Supporting the Future of Open Scholarship

A look at open infrastructure

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overview

defining “open infra”

what we’re hearing

paths forward
overview: about IOI

to foster a shared, interoperable, and community-driven network of open infrastructure to advance scholarly research.
improve funding & resourcing for the open technology that research relies on.
2018: Joint Roadmap for Open Science tools workshop
2019: Starter funding for IOI
2020 (March): First hire
Mapping the Scholarly Communication Landscape – 2019 Census

This report documents the design, methods, results, and recommendations of the 2019 Census of Scholarly Communication Infrastructure Providers (SCIP), a Census produced by the “Mapping the Scholarly Communication Infrastructure” project team (Andrew W. Mellon Foundation; Middlebury College, 2018-19). The SCIP Census was created to document key components comprising the organizational, business, and technical apparatuses of a broad range of Scholarly Communication Resources (SCRs) – the tools, services, and systems that are instrumental to the publishing and distribution of the scholarly record.
a confluence of crises

How Open Science and Open Data can help in the fight against COVID-19

With the global Novel Coronavirus pandemic filling headlines, TV news space and social media it can seem as if we are drowning in information and data about the virus. With so much data being pushed at us and shared it can be hard for the general public to know what is correct, what is useful and (unfortunately) what is dangerous.

Thankfully though, scientists around the world working on COVID-19 are able to work together, share eventually vaccines for COVID-19.

Coronavirus outbreak puts 'open science' under a microscope

Quick release of data could stop an epidemic, disrupt how research is reported

Open-Access Publishing and the Coronavirus

Some publishers are moving toward an open model, prompted by COVID-19.

By: Jack Grove for Times Higher Education  // May 15, 2020  2 COMMENTS

The unrestricted sharing of scientific papers during the coronavirus pandemic may have hastened the shift toward more open-access publishing, scientists believe, as several leading journals move to make content publicly available.

Covid-19 Changed How the World Does Science, Together

Never before, scientists say, have so many of the world’s researchers focused so urgently on a single topic. Nearly all other research has ground to a halt.

Links:
https://www.insidehighered.com/news/2020/05/15/coronavirus-may-be-encouraging-publishers-pursue-open-access
https://www.nytimes.com/2020/04/01/world/europe/coronavirus-science-research-cooperation.html
key assumptions

**Openness** is going to be more radically accepted (even demanded) than ever post-crisis.

**Key infrastructure pieces are at risk of going out of business or consolidating by the end of the year ...** and we should plan for that reality.

**The funding landscape is going to be radically different,** forcing institutions and providers to do more with less, and think beyond their walls about shared models, interoperable systems, and portability/redundancy.

**Investments in technology will be under heightened scrutiny** for mission-alignment, cost, return on investment, value to users, and external influence.
It’s easier to say what’s not enough, than it is to identify what’s needed to fix the system.
our approach

- **We conduct research** to increase our understanding of the current landscape.
- **We craft resources** to help others assess, build, and make investment decisions about open infrastructure.
- **We pilot solutions and coordinate stakeholders** to increase the sustainability of the sector.
current research

54 interviews
98 participants
18 countries
5 continents
defining open infra

open infrastructure (noun):
open tools, services, systems
underpinning research & scholarship

dictionary by karina from the Noun Project
defining: considerations

- What counts as open / critical / necessary?
- Who does it serve?
- How do we make decisions? What do we prioritize?
- How do we reconcile tensions & conflict?
what we’re hearing

• Points of tension
  o **Demand & resourcing:** increased need for services vs budget cuts
  o **Timeliness:** balancing urgency/immediacy in community-driven development
  o **Prioritizing:**
    ■ Local benefit vs general impact
    ■ Foundational infra vs new innovation
  o **Staffing:**
    ■ Governance, project maintenance, outsourcing
key issues: usage/interop

For a researcher starting their PhD today, the workflow tools they’re starting with today are unlikely to exist when they earn their degree.

We are also facing issues of discoverability, cost, access, interoperability, data ownership, and trust, especially as we see commercial entities buy up infrastructure for parts/their data.
key issues: resourcing

We’re now facing more tool options than funding to sustain it, leading to a perception of resource scarcity, heightened competition, and a marketplace driven by increasingly cash-rich, commercially-motivated players.

Funding for open tooling is often time-limited, has an upper boundary, and designed to support new, not sustain/maintain. Costs are often difficult to calculate, leading to shortages in staffing, development to meet needs.
key issues: development

Institutions (universities, research labs) have long supported platform-sized efforts and been key innovation drivers. Decisions often favor local development & customization vs communal benefit.

Up against vendors who can offer better support for end-to-end services, with focused sales & delivery. It’s easier to pay an invoice than switch to open. The return on investment is not always clear.
key issues: equity & access

When we speak about the value of “open infrastructure” the “for whom?” often favors the well-resourced, Western institutions and scholars.

Systemic inequities create multi-level barriers to participation, knowledge exchange, resourcing, and equitable access, countering our shared community values. What voices are missing from the discussion?

diversity by voneff from the Noun Project
paths forward

navigating complexity through collective action

- **Near-term:** working within existing tech/systems
- **Medium:** leveraging existing models & frameworks
- **Longer term:** transformation of our support models & systems

Long term by Branken from the Noun Project
Join us.

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