# A CARE and FAIR-ready distributed access control system for human-created data using the Australian Access Federation and beyond

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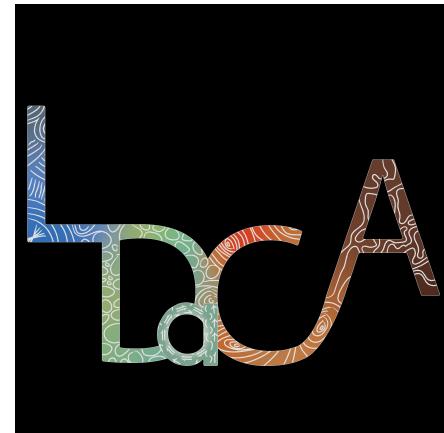
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The FAIR Guiding Principles for scientific data management and stewardship

Mark D. Wilkinson, Michel Dumontier, IJsbrand Jan Aalbersberg, Gabrielle Appleton, Myles Axton, Arie Baak, Niklas Blomberg, Jan-Willem Boiten, Luiz Bonino da Silva Santos, Philip E. Bourne, Jildau Bouwman, Anthony J. Brookes, Tim Clark, Mercè Crosas, Ingrid Dillo, Olivier Dumon, Scott Edmunds, Chris T. Evelo, Richard Finkers, Alejandra Gonzalez-Beltran, Alasdair J.G. Gray, Paul Groth, Carole Goble, Jeffrey S. Grethe, ... Barend Mons ✉ + Show authors

491k Accesses | **4577** Citations | **2034** Altmetric | Metrics

ⓘ An Addendum to this article was published on 19 March 2019

Associated Content

Collection

Scientific data

Collection

Metadata quality

The CARE Principles for Indigenous Data Governance can be downloaded here in summary **or** full

The CARE Principles in Spanish - CREA para la Gobernanza de Datos Indigenas
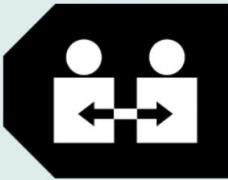
The CARE Principles in Vietnamese - Các nguyên tắc CARE đối với quản trị dữ liệu bản địa

CARE Principles for Indigenous Data Governance
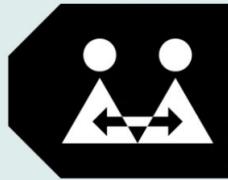
The current movement toward open data and open science does not fully engage with Indigenous Peoples rights and interests. Existing principles within the open data movement (e.g. FAIR: findable, accessible, interoperable, reusable) primarily focus on characteristics of data that will facilitate increased data sharing among entities while ignoring power differentials and historical contexts. The emphasis on greater data sharing alone creates a tension for Indigenous Peoples who are also asserting greater control over the application and use of Indigenous data and Indigenous Knowledge for collective benefit.

Protocol Labels

Protocol Labels outline traditional protocols associated with access to this material and invite viewers to respect community protocols.

TK Men Restricted
(TK MR)

TK Women Restricted
(TK WR)

TK Culturally Sensitive
(TK CS)

TK Secret / Sacred
(TK SS)

TK Verified
(TK V)

TK Non-Verified
(TK NV)

TK Seasonal
(TK S)

TK Women General
(TK WG)

TK Men General
(TK MG)

Case Study - Sydney Speaks

Australian
National
University

SCHOOL OF LITERATURE, LANGUAGES AND
LINGUISTICS
ANU College of Arts & Social Sciences

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Sydney Speaks Project

Sydney Speaks: Language variation and change in a diverse society

This project seeks to document and explore Australian English, as spoken in Australia's largest and most ethnically and linguistically diverse city – Sydney. The title "Sydney Speaks" captures a key defining feature of the project: the data come from recorded conversations between Sydney siders, as they tell stories about their lives and experiences, their opinions and attitudes. This allows us to measure how their lived experiences impact their speech patterns.

Sydney Speaks Licenses

A Data can be used by other researchers and excerpts can be played in public settings

B Data can be used by other researchers and excerpts cannot be played in public settings

C No access (no consent for sharing with other researchers)

D Data unavailable (not anonymised, transcription incomplete, no consent for including audio in web-based projects)
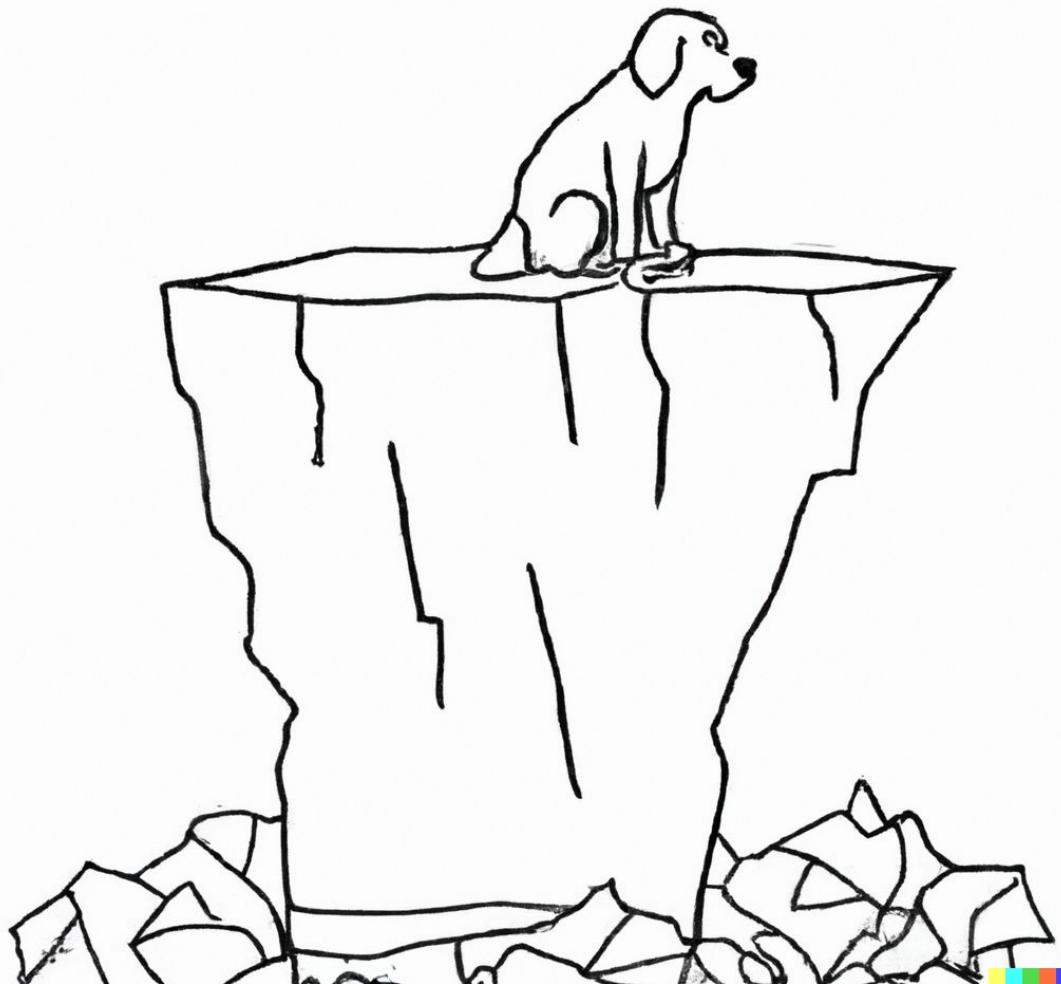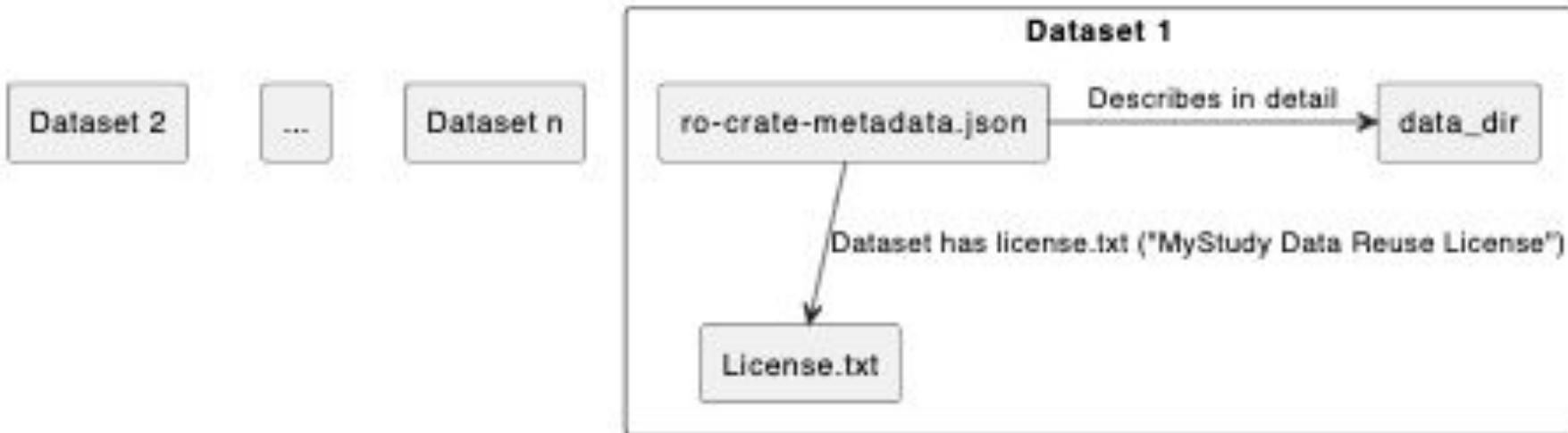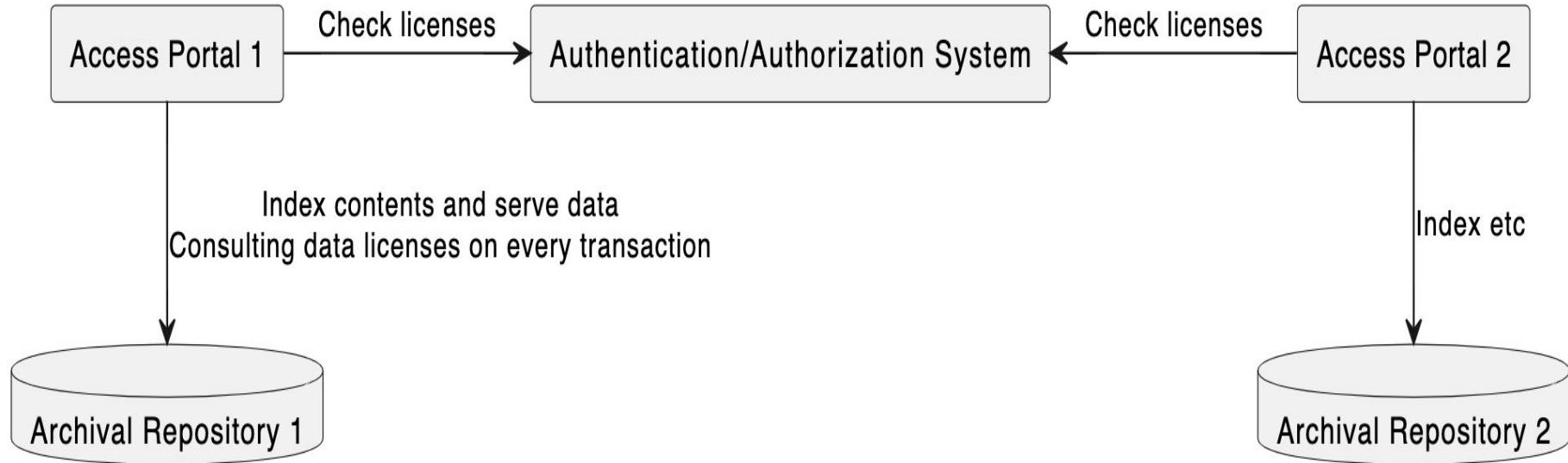
Archival Repository

Dataset 1

Dataset 2 ... Dataset n

ro-crate-metadata.json — Describes in detail → data_dir

Dataset has license.txt ("MyStudy Data Reuse License")

License.txt

Australian
TextAnalytics
Platform

SIGN IN WITH GITHUB

Admin login

User Memberships

Member of the following groups:

sydney-speaks-license-a

sydney-speaks-license-b

sydney-speaks-license-c

---

data.atap.edu.au/login

github.com/orgs/text-commons/teams

Search or jump to...   Pull requests   Issues   Marketplace   Explore

text-commons

Overview   Repositories   Projects   Packages   Teams 4   People 9   Settings

Find a team...

☐ Select all   Visib

☐ **sydney-speaks-license-a**   9 members
   https://www.dynamicsoflanguage.edu.au/sydne
   y-speaks/licence/A/

☐ **sydney-speaks-license-b**   4 members
   https://www.dynamicsoflanguage.edu.au/sydne
   y-speaks/licence/B/

☐ **sydney-speaks-license-c**   4 members
   https://www.dynamicsoflanguage.edu.au/sydne
   y-speaks/licence/C/

☐ **sydney-speaks-license-d**   4 members
   https://www.dynamicsoflanguage.edu.au/sydne
   y-speaks/licence/D/

CILogon

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CILogon CAs

CILogon: An Integrated Identity and Access Management Platform for Science

CILogon enables researchers to log on to cyberinfrastructure (CI). CILogon provides an integrated open source identity and access management platform for research collaborations, combining federated identity management (Shibboleth, InCommon) with collaborative organization management (COmanage). Federated identity management enables researchers to use their home organization identities to access research applications, rather than requiring yet another username and password to log on. Collaborative organization management enables research projects to define user groups for authorization to collaboration platforms (e.g., wikis, mailing lists, and domain applications). CILogon implements the AARC Blueprint Architecture and the REFEDS Assurance Framework.

CILogon supports over 4000 identity providers, including campus identity providers, GitHub, Google, and ORCID. Visit https://cilogon.org/ to view the full list of identity providers and to try logging on with your preferred provider. See our Add Identity Provider page for details on configuring your identity provider to work with CILogon. Visit https://demo.cilogon.org/ to see an example of how CILogon can be integrated with a web application. CILogon is a research and scholarship service provider in the InCommon federation, and CILogon is an InCommon Catalyst. CILogon is an open source project, with source code in GitHub.

For highlights of recent CILogon work, see:

- our April 2022 MAGIC presentation
- our July 2021 IAM Online webinar presentation
- our AAF Project with Australian BioCommons
- recent InCommon News about our support for NSF CloudBank
- recent InCommon News about our support for JWTs
- our June 2022 TNC22 presentation

REMS

README.md

⟳ FAILED

Resource Entitlement Management System

Resource Entitlement Management System (REMS) is a tool for managing access rights to resources, such as research datasets.

Applicants can use their federated user IDs to log in to REMS, fill in the data access application and agree to the dataset's terms of use. The REMS system then circulates the application to the resource owner or designated representative for approval. REMS also produces the necessary reports on the applications and the granted data access rights.

REMS is a Clojure+ClojureScript Single Page App.

REMS is developed by a team at CSC – IT Center for Science.

You can try out REMS using the publicly available demo instance at h

Getting started

- You can run the application with Docker
- or read the full development documentation
- or proceed to the installation instructions.

Releases

Currently, the REMS project aims to make small, frequent releases. Re
migrations where needed. Since REMS is undergoing active developn
compatibility for the API. However, all breaking changes are highlight

---

Catalogue **Applications** **About**   👤 Dr Peter Sefton   ➡ Sign out

Continue application

Unfinished applications:

Resource	Last activity ↓	
https://www.dynamicsoflanguage.edu.au/sydney-speaks/licence/A/	2022-10-06 11:38	View

Apply for access
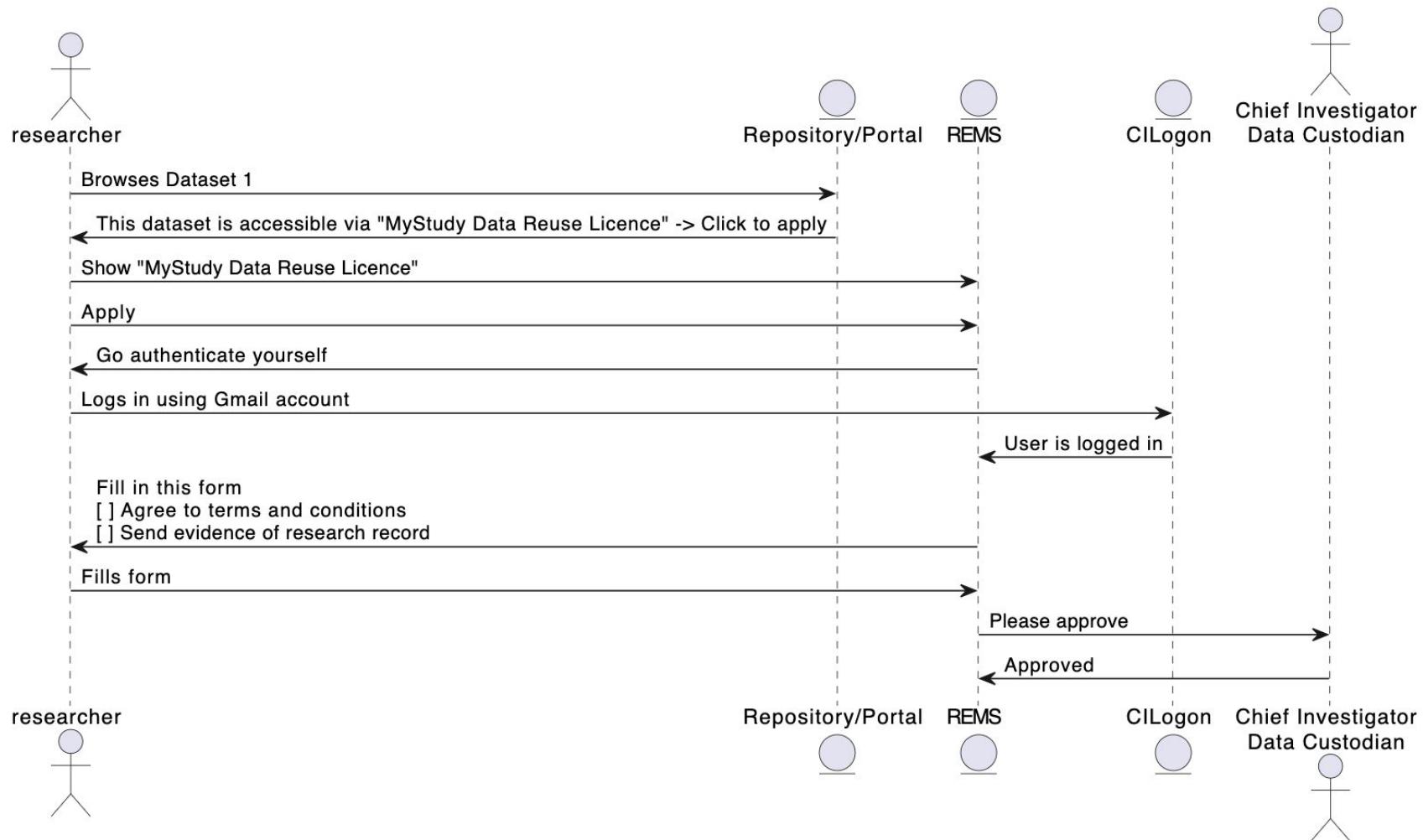
Search [   ]
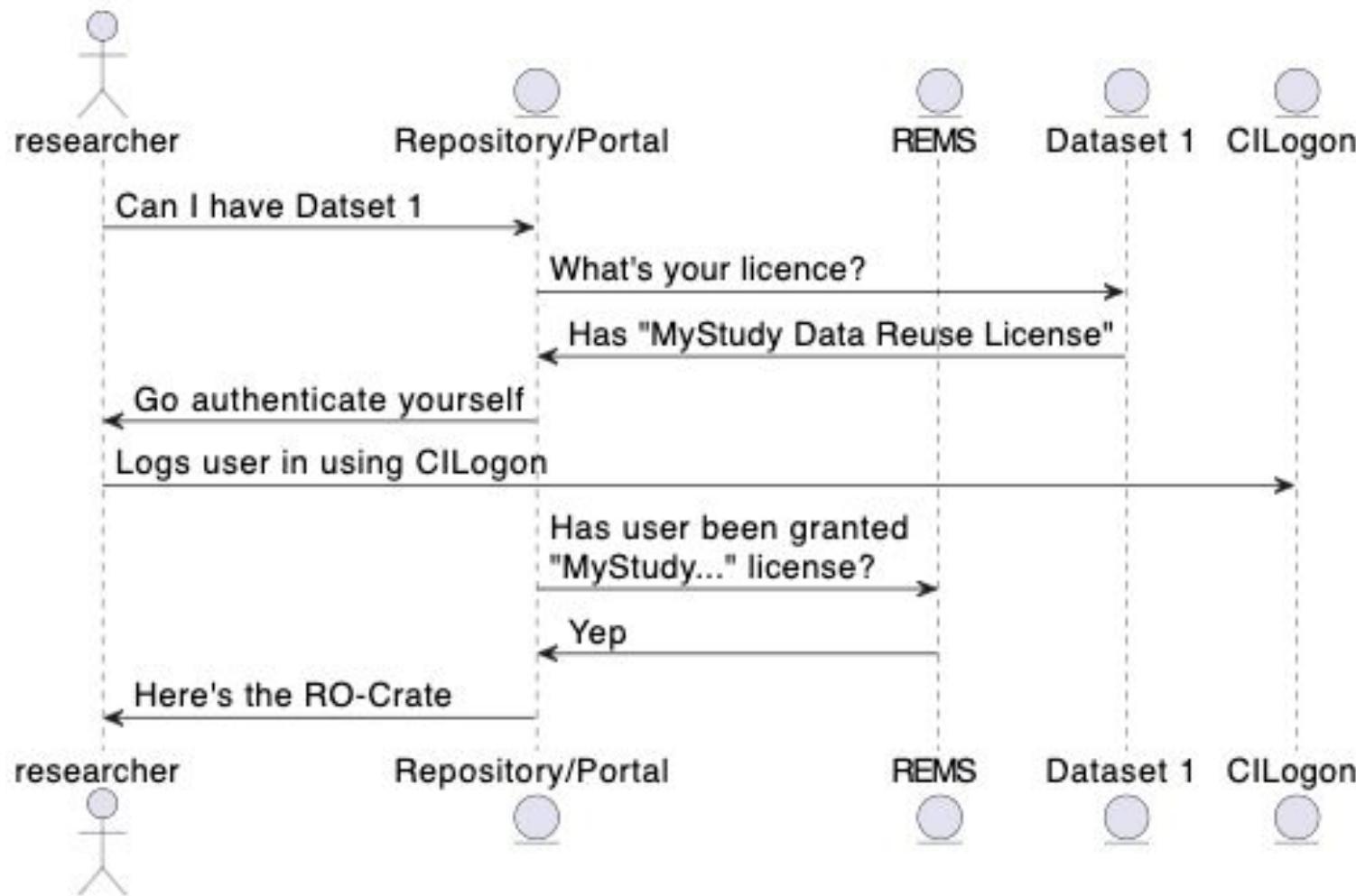
| Resource ↑		
https://www.dynamicsoflanguage.edu.au/sydney-speaks/licence/A/	⧉ More info	Apply
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https://www.dynamicsoflanguage.edu.au/sydney-speaks/licence/C/		Apply
https://www.dynamicsoflanguage.edu.au/sydney-speaks/licence/D/		Apply

Search [   ]

REMS Authorization: Applying for a licence

researcher — **Repository/Portal** — **REMS** — **CILogon** — **Chief Investigator Data Custodian**

researcher → Repository/Portal: Browses Dataset 1

Repository/Portal → researcher: This dataset is accessible via "MyStudy Data Reuse Licence" -> Click to apply

researcher → REMS: Show "MyStudy Data Reuse Licence"

researcher → REMS: Apply

REMS → researcher: Go authenticate yourself

researcher → CILogon: Logs in using Gmail account

CILogon → REMS: User is logged in

REMS → researcher: Fill in this form
[ ] Agree to terms and conditions
[ ] Send evidence of research record

researcher → REMS: Fills form

REMS → Chief Investigator Data Custodian: Please approve

Chief Investigator Data Custodian → REMS: Approved

researcher — **Repository/Portal** — **REMS** — **CILogon** — **Chief Investigator Data Custodian**

License Server w/ CILogon Authentication & REMS Authorization

researcher   **Repository/Portal**   **REMS**   **Dataset 1**   **CILogon**

Can I have Datset 1

What's your licence?

Has "MyStudy Data Reuse License"

Go authenticate yourself

Logs user in using CILogon

Has user been granted "MyStudy..." license?

Yep

Here's the RO-Crate

researcher   **Repository/Portal**   **REMS**   **Dataset 1**   **CILogon**

Demo

Next Steps in the AAF Engagement …..
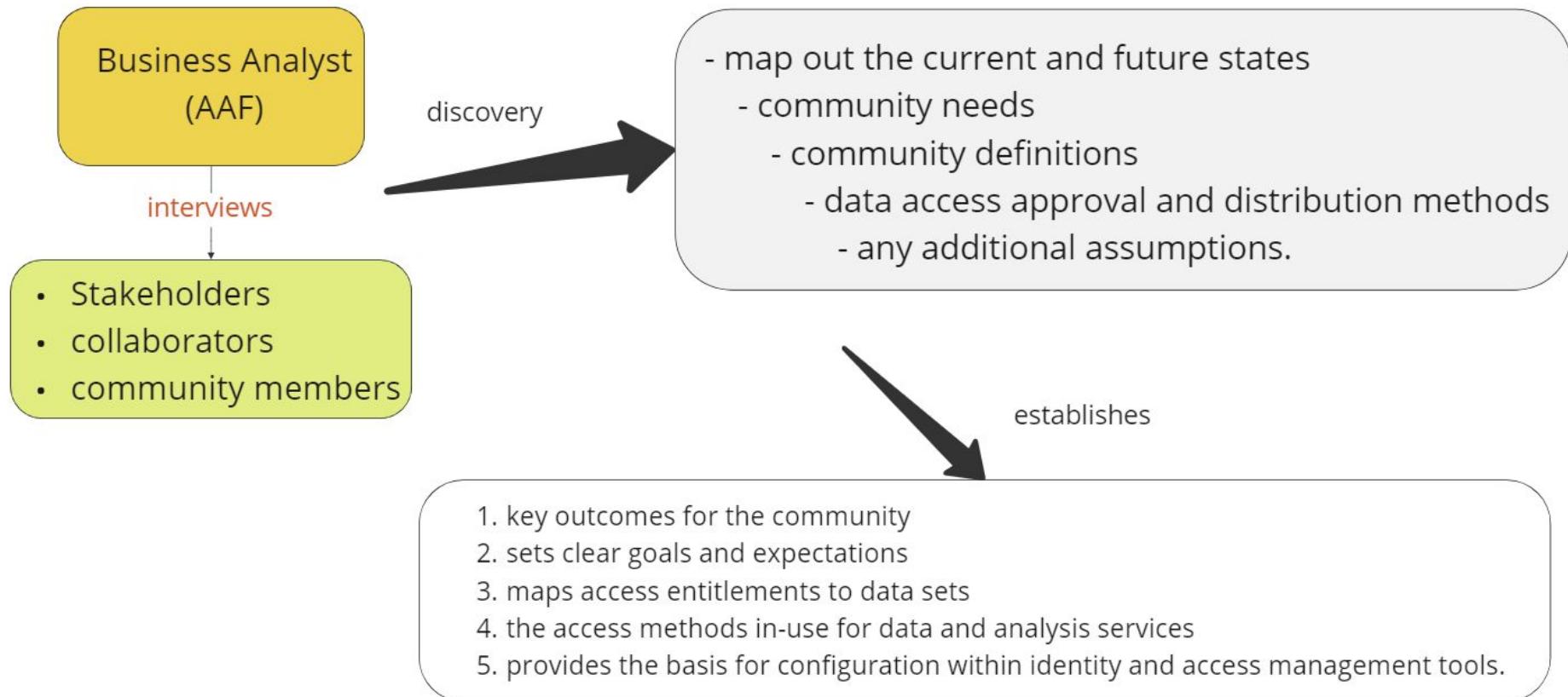
Revisit and consolidate the project's vision through interviews and engagement with

- stakeholders,
- collaborators and
- community participants

This next phase will provide the foundations for the development of policies to support the community. These will assist in creating a trusted community for access to sensitive data that supports the good practice and protocols.

These activities are outlined in the following slides …

The AAF's business analyst conducts interviews with stakeholders and community members to discover and formalise the community's processes and requirements

Business Analyst (AAF)

interviews

- Stakeholders
- collaborators
- community members

discovery

- map out the current and future states
  - community needs
    - community definitions
      - data access approval and distribution methods
      - any additional assumptions.

establishes

1. key outcomes for the community
2. sets clear goals and expectations
3. maps access entitlements to data sets
4. the access methods in-use for data and analysis services
5. provides the basis for configuration within identity and access management tools.

These feeds into the prototyping & implementing phase

Process

Requirements
- review background material
- interview subject matter experts
- validate and classify

Identify Requirements

Record new / updated reqs

Select priorities for prototyping

Test / review

Implement / pilot

Prototype

Production solution

Production