SHARE Tenets and Overview

What is SHARE?
SHARE (SHared Access Research Ecosystem) is a cross-institutional coordination framework to ensure access to, preservation and reuse of, and policy compliance for funded research. SHARE will develop a workflow architecture that can be implemented by institutions across a variety of software platforms, technical environments, and organizational support models. This framework will enable principal investigators to submit their funded research to any of the deposit locations designated by federal agencies (and, potentially, other funding bodies) using a single, common, user interface. SHARE will package and deliver the relevant metadata, files, and links to the appropriate repositories, be they federal, disciplinary, or institutional. Institutions implementing SHARE may elect to store copies of this information in their local repositories, to preserve and disseminate research as they deem appropriate, and to expose relevant metadata to indexing and discovery systems.

Fundamental SHARE Tenets
• Ensuring broad and continuing access to research is central to the mission of higher education.
• Recent US government initiatives to ensure public access to federally funded research outputs and research data have created a new and timely opportunity for the higher education community to better structure its strategies and systems for managing both data and publications.
• Independent of how federal agencies choose to operationalize implementation of the new Office of Science and Technology Policy (OSTP) directive, the higher education community is uniquely positioned to play a leading role in the good stewardship of research.
• The higher education community also has an interest in collecting and preserving their researchers’ scholarly output for reasons beyond ensuring access, such as for promotion and tenure and for analytic purposes.
• Research publications, research data, and their associated metadata should be publicly accessible. This accelerates research and discovery.
• Research outputs, research data, and their associated metadata should be available for reuse, text mining, data mining, and machine reading. This, too, accelerates research and discovery.
• There are likely to be several, and perhaps many, agency and funder strategies to advance public access to research outputs and research data.
• Complying with multiple requirements from multiple funding sources will place a significant burden on principal investigators and offices of sponsored research.
• The higher education community is committed to facilitating their researchers’ compliance with funder requirements.
• Solutions to address technical and operational issues related to the above tenets should rely on existing standards where available. In situations where standards do not already exist, solutions should be developed collaboratively by the research and higher education communities.
SHARE Benefits

- **Researchers.** Principal investigators are faced with a growing tangle of compliance requirements as they receive grants from multiple funders. Current deposit workflows can require more than 20 steps and multiple e-mails, making compliance extremely inconvenient and challenging for authors. With the potential for dozens of funding agencies to have distinct policies and procedures, the burden for individual researchers could be overwhelming. SHARE’s single-deposit mechanism will address this problem and allow principal investigators to focus less on process and more on research. SHARE will also make it easier for researchers to access, reuse, and mine their colleagues’ research results and data. Because research is an increasingly global enterprise, SHARE’s design will be scoped to facilitate international collaboration.

- **Funding Agencies.** SHARE will capture all of the pertinent information about sponsored research and deliver it to funding agencies in a streamlined manner. By placing the authority of the university and the sponsored research office behind the workflow, SHARE will increase both compliance levels and data quality. For agencies seeking a long-term solution to preserve and display their research output, the SHARE framework can be extended to encompass repository and discovery layers. SHARE will also develop APIs and other standards-based mechanisms enabling agencies to obtain compliance data.

- **Universities.** SHARE will facilitate efforts by sponsored research offices to optimize the interaction between the researcher and the granting agency. The framework will create an organic link between grant compliance and the analytics that universities use for tenure and promotion and other purposes. SHARE will enable institutions with open access policies to better facilitate and track participation. Additionally, universities that link the SHARE workflow to their local repositories or collaborate to develop a cloud-scale repository solution will also further their mission of preserving and serving their institution’s research outputs.

- **The General Public.** SHARE will increase the utility of federally funded research by making it easier for the public to access, reuse, and mine research outputs and research data. SHARE’s adoption of standards and protocols will make it easier for commonly used search engines and third-party services to render this information discoverable and usable. The involvement of universities, traditional stewards of information, will provide a signal of confidence that access to these materials will be available over the long term.

Next Steps

SHARE is a collaborative project engaging the university, library, research, funding, technology, intellectual property, and publishing communities. In the coming months, SHARE, under the leadership of the Association of Research Libraries, the Association of American Universities, and the Association of Public and Land-grant Universities, will engage with these interested parties to develop a project roadmap. This document will articulate in concrete terms how the SHARE cross-institutional network plans to ensure access to, preservation and reuse of, and funding compliance for federally funded research. The roadmap will document current and future challenges SHARE faces, and will engage with the community to craft practical solutions. The SHARE roadmap will identify where gaps exist in the current workflow and will seek to develop standards-based solutions to address them. It will address issues specific to research data, including its schema and its curation. The document will contemplate how the SHARE model can be developed to accommodate workflows for other funding sources beyond federal agencies, as well as to satisfy institutional mandates. It will also contemplate how SHARE can...
best facilitate improved discovery, through existing search engines and discovery services, by building on top of existing institutional repository structures, and/or by developing a cloud-scale repository that benefits from economies of scale.

The SHARE roadmap will document the project’s next phases. It will outline what a SHARE pilot will look like, and when it will be implemented. The roadmap will articulate concrete milestones in the project’s development, culminating with the launch of the SHARE integrated workflow solution. While many aspects of SHARE can be implemented now, its vision is ambitious and requires a thoughtful and inclusive implementation process.

**Who is Developing SHARE?**
The Association of Research Libraries (ARL) has partnered with the Association of American Universities (AAU) and the Association of Public and Land-grant Universities (APLU) to develop SHARE with significant input from the three associations’ member institutions and their broader stakeholder communities. ARL’s members are 125 research libraries at comprehensive, research institutions—108 in the US and 17 in Canada. AAU’s membership is composed of 60 US and 2 Canadian preeminent public and private research universities. APLU’s members are 217 state universities, land-grant universities, state-university systems, and related organizations in all 50 states, US territories, and the District of Columbia.

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