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CONNECTING RESEARCH,
ADVANCING KNOWLEDGE

Connecting Communities and Infrastructure to Advance Open Research on a Global Scale

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Premise

The global research enterprise depends on an infrastructure network that makes it possible for knowledge to be shared, discovered, used, and understood. These possibilities can only be fully realized when research infrastructure is open and interoperable, and when research infrastructure is understood in social as well as technical terms.

Outline

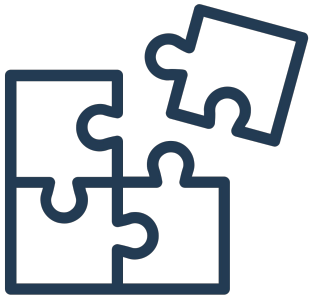
- Background: current & prior work
- Examples from California Digital Library, ROR, and DataCite
- Reflections on the future of global research infrastructure

My background

Central areas of focus

- Intersection of libraries, publishing, and research infrastructure
- Persistent identifiers and open metadata
- Partnerships and collaborations

Current role(s)



- Director of Strategic Programs & Partnerships at DataCite
- Leadership of DataCite Global Community & Services Team
- Director of ROR (Research Organization Registry)

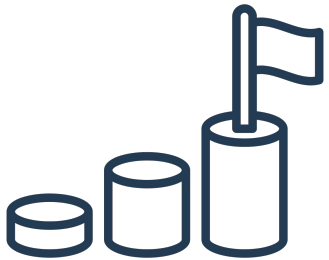
Community affiliations & activities

- OpenAlex Community Advisory Group
- Make Data Count Advisory Group
- US National PID Strategy NISO Working Group
- Open Citations Community Advisory Board
- PIDapalooza

Previous work

- California Digital Library
- University of California, Berkeley
- Public Library of Science (PLOS)

Key moments over the past decade +



- Open access
- Open data
- Open persistent identifiers
- Open metadata
- Open infrastructure

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Reflections from California Digital Library

California Digital Library (CDL)

- Systemwide library for the University of California
- Mission: “To provide transformative digital library services, grounded in campus partnerships and extended through external collaborations, that amplify the impact of the libraries, scholarship, and resources of the University of California”
- Key programs: licensing and collections, library discovery, publishing, archiving, and digital collections, and digital curation

UC3 – UC Curation Center

- Focus on digital preservation, data publishing, research data management, and persistent identifiers
- Persistent identifiers product portfolio focused on infrastructure and services for Crossref DOIs, DataCite DOIs, ARKs, N2T resolver, ROR, and ORCID API integrations
- Participation and collaborations in global PID community through membership and partnership activities
- Focus on being a partner, not a vendor

Strategic orientation – CDL UC3

- Multiple pathways toward open, with infrastructure as a key pillar
- Key initiatives focused on supporting CDL activities, University of California campuses and libraries, and external collaborations
- Leverage infrastructure and collaborations for global impact in alignment with local institutional strategy

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Reflections from ROR (Research Organization Registry)

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Research Organization Registry

- Open, free, curated database of persistent identifiers and metadata for 120,000+ research and funding organizations
- Collaboration between California Digital Library, Crossref, and DataCite
- Data and APIs used in publishing and repository systems and other integrations to disambiguate and standardize institutional data and to connect institutions to publications and other outputs

ROR origins and journey

- Emerged through multi-organization collaborations in 2016 to develop an open solution to institutional identification
- Used data from GRID as a seed file and launched initial prototype in 2019
- Subsequent work focused on additional technical development, curation policies and processes, and governance and sustainability model, all informed by community input along the way

Strategic orientation – ROR

- Start with a specific use case and scope
- Deliver a concrete and usable infrastructure solution as quickly as possible and then keep striving to make it better
- Leverage openness and community input as strategic advantages

Reflections from DataCite

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- Community and infrastructure for research organizations to make research outputs and activities more discoverable
- Services: membership model, DOI registration, metadata schema, open metadata and data file, open tools for discovery and retrieval
- 1700+ organizations, 100 million DOIs
- Small organization - 22 people on staff

DataCite focus

- Making membership accessible for all types of organizations globally
- Improving the precision and utility of DataCite metadata to support discovery, reuse, and impact
- Collaborations through memberships and partnerships to support metadata contributions, metadata connections, metadata consumption, and metadata enrichments

DataCite strategic orientation

- Evolve and adapt while staying true to values and community ethos
- Bring focus and innovation to key offerings (community and metadata)
- Leverage collaborations to extend reach, support local initiatives, and address shared problems at scale

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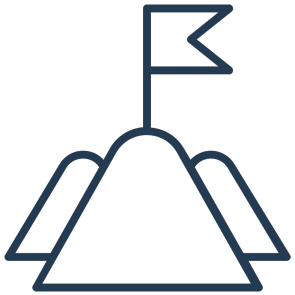
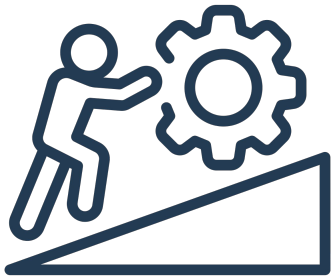
The future of open research infrastructure: perspectives and reflections

The present moment – successes



- Open infrastructure and open research have become more mainstream topics
- New policies and guidelines
- Global conversations & collaborations
- Key demonstration cases and examples

The present moment – challenges



- Unevenness of adoption and implementations
- Metadata quality challenges
- Duplication and overlap
- Economic and political volatility
- Promise and uncertainty of emerging technology
- Change takes time

Key lessons & opportunities

- **Power of collaboration**: leverage existing resources, share expertise, learn from each other, invest in relationships
- **Think smaller**: focus on specific problems, identify iterative milestones and deliver concrete improvements, value progress over perfection
- **Prioritize openness**: establish trust, build alignment, and create efficiencies

Conclusion

The global research enterprise depends on an **infrastructure network** that makes it possible for **knowledge to be shared, discovered, used, and understood**. These possibilities can only be fully realized when research infrastructure is **open and interoperable**, and when research infrastructure is understood in **social as well as technical** terms.

Audience considerations

From your perspective, what are the biggest challenges facing open research and/or open research infrastructure?

Can any of the examples mentioned today be useful in addressing these challenges?

THANK YOU!

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