Mutual creation of quality in the scholarly communication ecosystem

VUCA and beyond

Fiesole Retreat, Basel, Switzerland 2023
Gwen Evans, Vice President of Global Library Relations

Introduction

Gwen Evans
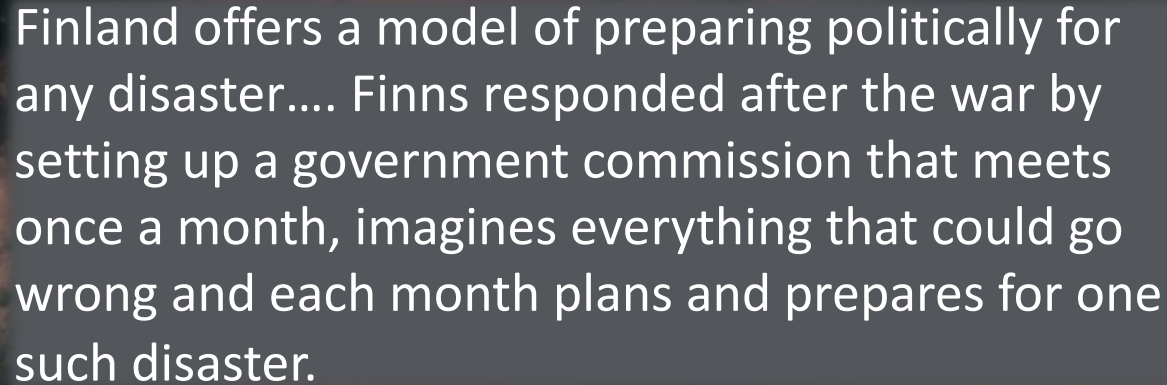
Vice President of Global Library Relations

- MA (Cultural Anthropology, University of Chicago), MSLIS (University of Illinois)

- Executive Director of OhioLINK (state agency leading 117 academic libraries in 88 higher education institutions); annual shared e-content purchases of ~$45 million USD (journals and e-books; E-journals & e-books. Funding is OhioLINK: 18% (capital funds); Member institutions: 82%)

- Associate Professor, Library Information and Emerging Technologies, Bowling Green State University, Ohio
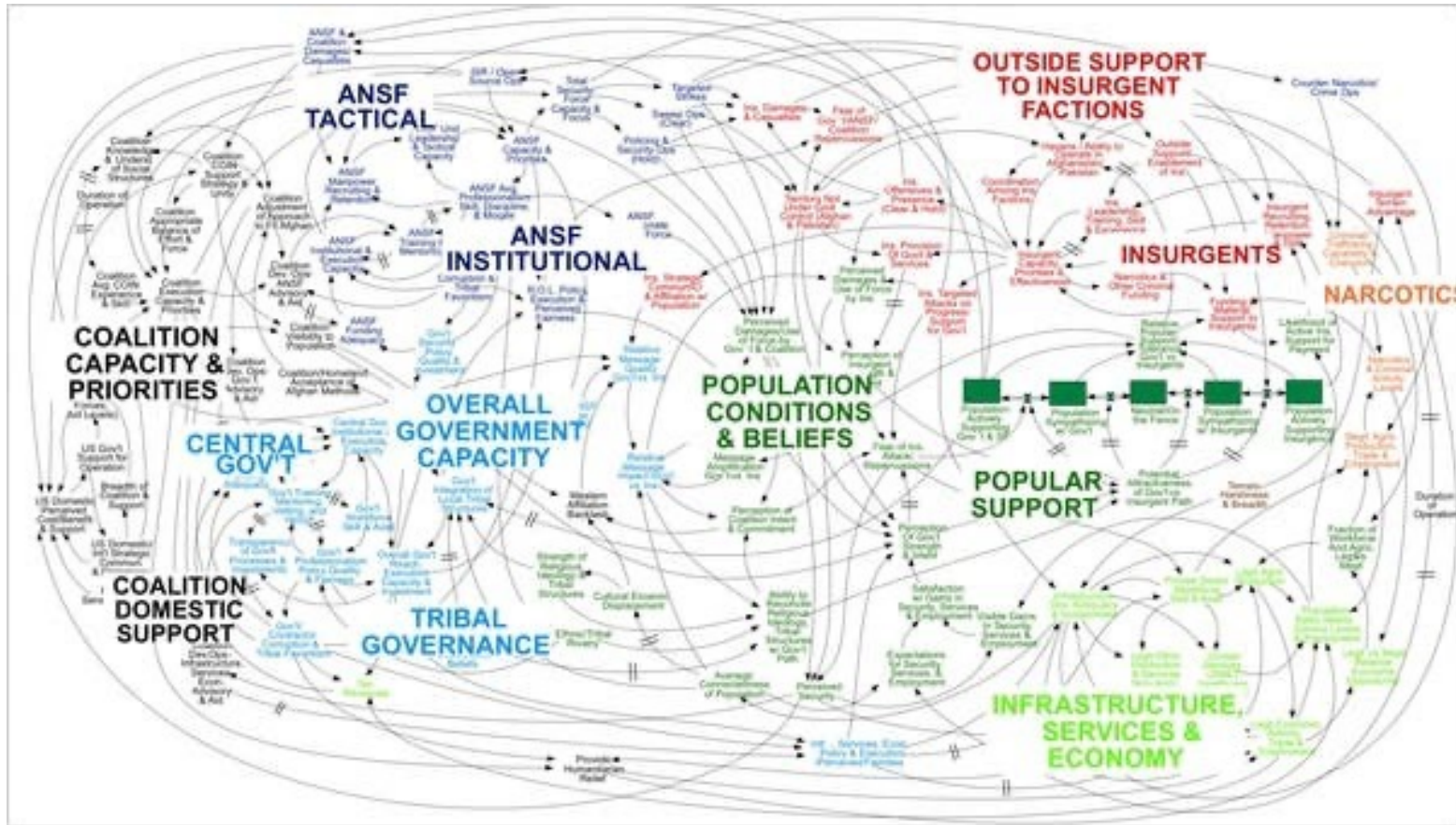
LinkedIn:https://www.linkedin.com/in/gwenevans/

Like Finland, Imagine Everything That Could Go Wrong

Feb. 13, 2023

Finland offers a model of preparing politically for any disaster…. Finns responded after the war by setting up a government commission that meets once a month, imagines everything that could go wrong and each month plans and prepares for one such disaster.

"Most Complicated Flow Chart Ever"?

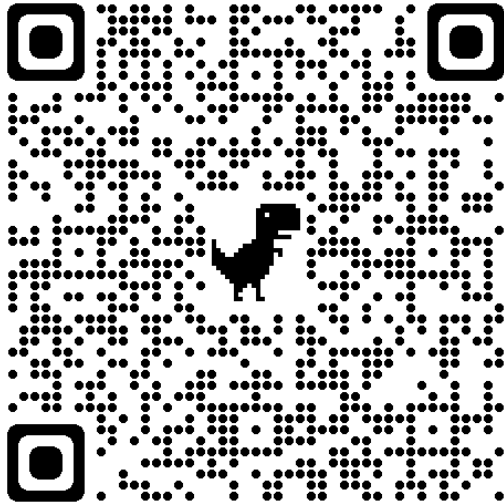The Microsoft PowerPoint slide which drove US military General Stanley McChrystal to declare that "When we understand that slide, we'll have won the war" at a briefing in Kabul. https://www.theguardian.com/news/datablog/2010/apr/29/mcchrystal-afghanistan-powerpoint-slide

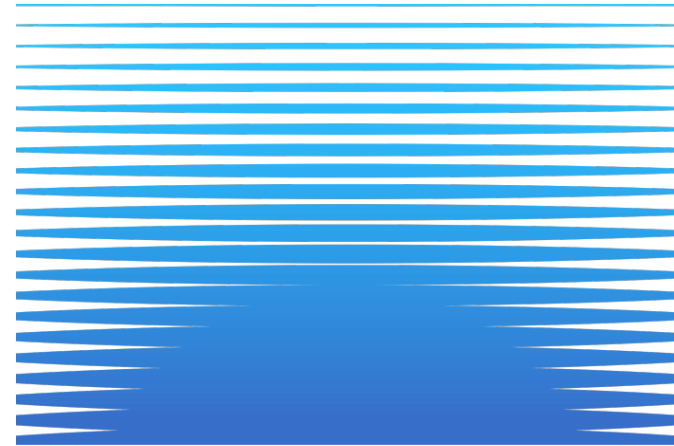# Ithaka S+R Common Scholarly Communication Infrastructure Landscape Review

Oya Y. Rieger, Roger C. Schonfeld

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Common Scholarly Communication Infrastructure Landscape Review

Oya Y. Rieger
Roger C. Schonfeld

ITHAKA S·R

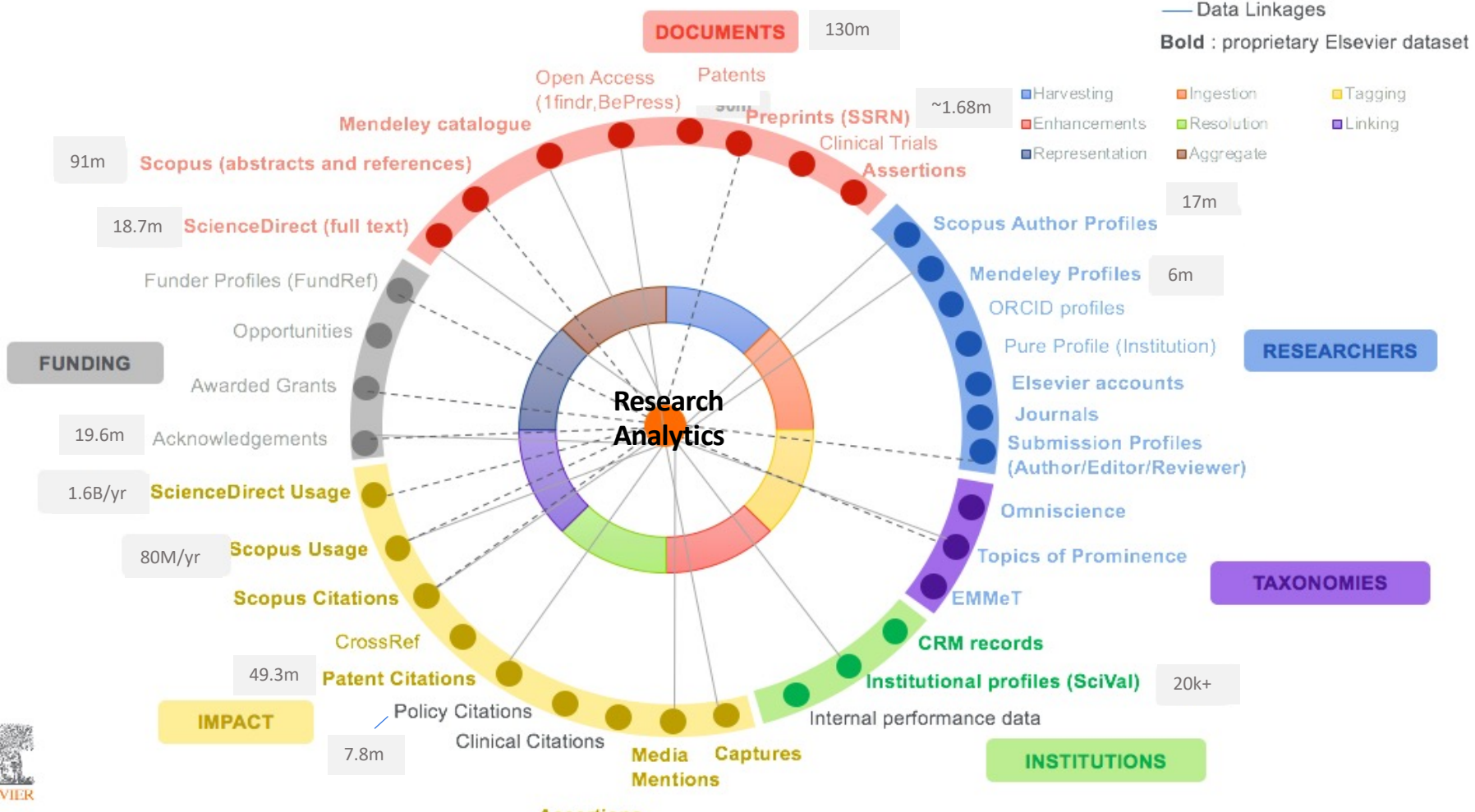# A Brief and Incomplete Overview of Actors and Elements

Actors

- Institutions including governmental, private, public

- Researchers

- Funders including transnational, nation-states, regions, federal states,

- Publishing Industry

- Affiliated industries and organizations as service providers

  - Aggregators (EBSCO, ProQuest, e.g.)

  - Discovery systems (Google Scholar, Scopus, Dimensions, ILS systems, e.g)

  - Content management systems (e-resource systems, LibGuides, Learning Management systems, Excel Spreadsheets)

  - Standards creation and management (ANSI, NISO, Library of Congress, ISSN, ISBN)

  - Authentication systems and providers

  - Metadata Exchange services (Crossref, ORCID, OCLC)

  - Preservation (CLOCKSS, Portico)

  - And more! ISSN, ISBN, IR services, OABLE, etc. etc. etc.

- Libraries

- End users (Researchers, faculty, students, policy makers, citizens etc.)
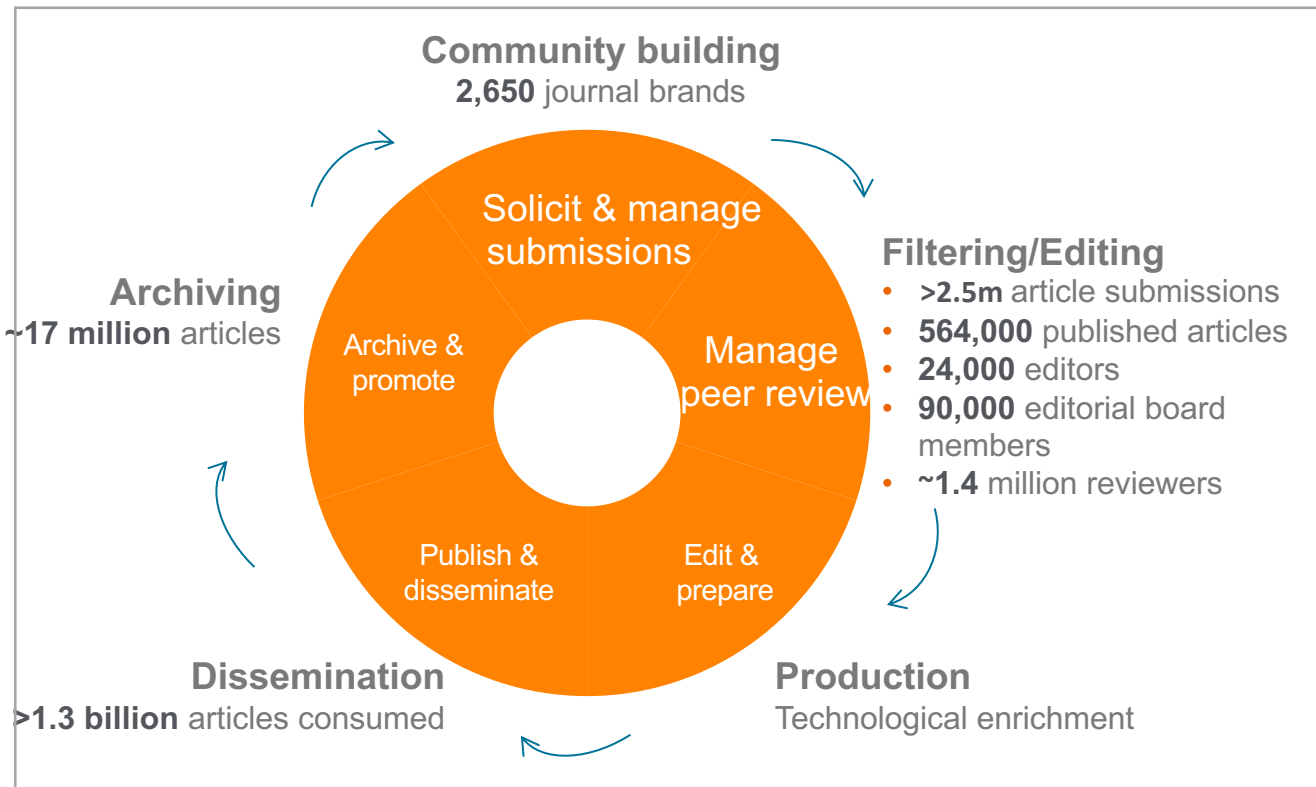
Examples (Authentication)

- IP Registry (https://theipregistry.org) is a single repository of the validated IP addresses for over 70,000 content licensing organizations worldwide, accessible by both publishers and libraries. IP Registry is developed by PSI Ltd, an independent UK company.

- EZproxy (https://www.oclc.org/en/ezproxy.html) is an OCLC product that provides the authorized users with remote access to subscription resources by authenticating their identity and delivering e-content.

- SeamlessAccess (https://www.seamlessaccess.org) enables users to sign in using their preferred log-in credentials. Formerly RA21, it is based on Federated Identity Management (FIM), an identity arrangement made between multiple online domains/applications to allow users to access several domains/applications without going through multiple logins. The federated authentication system describes how information is exchanged about the rights to facilitate a seamless user experience. It also relies on Security Assertion Markup Language (SAML), an open standard designed for secure single sign-on managed by the Organization for the Advancement of Structured Information Standards (OASIS). Governance of SeamlessAccess service is through the Coalition for Seamless Access, a collaboration between GÉANT, Internet2, the National Information Standards Organization (NISO), and the International Association of Scientific, Technical and Medical Publishers (STM).

- Federated Credential Management (FedCM) is a web API for privacy-preserving identity federation. Originally developed by Google, the technology has gathered the support from other major browser vendors to replace the existing tracking functionalities. It is not currently in wide usage in the scholarly communication sector.

- European Open Science Cloud (EOSC) Authentication and Authorization Infrastructure (AAI https://op.europa.eu/en/publication-detail/-/publication/d1bc3702-61e5-11eb-aeb5-01aa75ed71a1) is an example of a proposed architecture to streamline researchers' access to services, both provided by their own infrastructure and shared with other communities. It was developed by the EOSC Architecture Working Group.[12]

- Knowledge Bases (KBART https://www.niso.org/standards-committees/kbart) provide vital information for authentication and authorization systems.

- Campus Activated Subscriber Access (CASA, https://journals.ala.org/index.php/ltr/article/view/7852), which builds on Google Scholar's Subscriber Links program) are used to support library link resolvers in order to enable users' access to licensed content they are entitled to use through subscriptions held by their institutions.

- Order management and fulfillment is an important infrastructure category particularly for subscription publishers. System and services such as AdvantageCS, SiteManager (Silverchair), and Klopotek's O2C Apps (Klopotek) support order, subscription, fulfillment, distribution, and account management.[.[13]

Linked data and analytics for professionals across academia, industry, and govt.

DOCUMENTS 130m

Open Access (1findr, BePress)
Patents
Preprints (SSRN) ~1.68m
Mendeley catalogue
Clinical Trials
Scopus (abstracts and references) 91m
Assertions
ScienceDirect (full text) 18.7m

Funder Profiles (FundRef)
Opportunities
FUNDING
Awarded Grants
Acknowledgements 19.6m

ScienceDirect Usage 1.6B/yr
Scopus Usage 80M/yr
Scopus Citations
CrossRef
Patent Citations 49.3m
Policy Citations
IMPACT
Clinical Citations 7.8m
Media Mentions
Captures
Assertions

Research Analytics

Data Linkages
Bold: proprietary Elsevier dataset

Harvesting   Ingestion   Tagging
Enhancements   Resolution   Linking
Representation   Aggregate

Scopus Author Profiles 17m
Mendeley Profiles 6m
ORCID profiles
Pure Profile (Institution)
RESEARCHERS
Elsevier accounts
Journals
Submission Profiles (Author/Editor/Reviewer)

Omniscience
Topics of Prominence
TAXONOMIES
EMMeT

CRM records
Institutional profiles (SciVal) 20k+
Internal performance data
INSTITUTIONS

ELSEVIER

Journal and Article Ecosystem
Elsevier's support to the journal eco-system

Community building
2,650 journal brands

Solicit & manage submissions

Manage peer review

Archive & promote

Publish & disseminate

Edit & prepare

Archiving
~17 million articles

Filtering/Editing
- **>2.5m** article submissions
- **564,000** published articles
- **24,000** editors
- **90,000** editorial board members
- **~1.4** million reviewers

Dissemination
>1.3 billion articles consumed

Production
Technological enrichment

https://www.elsevier.com/about/policies/pricing

Elsevier's investment in the publishing process.

Here are some of the investments we make in the publishing process:

Managing and tracking submissions

Recruiting editors and reviewers (and compensating Level 1 editors)

Establishing infrastructure systems and contracts

Journal launch and registration

Managing the peer review process

Author & reviewer workshops and training

Linking data and software to articles

Ensuring compliance with funder & institutional policies

Checking for plagiarism & image manipulation

Substantive editing and proof-reading

Making articles machine-readable

Cascading rejected manuscripts from one journal to another

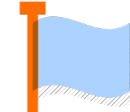Offering training for researchers on research data management

Archiving

Media relations and marketing

Third-party licensing and negotiation

Reporting & keeping scientific record up to date (CROSSREF)

Ethics investigations and developing pre-peer review checks

Content As Output

Publishers (Global)

Services against the provided content

- Curation of qualified content: organization of editorial and peer review, checking for manipulated and false content, compliance with funder and ethical mandates, etc.

- Processing and enhancement of curated content: proof reading and copy editing, making machine readable, linking, accessibility, usability testing, etc.

- Discovery and Dissemination: creation and maintenance of platforms, SEO, integration with aggregators, authentication systems, etc.

- Contributions and conformance to integrated systems: Crossref, Industry standards, etc.

- Archiving: Digital Preservation via CLOCKSS, Portico, etc.

Libraries (Local - ish)

Services against the provided content

- Curation of qualified content: collection development, acquisition, format and provider assessment, etc.

- Processing and enhancement of curated content: cataloging, local organization, integration of other platforms and information, digitization of print theses and dissertations and government documents

- Discovery and Dissemination: Catalog, Library discovery systems, IRs, Course Management systems, Access Services, Reserves, ILL, authentication systems

- Contributions to integrated systems: OCLC, other standards, etc.

- Archiving: Print and some Digital

Content As Output

Publishers (Global)

Services against the provided content

- Expert Advice and end user support: Author and reviewer workshops, training for librarians/providers, direct end user support on the platform

Provision or organization of new content or platforms

- Databases, A&I, Data analytics platforms, etc.

- Teaching and reference materials both traditional and new (3D Female Anatomy, Shadow Health simulation environment for clinicians

Libraries (Global/Local)

Services against the provided content

- Expert Advice and end user support: training and instruction for end users, reference desk services, IR support, Research Data Management support

Provision or organization of new content

- Digital Collections unique to the institution/organization

- Teaching and reference materials: OER

Content As Output

Publishers (Global)

Other Services (Elsevier specific)

- Research about Research: International Center for the Study of Research (ICSR) and the free computational platform ICSR lab https://www.elsevier.com/icsr and https://www.elsevier.com/icsr/icsrlab

- Mobile AI helps health workers deliver prenatal care in rural India providing frontline non-physician health workers with a mobile, adapted version of the Arezzo Clinical Decision Support System to focus on prenatal care and care of newborns and children under 5 years of age. https://www.elsevier.com/connect/mobile-ai-helps-health-workers-deliver-prenatal-care-in-rural-india

Libraries (Local)

Other Services

- University of Florida Smathers Library: ARCS (Academic Research and Consulting Support) https://arcs.uflib.ufl.edu/services/

  - AI (Artificial Intelligence)

  - Data Management

  - Data Science

  - Digital Humanities

  - Reproducibility

  - Research Integrity

  - Research Metrics and Impact

  - Spatial Information Services

Where does each entity deliver the best value in the value chain?

Artisanal

Industrial

Risk, Priorities,Values

- **Risk:** What are the risks in assigning parts of a complex scholarly infrastructure system to entities and actors that are either unfamiliar with or not equipped to take those roles and infrastructures on at scale, especially global scale?

- **Priority**: What is our collective priority stack? If high quality in all its aspects (reproducible, curated, verified, etc) is the highest priority, how does that intersect with other priorities and how to reconcile?

- **Values:** Money versus Value(s)

What are some of the considerations for discussions of OA and Digital Preservation?

Preservation starts at submission – what are the benefits and risks of consolidation versus disaggregation of publishing into many different sources?

- Acquisition risks – proliferation of sources, including under some models, individual authors as the source of content.
- "Platform conformance" – standardization enforced by major submission and output infrastructure versus "let a thousand flowers bloom"
- "Lot of copies keep stuff safe": lots of financial and business models keep stuff safe and sometimes commercial flexibility versus governmental support is feature, not a bug.
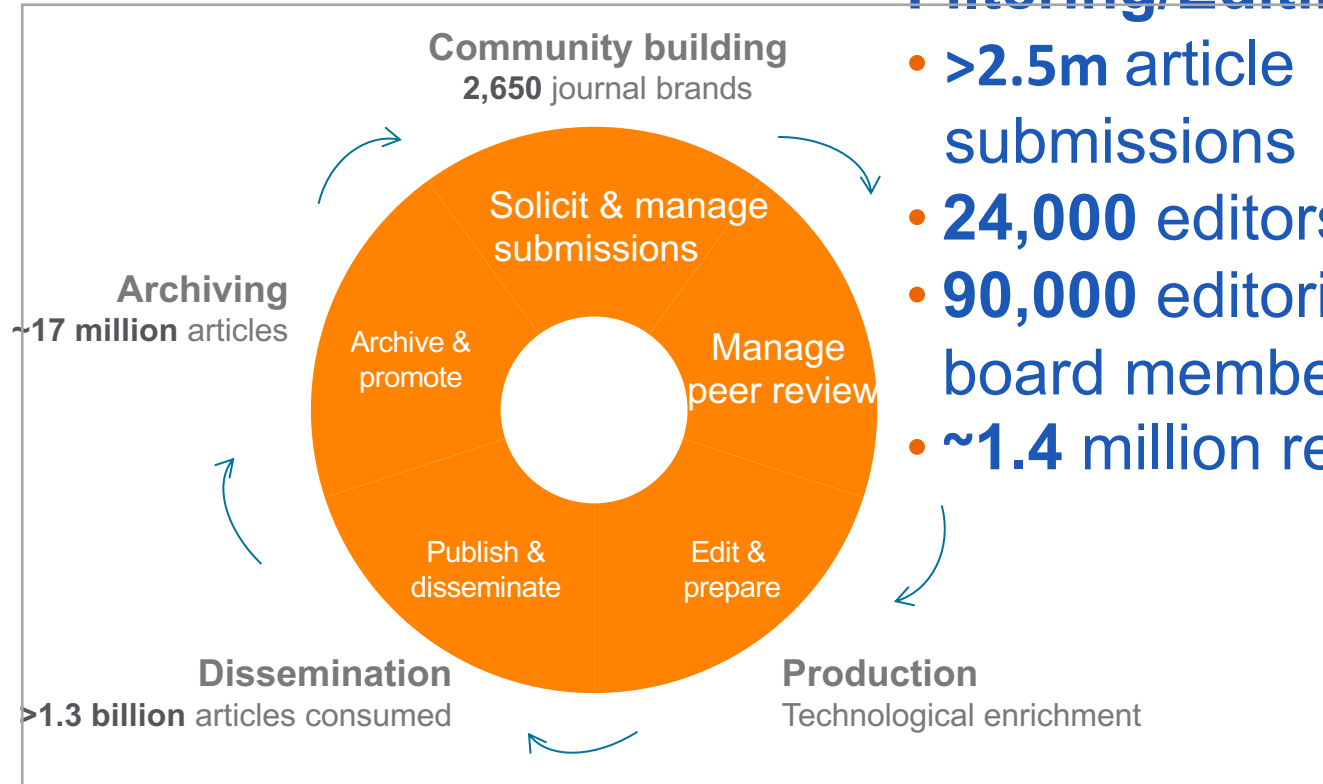
Geopolitical stress of various kinds

- Privacy, security, surveillance concerns with OA content/repositories hosted in certain countries
- Agility: Governments and in many cases publicly funded higher education can't move their servers out of the country, commercial entities can
- Rapidly shifting funding and staffing priorities under unstable conditions both at the institutional level and wider aggregations including national

Is publishing a platform for the organization of Professional Service?

Community building
2,650 journal brands

Archiving
~17 million articles

Dissemination
>1.3 billion articles consumed

Production
Technological enrichment

Solicit & manage submissions

Archive & promote

Manage peer review

Publish & disseminate

Edit & prepare

Filtering/Editing

- **>2.5m** article submissions
- **24,000** editors
- **90,000** editorial board members
- **~1.4** million reviewers

Some Resources

Stratechery by Ben Thompson https://stratechery.com/

Exponent Podcast (discontinued) by Ben Thompson and James Allred https://exponent.fm/

Priority Stacks: Ben and James discuss the NBA and Apple in China and the long-term implications of doing business with authoritarian governments https://exponent.fm/episode-175-the-abyss-stares-back/

Amazon and Avocados: Ben and James discuss Amazon's acquisition of Whole Foods, when acquisitions make sense, and the potential future of antitrust law. https://exponent.fm/episode-119-amazon-and-avocados/

Valuing the Value Chain: Ben and James discuss Amazon, Walmart, and groceries, Google Cloud versus AWS, and why understanding value chains helps evaluate business opportunities. https://exponent.fm/episode-164-valuing-value-chains/

Thank you

Twitter: @litslibrarian