
Project Information

Principal Investigator

Dan Whaley

Invest in Open Infrastructure, Advisory
Committee Chair



San Francisco, CA 94114
info@investinopen.org



Grantee Organization:

Invest in Open Infrastructure, a
fiscally sponsored project of Code
for Science & Society

Amount Requested:

\$50,000

Requested Start Date:

Nov 1, 2019

Requested End Date:

Oct 31, 2020

Project URL (if any):

<https://investinopen.org/>

Project Goal

IOI is establishing a network of open systems and tools that support education, research, collaboration, use, reuse and the dissemination of scholarship. By integrating and expanding open infrastructure initiatives, we will secure knowledge creation, production and sharing for the future.

Objectives

IOI's main objectives are: 1) significantly increase funding available for open infrastructure projects; 2) to be an organizational home for data about and analyses on open infrastructure; 3) to develop data-driven recommendations for investment in open infrastructure that can be applied globally.

Proposed Activities

Proposed activities include collecting and synthesizing information about, and analyses of, open infrastructure efforts and activities around the globe to inform up-to-date landscape analyses, best practices guidelines, and other resources targeted at stakeholders (infrastructure projects, institutions, and funding bodies).

Expected Products

Expected products include reports on the state of open scholarly infrastructure, guidelines and recommendations for stakeholder groups, and groundwork for the establishment of a fund dedicated to this work.

Expected Outcomes

Invest in Open Infrastructure will strengthen open scholarly infrastructure through advocacy, increased funding, and greater transparency. In doing so, IOI will support the sustainability of existing (and development of new) open initiatives that prioritize scholarly community values of openness and accessibility.

Invest in Open Infrastructure: A Proposal to unite initiatives and expand the scope of current open source for open science

Title: Invest in Open Infrastructure	Recipient: Code for Science and Society, fiscal sponsor
---	--

Prepared by the Invest in Open Infrastructure (the IOI Group) effort, a global multi-stakeholder steering group committed to catalyzing a large-scale, sustainable shift to open services and software for the scholarly community.

The importance of an integrated network of open infrastructure

Scholarship is at its best when communities of researchers, scholars, and knowledge workers can share, discover, and work together. But collaboration and open science are not common in today's environment. In addition, legacy systems in scholarly communication have created artificial barriers to open sharing. We are establishing a network of open systems and tools that support education, research, collaboration, use, reuse and the dissemination of scholarship. By integrating and expanding open infrastructure initiatives, we will secure knowledge creation, production and sharing for the future.

The needs of today's diverse scholarly communities are not being met by our existing scholarly infrastructure, which is dominated by legacy vendors. These commercial products often use vendor lock-in and monopolistic models that are incompatible with the values of scholarly communities. They are buying and building research infrastructure to ensure their access to and rights over the scholarly research data and data on research networks. Community-owned open infrastructure is best positioned to deliver on the promise of open scholarship to accelerate the creation, dissemination, preservation, and use of new knowledge, while securing data and privacy about scholarly activities. While more open infrastructure initiatives are emerging, as individual projects with limited funding available they are vulnerable to being co-opted by commercial enterprises. There is a fractured landscape that is struggling to meet the needs of institutions, funders, open data and content providers, and governments. Furthermore, there is not adequate visibility into the landscape to know what kinds of funding coordination is needed and the level of commitment by the global network of institutions.

The proposed solution

The Invest in Open Infrastructure organization (IOI) will facilitate integration and adoption of open technologies and services by increasing the level of funding available and the collaboration between activities. To achieve this, we are developing and resourcing the IOI organization to create synergistic cross-funder plans that sustain and connect open

infrastructure efforts. The IOI will engage in advocacy, tracking and reporting of open infrastructure projects and activities and match to the needs of the adopting communities. The IOI will work with funders, institutions, and agencies to advocate for investing in open infrastructure collectively and to establish integrated and interoperable technologies and services. The IOI will also work with open infrastructure builders and providers to improve interoperability and deliver integrated solutions. The goal of the IOI is to return scholarly and research infrastructure to a viable, diverse, efficient, thriving and healthy system that serves as the stable foundation of scholarly communications in the 21st century.

Outcomes and Activities

Intended outcomes:

- Significantly increase funding available for open infrastructure projects, bringing collective funds from adopting or partnering institutions together with government and foundation funds
- A clear and transparent organizational home for data about, and analyses of, open infrastructure efforts and activities
- Up-to-date landscape analyses, best practices, and recommendations for investment in open infrastructure that can be applied globally

The IOI will offer services such as landscape surveys, assessment tools, and recommendations that can be used by institutions, funders, governments and other organizations engaged in supporting scholarly activities. This network will be governed and managed for the benefit of those who create, manage and use essential parts of that system. To achieve this vision, the IOI Group proposes (1) uniting infrastructure builders, adopters, and funders to share a set of common goals that will (2) build an organization (IOI) offering a common understanding with accompanying data that will facilitate and support communities to collectively build and adopt open infrastructure and (3) funding the systems and infrastructures that deliver benefits to the broader scholarly community. This proposal is for start up funds necessary to build a working governance structure, establish that framework, and engage the communities that need it.

The Activities of the IOI Organization:

1. **Research and Reporting** - tracking projects, infrastructure services, existing mechanisms for community supported infrastructure, funding data and funder needs; and exchanging knowledge on this research on open infrastructure
2. **Definition** - establishing criteria for open infrastructure, defining the workflow of scholarly communication, and identifying areas of redundancy and gaps
3. **Collaboration** - building agreement among stakeholders, creating a healthy, competitive environment where end-to-end solutions that meet stakeholder needs and meet OI criteria can be identified and packaged
4. **Advocacy and Engagement** - communicating principles, priorities, good practices and practical tools

- 5. Matching and Assessment** - Develop and maintain a methodology for matching what is needed to what is available, prioritizing collaborative solutions. The framework would help to identify areas for investment in the connections between projects that will create more fully adoptable solutions, and promote investment therein.

IOI Partners:

The IOI Steering Group is made up of representatives from 17 organizations that range from open infrastructure projects to academic institutions, and advocacy organizations. The IOI group will help to launch the new IOI Organization and will stay on as the IOI Steering Committee, a strategic, steering body that facilitates and coordinates shared strategy, a shared agenda, and shared funding across stakeholders to reach the goal of creating a sustainable ecosystem of open, interoperable community-led and -supported infrastructure to support scholarship, research and education. The IOI Steering Committee will be a rotating body to ensure that it represents the wider community.

Initial IOI Steering Group

Participant	Affiliation
Ginny Barbour	The Queensland University of Technology (QUT)
Arianna Becerril	Universidad Autónoma del Estado de México
Leslie Chan	University of Toronto Scarborough
Raym Crow	SPARC
Peg Fowler	Hypothesis
Heather Joseph	SPARC
Pierre Mounier	OpenEdition
Cameron Neylon	Curtin University
David Lewis	2.5% Commitment
Lucy Ofiesh	Center for Open Science
Nici Pfeiffer	Center for Open Science
Vanessa Proudman	SPARC Europe
Kristen Ratan	Strategies for Open Science (Stratos)
Danielle Robinson	Code for Science & Society
Mike Roy	Middlebury College
Katherine Skinner	Educopia
Ina Smith	Academy of Science of South Africa
Greg Tananbaum	ORFG
Evivva Weinraub	The University at Buffalo
Dan Whaley	Hypothesis
Maurice York	University of Michigan

Year 1 Project Goals:

A detailed project plan will be completed in partnership with the incoming Executive Director. At this stage, the Steering Committee has defined the following key milestones over year 1:

1. Secure Initial funding to cover the first two years - in progress
2. Hire Executive Director and create initial resourcing staff

3. Increase momentum through year one, including establishing and meeting initial goals of number of organizations and individuals who have signed on to support IOI
4. Research and report on a first draft of the total annual funding required for open infrastructure, how much is unmet, what is needed to grow, what is needed to sustain
5. Facilitating agreement among an initial set of Foundations, institutions and agencies on best methods and policies on sharing data about funding commitments to open infrastructure with each other and IOI
6. Facilitating and tracking institutional, government and agency commitments to support open infrastructure
7. Establish sustainability plan for IOI and seek further funding from funders as well as institutions

Budget and Budget Justification:

A full budget is attached.

IOI requests \$50,000 from the Alfred P. Sloan Foundation to support the recruitment of a strong Executive Director we launch this initiative and will allow the team to focus on fulfilling the project goals in year one. Initial funding has been received from the Schmidt Futures Program in the amount of \$150,000 for year one and a second \$150,000 for year two contingent upon raising funds to match the whole \$300,000. If this request is successful, the funds from Sloan will count towards this match, and strengthen the entire initiative.

Recipient type: 501(c)3

Code for Science and Society is a 501(c)3 with the mission to empower communities to work together and build innovative technology for the public good.

Appendix 1: Conflict of Interest Statement

The potential for conflict of interest with the IOI project will come when individual open infrastructure project staff serve on committees and working groups that are producing work packages that could influence or even determine funding outcomes.

To mitigate this, the IOI leadership and Steering Committee will be completely transparent as to who is serving on the various committees and working groups. All individuals serving on an IOI committee or working group will be required to fill in a COI statement identifying their various affiliations, including employment, previous employment, and board or advisory board membership. The IOI governance structure, including the Steering Committee, all other Committees and temporary or permanent working groups will have a strict recusal process when individual infrastructure projects are involved in a decision-making process that could impact their own funding opportunities.

Community feedback will be solicited as to how these processes are working as the IOI work progresses and adjustments will be made if there are conflict of interest concerns.

Appendix 2: Attention to Diversity Statement

Code for Science & Society (CS&S), IOI, and all CS&S' Sponsored Projects are committed to meaningful equity and inclusive organizational practices. Science and technology are human endeavors, subject to influence by the biases of people. In the pursuit of science, people have often replicated power structures that reinforce the disenfranchisement and exclusion communities. In the American context, this has historically centered on the exclusion of marginalized communities from work in scientific and technical communities. CS&S strives to be a community leader on issues around meaningfully inclusive public interest technology across domains. CS&S does this through work with our Sponsored Projects and Collaborative Communities Programs.

When working with sponsored projects, CS&S focuses on helping projects grow sustainable, inclusive culture through evolving governance, working transparently, encouraging open dialogue around building leadership skills. Our Collaborative Communities program focuses on building capacity on the open source ecosystem. The Open Source Alliance for Open Scholarship [Handbook Project](#), includes a [frequently referenced definition](#) of Open Scholarship, where equity and inclusion are central. Ongoing work with inclusion professionals [DeEtta Jones & Associates](#) will focus on the challenging conversations about inclusion that are happening (and often not happening) in the open source and science space. Our work with DeEtta Jones [is summarized here](#). We co-organize [csv.conf](#), which brings together a diverse global data science community - read reactions to our 2019 event from [Julia Lowndes](#) and [Soila Kenya](#). This broad community-level impact helps support our Sponsored Projects as they grow and implement inclusive internal and community-facing practices.

As nonprofit home of multiple sponsored projects, CS&S will oversee project leaders and teams, who will also collaborate with staff at outside organizations. By centering transparency and governance with our projects and leaning in to organizational and community growth, we hope continue to lead as a voice for meaningful inclusive practices in open source and science. Our direct plans, as well as examples of how we incorporate diverse representation our projects:

1. **Diversity in our Collaborators:** Collaborating partners will recruit diverse perspectives to participate in a user centered design process.
2. **Equity and Representation in Staffing:** We are growing our networks to support our project's abilities to recruit and retain talented people from all backgrounds.
3. **Centering Inclusion in the Project Governance:** CS&S has been actively engaged in supporting open source community to question, iterate, and mature governance models. For example, Dat's new model prioritizes community engagement and creating paths to leadership for newcomers.
4. **Proactively Seeking Opportunities to Engage with the Global Community:** It can be hard for small projects on limited budgets to adjust to the needs of a growing community. There are unique funding opportunities for open projects to get expert diversity support. As another example, PREreview was selected to convene a working group of

international experts at 2019 TriangleSci to focus on [bringing equity and diversity to peer review](#), and a Wellcome Trust grant [specifically focused on Diversity and Inclusion](#).

IOI is already developing a global strategy through diverse representation on its Steering Committee. As the project develops, CS&S will support IOI to implement inclusive practices.

Information Products

The Invest in Open Infrastructure (IOI) will produce documents, databases, surveys and other landscape analysis tools, and conduct workshops and interviews with a wide range of stakeholders. All materials will be made available under a CC-BY license with the exception of sensitive personnel and/or funding information. It is the stated goal of the IOI project that these outputs be participatory in nature and of use to the wider community.