOR DATA COLLECTION	RESPONSIBILITY	BASELINE
<b>Output 1. Running and maintenance of the IDNC</b>	End of project archiving of metadata and orphaned datasets on a long-term, secure cloud infrastructure	Volume of repatriation requests and successful ingestion of external datasets on the archive	The data will be sourced by communication to and from external data holders. Through a secure transfer through Mediaflux and other cloud infrastructure. The data will include both	Across the duration of the project	IDNC Catalogue Data Manager	Up to five or more data requests per quarter

			qualitative and quantitative.			
<b>Output 2. Indigenous Data Catalogue Resources &amp; Extensions</b>	Indigenous Data Catalogue resources & extensions outlined in section 1.7, Sub-stream 1.	Commencement and progress towards activities outlined in section 1.7, Sub-stream 1.	Project website	To commence by the first quarter of 2024	Project manager, SS1 Project team	Not applicable
<b>Output 3. Training and educational resources on appropriate IDG that support IDCs, researchers and Indigenous communities</b>	Demand for use, downloads, case study implementation	# downloads, qualitative & quantitative analysis of survey data	Project website, SS.3.4 Survey of IDCs, feedback from case study community participants	Across the duration of the project	Project Manager, SS3 Project team	Not applicable
<b>Output 4. Standards, frameworks and tooling for indigenous data, metadata and research</b>	Demand for use, downloads, case study implementation	# citations in publications and IDC reports detailing use	Project website	6 monthly	Project Manager, SS1 Project team	Not applicable

<b>Output 5.</b> <b>Accessible spatiotemporal framework and research tooling</b>	Demand for use, downloads	# citations in publications and IDC reports detailing use	Project website	6 monthly	Project Manager, SS2 Project team	Not applicable
<b>Output 6.</b> <b>Resources to support improved data repositories and Indigenous data rematriation</b>	Demand for use, downloads, case study implementation	# citations in publications and IDC reports detailing use	Project website	6 monthly	SS4 Project team	Not applicable

**End of Project Outcomes** are the direct changes that occur from the outputs of the project that can be achieved within the timeframe of the investment.

OUTCOME	INDICATOR/S	MEASURE	DATA SOURCE/S	TIMELINE FOR DATA COLLECTION	RESPONSIBILITY	BASELINE
<b>EOP Outcome 1</b> <b>Indigenous Data Custodians will have IDG principles embedded in their Research data management</b>	IDCs that have IDG frameworks/policy increases	An increase of IDCs reporting implementation of IDG frameworks/principles	IDC survey	Responses to survey with IDCs midway and at end of project	Project Manager	Not applicable
<b>EOP Outcome 2</b> <b>Indigenous communities and organisations</b>	Indigenous communities and organisations	Indigenous organisations will report	IDC survey responses from	Responses to survey with IDCs midway	Project Manager	Not applicable

<b>have improved IDS</b>	have more control over the collection, access & use of their data	greater control of their data	Indigenous sector	and at end of project		
<b>EOP Outcome 4 Australia's Indigenous data ecosystem will be more secure and respectful</b>	IDCs will demonstrate better implementation of FARE and CARE principles	An increase in IDC FARE and CARE scores in the Indigenous Data Catalogue	Indigenous data catalogue FAIR and CARE scores	Indigenous Data Catalogue	Project Manager	Not applicable
<b>EOP Outcome 5 Indigenous &amp; non-Indigenous researchers will have better awareness of how to use Indigenous data appropriately</b>	Indigenous & non-Indigenous researchers will use IDG principles when collecting, accessing, analysing and sharing Indigenous data	Indigenous & non-Indigenous researchers will report better knowledge of IDG & IDS principles and how to employ them in their research	IDC survey	Responses to survey with IDCs midway and at end of project	Project Manager	Not applicable
<b>EOP Outcome 6 Increased community engagement, input and access to Indigenous research and its outputs</b>	Reduction of barriers to access/use/reuse of Indigenous research outputs in appropriate ways	Greater community engagement with Indigenous research and its outputs	IDC survey	Responses to survey with IDCs midway and at end of project	Project Manager	Not applicable
<b>EOP Outcome 7 Increased Indigenous and non-Indigenous people with expertise working in Indigenous Data Science</b>	Systematic identification of barriers and enablers to sustainable education and career pathways in data science for Indigenous peoples and professional	More Indigenous and non-Indigenous people engaging in educational resources and modules produced by the project, and increased	Website, Indigenous Data Governance enrolments, ARDC Summer School	Annual	Project Manager	Not applicable

	development for non-Indigenous ECRs in Indigenous Data Science	enrolments in data science and related areas with focus on Indigenous data	enrolments			
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### 1.13. Communications & engagement

A communications and engagement strategy will build on the existing strategy of Phase one of the project to focus on the specific partners in this project and to engage the Indigenous research community and research communities focused on Indigenous research topics. This will involve the cooperation of the Academies and research institutions not already involved, but able to respond to the challenges of the IIRC.

Online and face-to-face meetings with experts in disciplinary fields and representatives from the five IDC sectors focusing on specific streams and activities of this plan will provide the first stage of the communications and engagement strategy, followed by distribution of information about progress to the wider audience via newsletters, emails and social media platforms. Periodic reports and publications will depend on the progress of each stage and operational focus and will be the responsibility of the leaders of each stream and activity. Those involved in each of the outlined activities of the project will report to Project Steering Committee, who will be responsible for guiding the scope and scale of communication in each case, taking into account the particular audiences to be reached.

- Access, Authentication and Governance
- Consultation Phase
- Compute: HPC and GPUs
- Capability Building: Skills and Training
- IDNC
- The application of Indigenous governance frameworks
- Legal/legislative requirements around data
- Technical architecture and the ongoing development of IDNC, catalogue resources & extension



- Indigenous Research Capabilities
- Legal requirements for data management and infrastructure

Drawing on the findings from Phase 1 and the ongoing outputs of Phase 2 of the IIRC project, the IDN will provide advice to relevant national government agencies (i.e. National Indigenous Australians Agency & Office of the National Data Commissioner, Office of the Australian Information Commissioner) for the development, application and refinement of APS IDG frameworks, policies & regulations. This extends to Australian frameworks, regulation and policy related to: APS data access for Indigenous research and communities, Intellectual Property (IP) of Indigenous Data and Knowledges, and collection, storage, access, and use of Indigenous data.

## 2. GLOSSARY OF TERMS

TERM	DESCRIPTION
APS	See Australian Public Sector
Australian Public Sector	The Australian Public Service (APS) comprises entities that employ their staff under the <i>Public Service Act 1999</i> (PS Act). This includes all departments of state, and some other entities. Generally, APS agencies are 'non-corporate', being components of the legal entity that is the Commonwealth.
Indigenous research data	Within this project, we refer to Indigenous research data as all data generated by, about or for Aboriginal and Torres Strait Islander people in Australia. Indigenous research data specifically refers to information that is collected, analysed, and interpreted within the context of Indigenous communities, cultures, and knowledge systems. It includes data gathered through research projects conducted by and with Indigenous peoples, as well as data that Indigenous communities have generated and maintained themselves. Indigenous research data includes traditional ecological knowledge, oral histories, cultural practices, and other forms of Indigenous knowledge that may not fit traditional Western research paradigms. It may involve collaborative research approaches that prioritise Indigenous self-determination, community engagement, and the equitable sharing of benefits.
IDC	See Indigenous Data Custodian

Indigenous Data Custodian	For the purposes of the IIRC Project, we define Indigenous Data Custodians as five broad communities of Indigenous research data custodians: (1) Aboriginal and Torres Strait Islander communities and organisations; (2) universities, researchers and other research organisations; (3) the GLAM sector, including libraries, archives and museums; (4) Commonwealth, state, territory and local governments; and (5) Private sector (including not-for-profit).
IDG	See Indigenous Data Governance
Indigenous Data Governance	Indigenous data governance refers to the principles, practices, and systems by which Indigenous communities exercise control over the collection, ownership, management, and use of data that is relevant to them. It recognises the unique rights, interests, and needs of Indigenous peoples regarding their data and aims to ensure that data is collected, stored, and utilised in a manner that respects their self-determination, cultural values, and sovereignty. Indigenous data governance sets the foundations for data democracy at the community level, supporting Indigenous access, generation, and use of data.
IDS	See Indigenous Data Sovereignty
Indigenous Data Sovereignty	Indigenous data sovereignty refers to the right of Indigenous communities to own, control, and govern the data that is generated within their communities. It encompasses the principles of self-determination, cultural autonomy, and control over information and knowledge systems.
IDNC	See Indigenous Data Network Catalogue
Indigenous Data Network Catalogue	The Indigenous Data Network's catalogue of Indigenous datasets includes metadata of Indigenous data held by IDCs across Australia, including research data generated by the IDN in partnership with IDCs. This catalogue will be built over time as metadata of significant Indigenous datasets are located. The IDNC demonstrates improved metadata models and rating systems for data and metadata to improve Indigenous Data Governance.

### 3. CHANGE CONTROL (for ARDC information only)

Approval of this Project Plan will comprise the baseline for the project. Changes to any of the following are considered variances:

- Project details
- Project outcomes & aims
- Budget
- Project partners
- Project team roles and responsibilities
- Governance
- Milestones and deliverables
- (Inter)dependencies

Variances to the Project Plan require endorsement by the Steering Committee and then ARDC approval. If approved, the Project Plan will be revised and project reports from that point forward will report project progress against the revised Project Plan, not the original.

To request a variance:

1. The Steering Committee submits a request to ARDC for variance to the approved project plan.
2. ARDC reviews the changes and advises the project manager or project lead of the outcome.

## 4. APPENDICES

*Redacted*

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[1] <https://www.closingthegap.gov.au/national-agreement/priority-reforms>

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