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Executive Summary

At first glance scholarly communication may not seem like an incredibly important issue. It’s how we find out what’s happening in research, which is of course vitally important to researchers, policymakers, journalists and the public. But the norms and practices of scholarly communication are also tightly interwoven with a broad ecosystem of other important issues such as academic promotion and tenure, research funding, copyright, economic development, and even the pace, nature and integrity of scientific discovery. So while we may not blink when Facebook and Twitter change to keep up with our world’s rapidly evolving information expectations and practices, when scholarly communication is buffeted by these same forces the disruption that occurs is significant on many levels. How is scholarly communication holding up? What should its future look like? Are the solutions being adopting the right ones? Are we satisfied with the current pace and trajectory of open access, embargoes, peer review, digital preservation, data access, journal costs, impact tracking and institutional repositories?

Different stakeholder groups—universities, researchers, commercial publishers, funding organizations, scholarly societies, libraries, governments, open access advocates and so on—have focused on improving scholarly communication for many years now but generally as interest or industry groups and not as a broad stakeholder community. Because of the scope of impact of scholarly communication and because there are so many divergent perspectives on this issue—by stakeholder group, discipline, country and more—many have concluded that coming up with a broad, large-scale, collaborative, global approach to scholarly communication issues is vitally important, now more than ever, not just to protect the future health of research but also to ensure that the solutions we adopt today won’t widen the information access gap that already exists between wealthy and developing regions of the world (and indeed that ideally, global efforts will help close this gap and help sustain a more equitable future for information access).

The Open Scholarship Initiative (OSI) was developed to address this need. The **objective of OSI is to build a new and robust framework for direct communication and cooperation among all nations and stakeholders in order to improve scholarly communication, beginning with scholarly publishing and the issues that surround it**—and to the extent possible to help usher in common understanding and achievable, sustainable solutions and the capacity to work toward these solutions together. To accomplish this, OSI, which has been developed in partnership between the National Science Communication Institute (nSCI) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), has created a large community of high-level delegates from stakeholder groups around the world and convened this community in extended conversations, meetings and collaborative efforts—executive officers from key groups chosen to represent a cross-section of interests and opinions, authorized in most cases to speak on behalf of their institutions and in a position to reach agreements and push forward change.

The first meeting of this group happened this past April (OSI2016). Meetings are just one part of the overall OSI strategy, which consists of a continuous 10 year-long effort to expand perspectives, explore options, build partnerships with the many other groups who are also trying to affect change in these areas, research answers and fix problems, punctuated by annual meetings to build new bridges and dig more deeply into key issues. A central tenet of OSI’s still-evolving program will be to help figure out how these different groups and voices can work effectively together to rapidly achieve common goals and actionable, sustainable solutions. Improving the
global reach of OSI will also be important in this effort: OSI is not yet to the point where it is truly global or inclusive process—more work remains to be done but this effort is off to a strong start.

### Issue Overview and OSI’s Role

Publish or perish. That’s all most people know about the world of scholarly publishing. Research happens and then researchers transmit their findings. The full extent of this process is referred to as scholarly communication—everything that happens between the lab and the newspapers, including how articles are written, reviewed, submitted for publication, published, reviewed by the press, and communicated to policy makers and the public, as well as all other research “dissemination” activities via marketing, speaking, conferences, social media, books and so on.

Scholarly publishing is the capstone of this effort within academia—a modest but vital part of the scholarly communication spectrum related mostly to peer-reviewed journals in the sciences and monographs in the humanities. The core of this process (recognizing that many changes to it have happened over time) is an ancient and critical part of the scholarly communication process, steeped in history and arcanity, loaded with rules particular to each field, funding agency, and journal, and laced at the institutional level with incentives like promotion and tenure. This system is old and familiar, serves a purpose, and has broad buy-in from the research community, but it is changing—not necessarily quickly but energetically and in different directions. As a consequence it is probably fair to say that no one in academia is confident right now what the road ahead looks like for scholarly publishing. In addition, this commotion has caused a trickle down effect, feeding uncertainty about what kind of research we’re valuing, publishing, and funding; about the reproducibility of research (is research working the way it should?); about why and how universities and research institutions should incentivize and recognize different types of research communication (and how these decisions affect promotion and tenure); about the impact of the Internet on best practices for research communication; about whether research is sufficiently accessible by the people worldwide who need to read it (a conversation limited not just to library budgets but to whether there is a basic human right to science knowledge that we need to acknowledge); and a host of other issues such as open access (making information immediately and freely available for use and reuse), peer review, embargoes, impact factors, data deposits, preservation, institutional repositories, access costs and much more.

Different stakeholder groups have worked on these and related issues for years but rarely together in a broad, large-scale collaborative and global way. There has been collaboration and agreement at the margins, but in terms of achieving broad or rapid movement stakeholders have been generally been working to advance solutions that meet their particular needs, and these solutions are neither all-encompassing nor collaborative across widely differing viewpoints, groups, regions and disciplines. And the end result, some would argue, has been less than optimal progress toward open, too many solutions that don’t necessarily mesh well and a lingering air of distrust and acrimony between some stakeholder groups who are tired of fighting over their differences, even though they all care deeply about the future of scholarly communication writ large.

To many experts and observers, then, it has become apparent that if solutions to scholarly communication-related issues are going to emerge that are widely embraced, effective and sustainable—particularly at the global level where different countries often have vastly different outlooks on these issues—stakeholders will need to engage
directly, openly discuss their different ideas and perspectives, and figure out ways to knit together and build on work that has already been done and then fill in the gaps. Developing a broad, collaborative, global approach is seen as critical—now more than ever—to support the future of research (including evaluation and funding), and efforts to develop better global information access and equity. Arguably, even global economic development and public policy development will be affected by how the future of research publishing unfolds. For such an important issue and as in any multi-stakeholder environment—from environmental protection to medical research to international policy—mechanisms need to exist where representatives of different stakeholder groups can speak directly to one another so they can collaborate and coordinate on developing systems and policies that govern shared products, processes and resources. No single actor in a multi-stakeholder system like this can enact system-wide change unilaterally; a mechanism for collaborative action needs to exist but it doesn’t currently exist in scholarly communication on a broad scale.

So if we are going to fix this system, what should it look like? Who should decide and why? The Open Scholarship Initiative (OSI) was designed to tackle the issues in scholarly communication (beginning with scholarly publishing) by bringing together high-level representatives (importantly, people with decision making authority) from all the key stakeholder groups to share perspectives. The goal of OSI is to build a sustainable, robust framework for direct communication and cooperation among nations, universities, researchers, publishers, funding organizations, scholarly societies, libraries, policy makers, and other scholarly publishing stakeholders, in order to shape the future of scholarly communication, beginning with scholarly publishing and the issues that surround it, to support a climate for finding common understanding and workable solutions and to help this stakeholder community move toward these solutions together. OSI was developed by the National Science Communication Institute (nSCI) in early 2015 in partnership with and funded in large part by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and George Mason University, which also hosted the first annual OSI summit of global leaders earlier this year (in late April).

The first meeting of OSI delegates—dubbed OSI2016—was designed to address some very broad and foundational questions that underpin this effort. What do we mean by publishing for instance? Who should decide what is and isn’t open? What is the moral-ethical case for open? By airing these different ideas and perspectives in a diverse environment filled with high-level decision makers, meeting delegates worked to find common ground on where to begin moving forward together. OSI2016 brought together 190 delegates from 12 countries, 15 stakeholder groups and 182 institutions to answer these questions—including high-level representatives from 50 major research universities, 35 scholarly publishers, 24 government policy organizations, 23 scholarly libraries and groups, 23 non-university research institutions, 17 open knowledge groups, eight faculty and education groups and more. Future meetings will be at least the same size or larger, and will include even more international representation.

OSI2016 was the first of ten planned annual meetings. Between meetings, other elements of OSI will continue to develop, including studies, pilot projects, partnership agreements and so on. Annual meetings will underpin this effort and will give delegates an important opportunity to meet and interact but the bulk of the substantive work of the broader OSI effort will continue year-round.
OSI by the numbers (see Annex 3 for details)

<table>
<thead>
<tr>
<th>Delegates</th>
<th>Stakeholder distribution</th>
<th>Funding support ($169k)</th>
<th>Expenses ($169k)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals: 190*</td>
<td>50 research universities (25%)</td>
<td>Delegate registration fees, $58k (34%)</td>
<td>Meals (52%)</td>
</tr>
<tr>
<td>Institutions: 184*</td>
<td>37 scholarly publishers (19%)</td>
<td>UNESCO, $48k (29%)</td>
<td>Transportation (12%)</td>
</tr>
<tr>
<td>Countries: 12**</td>
<td>24 government policy orgs (12%)</td>
<td>Other sponsors, $42.5k (25%)</td>
<td>Management fee (10%)</td>
</tr>
<tr>
<td>Stakeholder groups: 15</td>
<td>23 scholarly libraries and groups (12%)</td>
<td>Sloan Foundation, $20k (12%)</td>
<td>IT (8%)</td>
</tr>
<tr>
<td>Workgroups: 16</td>
<td>23 non-university research institutions (12%)</td>
<td>Other donations, $350 (0%)</td>
<td>Conference-related materials (7%)</td>
</tr>
<tr>
<td>Scholarships granted: 80</td>
<td>17 open knowledge groups (9%)</td>
<td>Entertainment (7%)</td>
<td>Other hotel-related (2%)</td>
</tr>
<tr>
<td>Initiative partners: 3</td>
<td>14 other (scholcomm, journalists, politicians, funders)</td>
<td>Other admin (1%)</td>
<td>Other admin (1%)</td>
</tr>
<tr>
<td>Sponsors: 13</td>
<td>8 faculty &amp; education groups (4%)</td>
<td>Credit card transaction fees (1%)</td>
<td></td>
</tr>
</tbody>
</table>

*Most but not all of the key groups in scholarly publishing were represented. All groups were invited to attend and no one was deliberately excluded or omitted.

**Most OSI2016 delegates were from the US and UK

OSI2016 Outcomes

What did all these smart people accomplish at OSI2016? The dust is still settling but the biggest win may have been that this group came together at all, and with a shared sense of purpose that they could and should work together to help guide the future of scholarly communication and publishing. In a survey conducted shortly after the meeting we know there is a general sense among delegates right now of hope and enthusiasm, laced with uncertainty about what comes next and when. The word cloud below was created by participants, who were asked to list five words that best described this event to them.

The actionable outcomes from OSI2016 will flow from two sources: the OSI Action Plan (see summary in Annex 5), and the final papers that OSI2016 workgroups wrote together (available on the OSI website at osinitiative.org/2016-outputs). Workgroups were the central organizing feature of OSI2016. All 190 delegates were assigned to diverse workgroups of 10-12 delegates each and spent most of their conference time (in addition to pre-conference online conversations and studying; see Annex 1 for details) debating the answers to foundational questions in scholarly publishing like “What is open?” and “Who decides?”

We are modestly hopeful that some of the conclusions and recommendations developed by these groups will be usable starting points for conversation and might even eventually lead to real breakthroughs and progress.
Indeed, some of the proposals put forward by OSI2016 delegates are bold and insightful; others do a good job of capturing the complexity of the challenges ahead; still others concede that more study is needed. These are all complex questions requiring thoughtful and deliberate conversations. After receiving feedback from a wider stakeholder audience the OSI group will fine-tune at least some of these proposals into workable action plans—a process which is already underway.

The ideas in these papers can be grouped into two main categories: Overarching themes and specific recommendations. The overarching themes are helping inform the OSI group about where to focus next—where to find consensus and what issues are most fundamental to the success of reform efforts. These themes from OSI2016 can be characterized as follows:

1. **Acknowledging:** Scholarly communication is changing and this change presents opportunities and challenges.
2. **Describing:**
   - Some of the change that is happening involves *shaking up the current system to utilize publishing tools and approaches that may be better suited to an Internet-based information world*. But not all current and needed changes fall into this category. Indeed, some of the most needed changes do not.
3. **Doing (general guidelines for action):**
   - We don’t have a clear, coordinated action plan for improving open. What needs to happen today, tomorrow and the day after? Who are the actors, what are the mileposts, what are the likely impacts, and how do we measure success? (Note that these concerns don’t necessary suggest that OSI itself should create and evaluate specific programs of work. Rather, this is a commentary on the need for OSI to identify what it can do and how it will operate, and then farther down the road, what kinds of synergies OSI can encourage.)
   - Some change will need to involve reforming the communications culture inside academia, where old publishing methods, measures and perceptions can drive author choices and be used as proxies for merit when evaluating grant awards and tenure decisions. And some will need to involve examining our own biases that publishing is a binary proposition involving either open or closed, subscription or APC-based, right or wrong. Open, impact, author choices, peer review and other key concepts all exhibit a range of values. Identifying non-binary measures for some of these values (as proposed by several workgroups) may be helpful insofar as allowing stakeholders to focus on improving areas most in need of change and comparing progress and best practices across disciplines, institutions, publishing approaches, funders and so on.
   - Any widespread change is going to require a widespread effort. There are simply too many stakeholders with different interests and perspectives who influence different decision points. No single stakeholder or group will be able to affect this kind of change unilaterally.
   - How do we make these reforms in response to the needs and concerns of authors rather than in spite of authors (authors are not a homogenous group with common interests or opinions, of course, but there was some sense among delegates that reform efforts could be better attuned to what authors needed)?
   - How do we make changes across disciplines (which have different needs) and that also effectively build on the efforts of the many stakeholders in this space?
- How do we reform the system without losing its benefits?
- How do we move from simply repairing dysfunction to creating a more ideal publishing world and reaping the benefits that such a world could provide in terms of participation, efficacy, efficiency, and discovery?
- Developing standards and norms would be helpful as we move forward, as well as answers to a number of key questions.

To the skeptic it may not seem significant that a large group of high level delegates agreed that change is happening, that the challenges are great, and that clear, coordinated action is needed. But to the optimist, the exact opposite is true: It is encouraging that publishers and policymakers, open advocates and skeptics, funders and library heads, scientists and humanities leaders all agree that the scholarly communication system needs to be repaired as a group and that we need a foundation for action. No groups are walking away from the table, and no one is threatening to force change on the other (indeed, 99% of OSI2016 delegates plan to stay involved in OSI conversations during 2016-17 and over half will attend the OSI2017 meeting).

Some of the key specific recommendations developed by the OSI2016 are listed below. Bear in mind that these recommendations came from high-level representatives of multi-stakeholder workgroups. They aren’t just pie-in-the-sky proposals, but in many cases starting points for conversation that major publishers and research universities may be willing to stand behind:

<table>
<thead>
<tr>
<th>Workgroup</th>
<th>Key action items</th>
</tr>
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<tbody>
<tr>
<td>What is publishing 1</td>
<td>Explore disaggregating the current services provided by publishers (such as filtering, editing, dissemination, registration, and so on) and how current scholarly publishing stakeholders might be incentivized to embrace these changes.</td>
</tr>
<tr>
<td>What is publishing 2</td>
<td>Explore ways to change the publishing culture inside of academia, including systems of academic recognition and reward. Identify unmet author needs, and gaps in evidence and knowledge, develop disciplinary approaches, and use pilots rather than one-size-fits-all approaches.</td>
</tr>
<tr>
<td>What is open?</td>
<td>The scholarly community’s current definition of “open” captures only some of the attributes of openness that exist across different publishing models and content types. We suggest that the different attributes of open exist along a broad spectrum and propose an alternative way of describing and evaluating openness based on four attributes: discoverable, accessible, reusable, and transparent. These four attributes of openness, taken together, form the draft “DART Framework for Open Access.” This framework can be applied to both research artifacts as well as research processes.</td>
</tr>
</tbody>
</table>
| Who decides?                    | 1. Evaluation: Re-assess the criteria for academic tenure and promotion  
                                   a. Fully consider OA publications on the same footing as all other outlets in research assessment  
                                   b. Research and validate the use of altmetrics  
                                   c. Reward greater openness  
                                   2. Incubation: Nurture alternative, community-driven publishing models  
                                   3. Transformation: Facilitate a “global flip” of research journals from subscription-based to OA. |
| Moral dimensions                | In this transition period, we need to encourage a period of exploration and grace in the search for new models, while being prepared to judge such efforts by the highest moral standards. We must consider, for example, whether a particular invention maximizes the new digital affordances in order to increase universal access. We consider it our responsibility to make judgments about the morality of acts, artifacts, systems, and processes, but not on the morality of people and organizations. |
| Usage dimensions                | 1. Perform a landscape assessment of scholarly communication and workflow tools to categorize current best practices, standards and norms.  
                                   2. Create an issue brief concerning funder support of open access. OSI should identify conversations that
are already happening in this area, looking for synergies and potential partnerships, and facilitate knowledge sharing in this area.

**Evolving open 1**
1. We need a better understanding of how the system works now. Specifically, we need a comprehensive study that shows in detail, country by country, how funding, tenure, and promotion decisions are made and the role of research outputs and activities within this decision making process.
2. As a community and at a high level, define an ideal future across all issues—peer review, impact factors, etc.
3. Ensure that any new impact system adopted be transparent.

**Evolving open 2**
1. We recommend that OSI commission the development of a comprehensive set of resources and messaging efforts, targeted to specific audiences, to increase the profile of open access across stakeholder groups.
2. We recommend that OSI appoint a Task Force to develop a strategy for the establishment of an open access venture fund, and deliver a report at OSI 2017.
3. We recommend that the topic of liberating subscription budgets (and the dissolution of “big deal” models) be a future OSI Working Group, with representation from both libraries and publishers.
4. We recommend that an OSI Working Group identify and seek ways to close gaps within the OA infrastructure, beyond STM journals (the lack of developed infrastructure beyond STM journals and the fragmentation and lack of interoperability of systems and processes.

**Open impacts**
Openness scores should be developed, as well as utilization and economic impact measures. Ideas are proposed for what would be included in the baselines of each such evaluation. More research is needed and proposed, perhaps as standing (ongoing) OSI efforts.

**Participation**
1. Cultural change
2. Consistent messaging
3. More and better open publications
4. Institutional commitments to scholcomm efforts (including adjusting incentive and reward systems)
5. Support more research into solutions and sticking points

**Overload & underload**
1. Increase information literacy efforts toward understanding the behavior of information systems and economies, which can in turn prepare students and scholars to make both more understandable to others.
2. Expand information literacy to include knowledge about the nature of computation and its control over what is accessible from and delivered to our devices.
3. To address the overabundance of information that causes overload, filtering systems are needed to identify, sort, select, and summarize relevant information.
4. To address the problem of underdelivery of or lack of access to information, known as information underload, remove widespread sociopolitical, technological, educational, geographic, and financial barriers.
5. Apply more open metadata, social media, digital tools and networked expertise to advance discovery. Better exposure and discovery options for scholarly products are still needed, as well as the means to understand and apply them.
6. Convert more content into a machine-shareable form and continue promoting openness through responsible curating, archiving and discovery of raw data.
7. Advocate for mandatory copyright exception for text mining and encourage publishers and vendors to remove obstructions to mining content.

**Repositories & preservation**
1. Clarify opportunities for UNESCO and WSIS to engage in this effort
2. Coordinate action among meta-organizations (e.g., COAR, CLIR/ DLF)
3. Raise funds for improved sustainability and stewardship through investments and endowments in repositories
4. Support aggregation driven by preservation concerns, such as:
   a. Electronic legal deposit (UK)
   b. Portico, Chronopolis, APTTrust, and DuraSpace
   c. DPN, MetaArchive Cooperative, CLOCKSS
5. Build workflows and an ecosystem in order to ensure long-term access and preservation.

**Peer review**
1. Pre-publication peer review:
   - We encourage the use of preprint servers
| Embargoes | A project is proposed to study and reform the current embargo system. The stages of this project are as follows:
|           | 1. funder identification (already begun) and brief (drafted)
|           | 2. literature review (already begun)
|           | 3. case studies analysis
|           | 4. employing researcher(s) and surveying stakeholders
|           | 5. analysis of survey data and presentation at OSI 2017 (by the OSI 2016 Embargo Workgroup). The OSI Embargo Workgroup has prepared a set of draft survey questions and will analyze the survey data and present it to OSI 2017 |
| Impact factors | 1. DORA recommendations should be implemented. Future OSI workgroups should assess the initial response of research funders, especially in the biomedical field, to this proposed action and amend the following actions accordingly.
|           | 2. Create templates for universities / disciplines, to facilitate the development of appropriate tenure and promotion frameworks to implement DORA
|           | 3. Create an international metrics lab, learning from prior attempts to do this, and staffed with a coalition of groups already in this space (as identified in the report).
|           | 4. Share information about the JIF, metrics, their use and misuse, via a resource page on the OSI website and partnerships with institutions as identified in the report
|           | 5. Improve the validity of the JIF as one indicator of journal quality (OSI workgroups focused on indicators or impact factors should draft a list of improvements required to the JIF) |
| At-large | 1. Promotion and tenure was discussed at some point in most, if not all, workgroups. Notably, there was no team expressly designated to tackling the question of promotion and tenure. There is recognition that while promotion and tenure is a key component of the publishing ecosystem, there is perhaps little that publishers themselves can do to influence the process. In this sense, OSI could conceivably work with other stakeholders throughout the academic system to express perspectives and positions on this evolution.
|           | 2. More focus on impact is another idea. The at-large committee’s observations lend credence to the idea that a “spectrum of impact” measure might be developed by OSI to parallel the spectrum of open proposal. Specifically, a theme running as an undercurrent in many workgroup discussions was a greater need to focus on assessment of the value of research and scholarship. Notably, nearly all participants in the OSI2016 conference, and most stakeholders in the entire scholarly publishing ecosystem, have an interest and need to measure the impact of research and scholarship.
|           | 3. Improve composition and representation for OSI2017, begin focusing on action instead of ideas |

Drawing from this summary, then, and from other conversations about the broad goals of OSI, we have concluded that OSI2017 and the OSI efforts between now and April of 2017 should focus on these key points:
1. Develop partnership agreements to work together to change the culture of communication inside academia (and as part of this effort, clarify messaging with regard to benefits and impacts of open).

2. Lay the groundwork for promotion and tenure reform (a framework agreement with stakeholder partners to disentangle the influence of journal publishing and make evaluation more transparent).

3. Pilot new spectrum measures for “open” and impact (see the reports from the “Open Impacts” and “What is Open?” workgroups). Also assess the routes by which such measures might come into common use and the lessons to be learned from previous attempts that have not been taken up.

4. Develop and recommend new tools to replace the journal impact factor.

5. Fund studies or pilots that will help:
   a. Identify which publishing services can/should be better handled by others (disaggregated).
   b. Assemble and supplement as needed an evidence base to better inform our policies regarding embargoes.
   c. Develop a stronger underpinning (economic modeling?) for the discussion surrounding the idea of pushing a global flip to open using APCs (e.g., how might this affect access in the global south?).
   d. Identify the economic impacts of open.
   e. Get a better understanding of how the system works now, and then identify scholarly publishing standards, norms, best practices, exit strategies, incentive systems, and a future ideal.

6. Identify which scholarly publishing stakeholders can work together on these and other efforts and how (multiple stakeholders require a convening power).

7. Develop new funding models such as a venture fund that can allow more support for joint efforts, or improve the flexibility of library budgets (e.g., by examining the efficiency of “big deals”).

8. Propose radical new repository interoperability and infrastructure solutions.

9. Develop a broader and clearer description of peer review that takes into account the different needs for different stages.

Some of the proposals not raised at OSI2016 but that might be included in OSI2017 (and beyond) include:

1. Focus more on patent literature, research reports, databases and other published information. OSI by design has a university-centric and journal-centric bias to the perspectives being considered. Patent literature, research reports, and databases are also important sources of research information—more so than journals in some disciplines (although these still reference journal articles). As with journal articles this information isn’t always free or easy to find and is suffering from some of the same usability issues as journal articles.

2. Focus more on monographs and other long forms of publication (aside from journal articles).

3. Dig into the feasibility of the All-Scholarship Repository, a stand-alone effort that may align with the recommendations of the OSI2016 repositories workgroup. An early assessment of this effort was made by the original OSI working group in their February 2014 report.

At least a portion of the OSI2017 conference will focus on implementing OSI2016 proposals (or tracking the implementation of these proposals) and following through on progress, impacts and needed adjustments. A final determination about which proposals will be followed this year will be completed by the Fall of 2017. During 2016 OSI delegates may also look for quick wins that can help set the stage for more partnerships and efforts. See Annex 5 for more details.
The Future of OSI

While the rough outlines are beginning to take shape, precisely what OSI will look like going forward has yet to be determined. However, OSI2016 was an important step forward in this evolution. It is commendable that this stakeholder community has started to engage in this process.

This first event was made possible by financial support from 12 organizations plus delegate fees (which provided the largest portion of support). Continuing to grow the funding base for this effort will be a key focus in the coming years in order to ensure that we have sufficient people and resources in place to make things happen.

A fully-funded OSI program may require an annual budget of several millions of dollars. How much budget expenditure is warranted is a matter of perspective. Are there other projects that could create more benefit than OSI for the same expenditure? Is this expenditure worth the investment of time and money for stakeholders? In the sense that OSI is the only effort focusing on building a broad, international coalition of stakeholder groups to pursue reform together, then there really is no cost comparator. And in terms of the cost outlay, a few million dollars annually is small compared to the size of the scholarly publishing ecosystem, particularly when all the tangential costs and impacts for the wide variety of stakeholder groups are considered. Investing a modest amount in OSI annually (considered across the entire stakeholder investment in scholarly publishing and without judgment as to who should contribute or how much—only that all stakeholders should ideally participate) holds the potential to improve the scholarly communication landscape for everyone by:

- Achieving open goals faster and on a more predictable trajectory by bringing all stakeholders to the same side of the table to push together toward their common goals (while continuing to work out their differences on tangential issues),
- Creating multiple platforms for working on scholarly communication improvements together as a broad stakeholder community (these platforms will expand as OSI’s ability to collaborate and communicate increases),
- Increasing the efficiency and effectiveness of stakeholders by facilitating the development of a common roadmap of goals, policies, and standards in scholarly communication, and
- In the end, increasing the amount of science information available to the world and the number of people who can access this information.

About nSCI

The National Science Communication Institute (nSCI) is the parent body of OSI. The goal of nSCI is to change the culture of communication inside science. Other nSCI projects related to OSI include the All-Scholarship Repository (ASR), the Science Communication Network and the Science Communication PhD program. Funding for OSI and these other efforts flows through nSCI with no overhead. nSCI is a 501c3 tax-exempt nonprofit charity registered in Washington State (EIN 27-4690007). For more information about nSCI, please visit nationalscience.org.
Annex 1: OSI2016 Workgroup Questions

Each of these questions was addressed by diverse 10-12 person teams. Some teams were more diverse than others due to last-minute shifts in attendance, but overall, the conference was balanced by design to represent a broad swath of perspectives in scholarly publishing.

WHAT IS PUBLISHING?

What do we mean by publishing in today’s world? What should be the goals of scholarly publishing? What are the ideals to which scholarly publishing should aspire? What roles might scholarly publishers have in the future? What scenarios exist where publishers continue to play a vital role but information moves more freely? What impact might these reforms have on the health of publishers? Scholarly societies? Science research? Why?

WHAT IS OPEN?

There is a broad difference of opinion among the many stakeholders in scholarly publishing about how to precisely define open access publishing. Are “open access” and “open data” what we mean by open? Does “open” mean anything else? Does it mean “to make available,” or “to make freely available in a particular format?” Is a clearer definition needed (or maybe just better education on the current definition)? Why or why not? At present, some stakeholders see public access as being an acceptable stopping point in the move toward open access. Others see “open” as requiring free and immediate access, with articles being available in CC-BY format. The range of opinions between these extremes is vast. How should these differences be decided? Who should decide? Is it possible to make binding recommendations (and how)? Is consensus necessary? What are the consequences of a lack of consensus?

WHO DECIDES?

Tied to this question of who should decide the future of open access, who should have the power to make changes to scholarly publishing practices? Do these powers flow from publishers, institutions, tenure committees, funding agencies, authors, or all of the above? All of the above? None of the above? What are the pros, cons, and consequences of different institutions and interest groups developing and implementing their own solutions (even the one-off variety)? Is federal oversight needed? Global coordination (through an organization like UNESCO)?

WHAT ARE THE MORAL DIMENSIONS OF OPEN?

Does society have a moral imperative to share knowledge freely, immediately, and without copyright restriction? A legal imperative? Why or why not? What about research funded by governments? Corporations? Cancer research? For that matter, is our current mechanism for funding scholarly publishing just or unjust? What other models are there? What are the pros and cons of these models? What is the likelihood of change?
WHAT ARE THE USAGE DIMENSIONS OF OPEN?

What are the usage-related challenges currently faced by open efforts? For instance, open data is intriguing in principle, but in reality, making underlying data open can be problematic, conflicting with the need for research secrecy (whether driven by the desire to be first to publish, or the desire of funders to hold onto data to protect future discovery potential), the potential for misinterpretation by other researchers, and so on. Publishing clinical trial data in open formats is also intriguing but would run afoul of many current consent agreements, particularly older consents. Open access is similarly challenged in some instances by a conflict between which version of papers is allowed to appear in open repositories. What is the value of archiving non-final versions? What are the range of issues here, what are the perspectives, and what might be some possible solutions?

EVOLVING OPEN SOLUTIONS

Are the scholarly publishing tools we’re using today still the right ones? Is the monograph still the best format in the humanities? Is the journal article still best in STM? These products can be difficult to produce and edit, nearly impenetrable to read, and—as in the case of clinical research information—they aren’t necessarily the best-suited formats for capturing every piece of necessary information (like protocols and datasets in medical research) and showing how this information is all connected to other scholarship. What other formats and options are being considered or used? What are the prospects of change? How about the stakeholder universe itself? How are roles, responsibilities and expectations changing (and where might they end up)? Are we “settling” on half-measures or on the best possible solutions?

OPEN IMPACTS

How fast is open access growing? Is this fast enough? Why or why not? What are the impacts of currently evolving open systems? For instance, are overall costs being reduced for scholarly libraries? Is global access to scholarly information increasing? What about in the Global South? What is the impact in this region of increasing adoption of the author-pays system? What pressures is the move to open placing on institutions and systems and what are the costs/benefits?

PARTICIPATION IN THE CURRENT SYSTEM

Do researchers and scientists participate in the current system of scholarly publishing because they like it, they need it, they don’t have a choice in the matter, or they don’t really care one way or another? What perceptions, considerations and incentives do academicians have for staying the course (like impact factors and tenure points), and what are their pressures and incentives for changing direction (like lowering publishing charges)?

INFORMATION OVERLOAD & UNDERLOAD

Information underload occurs when we don’t have access to the information we need (for a variety of reasons, including cost)—researchers based at smaller institutions and in the global periphery, policymakers, and the general public, particularly with regard to medical research. Overload occurs when we can access everything but are simply overwhelmed by the torrent of information available (not all of which is equally valuable). Are these issues two sides of the same coin? In both cases, how can we work together to figure out how to get people the
information they need? Can we? How widespread are these issues? What are the economic and research consequences of information underload and overload?

**PRESERVATION, REPOSITORIES & MANDATES**

Are we satisfied with the current state of global knowledge preservation? What are the current preservation methods? Who are the actors? Is this system satisfactory? What role do institutional repositories play in this process? What does the future hold for these repositories (taking into account linking efforts, publishing company concerns about revenue declines, widespread dark archiving practices, and so on)? Would new mandates help (or do we simply need to tighten existing mandates so they actually compel authors to do certain things)? And how do versions of record figure into all of this—that is, how do archiving policies (with regard to differences between pre-journal and post-journal versions) affect knowledge accuracy and transfer?

**PEER REVIEW**

Managing the peer review process is one of the major attractions and benefits of the current publisher-driven publishing environment. Would it be possible to maintain peer review in different system—perhaps one where peer review happens at the institutional level, or in an online-review environment? How? What is really needed from peer review, what are the reform options (and what do we already know about the options that have been tried)?

**EMBARGOS**

In an information system where so much information is destined for subscription journals, the assumption has been that embargos allow publishers time to recoup their investments, and also allow the press time to prepare news articles about research. Is this assumption warranted? Why or why not? Is the public interest being served by embargos? What about by embargos on federally-funded research? Are there any facts or options that haven’t yet been considered to address the concerns animating the embargo solution?

**IMPACT FACTORS**

Tracking the metrics of a more open publishing world will be key to selling “open” and encouraging broader adoption of open solutions. Will more openness mean lower impact, though (for whatever reason—less visibility, less readability, less press, etc.)? Why or why not? Perhaps more fundamentally, how useful are impact factors anyway? What are they really tracking, and what do they mean? What are the pros and cons of our current reliance on these measures? Would faculty be satisfied with an alternative system as long as it is recognized as reflecting meaningfully on the quality of their scholarship? What might such an alternative system look like?
Annex 2: OSI2016 Delegate List

- Aaron McCollough, Head, Scholarly Communication and Publishing Unit, University of Illinois Library
- Adam Huftalen, Senior Manager of Federal Government Affairs, RELX Group
- Adyam Ghebre, Director of Outreach, Authorea
- Agathe Gebert, Open Access Repository Manager, GESIS-Leibniz-Institute for the Social Sciences
- Ali Andalibi, Associate Dean of Research, George Mason University
- Alicia Wise, Director of Access and Policy, Elsevier
- Ali Mudditt, Director, University of California Press
- Amy Brand, Director, MIT Press
- Amy Nurnberger, Research Data Manager, Columbia University
- Andrew Tein, Vice President, Global Government Affairs, Wiley
- Angela Cochran, Director of Journals, American Society of Civil Engineers (ASCE)
- Ann Gabriel, Vice President, Academic & Research Relations, Elsevier
- Ann Riley, President, Association of College and Research Libraries (ACRL)
- Audrey McColloch, Chief Executive, Association of Learned and Professional Society Publishers (ALPSP)
- Barbara DeFelice, Program Director for Scholarly Communication, Copyright and Publishing, Dartmouth College
- Becky Clark, Director of Publishing, Library of Congress
- Bev Acreman, Commercial Director, F1000
- Bhanu Neupane, Program Specialist, Communication and Information Sector, UNESCO
- Bill Priedhorsky, Science Resource Office Director, Los Alamos National Laboratory
- Brett Bobley, CIO, National Endowment for the Humanities (NEH)
- Brooks Hanson, Director of Publications, American Geophysical Union
- Bryan Alexander, higher education publishing consultant and futurist
- Caroline Black, Editorial Director, BioMed Central (SpringerNature)
- Catherine Murray-Rust, Dean of Libraries & Vice Provost for Academic Effectiveness, Georgia Tech
- Catriona MacCallum, Acting Advocacy Director, PLOS
- Cheryl Ball, Director, Digital Publishing Institute, West Virginia University
- Chris Bourg, Director, MIT Libraries
- Chris Erdmann, Director, Harvard-Smithsonian Astrophysics Library
- Christina Drummond, Director of Strategic Initiatives, Educopia Institute
- Christopher Thomas, Administrator, Defense Technical Information Center (DTIC), US Department of Defense
- Claudia Holland, Head of Scholarly Communication and Copyright, George Mason University
- Colleen Cook, Dean of Libraries, McGill University
- Concetta Seminara, Editorial Director, US Social Science & Humanities Journals Program, Routledge/Taylor & Francis
- Crispin Taylor, Executive Director, American Society of Plant Biologists
- Danny Kingsley, Head of Scholarly Communication, Cambridge University
- Dave McColgin, User Experience Director, Artefact
• David Ross, Executive Director for Open Access, SAGE Publications
• Deborah Stine, Professor of the Practice, Engineering and Public Policy, Carnegie Mellon University
• Dee Magnoni, Research Library Director, Los Alamos National Laboratory
• Denise Stephens, University Librarian, University of California Santa Barbara
• Diane Graves, Assistant Vice President for Information Resources and University Librarian, Trinity University
• Dick Wilder, Associate General Counsel, Bill & Melinda Gates Foundation
• Donna Scheeder, President, International Federation of Library Associations and Institutions (IFLA)
• Elizabeth Kirk, Associate Librarian for Information Resources, Dartmouth College
• Emily McElroy, Director, McGoogan Library of Medicine, University of Nebraska Medical Center
• Éric Archambault, President and Founder, Science-Metrix
• Eric Massant, Senior Director of Government and Industry Affairs, RELX Group
• Frances Pinter, CEO, Manchester University Press and Founder of Knowledge Unlatched
• Francisco Valdés Ugalde, Director General, Latin American Faculty of Social Sciences (FLACSO) in Mexico
• Frank Sander, Director, Max Planck Digital Library, Max Planck Society
• Gail McMillan, Director of Scholarly Communication, Virginia Tech
• Gary Evoniuk, Director of Publication Practices, GlaxoSmithKline (GSK)
• Geoffrey Bilder, Director of Strategic Initiatives, CrossRef
• Ginger Strader, Director, Smithsonian Institution Scholarly Press
• Glenorchy Campbell, Managing Director, British Medical Journal (BMJ) North America
• Grace Xiao, Co-Founder and President, Kynplex
• Gregg Gordon, President, Social Science Research Network (SSRN)
• Harriette Hemmasi, University Librarian, Brown University
• Ivan Oransky, Vice President and Global Editorial Director, MedPage Today, and Co-Founder, Retraction Watch
• Ivy Anderson, Interim Executive Director and Director of Collections, California Digital Library (CDL)
• J. Roberto F. Arruda, Special Advisor to the Scientific Director, São Paulo Research Foundation (FAPESP)
• Jack Schultz, Director, Christopher S. Bond Life Science Center, University of Missouri
• Jake Orlowitz, Head of The Wikipedia Library
• James Butcher, Publishing Director, Nature Journals
• James Hilton, University Librarian and Dean of Libraries, Vice Provost for Digital Education and Innovation, University of Michigan
• Jamie Vernon, Director of Science Communications and Publications at Sigma Xi and Editor-in-Chief, American Scientist
• Jane McAuliffe, Director, National and International Outreach, Library of Congress
• Jason Hoyt, CEO, PeerJ
• Jean-Gabriel Bankier, President, bepress
• Jeff Mackie-Mason, Dean of Libraries, University of California Berkeley
• Jeff Tsao, Distinguished Member of the Technical Staff, Sandia National Laboratories
• Jennifer Howard, Senior Reporter, Chronicle of Higher Education
• Jennifer Pesanelli, Deputy Executive Director for Operations and Director of Publications, Federation of American Societies for Experimental Biology (FASEB)
• Jessica Sebeok, Associate Vice President for Policy, Association of American Universities (AAU)
• Joan Lippincott, Associate Executive Director, Coalition for Networked Information (CNI)
• John Dove, library and publishing consultant
• John Inglis, Executive Director and Publisher, Cold Spring Harbor Laboratory Press and Co-Founder, bioRxiv
• John Vaughn, Senior Fellow, American Association of Universities (AAU)
• John Warren, Head, Mason Publishing Group, George Mason University
• John Willinsky, open access pioneer, PKP founder, and professor, Stanford University
• John Zenelis, Dean of Libraries and University Librarian, George Mason University
• Joshua Nicholson, CEO and Co-Founder, The Winnower
• Joyce Backus, Associate Director for Library Operations, National Library of Medicine, National Institutes of Health
• Joyce Ogburn, Dean of Libraries, Appalachian State
• Judy Luther, President, Informed Strategies
• Julie Hannaford, Deputy Chief Librarian, University of Toronto
• Kamran Naim, Lead Researcher, Open Access Cooperative Study
• Karin Trainer, University Librarian, Princeton University
• Karina Ansolabehere, human rights and democracy expert, FLACSO-Mexico
• Kathleen Fitzpatrick, Director of Scholarly Communication, Modern Language Association (MLA)
• Kathleen Keane, Director, Johns Hopkins University Press
• Kathleen Shearer, Executive Director, Confederation of Open Access Repositories (COAR)
• Keith Webster, Dean of Libraries, Carnegie Mellon University
• Kevin Bradley, President, US Journals, Taylor & Francis Group
• Kevin Davies, Vice President for Business Development, American Chemical Society, and Publisher, C&EN
• Kim Barrett, Dean of the Graduate Division, University of California San Diego (UCSD)
• Laura Helmuth, Incoming President, National Association of Science Writers (NASW)
• Laurie Goodman, Editor-in-Chief, GigaScience
• Lee Cheng Ean, University Librarian, National University of Singapore
• Lisa Macklin, Director, Scholarly Communications Office, Emory University
• Lisa Spiro, Executive Director of Digital Scholarship Services, Rice University
• Lorcan Dempsey, VP Research, Online Computer Library Center (OCLC)
• Marilyn Billings, Scholarly Communication & Special Initiatives Librarian, University of Massachusetts
• Mark Parsons, Secretary General, Research Data Alliance
• Mark Ware, Director, Mark Ware Consulting
• Martin Kalfatovic, Associate Director, Digital Program and Initiatives, Smithsonian Libraries
• Mary Augusta Thomas, Deputy Director, Smithsonian Libraries
• Mary Ellen Davis, Executive Director, Association of College and Research Libraries (ACRL)
• Mary Woolley, President, Research!America
• Maryann Martone, Director of Biosciences, Hypothes.is, and President, FORCE11
• Matt Spitzer, Community Manager, Center for Open Science (COS)
• Matthew Salter, Publisher, American Physical Society
• Medha Devare, Data and Knowledge Manager, Consultative Group on International Agricultural Research (CGIAR)
• Meg Buzzi, Director, Opus Program, UCLA
• Mel DeSart, Head, Engineering Library, University of Washington
• Melanie Dolechek, Executive Director, Society for Scholarly Publishing (SSP)
• Melinda Kenneway, Executive Director, Kudos
• Meredith Morovati, Executive Director, Dryad
• Micah Vandegrift, Digital Scholarship Coordinator, Florida State University
• Michael Van Woert, Executive Officer and Director, National Science Board Office, National Science Foundation (NSF)
• Michael Wolfe, Executive Director, Authors Alliance
• Mike Taylor, Software Engineer, Index Data and Research Associate, University of Bristol
• Nancy Davenport, University Librarian, American University
• Nancy Gwinn, Director, Smithsonian Libraries
• Nancy Rodnan, Senior Director of Publications, American Society for Biochemistry and Molecular Biology (ASBMB)
• Natalia Manola, Director, OpenAIRE
• Neil Jacobs, Head of Scholarly Communication Support, UK Joint Information Systems Committee (JISC)
• Neil Thakur, Special Assistant to the Deputy Director for Extramural Research, NIH, and program manager for the NIH Public Access Policy
• Norbert Lossau, Vice President, University of Göttingen
• Pablo Gentili, Executive Secretary, Latin American Council of Social Sciences (CLACSO) and Director, Latin American Faculty of Social Sciences (FLACSO) in Brazil
• Patrick Herron, Senior Research Scientist, Information Science + Studies, Duke University
• Paul Murphy, Director, RAND Press
• Paul Peters, CEO, Hindawi Publishing
• Paul Royster, Coordinator of Scholarly Communications, UNL Libraries
• Peter Berkery, Executive Director, American Association of University Presses (AAUP)
• Peter Potter, Director of Publishing Strategy, Virginia Tech
• Pollyanne Frantz, Executive Director, Grants Resource Center, American Association of State Colleges and Universities (AASCU)
• Rachel Dresbeck, President, National Organization of Research Development Professionals (NORDP) and Director of Research Development and Communications, Oregon Health and Science University
• Ralf Schmimer, Head of Scientific Information Provision, Max Planck Digital Library, Max Planck Society
• Rebecca Kennison, Principal, K|N Consultants
• Remi Gaillard, Head of Collection Management Department, University of Pierre and Marie Curie
• Renaud Fabre, Director, Scientific and Technical Information Directorate (DIST), French National Centre for Scientific Research (CNRS)
• Richard Gedye, Executive Council Chair, Research4Life and Director of Outreach Programs, International Association of STM Publishers
• Richard Ovenden, Bodley's Librarian, Bodleian Libraries, University of Oxford
• Richard Price, Founder and CEO, Academia.edu
• Rick Anderson, Associate Dean of Libraries at the University of Utah and President-Elect, Society for Scholarly Publishing (SSP)
• Rikk Mulligan, Program Officer for Scholarly Publishing, Association of Research Libraries (ARL)
• Rita Scheman, Publications Director, American Physiological Society
• Robert Cartolano, Vice President for Digital Programs and Technology Services, Columbia University
• Robert Kiley, Head of Digital Services, Wellcome Library
• Robert Schnabel, CEO, Association of Computing Machinery
• Robin Champieux, Scholarly Communication Librarian, Oregon Health & Science University (OHSU)
• Robin Staffin, Director for Basic Research, US Department of Defense
• Roy Kaufman, Managing Director, New Ventures, Copyright Clearance Center
• Ryan Merkley, CEO, Creative Commons
• Salvatore Mele, Head of Open Access, European Organization for Nuclear Research (CERN)
• Sarah Michalak, Associate Provost for University Libraries and University Librarian, University of North Carolina Chapel Hill (UNC)
• Sarah Pritchard, Dean of Libraries, Northwestern University
• Scott Montgomery, author, Chicago Guide to Communicating Science (2nd ed.)
• Scott Plutchak, Director of Digital Data Curation Strategies, University of Alabama at Birmingham
• Seth Denbo, Director of Scholarly Communication and Digital Initiatives, American Historical Association
• Sharon Farb, Associate University Librarian for Collection Management and Scholarly Communication, UCLA
• Sindy Escobar-Alvarez, Senior Program Officer, Doris Duke Charitable Foundation Medical Research Program
• Sioux Cumming, Program Manager, Online Journals, International Network for the Availability of Scientific Publications (INASP)
• Stephanie Fulton, Executive Director, Research Medical Library, MD Anderson
• Steve Fiore, President, Interdisciplinary Network for Group Research (INGRoup)
• Steven Hall, Managing Director, IOP Publishing
• Steven Hill, Head of Research Policy, Higher Education Funding Council for England (HEFCE)
• Stuart Taylor, Publishing Director, The Royal Society
• Susan Gibbons, Deputy Provost, Libraries & Scholarly Communication, Yale University
• Susan Haigh, Executive Director, Canadian Association of Research Libraries
• Susan Skomal, President/CEO, BioOne
• Susan Veldsman, Director, Scholarly Publishing Unit, Academy of Science of South Africa (ASSAf)
• Tee Guidotti, President-Elect, Sigma Xi
• Terry Ehling, Associate Director, Content Acquisition and Publisher Relations, Project MUSE, Johns Hopkins University Press
• Todd Carpenter, Executive Director, National Information Standards Organization (NISO)
• Tony Peatfield, Director of Corporate Affairs, Medical Research Council, Research Councils UK (RCUK)
• Tony Roche, Publishing Director, Emerald Publishing Group
• Trevor Owens, Senior Program Officer, Institute of Museum and Library Services (IMLS)
• Vivian Siegel, Director of Education and Training, Global Biological Standards Institute, Vanderbilt University
- Will Schweitzer, Director of Product Development, AAAS/Science
- William Gunn, Director of Scholarly Communications, Elsevier
- Wim van der Stelt, Executive Vice President, Projects Open Research, Springer Nature
## Annex 3: OSI2016 Sponsors & Budget

### INCOME

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<tr>
<th>Institution or Commitment</th>
<th>Amount</th>
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<td>UNESCO</td>
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<td>Alfred P. Sloan Foundation</td>
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<td>Elsevier</td>
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<td>PressForward Institute (via Sloan)</td>
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<td>Nature Publishing Group</td>
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<td>Wiley</td>
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<td>Laura &amp; John Arnold Foundation</td>
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### EXPENSES

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<td>Transportation</td>
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<td>Live-stream video (through GMU)</td>
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<td>Program director’s travel and lodging bill</td>
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<td>Name tags (to be printed by GMU)</td>
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<tr>
<td>Misc printing (pens, jackets, folders, etc.)</td>
<td>$8,750</td>
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<tr>
<td><strong>Total expenses</strong></td>
<td><strong>$168,850</strong></td>
<td><strong>100.0%</strong></td>
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Annex 4: OSI FAQs

**Why is collaboration needed? What proof is there that collaboration will succeed?**

On the one hand, it’s clear to many people who have followed the changes happening is scholarly publishing over the years that much tension and uncertainty currently exists. To this, OSI delegate Rick Anderson noted in a recent OSI listserv conversation that “All of us have an imperfect understanding of ‘the bigger picture,’ and we should...try hard both to listen to and to learn from the perspectives of those who spend most of their time working in a different part of the system than we do.”

Having a forum where issues can be discussed that reach across stakeholder groups is critical, as it is with many other societal concerns. Imagine OSI’s approach to improving scholarly publishing as being akin to auto manufacturers needing to establish common standards, or environmental regulators working toward common goals with a wide variety of stakeholders in the private sector, state and local governments, and federal and international governments.

In scholarly publishing, a variety of independent stakeholders are independently working to create a similar class of products that should ideally be interoperable and that have significance to society—the production of knowledge of consequence to medical research, industry, environmental protection, and so on, using public money in most cases. This information isn’t entertainment, nor is the type of information we’re likely to easily find in newspapers or online (without access privileges), but research that we’ve invested in, that we monitor, and from which we increasingly expect to receive a return on investment. And in the production of this good, we have no universal guidelines—no coordinating body that says how it will be done, where it will be stored and preserved, how it can (or can’t) be used, and so on.

Ensuring that this process has reasonable guidelines that protect the benefits owed to society is the best way to protect the outputs from this system.

So to create these guidelines—or at least to begin having this conversation—we need to create some kind of working group, some kind of representative body or forum that can work toward developing a system of joint responsibility for its proper care and development.

**How will the OSI model yield results?**

OSI will work together to solve difficult problems of mutual interest. Exactly how this will happen is still being discussed (the exact projects that OSI will tackle, for instance, and the governance structure OSI will follow). Something like this has never been tried before in scholarly publishing, though, so the honest answer to the question of how this model will yield results is “we don’t know yet.” At minimum, however, this effort is a catalyst, and the collateral benefits of this engagement may end up being just as important if not more so than the engagement itself. Whether through the specific efforts of OSI or through the better stakeholder interaction that OSI can help catalyze, better communication between stakeholders might result in tangible achievements such as clarifying author rights and publisher policies, promoting more transparency with regard to publication evaluation in tenure and promotion practices, strengthening
institutional repository practices, evolving peer review, or all of the above. In a system that is so interwoven and where so many actors have significant influence over policy, funding and implementation decisions, having a forum where the decision makers in these groups can communicate—or at minimum, can be made aware of the different perspectives they need to consider—can only benefit.

### What is the return on investment in OSI and the relative advantage of the approach it proposes?
Comparing the cost-benefit of OSI’s approach with other ways of expanding open access is problematic. First, OSI’s approach is intended to redress a clear deficiency in the scholarly publishing ecosystem—specifically, the lack of broad, high-level communication and engagement between stakeholder groups. As far as we’re aware, there aren’t any other programs designed to do exactly this. While it would be fair to ask how the money spent on this approach might compare with, say, spending the same amount on establishing a new open access journal, this question is like asking how spending money to improve water quality affects spending on air quality programs. There’s clearly a connection insofar as both spending programs relate to health, and insofar as budget resources aren’t infinite and we need to set priorities and make tradeoffs, but the goals of these two programs are different.

Second, OSI’s approach is not focused on improving open access, but on improving open scholarship write large. “Open access” is a specific condition of open scholarship and does not involve issues like tenure reform and peer review reform. These tangential issues are all connected and are all part of the broad reform efforts being pursued by OSI.

### What role will OSI have in this space and how will it fill this role?
OSI’s role is to bring the many stakeholder groups in scholarly communication together in conversation with a broad goal of finding common ground and coming up with workable solutions. Everything that happens as a result of this communication is a win—even the conversation itself. That these groups are agreeing to communicate at all—OSI2016 was just a first step—shows that there is broad acceptance of the merit of this general approach, but the exact mechanisms for what comes next and how have yet to be considered and approved by the full OSI assembly.

Importantly, it would be wrong to perceive that OSI is trying to supplant or surpass existing reform efforts. Indeed, one of the goals expressed by several OSI2016 workgroups was to try to integrate OSI quickly into the fabric of existing stakeholder groups to figure out how this effort can add value. It may be that OSI should try to coordinate joint actions across groups; or maybe simply connect groups through a common forum; or maybe attract partnerships through action on specific issues like tenure reform will be the best approach; or have different approaches for different issues. These conversations are ongoing and more detail is expected by the Fall of 2016.

The common denominator in all of these possible approaches is that the goal of OSI is to help make significant improvements scholarly communications quickly—not to help eventually nudge along marginal change, but to help make broad, significant, sustainable change in a reasonably short period of time.

### What is the governance structure of OSI?
OSI is a group of scholarly publishing stakeholder representatives who are working together to improve scholarly publishing. To-date, this group has just been a loose assembly of delegates. Going forward, a governance structure will be needed. A
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>What is OSI’s budget?</td>
<td>At present, OSI’s budget is the conference budget, as detailed in the annex section of this report. Support for this conference comes from delegates and from a wide variety of sponsors. Going forward, we hope to raise more money to also support staff salaries, studies, outreach, solutions development, and other items as needed.</td>
</tr>
<tr>
<td>What is nSCI’s role?</td>
<td>OSI is a project created and currently managed by nSCI in partnership with the United Nations Educational, Scientific and Cultural Organization (UNESCO).</td>
</tr>
<tr>
<td>What is nSCI?</td>
<td>The National Science Communication Institute (nSCI) is a 501c3 non-profit charity registered in Washington State. For more information, please visit the nSCI website at <a href="http://www.nationalscience.org">www.nationalscience.org</a>.</td>
</tr>
<tr>
<td>What are the proposed workgroups for OSI2017?</td>
<td>OSI2017 workgroups are currently being decided by the OSI delegate group. This information will be finalized soon and posted on the OSI website.</td>
</tr>
<tr>
<td>What are the specific action plans for OSI?</td>
<td>See Annex 5. This, too, is currently being decided by the OSI delegate group. Of immediate concern is enrolling delegates for OSI2017. This meeting will be held in Washington DC from April 18-21, 2017. We expect that 200-250 delegates will attend, with about half of these delegates returning from OSI2016.</td>
</tr>
</tbody>
</table>
Annex 5: OSI Action Plan (Excerpts from August 2016 Draft)

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Timeline</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Publish OSI2016 outcomes</td>
<td>Spring and summer 2016</td>
<td>Done</td>
</tr>
<tr>
<td>2</td>
<td>Outreach</td>
<td>Summer 2016</td>
<td>Step 1 done, step 2 pending</td>
</tr>
<tr>
<td>3</td>
<td>Start inviting delegates to OSI2017</td>
<td>Summer 2016</td>
<td>Step 1 done, other steps pending</td>
</tr>
<tr>
<td>4</td>
<td>Quick wins</td>
<td>October 2016</td>
<td>Pending</td>
</tr>
<tr>
<td>5</td>
<td>OSI2017 workgroups and focus areas</td>
<td>Fall 2016</td>
<td>Pending</td>
</tr>
<tr>
<td>6</td>
<td>OSI2017 meeting schedule</td>
<td>Winter 2016</td>
<td>Pending</td>
</tr>
</tbody>
</table>

Step 1: Publish OSI2016 outcomes

1. Finalize the OSI2016 workgroup papers and publish these online.

Step 2: Outreach (Summer 2016)

1. Circulate the OSI2016 papers and summary for comment and feedback.
2. Circulate the official OSI2016 summary report to a variety of stakeholder audiences, and encourage these audiences to share this summary with their institutions and networks for feedback/comment.

Step 3: Start inviting delegates to OSI2017 (Summer 2016)

3. Determine which audiences and individuals we still need to include.
   a. Approve the stakeholder quota system proposed in the table below. (Note: As of September 2016 this structure is being slightly modified and may end up including around 17 groups.)

<table>
<thead>
<tr>
<th>Stakeholder group</th>
<th>% of delegates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Research universities</td>
<td>23%</td>
</tr>
<tr>
<td>2. Scholarly publishers</td>
<td>19%</td>
</tr>
<tr>
<td>3. Non-university research institutions</td>
<td>10%</td>
</tr>
<tr>
<td>4. Government policy organizations</td>
<td>10%</td>
</tr>
<tr>
<td>5. Open knowledge groups</td>
<td>10%</td>
</tr>
<tr>
<td>6. Funders (public and private)</td>
<td>5%</td>
</tr>
<tr>
<td>7. Scholarly library groups</td>
<td>5%</td>
</tr>
<tr>
<td>8. Broad faculty and education groups</td>
<td>5%</td>
</tr>
<tr>
<td>9. Businesses</td>
<td>5%</td>
</tr>
<tr>
<td>10. Scholarly communications experts</td>
<td>5%</td>
</tr>
<tr>
<td>11. Journalists</td>
<td>2%</td>
</tr>
<tr>
<td>12. Politicians</td>
<td>2%</td>
</tr>
<tr>
<td>13. Industry analysts</td>
<td>Up to 20 per meeting</td>
</tr>
<tr>
<td>14. Authors</td>
<td>Up to 20 per meeting</td>
</tr>
</tbody>
</table>

Step 4: Quick wins (by October 1)

1. Develop OSI governance guidelines for review and approval by the full delegate group.
2. Once 2017 focus points are identified, reach out to stakeholder groups to develop partnerships to move forward on these points.
### Step 5: OSI2017 workgroups and focus areas (Fall 2016)

OSI2017 workgroups will be formed early so they can begin working—leading various aspects of research or planning, making connections, and/or serving as an advisory board for admin work done by OSI. Workgroups report out to the full delegate assembly at OSI2017. Workgroups will be designed around the following tracks:

<table>
<thead>
<tr>
<th>Track</th>
<th>Description</th>
<th>Needed</th>
<th>Delegates (250)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Follow-up</td>
<td>Follow up ideas and recommendations drawn from OSI2016 papers, notes and conversations.</td>
<td>To the extent we can start working on these plans now, we will.</td>
<td>Groups of 10-12 delegates</td>
<td></td>
</tr>
<tr>
<td>2. Common threads</td>
<td>What are the common themes that run through a number of presentations?</td>
<td></td>
<td>Groups of 10-12 delegates</td>
<td></td>
</tr>
<tr>
<td>3. New issues</td>
<td>What are the other foundational and emerging issues that weren't covered at the previous meeting?</td>
<td></td>
<td>Groups of 10-12 delegates</td>
<td>For instance, global south, Sci-Hub</td>
</tr>
<tr>
<td>4. Streams</td>
<td>What are the specific needs and goals for specific streams?</td>
<td></td>
<td>Groups of 10-12 delegates</td>
<td>Possible streams: HSS, STM, authors, scientists</td>
</tr>
<tr>
<td>5. Plenary</td>
<td>OSI2017 will have more opportunities for full-group conversation, and also debating broad agreements.</td>
<td>Between now and OSI2017, the structure and function of this body will need to be prescribed (and approved by the full OSI membership).</td>
<td>One group of 30 elected to an upper body as OSI reps; others are delegates.</td>
<td>The full plenary can also give delegates more opportunity to discuss other full-group issues</td>
</tr>
<tr>
<td>6. At-large</td>
<td>Observing and also helping facilitate groups as needed.</td>
<td></td>
<td>About 25</td>
<td>This group will also meet to discuss common themes and recommendations.</td>
</tr>
</tbody>
</table>

With these tracks in mind, and combined with outcomes for the OSI2016 reports, there would tentatively be 22 workgroups at OSI2017 as follows (noting that this number may change):

<table>
<thead>
<tr>
<th>Track #</th>
<th>Track description</th>
<th>Workgroup #</th>
<th>Workgroup description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Follow-up</td>
<td>1a</td>
<td>Dig deeper in the question of developing new spectrum measures for open impact</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1b</td>
<td>Dig deeper into the question of developing new spectrum measures for open impact</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>2</td>
<td>Dig deeper into the question of developing and recommending new tools to replace the journal impact factor (and recommend possible actions between now and the next meeting)</td>
</tr>
<tr>
<td>3a</td>
<td></td>
<td>3a</td>
<td>Conduct more research (even studies or pilots to the extent possible) that will help identify which publishing services can/should be better handled by others (disaggregated)</td>
</tr>
<tr>
<td>3b</td>
<td></td>
<td>3b</td>
<td>Conduct more research (even studies or pilots to the extent possible) that will help create an evidence base to answer the question of whether subscription revenue is negatively affected by removing post-publication embargoes</td>
</tr>
<tr>
<td>3c</td>
<td></td>
<td>3c</td>
<td>Conduct more research (even studies or pilots to the extent possible) that will help answer the questions of whether a global flip using APC’s is the right model to pursue (given concerns about how this might affect access in the global south)</td>
</tr>
</tbody>
</table>
| 3d      |                   | 3d          | Conduct more research (even studies or pilots to the extent possible) that will
3e help identify the economic impacts of open
Conduct more research (even studies or pilots to the extent possible) that will help us develop a better understanding of how the system works now, and then identify scholarly publishing standards, norms, best practices, exit strategies, incentive systems, and a future ideal

4 Identify which scholarly publishing stakeholders can work together on these and other efforts, and how (multiple stakeholders require a convening power)

5 Develop new funding models, such as a venture fund that can allow more support for joint efforts, or improve the flexibility of library budgets (e.g., by examining the efficiency of “big deals”)

6 Propose radical new repository interoperability and infrastructure solutions

7 Develop a broader and clearer description of peer review that takes into account the different needs for different stages

8 Continue exploring solutions to overload/underload (specific to research)

2 Common threads
9 Develop partnership agreements to work together to change the culture of communication inside academia (and as part of this effort, clarify messaging with regard to benefits and impacts of open)

10 Lay the groundwork for promotion and tenure reform (a framework agreement with stakeholder partners to examine the feedback loop influence of journal publishing in promotion and tenure decisions and make these evaluations broader, more transparent, and less reliant on impact measures)

3 New issues
11 The global south, the global diversity of scholarly communication, and the different issues, challenges and opportunities in underserved regions of the world

12 Sci-Hub and other rogue solutions (impacts, future)

13 Patent literature, research reports, databases and other published information. The majority of journal articles come from inside universities even though the majority of researchers are outside universities—so OSI by design has a university-centric and journal-centric bias to the perspectives being considered. Patent literature, research reports, and databases are also important sources of research information—more so than journals in some disciplines (although these still reference journal articles). As with journal articles, this information isn’t always free or easy to find and is suffering from some of the same usability issues as journal articles.

4 Streams
14 What are the unique needs and concerns of HSS scholars in this conversation and what can we do to help?

15 What are the unique needs and concerns of scientists in this conversation and what can we do to help?

5 Plenary
16

6 At-large
17
Notes:

This section substantially duplicates the content of an article written by the author of this summary, Glenn Hampson, for the June 15, 2016 issue of *International Innovation* magazine, online at [http://bit.ly/291o9z0](http://bit.ly/291o9z0). This content is reprinted here with permission. For a deeper background on the OSI project’s origins and rationale, you may also be interested in reading the original OSI paper (also written by Hampson) at [http://bit.ly/1DJwRLT](http://bit.ly/1DJwRLT).