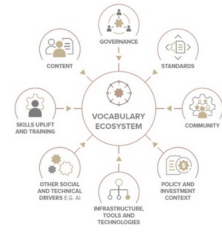


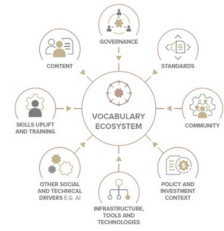
## A STRATEGIC COMMUNITY ROADMAP FOR AN AUSTRALIAN FAIR VOCABULARY ECOSYSTEM

Wong, M., Atkins, N., Boyle, D., Dharmawardena, K.,  
Hoborn, D., McEachern, S., and Wyborn, L.





Data driven digital economy  
requires  
semantic understanding of the data  
by  
machines and humans



Use of Vocabularies are critical for achieving this understanding in data

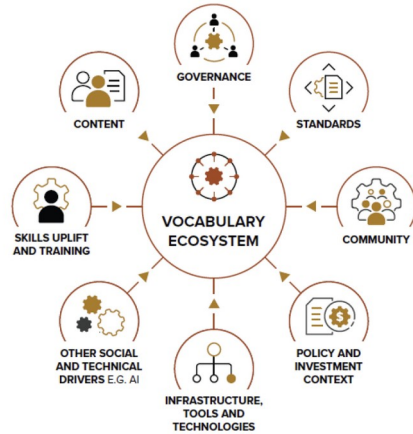


Australia's vocabulary ecosystem is fragmented  
and  
lacks effective coordination



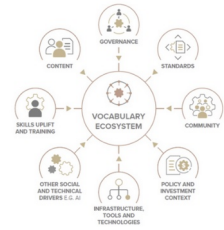
Australian  
National  
University

Australian Data Archive  
POLIS: The Centre for Social Policy Research



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Roadmap outlines a pathway to transition from its fragmented landscape to a cohesive and dynamic FAIR Vocabulary Ecosystem

# The Roadmap was developed from a Vocabulary Workshop held in November 2022

The workshop, supported by ADA and DDI-CDI, CODATA, ARDC, brought together a diverse group of participants, including vocabulary creators, managers, service providers, tooling experts, and advocates from various fields such as health and medicine, Earth and environmental science, as well as the humanities, arts, and social sciences.

## Followed by community consultation between 2022 to 2024

eResearch Australasia Conferences (2022, 2023 & 2024)  
the Australasian eResearch Organisations Newsletter (AeRO, 2024)



# Followed by extensive community consultation between 2022 to 2024

eResearch Conference 2022 Conference: *BoF on Enabling FAIR Vocabularies for Interoperability in Cross Domain Research in Australia*

eResearch Conference 2023 Conference: *BoF on A Roadmap for the Future of Shared Vocabularies in Australia: Harmonising Across Sectors, Disciplines and Internationally*

eResearch Conference 2024 Conference: *BoF on The Research Vocabularies Ecosystem in Australia: Continuing the Conversation*

Via the November 2024 Australian eResearch Newsletter (AeRO, 2024)

2022 Workshop attendance, and roadmap Review by AIATSIS (2025)





# THANK YOU

for all the feedback that was received from the community

# Vision and Mission: A Shared Direction Forward



## Vision

That shared vocabularies and their ecosystem form a key part of the Australian and international data landscape, enabling the impact of data for beneficial cultural, environmental, societal, economic and health outcomes.

## Mission

To further the consistency and sustainability in the development, implementation, governance and use of vocabularies across domains to solve real-world problems, both in Australia and internationally, through the establishment of an effectively coordinated community and services.

- The Outcome: In the next 5 to 10 years, the importance of vocabularies will be widely recognized in Australia. This will lead to a growing ecosystem of vocabularies, along with associated services and tools, that will make it easier to publish and use vocabularies as a fundamental component of data assets, services, and infrastructure.



# 57 Recommendations Across Four Strategic Themes

## Foster a Thriving Vocabulary Ecosystem

This theme aims to encourage the widespread adoption of FAIR vocabularies for data sharing and integration.

## Improve the consistency, content and context of vocabularies across Australia

This theme aims to reduce duplication, promote interoperability, and facilitate appropriate data integration and reuse, in line with the FAIR and CARE principles.

## Improve the consistency of vocabulary tools and services

This theme aims to enhance data quality, support the FAIR data principles, and establish a cohesive vocabulary ecosystem.

## Lower Barriers for Use and Maintenance

this theme aims to promote the reuse and adoption of vocabularies, thereby supporting the FAIR principles and enhancing data interoperability.

# Seven Key Topics



Technical Standards  
Adoption

Promote the use of well-governed and established, internationally endorsed technical standards for encoding vocabularies in standard representation languages and formats.



Vocabulary Content  
Creation

Recommendations to make it easier for people to find, use, and contribute to vocabularies in a way that respects expertise and promotes wider use.



Vocabulary Publishing

Recommendations to ensure that vocabularies are discoverable, authoritative, and sustainable over time.



Vocabulary Governance

Support persistent and sustainable vocabulary registers and services, engage with domain experts, and promote authoritatively governed vocabularies.



Mapping and Annotation

Provide tools for defining and publishing mappings between vocabulary terms, enable discovery of known mappings, and facilitate semi-automated creation of candidate mappings.  
Enable users to easily find, access and reuse vocabularies through standard APIs, user-friendly interfaces, and seamless integration into data management workflows.



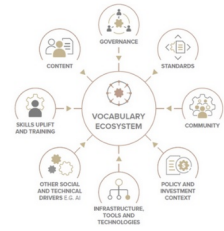
Finding and Using FAIR  
Vocabularies



Skills, Training and  
Outreach

Invest in vocabulary professionals, support communities of practice, provide training workshops, and advocate for vocabularies as first-class digital citizens.

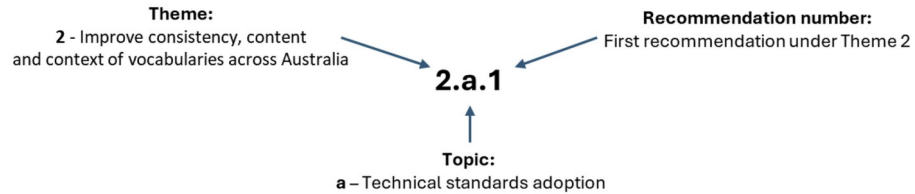
# Structure



## 2. Improve the consistency, content and context of vocabularies across Australia

Strategic theme	Topic	Recommendation Description	Timeframe	Priority
2.a.1	a) Technical standards adoption	Promote the use of well-governed and established, internationally endorsed technical standards.	1. Short	1. High
2.b.1	b) Vocabulary content creation	Reduce vocabulary duplication by facilitating the search for existing resources, including across vocabulary services.	2. Medium	1. High

Each recommendation is coded, as an example:



# Audience for the Roadmap

## Strategy Coordinators and Implementers

The NDRI is coordinated through the National Research Infrastructure Advisory Group

## NCRIS and NRI Platforms

Decision-makers and technical teams responsible for developing and maintaining Australia's NCRIS and related NRI platforms

## Government Agencies

Various State, Territory and Federal government departments have a vested interest in managing data and vocabularies for policymaking, reporting, and research purposes

## Universities

Academic institutions that can benefit from and contribute to the uptake of improved vocabulary practices and infrastructure

## Researchers and Data Scientists

Individuals in academic, government, and on-governmental organisations (NGOs) who are directly involved in managing, curating, and using high-quality, reusable data assets



1

Read the Roadmap

2

Consider what recommendations you can incorporate into your work and collaborative efforts in the short-term?

3

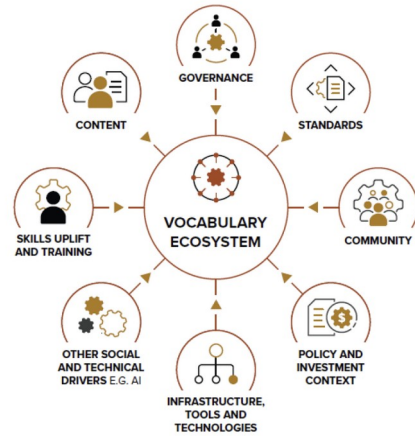
Incorporate the recommendations within strategy and funding calls





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