Research Information at California Digital Library

Authored by the Open Research Information (ORI) Connect group

December 13, 2024

Executive summary

Inspired by the Barcelona Declaration on Open Research Information and aligned with the University of California's open scholarship efforts, this report was written by the Open Research Information Connect (ORI Connect)[1] team, an internal, cross-functional group within the California Digital Library (CDL)[2]. The report provides an overview of CDL's c**urrent activities, contributions, and recommendations for future work** within the area of research information infrastructure. It reflects on the opportunities and challenges of transitioning from closed to open research information (ORI) systems and outlines actionable strategies for CDL's continued leadership in this space.

Current Use of Research Information at CDL

CDL relies on both open and closed research information systems to fulfill its mission across key program areas. Tools and services which provide data at a research object level support Business Intelligence (tracking publishing trends, negotiating transformative agreements and informing open access strategy), Discovery (enhancing metadata to improve access and discoverability for UC research outputs) and Identification (leveraging ORCID, ROR, and DOIs to ensure accurate attribution and interoperability across systems). Tools and services which provide information related to managing research objects include Source Detail databases (journal lists, transfer title lists, etc.) and Standards (information about how research is cataloged).

CDL Contributions to the Open Research Information Landscape

CDL works to shape the global research information ecosystem by supporting open infrastructure and promoting best practices in Persistent Identifiers (leadership in DataCite, Crossref, ROR, ARK, and other PIDs underpins open infrastructure and strengthens UC's contributions to open research), Advocacy and Standards (CDL works to develop national-level policies and standards, including the U.S. National PID Strategy, and advances data metrics through Make Data Count) and Open Metadata (collaborative initiatives like the COMET Taskforce aim to improve metadata quality, ensuring discoverability and equity in the research landscape). These efforts position CDL as a leader in the transition toward open research information.

High-Priority Opportunities and Needs

CDL should enhance its impact by focusing on expanding PID Adoption (promote broader use of ROR and ORCID across UC and beyond), metadata Enrichment (strengthen data quality in Crossref, DataCite, and

[1] CDL's CONNECT process applies a portfolio evaluation and management approach to efforts where CDL's investment is distributed across multiple programs, with the goal of clearly defining our desired portfolio impact and aligning all activities around it. More information is available at https://cdlib.org/about/mission-vision-and-values/ and https://cdlib.org/wp-content/uploads/2019/01/Strategic_Vision_Connect_Process.pdf

[2] California Digital Library (cdlib.org) is a part of the University of California Office of the President (ucop.edu). CDL's mission is 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. CDL aims to work as a community to continually assess and apply our shared values to our everyday work and advance issues of equity and inclusion.

other systems), supporting open alternatives (develop and pilot workflows to transition from closed systems to open platforms), advocating for change in closed systems (leveraging our size and strength to persuade legacy vendors to adopt more open practices) and campus Integration (foster seamless workflows and user-friendly training to maximize the adoption of open tools across UC campuses).

Recommendations and Next Steps

To build on its successes and address identified gaps this report recommends that CDL should:

1. **Support system-wide adoption**: Support the further integration of ORI into CDL services and campus workflows, ensuring access to tools and infrastructure to enhance research, discoverability, and impact.
2. **Pilot open alternatives**: Develop and test scalable, open solutions to replace closed systems and demonstrate the feasibility and advantage of open research infrastructure.
3. **Negotiate for more openness in existing systems:** Work with publishers and/or vendors of legacy systems to advocate for more open practices and integrate ORI principles into contracts and negotiations.
4. **Invest in metadata quality and completeness**: Enhance metadata quality and completeness across CDL services to improve discoverability and equity in research information.
5. **Enhance Partnerships**: Strengthen collaborations with key stakeholders and explore new alliances.
6. **Sustain Advocacy**: Continue to influence national and international ORI strategies by embedding CDL values and advocating for equitable, open research practices.

CDL is uniquely positioned to continue to facilitate the transition to open research information, leveraging its expertise and partnerships, as well as the size, breadth and the UC coalition's position of leadership in this area, to drive innovation and equity. This report charts a path forward, balancing immediate priorities with long-term investments in infrastructure, advocacy and collaboration. By embracing these recommendations, CDL will continue to advance open scholarship and transform the global research information landscape.

Background and context

California Digital Library (CDL) is committed to advancing open research and scholarship; this commitment is realized in part through CDL's participation and leadership in services, initiatives and strategies to achieve a more open and sustainable research and scholarly communication landscape. In service of this goal, the CDL charged a team through its CONNECT process. The resulting ORI Connect group was charged to investigate the ways in which closed research information currently underpins CDL work, including key CDL open scholarship efforts, and how CDL and others can transition to and support open research information (ORI).

Research Information & Open Research Information

Research information is information (metadata) about research. Research information can be bibliographic metadata; metadata on software, data, samples and instruments; funding and grant information; and information on organizations and research contributors.[3]

Open research information is information that meets this definition and is free to access and does not have restrictions placed on its reuse. Open research information should ideally adhere to the FAIR principles of findability, accessibility, interoperability, and reusability.[4]

Barcelona Declaration on Open Research Information

In late 2023, an international group of research information experts developed the Barcelona Declaration on Open Research Information to advance openness of research information. The drafters noted that the scholarly community "monitor[s] and incentivize[s] open science using closed data" and that these closed data sources have structural biases that de-emphasize languages, regions, and research agendas that are less well resourced.

Signatories commit to the following:

1. We will make openness the default for the research information we use and produce
2. We will work with services and systems that support and enable open research information
3. We will support the sustainability of infrastructures for open research information
4. We will support collective action to accelerate the transition to openness of research information[5]

The Barcelona Declaration outlines a critically important vision for the research information landscape; While the size and complexity of the UC can create significant challenges to meeting these goals on a specific timeline,CDL does have the opportunity to advance the Declaration's goals in the short and long term through a number of activities.

[3] Source: https://barcelona-declaration.org/definitions/#research-information
[4] Source: https://barcelona-declaration.org/definitions/#open-research-information
[5] Source: https://barcelona-declaration.org/

The research information landscape: current and emerging activities and trends

Discussions in the ORI Connect group and with CDL colleagues highlighted the complexity of the current research information landscape. Of particular note is the fact that most closed research information services (those that require payment to access, and may impose restrictions on how their data is (re)used) provide access to and are reliant on research information that is open, and are used to help support CDL's goals promoting open scholarship at UC and beyond.

The research information landscape is populated by a diverse array of platforms, tools, and services designed to support the discovery, analysis, and dissemination of scholarly work. These include well-established proprietary systems, as well as open initiatives. Each offers unique capabilities, from citation analysis and bibliographic tracking to integration with persistent identifiers like DOI, ROR, and ORCiD.

In recent years, open research information platforms have gained momentum, spurred by community calls for transparency, accessibility, and sustainability. The Barcelona Declaration on Open Research Information has further galvanized efforts to prioritize building and adopting open systems. A leading example is OurResearch's OpenAlex, which has emerged as an impetus and locus for work related to the transition to ORI. Open systems like OpenAlex support data and APIs that can serve as the foundation for other services, and, in some cases, are disintermediating those from which research information has been traditionally derived.

Current use of research information at CDL

To understand how research information is used at CDL, the ORI Connect conducted a landscape analysis by interviewing colleagues across all CDL program areas. Many projects at CDL rely on a variety of closed and open research information tools and services to support services that are critical to the CDL and UC Libraries missions. In reviewing the information gathered through these interviews, the ORI Connect identified five key uses of research information at CDL. Below are high-level overviews of how CDL uses research information to support these areas, gaps in functionality at a landscape level, and examples of tools that are used across CDL.

Business intelligence

CDL relies on different resources to provide research information for business intelligence purposes, including statistics on usage of content, data reported by vendors about the outcomes of agreements (e.g. transformative agreements), and institutional research data to help understand behavior of CDL and UC users, authors, and communities. This information allows CDL programs to track and understand scholarly publishing and research trends within UC and globally, which guides OA and transformative agreement strategy.

Most of the tools that support CDL's business intelligence needs are considered highly important and even critical to the programs' work; however, the business intelligence services currently available do not meet all of CDL's needs. Interviewees specifically noted that additional normalization of data to facilitate

data synthesis across various services would benefit CDL work on transformative agreements and help guide strategy-setting. While many of these sources are closed by necessity, as they represent internal reporting systems with data that CDL wouldn't share publicly, additional open data sources would benefit both end users and CDL by easing the burden on faculty participating in OA policies and on CDL staff managing and monitoring author behavior.

Discovery

CDL groups leverage a number of research information sources to discover or harvest information to display, augment, or enhance research information in a CDL- or UC-provided service. Sources include journal, funding, and bibliographic information resources as well as systems and services that aggregate such information for the purposes of research and analysis, and for display in CDL and UC systems. These sources are used in a variety of ways: verifying dataset deposits in federal agencies' public access repositories; identifying UC publications and harvesting them for eScholarship deposit; enhancing metadata in CDL-maintained systems and sharing back links to full text articles to enhance access to these materials by the wider community; and supporting discovery of and access to UC print and electronic collections by students and scholars.

Several resources and systems are used across multiple CDL programs for discovery and related purposes: PubMed, Symplectic Elements, Alma, ProQuest Dissertations and Theses database and OCLC APIs were all cited by multiple interviewees as being useful to their work. These resources are also used by campus colleagues and users, directly or indirectly, for discovery of scholarly materials for research and teaching but also to fill out publications data in researcher profiles systems, websites, and faculty reporting systems.

Identification

CDL groups use open research information infrastructure to create, harvest, and use persistent identifiers to disambiguate research grants, research outputs, contributors, and institutions in a CDL- or UC-provided service. These tools also support proper citation of research outputs, ease workflows for depositing research into UC repositories and verify author affiliations.

EZID, Crossref, DataCite, ORCID and ROR are used by multiple CDL groups and UC campuses to support clear identification of authors, outputs and objects. These resources also have significant intersections with campus and end user activities: UC authors use IDs created by these organizations to cite their and others' research outputs and identify themselves and co-contributors in different systems, and are able to take advantage of improved linking of their outputs within research information infrastructure that supports these IDs.

Source detail databases

These resources represent research information sources that groups at CDL draw from when synthesizing information on a particular object for inclusion in a CDL- or UC-provided service. Primary examples at CDL include data sources for catalogers to build catalog records for inclusion in Alma; to support collections analysis and retention decision making; and supporting subscription management. CDL teams

both also contribute data back to key source detail databases, ensuring CDL-stewarded information is available to the wider community for local use and decision-making.

Standards

CDL regularly uses resources that provide information on cataloging standards which, while not research information as defined above, dictate how CDL contributes to the global research information landscape through metadata creation.

CDL contributions to ORI

The current research information landscape requires CDL to use a mix of open and closed sources, tools and services to meet business needs. However, gaps remain in data normalization, metadata quality and integration across workflows. As part of its commitment to advancing open research and scholarship, CDL works to shape the global research information ecosystem by supporting open infrastructure and promoting best practices in persistent identifiers, advocacy and standards and open metadata. These efforts position CDL as a leader in the transition toward open research information.

Persistent Identifiers

CDL's most substantial contributions to the ORI landscape are in leadership of persistent identifier services, namely DataCite, Crossref, and ROR (jointly led with DataCite and Crossref), as well as ongoing support of Archival Research Key (ARK) infrastructure. These first three groups form the core of almost all other open infrastructure, as well as that in many closed commercial platforms, while the latter serves local and distributed identification use cases.

DataCite

As a founding member of DataCite and through recent board leadership, CDL has helped the organization evolve from its initial scope of enabling data citation practices to now being a global leader in persistent identification. This has led not only to the growth and standardization of data citation, but also to the rationalization of data sources and identifier systems external to the DOI ecosystem that are increasingly being migrated into its infrastructure, such as IGSN identifiers.

CDL serves as the lead organization of the UC's consortium in DataCite, providing extensive support to UC campus partners in DOI registration activities and associated best practices. CDL consults frequently with campus libraries on continuous development work to ensure that they are properly supported in their direct engagement with researchers, and that registrations remain aligned with new DataCite functionality, schema versions, and resource types. CDL commonly acts in a testing capacity for DataCite, piloting new features to guarantee that new registration offerings are stable and consistent with the needs of UC campuses and the broader community. In this capacity, CDL recently piloted DataCite's support for award DOIs, in collaboration with the UC Research Grants Program Office (RGPO). This project greatly improved the visibility and discoverability of UC-funded research in services that consume DOI metadata, while at the same time demonstrating DataCite's viability for this use case, and ultimately resulted in the registration of DOIs for more than 7,000 current and historic grants, representing 30 years of the RGPO's funding activities. Such activities position CDL not only at the forefront of new uses of

persistent identifiers, but also provide opportunities for CDL to shape the overall policy and guidance that surrounds them.

Acting as a consortium lead also entails participation in working groups and instructional sessions, where CDL serves to build capacity and encourage best practices among DataCite membership, which includes globally competitive research institutions and those in under-resourced countries that lack similar communities of practice. Continued investment in and partnership with DataCite ensures that CDL remains at the forefront of innovation and support for open research information, the success of which relies so heavily on DataCite's PID infrastructure and its widespread adoption.

Crossref

CDL's leadership Crossref's board highlights how deep institutional knowledge can positively shape the strategic direction of open research infrastructure. CDL brings its perspective as an institutionally-supported publisher, serving as a balance to the perspectives of larger commercial entities, while emphasizing the need for global equity and participation in the use and availability of PIDs. This has proven particularly important in addressing Crossref's sustainability challenges. CDL's experience balancing these concerns has guided decisions about resourcing models that can support publishers of all sizes, with particular attention to the needs and sensitivities of smaller organizations and those in the Global South.

CDL's practical publishing experience has also influenced Crossref's approach to its service development and metadata quality initiatives. Drawing from CDL's direct experience with these workflows and the institutional capacity and training they require, CDL consistently advocates for community initiatives that balance metadata quality against overall access. This has led to focused, evidence-based criteria for supporting tools and platforms that can produce higher quality metadata at the same or improved levels of access through better defaults.

This commitment is demonstrated through CDL's substantial support of the Janeway platform, which underlies the publishing team's journals platform, and where a multi-year funding commitment to the Open Library of Humanities (OLH) is complemented by extensive in-kind contributions. CDL is Janeway's leading external contributor, both financially and in terms of staff time dedicated to governance and product development, including its ORCID implementation and journal migration tools. This technical work is complemented by CDL's broader engagement with OLH through participation in UI/UX reviews, experience-sharing panels and workshops, cross-team training initiatives and active participation in Janeway's Governance Working Group.

CDL's engagement with Crossref strengthens the organization's role as a meeting ground where publishers of different sizes and models align on a shared framework for persistent identification and metadata standards. CDL's participation in board and membership activities ensures these services remain accessible across the entire spectrum of scholarly publishing, without undue burdens, through participation on the board and in membership activities. Given Crossref's place in the global scholarly communications ecosystem, CDL's continued investment in the organization has wide-ranging impacts on

discovery, interoperability and the future development of open infrastructure and open research information.

Research Organization Registry (ROR)

CDL's investment in ROR has been high-impact and has allowed ROR to become a catalyst for change in the research information landscape. By serving as infrastructure for infrastructure, ROR has allowed myriad other services to redirect resources away from purchasing or maintaining an institutional data model and toward pursuing more rapid and constructive actions that lessen reliance on closed research information and facilitate the transition to open research information. Through its provision of a single, continuously improved source of truth for organizational metadata, ROR has helped rationalize the identification of organizations across scholarly communications. This information had previously been fragmented and bound to closed, commercial systems or systems that use closed data derived therefrom. ROR's fully unrestrained data, freely-provided curation activities and highly-available API services have dramatically shifted the landscape away from deeply-embedded inequities and toward equal access to standardized institutional identifiers, where all organizations, regardless of size, location or resources can participate more fully in the global research community.

Similar to DataCite, CDL's work on ROR also greatly extends its reach in shaping international PID and ORI policy. Through leadership of ROR, CDL has newly established or strengthened relationships with government agencies, funders, research organizations and open and closed service providers worldwide. This positions CDL as trusted advisors and necessary participants in almost every initiative related to this work, particularly as countries, institutions and services increasingly move to implement ROR-based research assessment and reporting frameworks, either directly or through use of services that leverage ROR infrastructure, such as OpenAlex.

Archival Research Keys (ARKs)

CDL's role in developing the ARK identifier system and its establishment of the ARK Alliance demonstrate commitment to supporting a diverse range of persistent identifier activities, including those outside the DOI ecosystem. Through its work on ARKs, CDL transformed what began primarily as a self-hosted identifier solution for internal services into a community-supported framework for high-volume, local persistent identification, primarily in use in archival settings.

ARKs underlie some CDL services and are used by campuses for project-based work, primarily where DOI registration is infeasible because of incongruence with DOI metadata schemas, for example identification of digital objects in Calisphere, preservation activities in Merritt and campus projects such as the National Exoneration Registry. ARK use by campuses has helped CDL develop expertise in related implementation and support activities, which CDL leverages to provide overall guidance to the ARK community. This experience also helps inform CDL's collaborations with organizations in other regions.

Advocacy

CDL's advocacy work leverages its experience to advance broader adoption of ORI, primarily through strategic policy development and standardization efforts. Through these initiatives, CDL helps shape national- and international-level policies and promotes best practices.

U.S. National PID Strategy

One major project has seen the development of an implementation framework that addresses persistent identification needs for all research activities in the U.S. Through stakeholder engagement with federal agencies, research institutions, and infrastructure providers, the US National PID Strategy project aims to build consensus on implementation priorities and use of PID services among all organizations. CDL's role coordinating these activities builds on and leverages its extensive experience with and leadership on developing PID infrastructure, and makes use of established relationships and technical expertise to advance national-level policy guidance. This work positions CDL as a bridge between policy requirements and practical implementation needs, supporting the broader transition toward open research information.

Make Data Count

As a leading member of the Make Data Count, CDL has helped advance the project's core mission of developing standardized approaches to research data metrics and usage tracking. In collaboration with DataCite and other partners, CDL has contributed to the development of the COUNTER Code of Practice for Research Data[6] and supported the implementation of the DataCite Usage Tracker,[7] allowing for consistent collection and reporting of data usage statistics across platforms.

CDL's ongoing participation in Make Data Count's community initiatives helps drive forward its strategic roadmap for enhancing the visibility of research data and recognition of its impact. This engagement ensures that tools and standards for data citation continue to evolve to meet the needs of the UC system, as well as all other stakeholders in the research community.

Recommendations and next steps

The following recommendations outline actionable steps for CDL to strengthen its leadership in open research information. Organized by key areas of focus, these recommendations provide a balance of near-term priorities, longer-term investments and additional discussion points to guide strategic planning. Each reflects CDL's dual role as contributors to UC-specific initiatives and global advocates for open research information.

1. **Support system-wide adoption**: Support the integration of ORI into CDL services and campus workflows, ensuring access to tools and infrastructure to enhance research, discoverability, and impact.
    a. *Near-term*
        i. Review existing CDL tools and workflows to identify opportunities for incorporating ORI. For example, integrate EZID functionality into eScholarship to create DataCite DOIs for repository content. *(UC-facing)*
        ii. Develop a targeted outreach campaign to raise libraries' and other UC stakeholders' awareness of ORI resources and their benefits. *(UC-facing)*

[6] https://www.countermetrics.org/coprd/
[7] https://support.datacite.org/docs/datacite-usage-tracker

iii. Facilitate partnerships with UC units to streamline data connections to ORI tools for enhanced integration with UC workflows. *(UC-facing)*
iv. Launch a system-wide discussion to encourage broader use of ORI tools and infrastructure, reducing barriers to adoption across disciplines. *(UC-facing)*

b. Longer-term

i. Implement system-wide integration of ORI tools and workflows across all UC campuses, including standardizing metadata quality and PID adoption processes. *(UC-facing)*
ii. Develop centralized support infrastructure to enhance UC partners' capacity-building efforts around ORI. *(UC-facing)*
iii. Align CDL's messaging with the UCOLASC Declaration of Rights and Principles to Transform Scholarly Communication "10. No closed metadata" to embed ORI into UC's strategic goals. *(UC-facing)*
iv. Engage campuses in sustained conversation to support the use and promotion of ORI tools and best practices in systems across UC campuses. *(UC-facing)*

c. *Additional considerations*: How can CDL address the technical and institutional barriers to ORI adoption in ways that scale across the system? How does CDL establish regular feedback channels with campus stakeholders to ensure ORI tools are meeting their needs?

2. **Pilot open alternatives**: Develop and test scalable, open solutions to replace closed systems and demonstrate the feasibility and advantage of open research infrastructure.

a. Near-term

i. Partner with ORI Tools on a pilot project exploring its integration into CDL workflows, focusing on use cases like business intelligence and metadata quality. *(External)*
ii. Evaluate the feasibility of a CDL or system-wide subscription to ORI Tools. *(UC-facing)*
iii. Design a small-scale pilot with ORI Tools to test replacing specific closed systems. *(External)*

b. Longer-term

i. Conduct large-scale pilots to fully replace closed systems with open alternatives in key CDL workflows, using insights from earlier initiatives. *(UC-facing)*
ii. Develop benchmarks to establish a "threshold of goodness" for transitioning to open alternatives and outline pathways to achieve it. *(UC-facing)*
iii. Integrate ORI workflows into key UC services. *(UC-facing)*

c. *Additional considerations*: What's the best way to design pilots that generate buy-in across UC while demonstrating clear cost and efficiency benefits? Should CDL explore co-development opportunities with ORI Tools to bridge current functionality gaps?

3. **Negotiate for more openness in existing systems:** Work with publishers and/or vendors of legacy systems to advocate for more open practices and integrate ORI principles into contracts and negotiations.
    a. *Near-term*
        i. Charge a cross-CDL group with developing model language for ORI requirements in CDL contracts, RFPs, and vendor negotiations. *(UC-facing)*
        ii. Identify opportunities within existing closed systems to integrate ORI principles, such as leveraging open metadata contributions. *(UC-facing)*
    b. *Longer-term*
        i. Publish model language and negotiation tactics publicly to put pressure on vendors and inspire others to pilot hybrid models that incorporate ORI practices in their negotiations. *(External)*
        ii. Determine the cost and use cases for all licenses to Web of Science, Scopus, and Dimensions across the UC system to help inform future decisions and strategies *(UC-facing)*.
    c. *Additional considerations*: How can CDL push for more openness in current closed tools without disrupting critical CDL workflows and system-wide services? What collaborative strategies can CDL use to encourage vendors to embrace greater transparency and interoperability?

4. **Invest in metadata quality and completeness**: Enhance metadata quality and completeness across CDL services to improve discoverability and equity in research information.
    a. *Near-term*
        i. Audit existing CDL tools to identify gaps in metadata completeness and quality. *(UC-facing)*
        ii. Organize a metadata cleanup hackathon to improve metadata quality for applicable CDL services, engaging UC researchers and staff. *(UC-facing)*
        iii. Review CDL tools to identify user touchpoints to communicate the benefits of providing comprehensive research to support a healthy ORI ecosystem. *(UC-facing)*
    b. *Longer-term*
        i. Build UC awareness of and capacity to create and use ORI, in alignment with UCOLASC Declaration of Rights and Principles to Transform Scholarly Communication "10. No closed metadata". *(UC-facing)*
        ii. Expand CDL's involvement in metadata enrichment initiatives to drive equitable and standardized metadata practices. *(UC-facing)*
        iii. Develop tools and training materials to build UC's capacity for creating, sharing, and using high-quality PID metadata. *(UC-facing)*
    c. *Additional considerations*: Should CDL advocate with publishers and vendors to prioritize open metadata contributions and unsupported metadata elements CDL feels critical during negotiations?

5. **Enhance Partnerships**: Strengthen collaborations with key stakeholders and explore new alliances.
    a. *Near-term*
        i. Pursue participation in OpenAlex's inaugural advisory group to shape its development in alignment with CDL needs. *(External)*
        ii. Strengthen collaborations with DataCite, Crossref, ORCID, ROR and Janeway to support mutual priorities and align their work with CDL's ORI goals. *(External)*
    b. *Longer-term*
        i. Deepen investments in ROR and related PID initiatives to ensure their sustained growth and adoption. *(External)*
        ii. Explore new alliances with emerging ORI stakeholders to broaden CDL's impact in the global research information ecosystem. *(External)*
    c. *Additional considerations*: Would a regular review of ORI-related partnerships help CDL align collaborations with its strategic goals and identify areas for deeper engagement?

6. **Sustain Advocacy**: Continue to influence national and international ORI strategies by embedding CDL values and advocating for equitable, open research practices.
    a. *Near-term*
        i. Participate in Barcelona Declaration Working Groups to contribute to global ORI strategies and ensure alignment with CDL's goals. *(External)*
        ii. Continue national advocacy efforts through Make Data Count and the U.S. National PID Strategy. *(External)*
    b. *Longer-term*
        i. Collaborate with international stakeholders to harmonize ORI practices and ensure equitable representation across regions and disciplines. *(External)*
        ii. Contribute CDL resources to hosting workshops, publishing white papers and presenting at conferences. *(External)*
    c. *Additional considerations*: How can CDL partner with like-minded organizations/libraries to amplify its voice in the national and global ORI communities? Should CDL periodically assess its advocacy strategies to ensure they stay relevant and impactful as the landscape evolves? How can CDL learn about and support the ORI advancements and practices in other parts of the world and bring that knowledge back to UC?