

The future of digital research infrastructure



19 Oct 2023
eResearch
Australasia

PRESENTED BY
Keith Russell
Director, Outreach

Acknowledgement of Country

We acknowledge and celebrate the First Australians on whose traditional lands we meet, and we pay our respect to their elders past, present and emerging.





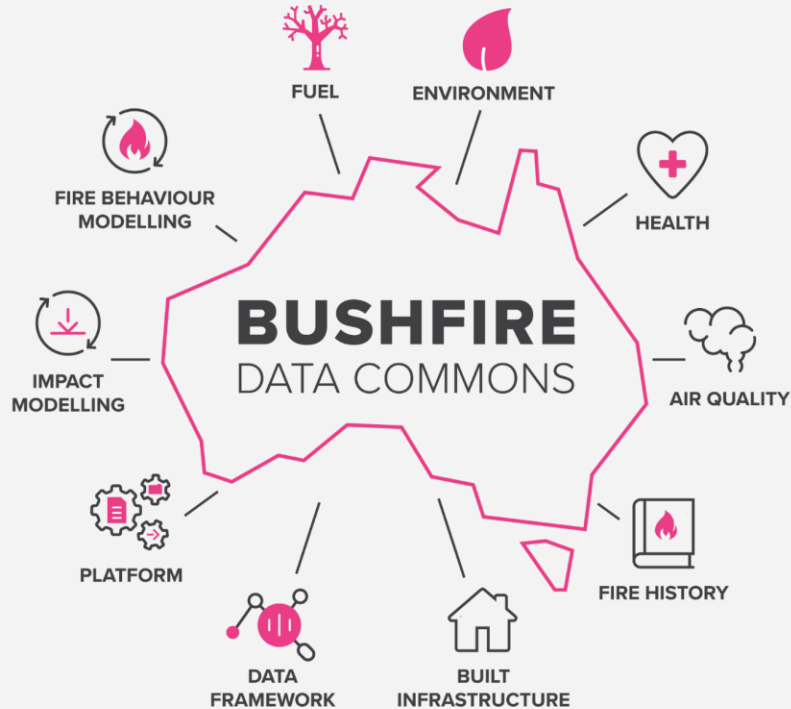
Australian Research Data Commons

Purpose

To provide Australian researchers with competitive advantage through data.

Mission

To accelerate research and innovation by driving excellence in the creation, analysis and retention of high-quality data assets.

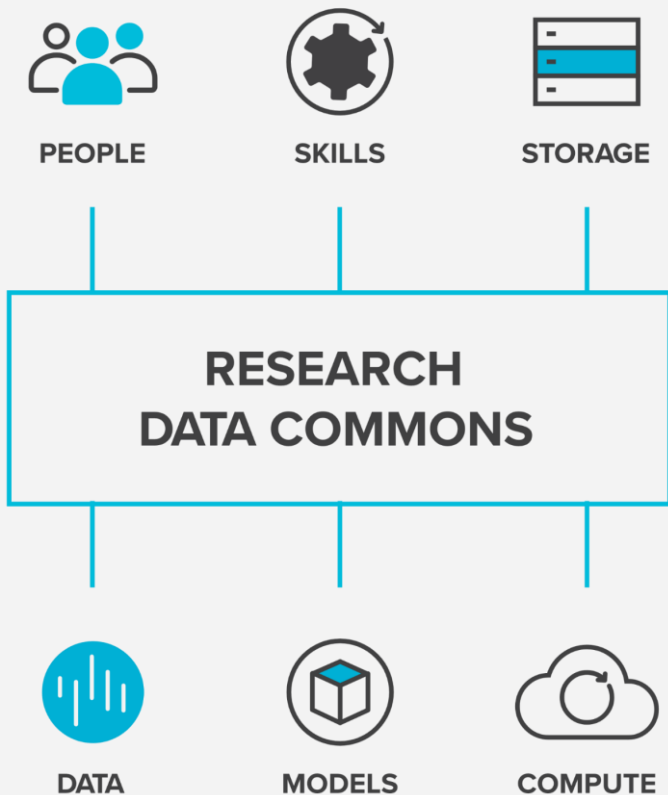


Research resilience, response and recovery

TRANSLATIONAL RESEARCH DATA CHALLENGES: BUSHFIRES

Understanding bushfire

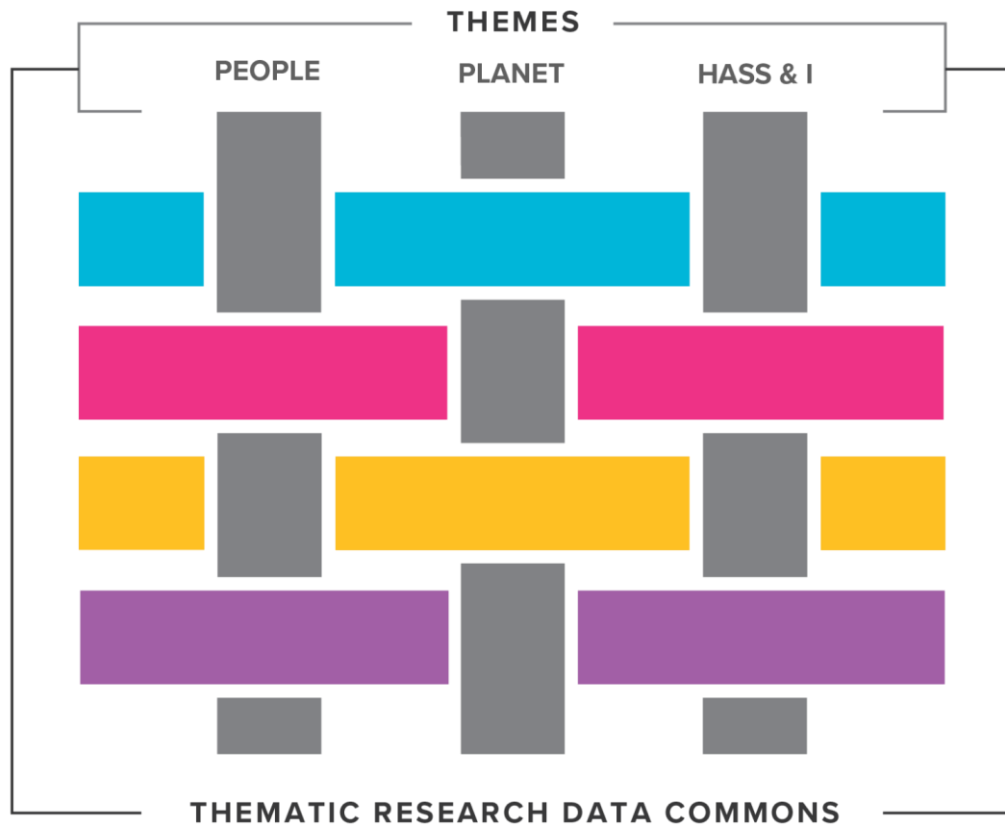
- Behaviour
- Impact



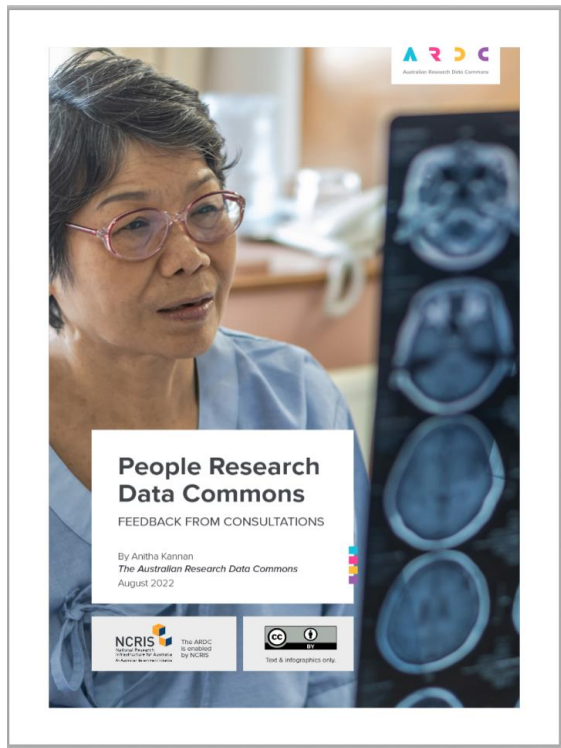
WHAT IS A RESEARCH DATA COMMONS?

A research data commons brings together people, skills, data, and related resources such as storage, compute, software, and models to enable researchers to conduct world class data-intensive research.

THEMATIC RESEARCH DATA COMMONS



WORLD LEADING KNOWLEDGE INFRASTRUCTURE ENABLES AUSTRALIAN RESEARCHERS TO TRANSFORM OUR LIVES



Australian Research Da... @... · Mar 2 ···

We held a roundtable for the Planet Research Data Commons to explore the data challenge areas of 'Reliable and trusted data supply chains' + 'Modelling and decision-support infrastructure'. Thanks to all our participants! More about the program > ardc.edu.au/program/planet..



Elisa Bayraktarov and 9 others



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HUMANITIES, ARTS & SOCIAL SCIENCES RESEARCH DATA COMMONS & INDIGENOUS RESEARCH CAPABILITY



**Improving
Indigenous
Research
Capabilities**



**HASS
Community
Data Lab**



**Language Data
Commons of
Australia**

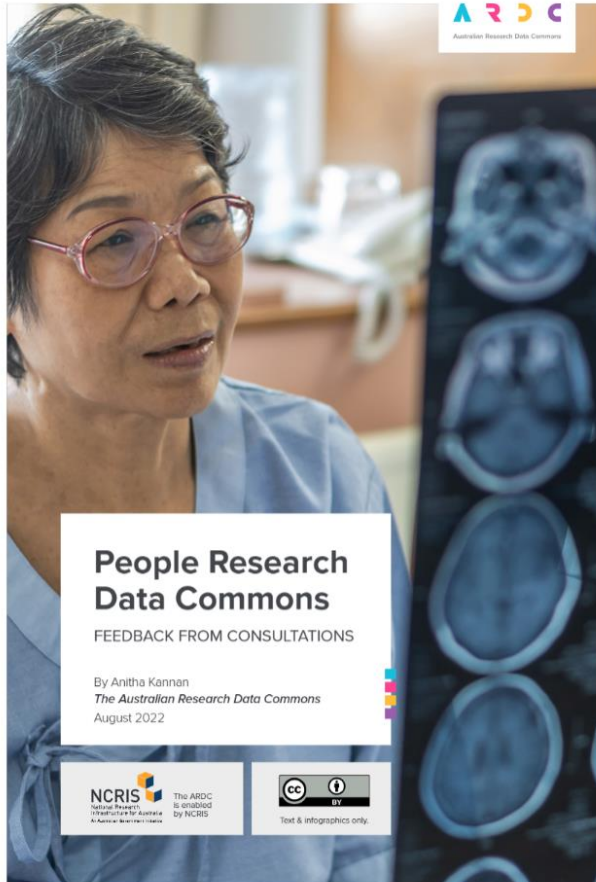
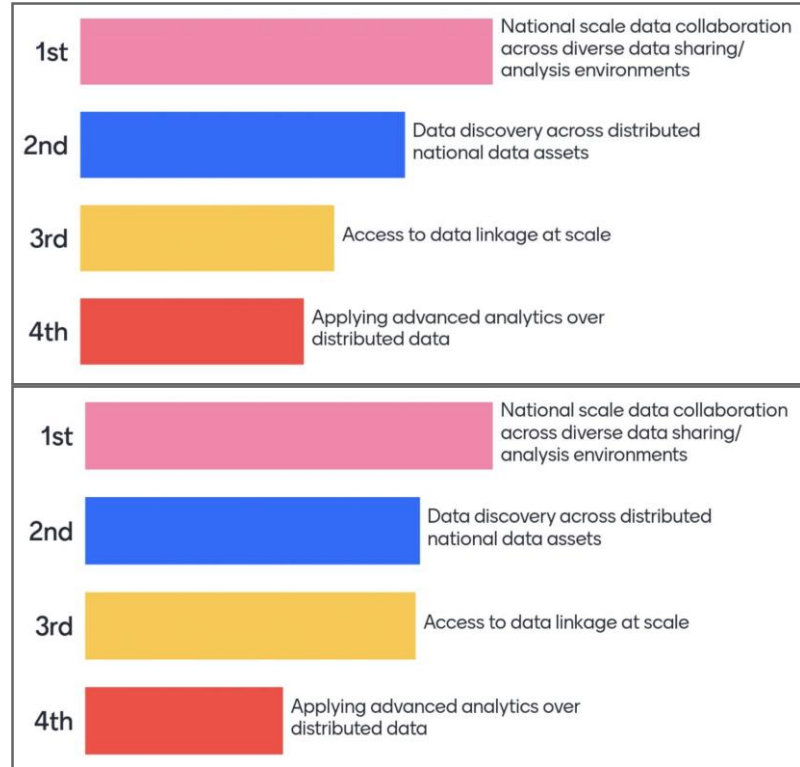


**Integrated Research
Infrastructure for
Social Sciences**



RANKING OF DATA CHALLENGES

(from public roundtables)





PEOPLE RDC VALUE PROPOSITION

The People RDC supports Health and Biomedical researchers

Develop cross-sector and multi-disciplinary data collaborations on a national scale

Through **federated** models that deliver **interoperable** compute, storage infrastructure and services with analysis platforms and tools, that are supported by expertise, standards and best practices.

HeSANDA: Health Studies Australian National Data Asset

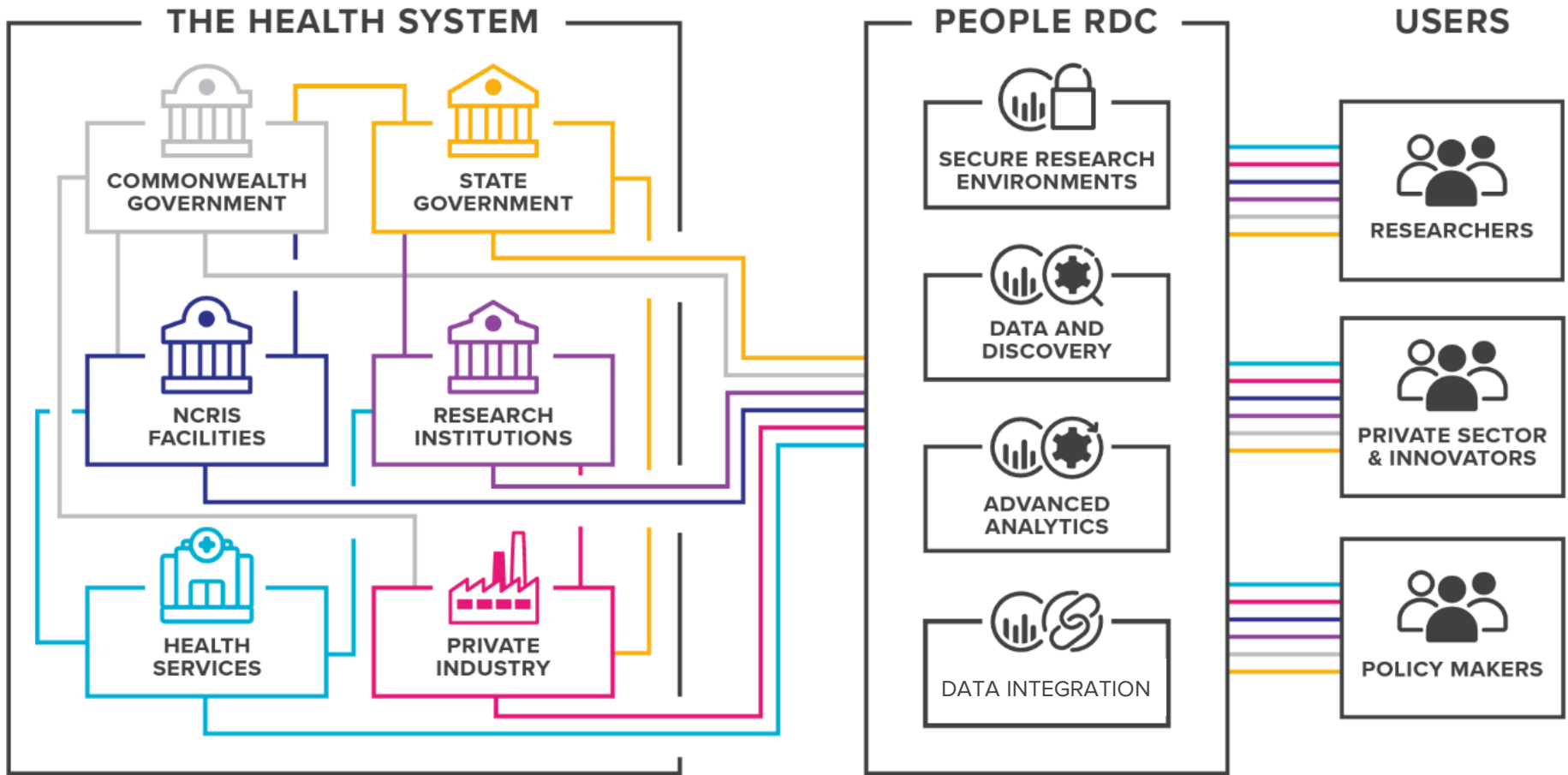


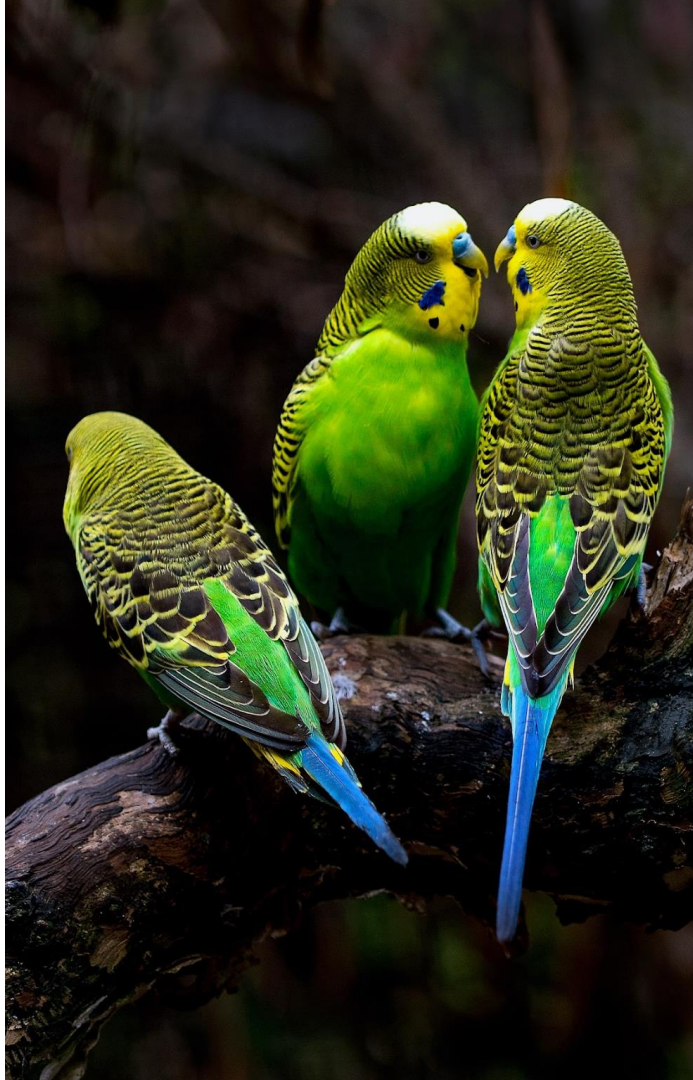
ARDC has taken a highly collaborative approach to the HeSANDA initiative and we are glad to both represent and help capture the voice of the investigator-led clinical trials sector.

Prof Steve Webb, *Chair of the Australian Clinical Trials Alliance (ACTA)*



Image — kckate16 - 430857605 / BIGSTOCK





PLANET RDC CONSULTATIONS

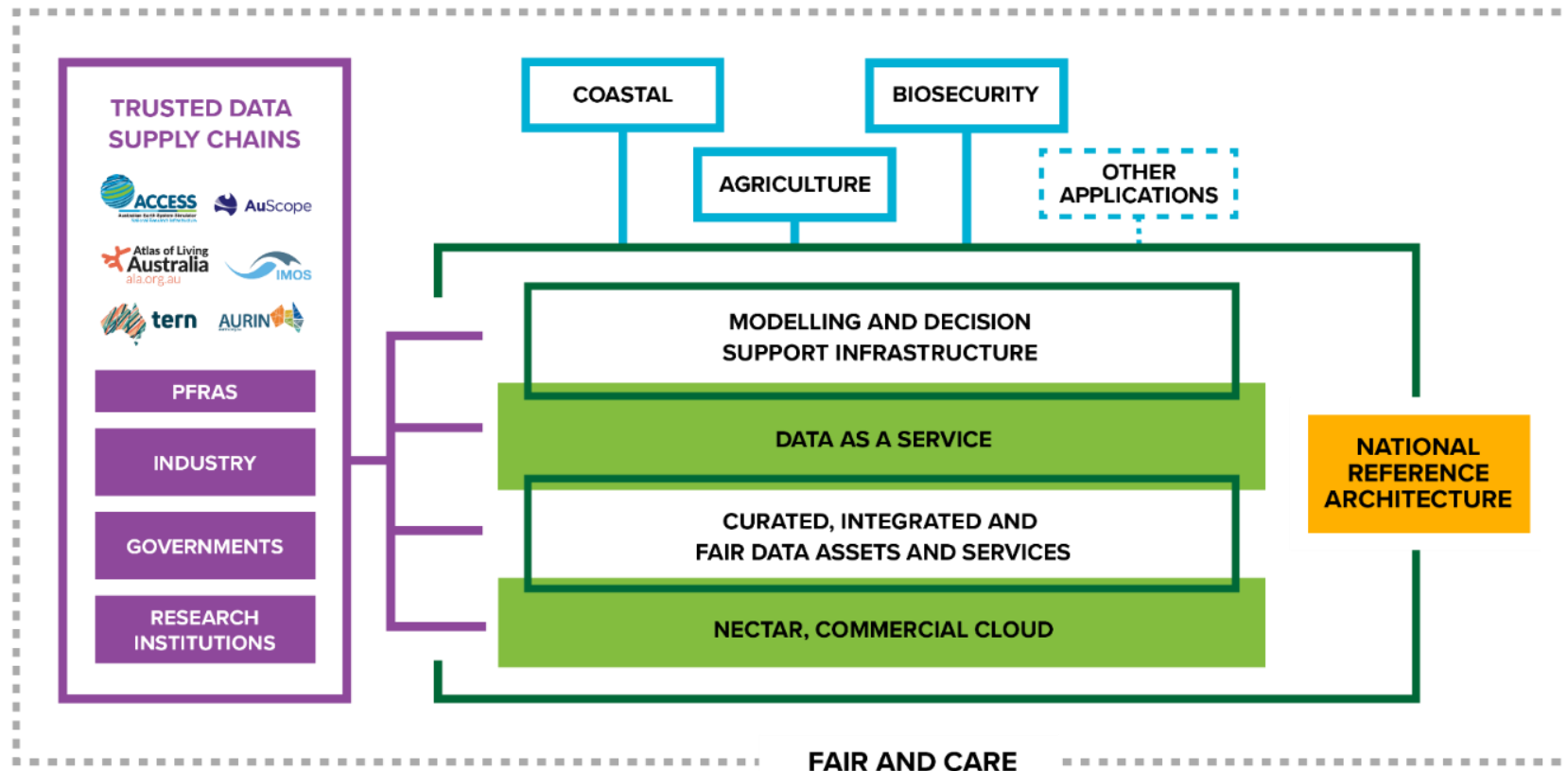
WHO will the Planet RDC support?

National stakeholders in Earth and Environmental research and management

WHAT does the Planet RDC need to deliver to researchers across academia, industry and government?

WHY will the proposed outcomes of the Planet RDC be transformative for research?

World-Leading Environmental & Climate Digital Infrastructure



National Digital Research Infrastructure Strategy NDRIS



NDRIS should address the following issues, as identified through Roadmap consultations:

- Increased **data accessibility and interoperability**, supported by improved data governance through an NDRI Strategy, could ensure consistent data quality across the NRI ecosystem
- To maintain this data as a national asset, **data storage** capacity needs to be improved for both working data and longer-term retention.
- The Roadmap consultation process identified **trust and identity** as fundamental research infrastructure.
- ...plan and prepare for future challenges and opportunities including **HPC**, exascale computing, quantum computing, big data and commercial and non-commercial cloud services.
- Due to its importance, **research software** must be considered as research infrastructure itself.
- **Skills:** The NDRI Strategy should consider how national, system-wide approaches to training and services could benefit researchers.
- DRI investment should drive an **integrated ecosystem** which provides seamless access to data and computing in a timely way.



Australian Research Data Commons



Mrs Rosie Hicks
Chief Executive Officer



Dr Emma Crott
Chief of Staff
Company Secretary



Dr Andrew Treloar
Director, International Strategy

STRATEGIC PILLARS



Dr Adrian Burton
Deputy CEO
Director, People RDC



Mr Hamish Holewa
Director, Planet RDC



Ms Jenny Fewster
Director, HASS and
Indigenous RDC



Dr Sheida Hadavi
Director, Translational
Research Data Challenges

OUTREACH

NATIONAL
COORDINATION

SERVICES

OPERATIONS

BUSINESS UNITS



Mr Keith Russell
Director, Outreach



Ms Natasha Simons
Director National Coordination



Ben Chiu
Director Services



Mr Matt Dailey
Chief Operating Officer
Director Operations

RESEARCH DATA COMMONS (RDC)

PEOPLE RDC

PLANET RDC

HASS AND
INDIGENOUS RDC

TRANSLATIONAL
RESEARCH DATA
CHALLENGES

TEAM ARDC



2023 Impact Booklet

PARTNERING FOR SUCCESS

Download at

bit.ly/ARDC-impact-2023 ►



INTERNATIONAL DATA WEEK 2025

*Trusted research data driving
innovation and a better world*



Australian Research Data Commons



NCRIS
National Research
Infrastructure for Australia
An Australian Government Initiative

The ARDC
is enabled
by NCRIS



COMMITTEE ON DATA
CODATA
INTERNATIONAL
SCIENCE COUNCILS



RESEARCH DATA ALLIANCE



WORLD
DATA SYSTEM

See you in
Brisbane
Australia

13 - 16 OCTOBER 2025



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THANK YOU



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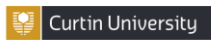


[Australian-Research-Data-Commons](https://www.linkedin.com/company/ardc)



[ARDC_AU](https://www.youtube.com/ARDC_AU)

MEMBERS



Host institutions

About the ARDC

KNOWLEDGE INFRASTRUCTURE



Shared scientific data assets and resources, such as scientific collections, repositories and archives from many different disciplines; the standards, protocols, and services enabling deposit, integration, sharing, and reuse of those data and remote access to instruments and experiments; the analytic and computational algorithms and platforms critical to transform data into knowledge and discoveries; and human capital infrastructure.

'National Strategic Overview for Research and Development Infrastructure',
US National Science and Technology Council (NSTC), 2018

ARDC STRATEGY



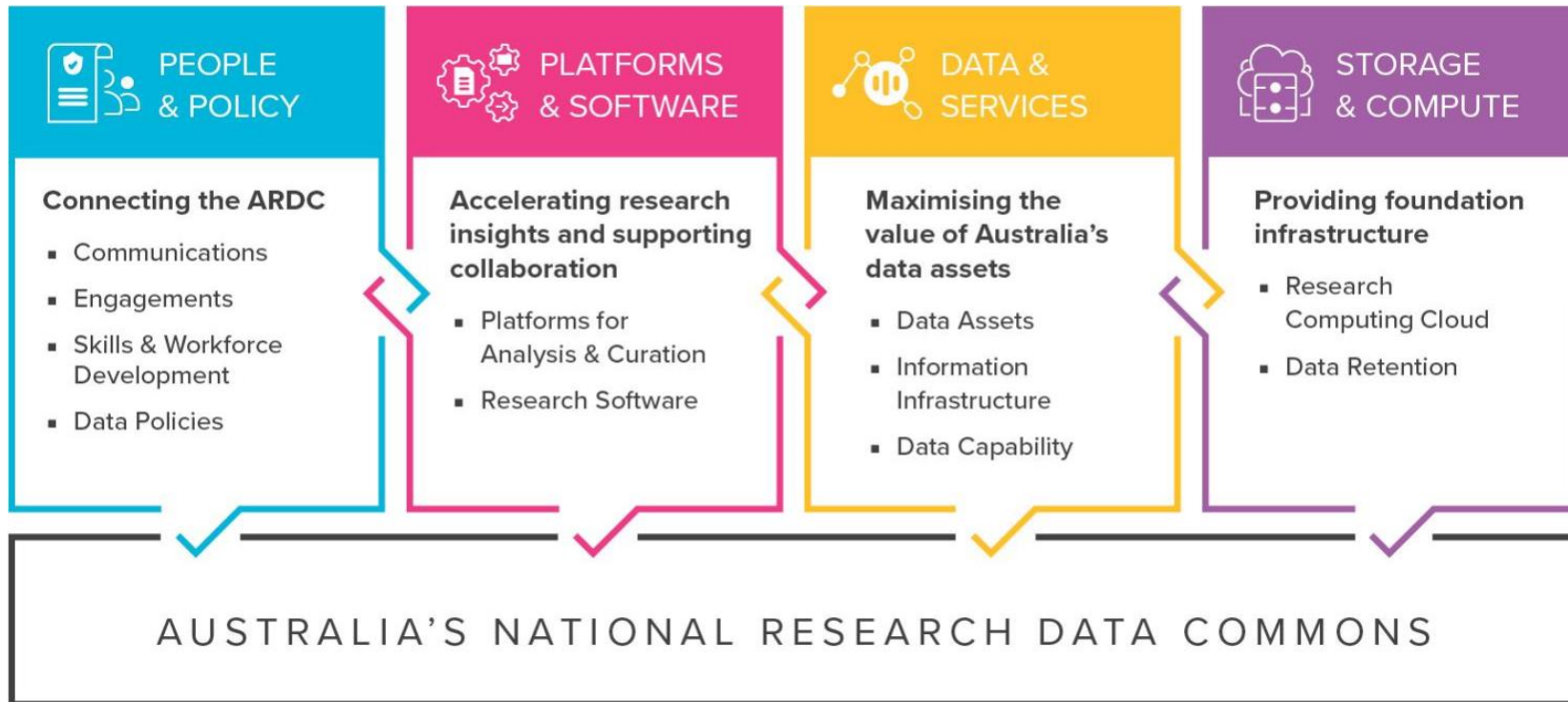
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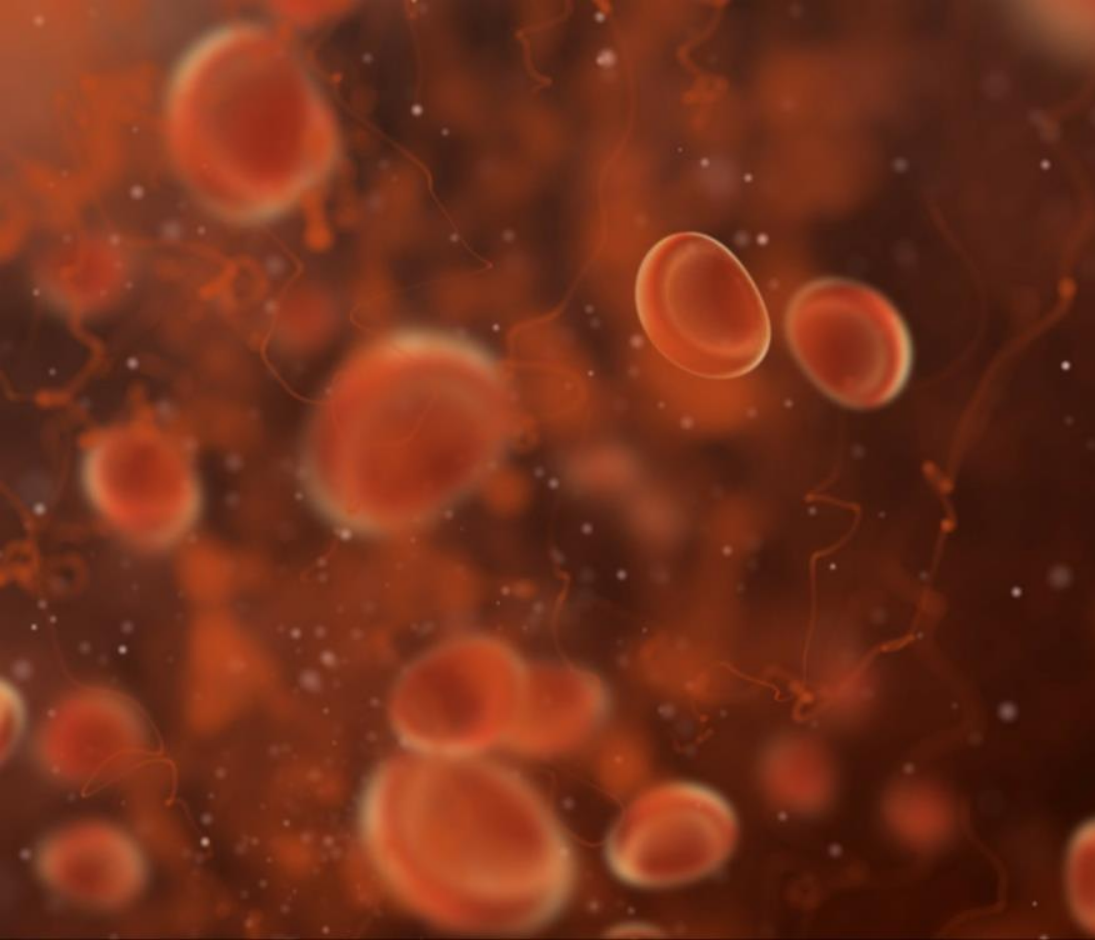


Open EcoAcoustics



We provide a dedicated ecoacoustics platform that is open to everyone, so that it can aggregate and share data, analyses and tools, and interoperate with downstream services.





NATIONAL DATA ASSETS PROGRAM

The National Data Assets initiative is a multi-year, \$20 million+ investment by ARDC that will provide Australian researchers with access to a portfolio of national-scale data assets that support leading-edge research.

Image — [DigiLife 318019252](https://www.gettyimages.com/detail/stock-photo/318019252) / [STOCK.ADOBE.COM](https://www.gettyimages.com/detail/stock-photo/318019252)

NATIONAL PIDS STRATEGY

Leveraging ARDC & AAF leadership in PIDs

Whole sector approach with **5** priority PIDS

- ORCID for people
- ROR for institutions
- RAiDs for projects
- DOIs for research outputs
- DOIs for grants

Funders should build on success of ARC integration

Target for **80%** adoption in **5** years



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2012-2022
CELEBRATING
10 YEARS



ARDC Nectar Research Cloud
is Australia's federated national
research cloud providing the research
community with on-demand computing
infrastructure and software

CASE STUDY

A Language Data Commons for Australia



With the Language Data Commons, if you apply the right search, you'll be able to access that material, but you'll also be able to access anthropological materials and other papers that contain less linguistic terminology that can help you get a better understanding about your language.

Robert McLellan, Industry Fellow, School of Languages and Cultures
Faculty of Humanities and Social Sciences, *The University of Queensland*

About the ARDC




IMAGE — TALKING LANGUAGE WITH



Where to From Here?





TRANSLATIONAL
RESEARCH DATA
CHALLENGES:
BUSHFIRES