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Engaging Stakeholder Networks to Support Global OA Monograph Usage Analytics

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From the Field

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Abstract

Just as COVID-19 brought in-person meetings to a halt, the Open Access eBook Usage (OAeBU) Data Trust transitioned from a two-year stakeholder planning project to a two-year global pilot tasked with developing infrastructure use-cases, software code, sustainability models, and governance mechanisms to better enable the usage and impact analyses of OA monographs. This report introduces the array of stakeholders involved in OA book analytics and summarizes how this data trust effort worked to engage them during the first third of the project. Virtual network building and engagement strategies such as online stakeholder-oriented communities and collaboration tools are discussed alongside traditional strategies like interviews and proof of concept partnerships. The report concludes with observations made to date as the team explores whether a global usage data trust can meet the needs of OA monograph creators, editors, publishers, publishing service providers, libraries and sponsors.

Keywords: Open Access, analytics, metrics, stakeholder networks, data trust

Introduction

This *From the Field Report* provides a snapshot of the virtual collaboration mechanisms and leadership networks leveraged during the first third of the *Developing a Data Trust for Open Access eBook Usage* project, commonly referred to as the OA eBook Usage (OAeBU) Data Trust. Supported by The Andrew W. Mellon Foundation, the project is working from January 2020 to December 2021 to build and pilot a data trust to facilitate usage reporting across OA book publishing supply chain stakeholders.

OA Book Analytics

Multiple Sources of Usage Data

As widely accessible digital objects, Open Access (OA) monographs lead to the creation of usage data as users access and engage with both the digital content itself and the full range of media that connects people to the content, from aggregation platforms and download websites to referral links and social media. Such data has been used to examine the performance of re-

gional[1] and institutional[2] OA policies, understand OA monograph usage across the OPERAS network and JSTOR,[3] inform press marketing operations with engagement trends,[4] and allow publishers to compare the reach of OA against non-OA titles.[5] Yet, leveraging usage data for such analyses of OA books is not straightforward. Impact-driven decision-making is hindered by the effort required to aggregate and prepare the wide array of usage and impact data sourced from across the ecosystem of usage data providers, as is illustrated beautifully in a forthcoming work produced for the *Developing a Data Trust for Open Access eBook Usage* project (see figure 1).[6]

Figure 1: OA monograph usage data supply chain map developed by Clarke and Ricci for the project
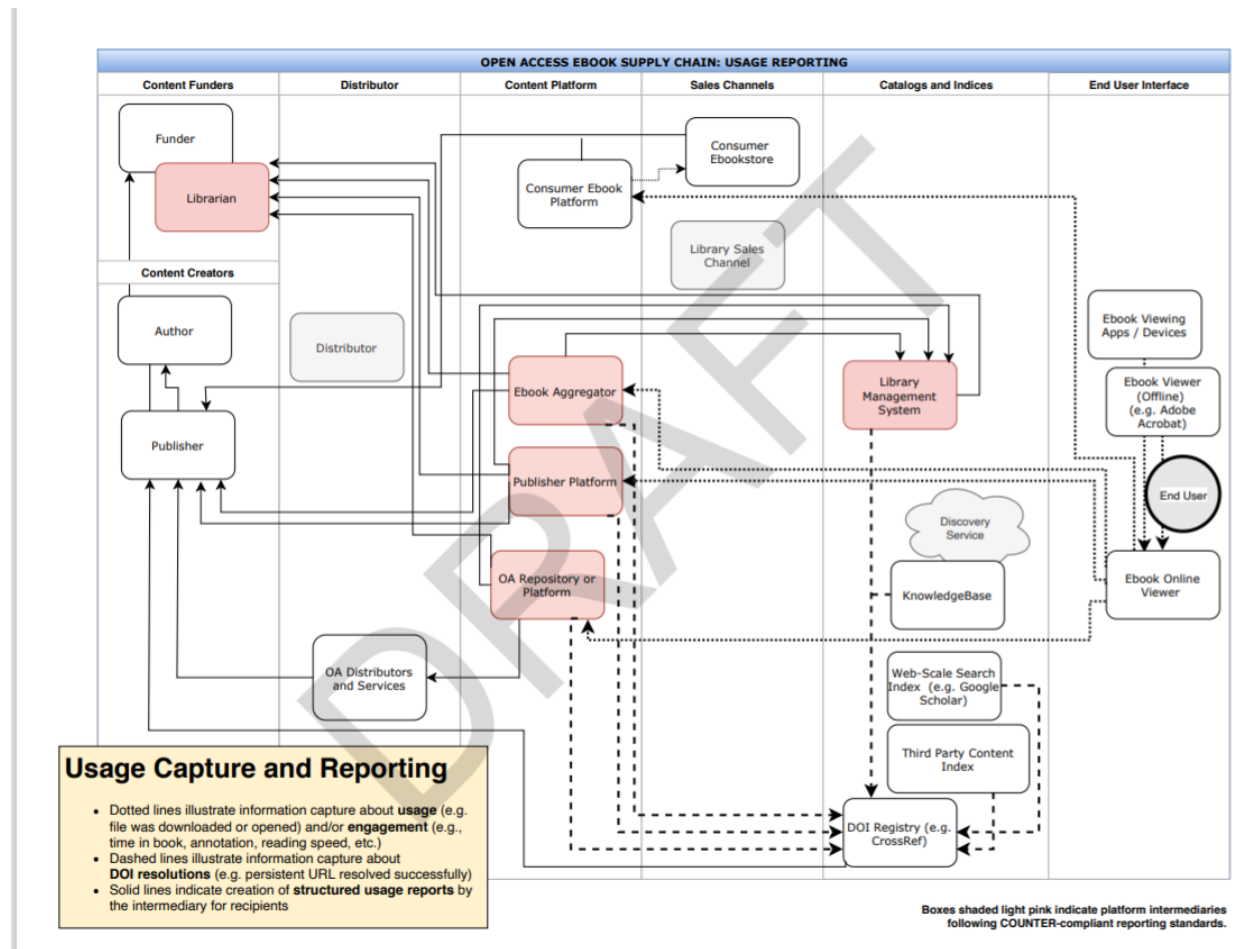
To understand engagement trends for OA monographs, an organization must address technical challenges that go beyond those occurring with serial publications. While serials are usually hosted on a single website, given the incentive for OA books to be as widely discoverable as possible, books are hosted and referenced via multiple platforms, which in turn leads to varied sources of access information. Authors and institutions interested in reporting on how their books are accessed must aggregate varied usage reports from the array of OA book publishers, publishing platforms, and services that make up the OA monograph publishing ecosystem.[7]

Evolving Data Standards with Multiple Versions

While monograph-related metadata standards continue to evolve to support usage reporting, varied versions of said standards are in use across the ecosystem. Since 1999, the international standards organization EDItEUR has collaborated with the Association of American Publishers, Book Industry Study Group, and others to develop the ONIX for Books XML standards,[8] with both versions 2.1 and 3.0 now being used across the publishing industry.[9] The Counting Online Usage of Networked Electronic Resources (COUNTER)[10] standard broadened in scope from its initial focus on subscription-based online serial publications;[11] by 2016, 59 publishing vendors were registered as providing book-related usage reports that adhered to COUNTER Release 4,[12] and COUNTER Release 5 in 2020 includes greater support for OA publications.[13] Between 2004 and 2007, the Standardized Usage Statistics Harvesting (SUSHI) standard evolved to support machine-to-machine based exchanges of such COUNTER reports, but with an emphasis on journal articles data exchange.[14]

Those looking to understand the impacts of OA monographs for a particular author, editor, or institution must have the staffing, technical capacity, and time to aggregate data across these efforts.[15] Publishers and platforms provide varied usage data outputs and dashboards for those looking to understand their usage data. Unlike journal articles that are often accessed from a single publisher-controlled website, book usage and impact metrics are sourced from disparate intermediaries involved in digital book cataloging, indexing, discovery, and distribution.[16] For example, small, library-based, and independent presses outsource upstream book hosting to a combination of OA platforms (e.g., OAPEN and Open Edition) and traditional hosts (e.g., JSTOR and Ingenta), putting distance between publishing operations and usage or access data.[17] This

results in an environment where small- to medium-sized institutions without large technical teams face technical capacity challenges when aggregating usage data for reporting: institutions must incorporate data from across internal and third party platforms and services, or risk missing out on critical insights tied to system-wide impact and reach.

Prior OA eBook Usage Data Efforts

At the 2015 Scholarly Communications Institute, one team of participants launched a conversation about how to improve usage data aggregation and analysis across web analytics (i.e., Google Analytics and Piwik) and platform usage data reports.[18] Simultaneously, another effort documenting the OA eBook supply chain noted similar challenges around inconsistent metadata standards (ONIX, MARC) and usage data reporting variance among vendors, finding "The differences in the ways that delivery platforms and websites are organized makes it difficult to tell a data-driven story of the impact of OA approaches."[19]

In addition to such scholar-led research, commercial platforms and services have actively developed and supported customer-facing analytics portals for their publishers, editors, and authors to understand OA monograph access and usage.[20]

Multiple recent efforts have worked to improve the interoperability and linking of monograph metadata. The High Integration of Research Monographs in the European Open Science infrastructure (HIRMEOS) project of OPERAS, created a usage metrics data model and related software to support usage data imports from various platforms.[21] Crossref's Distributed Usage Logging (DUL) effort aims to facilitate publisher access to usage metrics derived outside of publisher platforms, through repositories, content aggregators, social network and reading

tools. The Community-led Open Publication Infrastructures for Monographs (COPIM) project is developing protocols and infrastructure to enhance OA book discovery and dissemination.[22]

Within this environment, united interests were awarded 2018-2019 support from The Andrew W. Mellon Foundation to investigate shared solutions to facilitate the analysis, visualization and exchange of usage data.[23] Stakeholders representing standards bodies, libraries, publishers and platforms were convened by a team led by Brian O'Leary of the Book Industry Study Group, Kevin Hawkins and Charles Watkinson respectively of the university libraries of North Texas and Michigan, Cameron Neylon and Lucy Montgomery of Knowledge Unlatched Research, and Katherine Skinner of the Educopia Institute. Through a widely disseminated online discussion document,[24] an in-person workshop for 28 key stakeholders,[25] and virtual webinars, participants converged on a set of recommendations for future work that could address many of the issues preventing the increased adoption of OA book usage data analytics.

Recommendations included:

- Engaging diverse stakeholders to document specific roles and use-cases for the data trust,
- Documenting the global OA monograph publishing supply chain,
- Developing & piloting an open-source data trust infrastructure to support the OA eBook usage metrics reporting, visualization, and data exchange required by the use-cases, and
- Modeling sustainability and governance plans while documenting operational policy and legal requirements for post-pilot multinational data trust operations.[26]

Participants in the *Understanding OA eBook Usage: Toward a Common Framework* predecessor for the current *Exploring Open Access eBook Usage Data* project made clear that a data trust would have to govern sensitive data across stakeholder networks, necessitating strong data stewardship and data ethics practices and policy. The importance of access and security controls surfaced, given the needs of presses, publishers, platforms, and services looking to contextualize their data against sensitive or proprietary data provided by their market competitors. In addition, participants noted the need to address potential privacy and ethical implications of bringing together previously disparate data. The concept of trust became central; participants in a data trust would need to trust in the ability of such a community-governed infrastructure to securely aggregate and contextualize information in a way that would protect each participant's interests over time.

In addition to the sensitivity of the data itself, concerns over the higher-level system impacts of enabling OA datafication[27] surfaced as an issue to consider. While some scholars were advocating against the use of metrics in the humanities,[28] the question remained as to whether usage metrics could be ethically wielded given concerns over unintended negative impacts that could result from making publication usage data more readily reportable. Similar to discussions of the ethical use of journal impact factors in the evaluation of scholarship, questions surfaced as to how increased visibility to OA monograph views and usage could influence scholarly endeavors and publishing activities both locally and globally. The ethical use of aggregated OA book usage data became another factor where the data trust would have to engage stakeholders to establish and maintain trust among scholarly communities. The concept of a data trust emerged as a potential legal, organizational, and technological means to operate as "*an independent intermediary among industry stakeholders, compiling and analyzing data on behalf of trust members.*"[29]

Global Collaboration to Develop a Data Trust for Open Access eBook Usage

Against this background, the *Developing a Data Trust for Open Access eBook Usage* project, commonly referred to as the OA eBook Usage (OAeBU) Data Trust, was awarded support from The Andrew W. Mellon Foundation to create a pilot data trust based on the above recommendations. The 2020-2021 project is underway under the leadership of six co-investigators, a program officer, and twenty advisors representing the above efforts and OA presses, publishers, and publishing services through the project's Advisory Board and Technical Advisory Group.

During the first third of this project, consultants were selected though an RFP process to conduct OA eBook usage data supply chain modeling, sustainability and budget modeling, and legal analysis. The program officer and technical team positions were staffed and empowered to host conversations with international stakeholders to validate the data trust concept. The following sections of this paper will outline the mechanisms used by project staff to strengthen collaborative ties with stakeholders and prompt engagement during the exceptional realities of work-life during 2020.

Network Building Strategies

Understanding the Landscape of Stakeholders to Engage

In 2019, an Open Data Institute study of three operational data trusts outside of scholarly publishing noted the importance of involving key influencers from the beginning of a data trust scoping effort, while being mindful of politics and perceptions.

The instigators of a data trust, who lead its scoping, design and creation, can be a significant factor in its success. It is important to encourage

key people and organisations to actively advocate for the data trust early on….Who it is that instigates a data trust can have a significant impact on how it is perceived.[30]

While the OAeBU team had a recognized set of leaders and advisors for the project, additional analysis was required to understand where targeted outreach efforts could have the most impact.

To guide initial outreach efforts, the program officer conducted an informal environmental scan and engagement analysis to understand how different stakeholders had contributed to the dialogue about OA books usage data to date. Results were compiled to then identify ongoing efforts and researchers that did not yet have connections to the project. This work provided the initial focus for the program officer's direct email campaign, while the team awaited more formal analysis coming out of the business modeling and supply chain mapping activities that were being completed simultaneously.

Initial stakeholder access via well-connected leadership

The OAeBU effort drew strength from its well-recognized team of principal investigators. These leaders leveraged their professional networks to engage a diverse array of organizational representatives during the 2018-2019 planning phase. Many of the affiliated project leaders who participated in the planning grant's conversations assumed advisory roles for the current project, providing bridges to ongoing research and commercial efforts in OA book publishing.

At the beginning of the 2020 project, five continents were represented by the twenty individuals seated on the project's Advisory Board and Technical Advisory Group, including representatives of aligned initiatives (COPIM, OAPEN, OPERAS, TOME), service providers, university

presses, commercial publishers, research institutes, and library systems and associations. Work is underway to empower these individuals to champion the work of the data trust more broadly in order to reach beyond the networks of the project team. Yet, increasing international representation remains central to understanding how a usage data trust can support needs and address concerns from across the OA monograph supply chain. As described below, this impetus has guided outreach, pilot partner identification, and stakeholder engagement activities during the first third of the OAeBU project.

Diversity among the project leadership team was a key asset for the project, as it provided direct personal connections to the high-profile publishers, university presses, libraries, platforms, and scholars already engaged in usage analytics practices, innovation, and standards. This network-based approach to early project engagement, combined with the nature of the book publishing sector, resulted in a dominant set of participants from the US and Western Europe.

Deeper engagement through continued collaboration

The positive multi-stakeholder response in the project's first phase helped the project team to seed a strong set of advisors going into the current project period. In 2019, eleven of the organizational participants from the planning phase workshop agreed to continue collaborating in the 2020-2021 project (see figure 2).

Figure 2. International advisors for the 2020-2021 OA eBook Usage Data Trust pilot project

Project Advisory Board

- Jon Elwell* - EBSCO, GOBI
- Jill Emery - Project COUNTER, Portland State University Library
- Eelco Ferwerda* - OAPEN, OASPA, OPERAS
- Andrew Joseph - Wits University Press
- Jo Lambert - JISC
- Roxanne Missingham - Australian National University Press
- Samuel Moore - COPIM, Coventry University
- Peter Potter - Toward an Open Monograph Ecosystem (TOME), University Libraries at Virginia Tech
- Ros Pyne - Springer Nature
- Wendy Queen - Project MUSE
- Gimena del Rio Riande - IIBICRIT, CONICET
- Brian Scrivener - University of Calgary Press
- John Sherer* - University of North Carolina Press
- Charles Watkinson* - University of Michigan Press

Technical Advisors

- Javier Arias - HIRMEOS, Open Book Publishers
- Francesco de Virgilio- Ubiquity Press
- Susan Doerr - University of Minnesota Press
- Paul Groth - University of Amsterdam
- Stefanie Haustein - University of Ottawa
- Michael Taylor* - Digital Science, University of Wolverhampton

Principal Investigators

- Kevin Hawkins* - University of North Texas
- Brian O'Leary* - Book Industry Study Group
- Lucy Montgomery* - COARD, Curtin Open Knowledge Initiative, Curtin University
- Cameron Neylon* - COARD, Curtin Open Knowledge Initiative, Curtin University
- Katherine Skinner* - Educopia Institute
- Rebecca Welzenbach* - University of Michigan Libraries

* 2018-2019 Planning phase participant

Targeted outreach informed by stakeholder engagement analysis

To grow the project beyond its existing networks, outreach required engaging a representative, diverse network of collaborators from both the global OA and book publishing sectors. The program officer staffed in April of 2020 was intended to travel extensively to OA and book publishing events worldwide to present and network. However, COVID-19 shifted the nature of such outreach to virtual presentations, conference follow-up emails, and direct outreach email.

Fortunately, there are ample virtual forums with international audiences. Awareness of the project is growing through presentations at virtual conferences (e.g., OASPA, the Basel Sustainable Publishing Forum, and the Research Data Alliance), regular stakeholder gatherings (e.g., for members of CrossRef or BISG) and online Slack communities (e.g., the OA Book Network). It is unclear how many new participants will join the project's community input mechanisms as a result of such online networking efforts, but it remains a priority to keep the door open for community involvement.

Direct email-based invitations to inform the data trust became a core strategy for outreach. In the first few months, such emails resulted in a much higher join rate in the project's online work groups than invitations forwarded through relevant list-servs. Yet, cultivating each relationship remained key to online engagement. As expected, individuals with prior project connections or with whom project staff built a relationship through follow-on email conversations have been more engaged in the asynchronous,

online activities described below. This resulted in a constant balancing of staff time spent on new stakeholder outreach versus encouraging and facilitating participant engagement within community groups.

Engagement pathway for new collaborators

While previous collaborators were actively engaged at the project onset through the project's advisory and announcement mechanisms, it was unclear how new collaborators could directly inform pilot project developments. Yet, to ensure the data trust developed to meet the needs of its global constituency, a means to engage new perspectives was vital. To allow people to contribute to the project beyond the advisory boards, new online communities and working groups were created to enable engagement throughout the project lifecycle.

Informed by design thinking[31] and established workshop facilitation approaches, the project team decided to leverage online communities as a mechanism to build awareness and host peer-to-peer conversations related to defining the trust's use cases and model policies. To foster a safe space for discussion, while controlling for different industry vocabularies and ideologies, the team created eight online discussion forums as a mechanism to prompt facilitated discussion and engage individuals in project work. Six Google Groups were created as open peer-to-peer discussion spaces for like stakeholders, while two open multi-stakeholder working groups were created for individuals to participate in conversations of policy or technical standards and norms (see figure 3).

Figure 3. Virtual stakeholder communities and working groups for the OA eBook Usage Data Trust pilot project
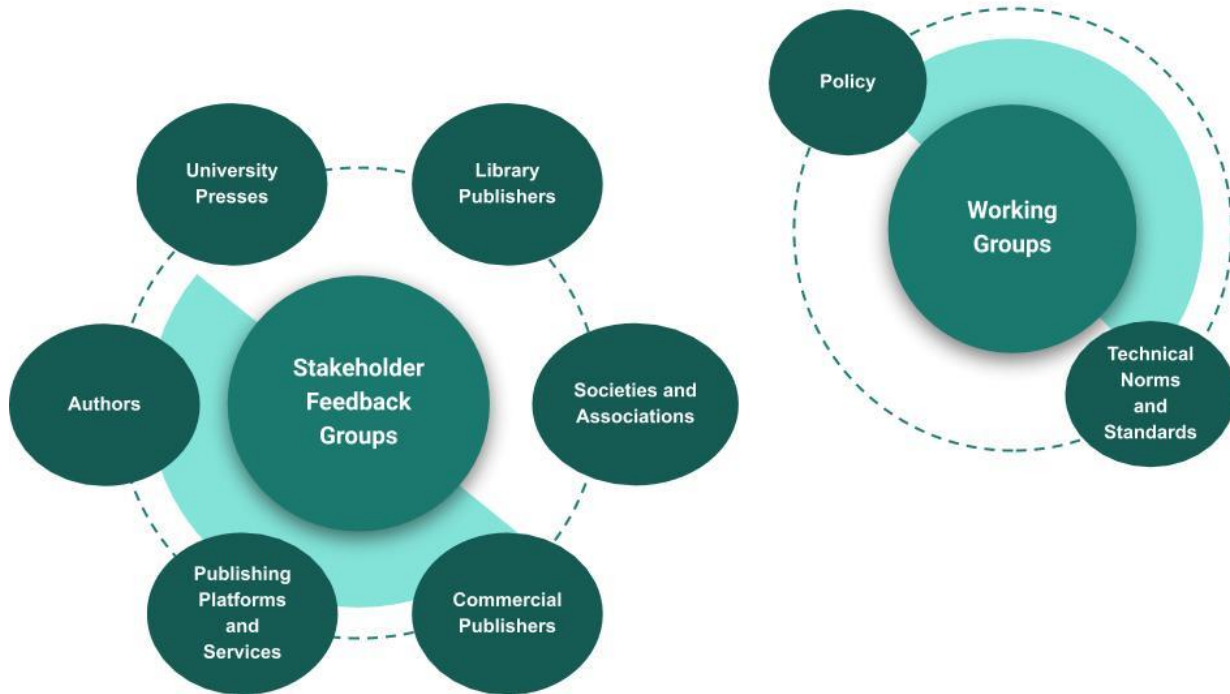
These groups will remain open to all to join throughout the project term, with join links posted prominently on the project's website. Yet just because the groups were built, engagement was not automatic. A push communication strategy was developed as it was unrealistic to expect people to find the website unprompted, especially given the unique work-life demands of 2020.

To date, a handful of individuals have joined the groups following virtual presentations about the project; this remains an important way for anyone to inform the project. Over 75 individuals have joined these groups in response to a direct email invitation. In the second year of the project, as engaged participants speak about their data trust activities directly to their own networks, and as project outputs such as the OA

Supply Chain report and data trust business model are released for comment, additional group members are expected to join without direct prompting by members of the project team.

Asynchronous online design exercises

In the pre-pandemic world, this project could have held in-person conversations and design sessions co-located with conferences and forums. This would have provided a venue in which to engage like-minded peers in design thinking workshops to discuss, explore, and ideate use-cases for the data trust tied to the needs of particular stakeholder groups. Once travel restrictions were in place, an alternative solution was required capable of engaging individuals during this time when many in scholarly communications face budget constraints and suffer from Zoom meeting fatigue. A desire to

minimize meetings while maximizing opportunities for input drove the program officer to leverage collaborative group ideation and facilitation tools to replicate the sticky note and white board ideation and prioritization exercises that would have taken place in-person. The Group-Map software service was selected for this pilot for its asynchronous contribution capabilities and facilitator tools that enabled grouping, voting, and template creation.

As project team capacity allows, and once at least six individuals beyond the project team are represented in a given stakeholder group, the interactive use-case development process is launched. Individual boards are created and preset for community members to respond to as described in an email invitation to contribute. After a series of online contributions on sequential virtual white boards, meetings are offered for group members to discuss and refine boards prior to moving the information therein into shared documentation for comment. This process has allowed individuals to contribute their ideas across time zones and on their own schedules while allowing the project team to gain the insights they require to inform data trust infrastructure and sustainability model development.

Figure 4: Online use-case development process in use
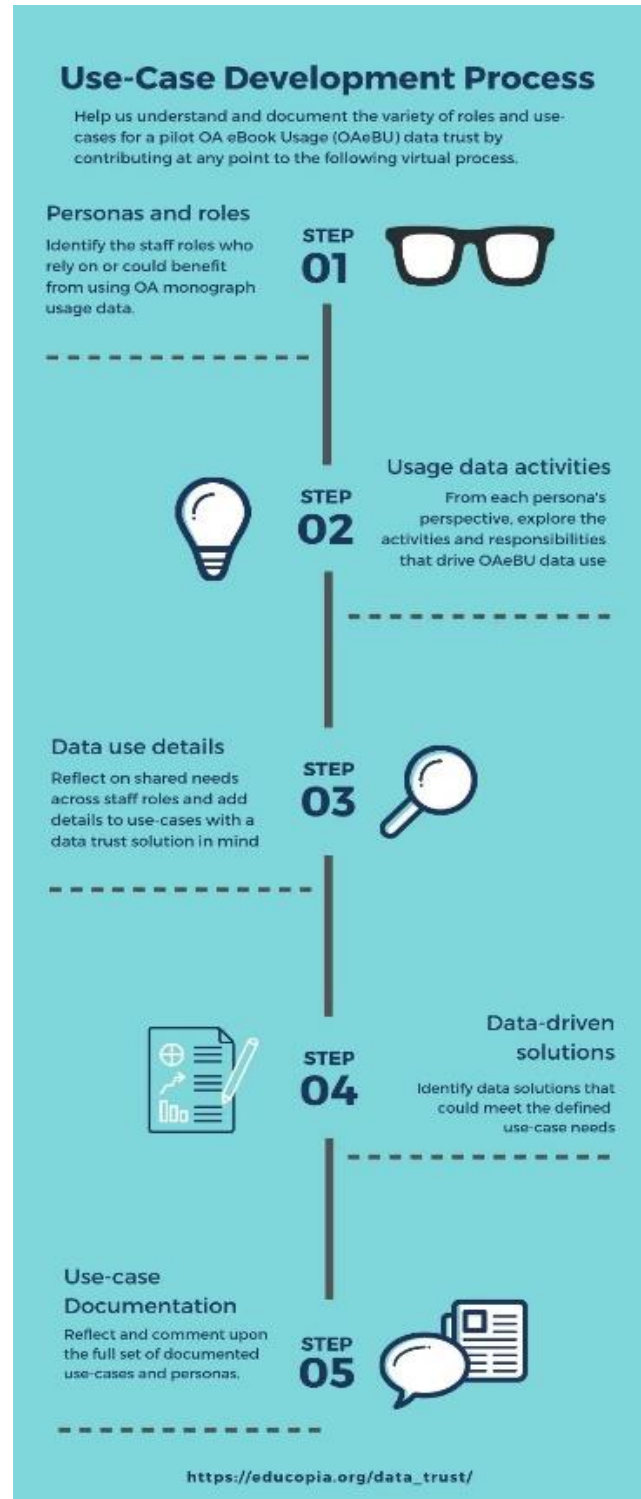
Conclusions

The global nature of OA monograph usage combined with the diversity of players involved in content production, dissemination, and discovery and engagement necessitated a broad tent approach to developing and piloting a data trust solution. Recognizing that the trust must meet the needs of both for-profit and non-profit players, including organizations that may find themselves competing with each other for funding, the project team needed to create spaces in which peer organizations could anonymously describe their needs while openly discussing sensitive topics more broadly. Online engagement solutions, such as the combination of Google Groups and GroupMap have allowed project staff to explore how best to replicate in-person design-oriented conversations virtually with global audiences in 2020.

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