Indigenous knowledge and research infographic

First Nations knowledge and research has great potential to help solve some of our biggest research challenges. Australia’s national research infrastructure is engaging with Indigenous researchers, industry users and community groups across the country to tap into this potential, and to put research and data in the hands of Aboriginal and Torres Strait Islander peoples.

To learn more about the data holdings and how to access them, please contact the organisations via the links.

Australia’s national research infrastructure is enabled by NCRIS, a $7.1 billion Australian Government Initiative supported by universities, state and territory governments and research organisations nationwide.

NCRIS is based on the principle of open, merit-based access. If you are a researcher or industry user wanting to find out more about the specific infrastructure available through NCRIS, head to the [NCRIS portal](https://www.arin.org.au/pt/ncris).

Artist credit: Meteorites by Margaret Whitehurst, Wajarri Yamatji visual artist. [Learn more](https://www.youtube.com/watch?v=JgAQ2_ON9Ks&feature=youtu.be) about the artwork.

Artwork Source: Pawsey Supercomputing Research Centre.

Graphic design: Romy Pearse, AAL.

Infographic created by the NCRIS Communications Network.

AuScope

AuScope recognises Aboriginal and Torres Strait Islander peoples as the first geoscientists of the unceded lands, seas and skies across the Indo-Australian plate. It is proud to help enable inclusive and equitable geoscience initiatives, and to enable geochronological (age dating) studies that can support local Indigenous oral and visual histories. Click here to find out more. <https://ardc.edu.au/collaborations/strategic-activities/hass-and-indigenous-research-data-commons/>

Australian Research Data Commons (ARDC)

The ARDC is collaborating with the Indigenous Data Network (IDN) on the Indigenous Research Capability program to support the consolidation and expansion of its technological, training and governance initiatives. Click here to find out more.

Population Health Research Network (PHRN)

PHRN has linked Australia-wide population data since 2009. The linked data has supported a range of projects that have enabled researchers to better understand Indigenous people’s health and well-being. Click here to find out more. <https://www.phrn.org.au/>

AARNet

AARNet provides fast, reliable and secure network infrastructure and services to support AITSIS research and digital preservation activities. Click here to find out more. <https://aarnet.edu.au>

Australian Access Federation (AAF)

The AAF provides secure access for AIATSIS to enable organisations to connect to online learning courses for education, research and commercial providers. AIATSIS provides premier resources for information about the cultures and societies of Aboriginal and Torres Strait Islander peoples. Click here to find out more. <https://aiatsis.gov.au/research>

Microscopy Australia

Microscopy Australia is enabling image and data collection for Indigenous artists, archaeologists, Knowledge Keepers and partners to explore and communicate Indigenous knowledge, build understanding, new businesses and partnerships. Click here for more. <https://micro.org.au/news/evidence-of-2000-year-old-banana-cultivation-in-torres-strait-islands>

Terrestrial Ecosystem Research Network (TERN)

TERN collaborates with Indigenous rangers and groups on Country to share information, compare ways to monitor and manage the land and enable knowledge exchange. Click here to find out more. <https://www.tern.org.au/>

Bioplatforms Australia

Bioplatforms Australia (BPA) sequenced the DNA for the National Centre for Indigenous Genomics (NCIG), to enable the preparation of a reference genome to support Indigenous healthcare. National Computational Infrastructure (NCI) provided the underpinning technical infrastructure, including the computational and data resources and expertise to support NCIG to analyse and interpret this data. Together, Bioplatforms Australia and NCI were able to support NCIG in its mission to bring the benefits of genomic medicine to Indigenous Australians. Click here to find out more. <https://bioplatforms.com/projects/indigenous-genomics/>

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Australian National Fabrication Facility (ANFF)

ANFF assists projects harnessing Indigenous knowledge of materials as it enables clients to make and modify substances using micro/nanofabrication. This includes Trioda Wilingi, a company commercialising spinifex-derived products and the first Indigenous business formed using Indigenous owned patents and funded from private capital. It’s a collaboration between ANFF, the Dugalunji Aboriginal Corporation (DAC), and UQ.

It sees DAC creating jobs to source and process raw materials, and helps to fund future Indigenous engineers through university. Click here to find out more. <https://www.anff.org.au/>

Pawsey

Pawsey supports the Mira Canning Stock Route Project Archive by storing their data as part of Pawsey data collection, including over 40,000 unique items such as photographs, video footage, oral histories, historical records from several Indigenous communities. The project archive was developed and managed by FORM’s Canning Stock Route Project with the Centre for Digital Archaeology at UC Berkeley (CoDA). The data has been used a part of a tool for preserving and sharing the Project’s invaluable intangible cultural heritage with both participating communities and where culturally appropriate, the general public. Click here for more. <https://www.canningstockrouteproject.com/digital-futures/mira-canning-stock-route-project-archive/>

ANSTO Centre for Accelerator Science

ANSTO Centre for Accelerator Science’s strength in preparation and radiocarbon dating of microgram samples and trace-element analysis has enabled a vast portfolio of high impact research into Indigenous cultural heritage, including deepening our understanding of Aboriginal rock art and supporting Aboriginal farmers in authentication of native foods. Click here for more. <https://www.ansto.gov.au/news/seeing-inside-artefact>

ANSTO Australian Centre for Neutron Scattering

Neutron imaging at ANSTO’s Australian Centre for Neutron Scattering (ACNS) can offer an unique view *into* stone tools, without damaging these significant artefacts. Neutron imaging at ACNS of underwater archaeological artefacts from the continental shelf, located off the Murujuga coastline in North-Western Australia has also been conducted. Click here for more.

<https://www.ansto.gov.au/news/radiocarbon-dating-at-ansto-informs-date-of-oldest-known-aboriginal-rock-art>

Australian Plant Phenomics Facility (APPF)

APPF is enabling studies on the native parasitic vine *Cassytha pubescens* as a biological weed control and using wild rice consumed by Indigenous people in the Top End for thousands of years, to improve rice yields and salt tolerance. Click here to find out more. <https://link.springer.com/article/10.1186/s12284-018-0257-7>

Atlas of Living Australia

In partnership with Indigenous communities working on Country, the Atlas of Living Australia is exploring the role of information management platforms in bridging the boundaries between traditional and contemporary Indigenous knowledge and western science. Click here to find out more. <https://www.ala.org.au/indigenous-ecological-knowledge/>

National Imaging Facility

National Imaging Facility’s (NIF) increasing national human imaging reach is enabling health research in remote populations. In 2021 NIF welcomed its first regional Node, the University of Newcastle, which in partnership with the Wollotuka Institute, has a strong reputation for Indigenous engagement, education, training and advocacy. Other Nodes are investigating Indigenous health issues such as dementia, and informing prevention, diagnosis and policy, in line with NIF’s commitment to supporting societal, health and research equity through advanced imaging capabilities. Click here for more <https://anif.org.au/neuro-imaging-to-examine-high-rates-of-dementia-in-older-aboriginal-australians/>

Integrated Marine Observing System (IMOS)

IMOS recognises Traditional Owners as Australia’s first marine scientists and carers of Country. As fellow marine observers, IMOS acknowledges existing Traditional Ecological Knowledge and works to provide observations to help understand and manage Sea Country. Click here to find out more. [https://imos.org.au/](imos.org.au)

Astronomy Australia Limited (AAL)

Astronomy Australia Limited (AAL) supports astronomy projects that have formed close collaborations with Indigenous Australians. Astronomers from the Murchison Widefield Array (MWA), a precursor for the multi-billion Euro Square Kilometre Array (SKA), have been working with the Indigenous communities of the Mid West region in Western Australia, including Wajarri Yamaji people (the traditional owners of the SKA site), for over a decade. The MWA director, Prof. Steven Tingay from Curtin University, and colleagues from Yamaji Art in Geraldton, have brought together art, science, culture, and technology to curate world-wide art exhibitions and produce a feature length film. Click here to find out more <https://theconversation.com/how-making-a-film-exploring-indigenous-stories-of-the-night-sky-enriched-my-perspective-as-a-scientist-167529>