

Research Library Impact: Pilot Models for Scalable and Sustainable Assessment

The Association of Research Libraries (ARL) seeks grant funding to support the **Research Library Impact: Pilot Models for Scalable and Sustainable Assessment project**. This highly collaborative project focuses on the needs of the researcher and the learner, in the context of the research and teaching mission. It will engage stakeholders from ARL member libraries to understand and better communicate the impact research libraries have within their own institutions and in the broader research and learning ecosystem. The project supports ARL's development of a research agenda along with the creation and advancement of sustainable and scalable models that libraries of all types can use to understand other questions. The build out of a common, yet institutionally specific, research agenda means that individual libraries can work on problems most pressing for their institutions and, at the same time, contribute to a shared body of knowledge through pilot projects and practice briefs.

This project at a macro level will fill the gaps between the audiences the ARL assessment program is currently serving and those audiences ARL members most need the program to serve. At the micro or institutional level, the project will help individual libraries make informed choices about the use of increasingly limited resources and help them more effectively advocate for their needs using outcome- and impact-centric measures. In response to the absence of these measures, ARL developed a Research Library Impact Framework to determine, increase, and then describe the impact of a research library's services and programs in support of typical real-world institutional mission and goals.

The uniqueness of the Framework is that it was created in such a way to support regular updates by the community to ensure that the most critical research topics and questions are at the forefront of what libraries need to discover. Pilot research projects and practice briefs will be developed to test a subset of questions in the Framework and will result in scalable models for creating impact-centric measures for all types of libraries nationwide and internationally. As libraries improve how to understand and communicate value to their constituencies through sound approaches, data collection, and analysis, the recipients of services, programs, and resources will benefit from more exemplars of quality programs. Ultimately, the project will lead to improved data points that more effectively tell the story of research libraries and their impact.

Title: Research Library Impact: Models for Scalable and Sustainable Assessment

Introduction: The Association of Research Libraries (ARL) is requesting \$237,468 for a two-year National Leadership Grant in the **Research in Service to Practice** funding category and the **Community Catalysts** project category. This highly collaborative project focuses on the needs of the researcher and the learner, in the context of the research and teaching mission. It will engage stakeholders from ARL member libraries to understand and better communicate the impact research libraries have within their own institutions and in the broader research and learning ecosystems. In response to the absence of outcome- and impact-centric measures, ARL developed a Research Library Impact Framework to determine, increase, and then describe the impact of a research library's services and programs in support of typical real-world institutional mission and goals. The uniqueness of the Framework is that it was created in such a way to support regular updates by the community to ensure the most critical research topics and questions are at the forefront of what libraries need to discover. Pilot research projects and practice briefs will be developed to test a subset of questions in the Framework and will result in scalable models for creating impact-centric measures for all types of libraries nationwide, and internationally. As libraries improve how to understand and communicate value to their constituencies through sound approaches, data collection and analysis, the recipients of services, programs, and resources will benefit from more exemplars of quality programs.

Statement of National Need

Member institutions of the Association of Research Libraries (ARL) identified the need to understand and better communicate the impact they have within their own institutions and in the broader research and learning ecosystems as a critical capability gap. These are common needs among all research libraries—academic, public and governmental. Historically, research libraries have identified quantitative measures focused on inputs, without specifying the value and impact of those measures on achieving a specific mission or audience objective. ARL has collected and published annual data for the members of the Association since 1932 and with a formal data collection program beginning in 1961. While ARL updated its annual data collection requirements over time, it became clear in 2017 when the Assessment Program Visioning Task Force (APVTF) conducted its overall review of the assessment program, that the data needs of ARL member libraries and staff have evolved a great deal over time.

A series of activities supported the development of the APVTF recommendations including (a) interviews with over eighty library directors, assessment librarians, assessment community leaders, research funders, and other stakeholders; (b) site visits to four libraries to observe their assessment programs; (c) responses from over 200 individuals to a survey regarding use of assessment practices and tools; (d) feedback from ARL directors during twice-yearly Association Meetings; (e) journey mapping with APVTF members; and (f) identification and prioritization of recommendations with ARL directors and assessment practitioners. The deep environmental scan also included a review of existing ARL assessment and data collecting practices and the use of tools and services within ARL member libraries and across the broad spectrum of other stakeholders.

All of these activities led to a series of significant discoveries. There are distinct gaps between the audiences the ARL assessment program currently serves and the audiences ARL members most need the program to serve. Multiple models and approaches to library assessment are present in ARL member libraries. The commonalities and differences between institutions in their assessment needs are evident, such as differences between public and private institutions; governmental mandates that drive reporting needs; or a parent institution's culture and orientation around data and metrics. There is no "one size fits all" approach to library assessment that will work for all libraries. Most importantly, ARL members want to understand how to better

meet user needs by communicating their impact on the research and learning mission of their institution as well as their impact relative to other research libraries and other institutions.

ARL members, like most research libraries, are accountable to their users and decision-makers to ensure they are delivering optimal value for the investments made in their services, collections, and people. They seek first to use evidence to understand where adjustments are needed to more effectively and efficiently contribute to research and learning goals. They want to then use the evidence to adjust their work, and to communicate the impact to key decision makers—both in specific institutions and more broadly in society. The opportunity to define the values by which research libraries are measured in the context of the broader mission of which they are a part, rather than manufacturing values out of the data they have is critical to libraries' success. Access to the right data elements is essential in the current culture of accountability that research and learning institutions find themselves. With generally flat budgets, research libraries must make informed choices about how they invest the limited resources available to them and make the case for increased resources in a competitive workplace. (see full APVTF report-Appendix A)

ARL is committed to providing research libraries with conceptual models, methodologies, data, and tools to tell their story locally, reflecting the broader context in response to the discoveries made by the APVTF and due to the absence of outcome- and impact-centric measures. ARL has developed the Research Library Impact Framework that describes the impact of a research library's services and programs in support of typical real-world institutional mission and goals. Through the Framework and overall program, ARL members will create measures that align with the values and vision of 21st-century research libraries in the context of the 21st century research and learning ecosystem. The resulting measures will support critical thinking and evidence-based decision-making.

The Framework was created as a "modular" approach for ARL's future assessment program, services, and offerings, which will enable libraries to see the entire ecosystem and pick and choose those elements of the system that are relevant to their own situation. As an iterative document, the Framework will be updated regularly by ARL and its members to ensure that priority areas and research questions are currently reflecting the goals of libraries.

The Framework was built around four areas that represent the research and learning ecosystem and align with common institutional priority themes: (1) life cycle of research and scholarship; (2) teaching, learning, and student success; (3) collections; and (4) physical space. The framework provides shared reference points for ARL members to think about the operational, cultural, and contextual commonalities and differences between their libraries. It is comprised of over 185 research topic areas and questions identified, expanded, refined, and prioritized in the spring of 2018 by a diverse group of assessment practitioners, library directors, ARL members, and ARL staff. The topics and questions are organized into the four components noted above, which allow libraries to map their own strategic objectives within the context of parent institutional goals to any of the topic areas or research questions and ultimately to the operations of the library. (see Framework-Appendix B)

This grant project will deploy the Research Library Impact Framework to create two sustainable research and analytics models—pilot projects and practice briefs—using the following five priority research questions identified by the ARL Research and Analytics Committee as the first set of issues to be investigated and tested for model development:

1. (How) do library collections play a role in attracting and retaining top researchers and faculty to the institution?
2. (How) do library spaces facilitate innovative research, creative thinking, and problem-solving?

3. (How) do the library's special collections specifically support and promote teaching, learning, and research?
4. (How) does the library contribute to equitable student outcomes and an inclusive environment?
5. (How) does the library help to increase research productivity and impact?

This innovative approach means that libraries can leverage their networks and infrastructures in addressing one of the 185 research questions. Through collaborative partnerships in conducting research and creating models, libraries can use this information to address other questions. This project will maximize the value of the learnings through these projects and minimize the need to repeat research across multiple organizations. As ARL and participating libraries build the models within the grant project and continue to do so beyond the time of this grant, the ARL community will benefit as well as the library community beyond research libraries. As research libraries improve their ability to address institutional goals, the faculty and students within their community will benefit.

Pilot projects are formal, original research studies designed to address the one of the five research questions. The project leaders will refine the formal research question; design a standardized, rigorous research protocol; design the methods (qualitative and/or quantitative) for answering the question; identify the resources to carry out the research; conduct the research; and analyze, document, and disseminate the results. The documented outputs will identify the hypothesized library impact, show evidence of intended or unintended impact and/or outcomes, analyze methodologies employed, and whether they evidence impact to research library stakeholders. Whenever possible, outputs will include templates, checklists, and guidelines for replicating in local contexts. (see pilot project template and timeline - Appendices C and D)

The practice briefs, short documents designed to support practitioners with research-based information to improve their library assessment work, will address one of the five prioritized research questions. The easily digested documentation reports on methods, outputs, and lessons learned in a case study format and can be deployed and replicated by other libraries and in multiple environments. (see practice brief template - Appendix E)

The uniqueness of these models will be the standardized practices and reporting formats created and ultimately replicated by other libraries. The collaborative support of project teams to conduct the research and analysis will lead to a strong community of practice. Once the models for pilot projects and practice briefs are tested and modified based on research conducted, libraries will be able to use the models to investigate other questions of importance to libraries and their institutions and/or communities. These efforts will lead to an accumulation of knowledge and experience in the broader research and assessment community. The Research Library Impact Framework was created to support regular updates to ensure that the most critical research topics and questions are at the forefront of what libraries need to discover.

When undertaking ARL's program review, the APVTF considered as part of its environmental scan the research, assessment, and data activities of allied and partner organizations such as the Public Library Association (PLA), Association of College & Research Libraries (ACRL), ACRL Rare Books and Manuscript Section, Society of American Archivists, Jisc, and Association of American Colleges & Universities. Another partner is the National Center for Education Statistics and the Integrated Postsecondary Education Data System program for which ARL member libraries located in the US submit data each year. These partners have developed or are developing tools for libraries to understand the impact of library services. One distinction between several of these programs and ARL's Framework is that the Framework is a series of 185 questions identified by ARL directors and librarians that illustrate key goals of significance to their institutions' missions. ARL's grant project will examine these questions to develop the models through which the questions can be

addressed. The models will include more than surveys, which are foundational in the PLA and ACRL projects. Pilot project and practice brief teams will access information and reports of these partner programs to learn from and use ideas and tools that will strengthen their own projects.

Project Design

Project Goals

ARL developed a Research Library Impact Framework to determine, improve, and describe the impact of a research library's services and programs in support of typical real-world institutional mission and goals. The Framework provides an innovative scaffold for deeper exploration across multiple library service areas, is designed to be flexible and scalable, and serves as the foundation for ARL's assessment research agenda. The Framework sets the stage for conducting in-depth explorations of priority issues.

The Framework is organized into four areas aligned with common institutional priorities and research questions. The table (A) below illustrates the relationship of the five questions selected for the initial pilot projects and practice briefs to theme and priority goal areas. (see Abbreviated Framework - Appendix F)

Table A

Framework Themes	Priority Goal Areas	Framework Questions (5 selected for first round of projects and practice briefs)
Lifecycle of Research & Scholarship	Enable, foster, and promote relevant and unique research; increase productivity; enable research collaboration	(How) does the library help to increase research productivity and impact? (Q5)
Teaching, Learning & Student Success	Enable student and faculty success, teaching excellence, and innovation; promote diversity and inclusion	(How) do the library's special collections specifically support and promote teaching, learning and research? (Q3) (How) does the library contribute to equitable student outcomes and an inclusive learning environment? (Q4)
Collections	Enable and promote access to research collections, open access, and student success; improve global reputation; engage community	(How) do library collections play a role in attracting and retaining top researchers and faculty to the institution? (Q1) (How) does the library contribute to equitable student outcomes and an inclusive learning environment? (Q4)
Physical Space	Enable and enhance student success, innovative and interdisciplinary research, and research collaboration; promote diversity and inclusion	(How) do library spaces facilitate innovative research, creative thinking and problem solving? (Q2) (How) does the library contribute to equitable student outcomes and an inclusive learning environment? (Q4)

ARL's discovery of the gaps between the audiences that the ARL assessment program serves and those that ARL members most need the program to serve highlights several benefits of this project. In order for ARL members to tell the story of the value and success of research libraries in society and in their specific institutions, models are needed to help them accomplish this. This two year project will result in a series of research models using sound qualitative and quantitative methods that can be replicated by other libraries. Using an iterative approach, project teams will share their methodologies and findings with each other throughout the grant cycle in order to refine and improve processes. The projects selected for the pilots incorporate a range of methodologies, which enhances the overall learning experience for everyone. As libraries improve how to understand and communicate value to their constituencies through sound approaches, data collection, and analysis, the recipients of services, programs, and resources will benefit from more exemplars of quality programs. This overall project allows ARL and its participating libraries to test innovative strategies for addressing important questions.

ARL's grant project will investigate the nature of and evidence for the impact of library services and programs using a subset of the research topics through two methods: pilot projects and practice briefs. The outcomes and results of the pilot projects and practice briefs are intended to understand library impact and, as a result, provide evidence to demonstrate the value of the research library to its parent organization and the broader research and learning ecosystem, and to advance understanding of the public good research libraries provide as cultural heritage institutions. The questions identified in the Framework will help libraries define metrics and methodologies that can be used to locally translate a library's value into measures within the context of the larger institutional goals and library operations. The Framework is an evolving document that will change as needs change.

Through project teams from ARL libraries, the pilot projects will address previously unexamined questions and identify a sustainable series of research models that other libraries can use to implement their own investigations in support of their individual institution. These models will help ARL identify data elements that libraries would collect for more effectively telling their stories. Additionally, the research projects that begin at a local institutional level will add to local value and at the same time support a cumulative reach across multiple organizations. The practice briefs, also completed in collaboration with ARL member libraries, are designed to support library professionals with research-based information as they improve their library assessment work. The briefs will illustrate current methodologies or best practices that other libraries can duplicate in their libraries. Table B provides details on the qualitative and quantitative methodologies that will potentially be employed in projects pending final articulation of research protocols and outcomes.

Table B

Research Questions	Project Teams (Some Projects Include Multiple Libraries)	Qualitative & Quantitative Measures
(How) do library collections play a role in attracting and retaining top researchers and faculty to the institution?	(1) Texas at Austin (practice brief)	Collection data and analysis Semi-structured interviews
(How) do library spaces facilitate innovative research, creative thinking and problem solving?	(1) California Davis, Florida, Iowa State, and Syracuse (2) Johns Hopkins (3) Temple (practice briefs)	Literature review Environmental scan Structured Interviews Focus Groups

		Surveys
(How) do the library's special collections specifically support and promote teaching, learning and research?	(1) Johns Hopkins (practice brief) (2) California Irvine, Louisiana State, and Pittsburgh (3) Western	User demographics Reference transactions Collection use Instruction sessions Surveys
(How) does the library contribute to equitable student outcomes and an inclusive learning environment?	(1) Texas Tech (2) California Riverside, Houston (3) Washington (practice brief)	Ethnographic observation Post event surveys Social media analysis Headcounts Interviews
(How) does the library help to increase research productivity and impact?	(1) Alabama and Manitoba (2) California Berkeley and Illinois at Chicago (3) California Davis, Pittsburgh and Washington (4) Vanderbilt (practice brief) (5) Waterloo (practice brief)	Surveys Semi-structured interviews Collection use data and analysis Focus Groups Citation analysis

The outcomes, deliverables, and evaluation methods for the grant project are highlighted in Table C. The evaluation methods will be defined in specific detail when the project protocols and methodologies are determined.

Table C

Grant Project Outcomes	Deliverables	Evaluation Methods (examples)
Create and foster a culture of assessment through participation in formal, methodologically sounds research projects.	Practice briefs illustrating best practices for assessment activities.	Level of participation; drop out rates; number of libraries that use the practice briefs
Enhance and improve processes for identifying data points for collection and distribution of information that substantiate library impact to institutional decision-makers and within the research and learning ecosystem.	Template for reporting the methodologies used to conduct research and the findings that can be used on future research topics and questions.	Before and after change in process improvement; increased receptivity by decision-makers to the data presented to them. [before and after interviews with decision-makers]; increased receptivity to the data presented to other parts of the research and learning ecosystem [before and after interviews with targeted parts of the research and learning ecosystem]

Expand abilities to collaborate and compare data and methods with peers on topics highly relevant to individual library and pool research expertise and resources for collective benefit.	Quantitative and qualitative methodologies to address a research questions.	Ease of comparing data and methods among peers; use of compared data and methods both individually and cumulatively in reporting impact of research libraries
Improve the impact of services and programs for users.	New data, evidence and practices that illustrate impact.	Survey of the users to understand impact on them

ARL's grant project expects to enhance the ability of libraries to improve the ways in which the needs of faculty, students, community members, and other stakeholders are leveraged and met. Libraries—including research and academic, public, and federal—will be able to develop and implement strategic responses that better align with the goals and missions of their institutions, the community, and society as a whole. Ultimately, ARL's project will provide libraries with tools and models to have greater impact within their particular community; for example, research libraries within the university, public libraries within their community, and federal/national libraries within their governmental jurisdiction.

Project Management

ARL will lead the overall project, be responsible for all grant reporting, and support a project website for disseminating information about progress and final reports. ARL will provide infrastructure such as conference calling capabilities, and a virtual collaboration space and shared tools and resources will be provided. The principal investigator (PI) is ARL's deputy executive director. The PI will oversee the overall project, outcomes, deliverables, and evaluation. The PI will produce interim and final reports that could result in updates to the Research Library Impact Framework and inform decisions related to scale, broader adoption, and sustainability.

An Advisory Group will comprise the principal investigator, three members of the ARL Research & Analytics Committee, ARL director of the research & analytics program, ARL executive director, and a social scientist. The Advisory Group will meet two times in person and three to four times via video conferencing over the course of the project to coincide with other milestones and meetings for the pilot project and practice brief team members. This group will be responsible for overall project evaluation and performance measurement. In addition, the Advisory Group will advance the Framework based on project results.

This proposal includes funding to secure the services of a data analyst who would help all project teams to develop data collection systems and other strategies to identify data elements, interpret and analyze data, and identify ways to visualize data. A social scientist will also be secured to assist teams in thinking through strategies to maximize research protocols. Five visiting program officers¹ (VPO) will be identified through an application process and support the research teams for each theme areas. In some cases, this includes multiple projects.

Each pilot project and practice brief team will produce semi-annual progress reports and produce or publish outputs such as templates, checklists, papers, practice briefs, guidelines for replicating research in the local context, and evidence-based articulations of practical applications of the research. The ARL.org website will

¹ ARL supports a Visiting Program Officer program, which provides opportunities for staff in member libraries to contribute to special projects and programs, either in whole or in part, in order to advance the agenda of the Association.

host all materials and communications. Each cohort of project teams will be responsible for blogging about their projects and/or contributing to regular communications with the ARL membership. Team reports will be published and openly available. Another forum for presenting projects and their results will occur during the twice-yearly ARL Association Meetings and the 2020 Library Assessment Conference. This conference is a particularly relevant opportunity as it encourages networking and conversations in addition to presentations.

The timeline below, and with the assistance of the PI and VPOs, pilot project and practice brief teams will receive project management support to keep projects on track and assistance in identifying realistic milestones for their projects. Because each project will be addressing different research questions with different approaches and methodologies, timelines will vary. As projects are underway, the team—with support of their VPO and the Advisory Group—will use monthly virtual meetings to discuss challenges and collaboratively identify strategies for mitigating them. A critical element of the overall project is that a project team may learn that their project does not result in what was originally planned. As part of the regular discussions, the project teams will evaluate the qualitative and quantitative methods to determine whether the methods are providing the data needed to adequately address the research questions.

November 2018-March 2019. ARL's program began in late 2018 with a call to all 124 ARL directors for library impact pilot projects and research brief expressions of interest. The call outlined the theme areas and five research questions. A total of 27 expressions of interest were made by 22 distinct institutions representing all four ARL-designated US geographic regions (Northeast, Mid-Atlantic/Deep South, Midwest, and West/Southwest) and the five research questions. Pilot project team members are expected to provide some combination of the following: domain expertise, analytical skills, access to research data, access to key decision-makers and partners, and project management. A sub-committee of the ARL Research and Analytics Committee reviewed the submissions and recommended ten pilot projects and eight practice briefs.

April 2019 through June 2019. Project teams will be formed and attend a virtual orientation session with the PI to review the goals and deliverables of the overall project. Project teams will meet on a monthly schedule via video conferencing calls with their assigned VPO who supports the teams in framing the projects, planning the research methodologies, and the research timeline. The Advisory Group will be formed and meet to review responsibilities and expectations.

July 2019 through December 2019. Project teams will gather for an in-person two-day meeting in July or August to discuss research goals, methodologies, and timetable with all of the other research teams and the support of a social scientist consultant. Research project and practice brief teams will meet monthly with assigned VPO to review progress to date and share questions and learnings. The PI will meet monthly with the five VPOs to review progress and address any challenges teams might be having with their projects. The Advisory Group and VPOs will meet via video conferencing in September to review the launch of teams and identify mechanisms for instituting support for teams as needed. The project teams, Advisory Group, and VPOs will meet via video conferencing in October to share project plans and research methodologies.

January 2020 through June 2020

The Advisory Group and VPOs will meet via video conferencing in March to review progress of teams and identify mechanisms for instituting support for teams as needed. The second meeting of the project teams will occur in April via video conferencing and focus on mid-project check-in and review with the Advisory Group.

July 2020 through December 2020

The Advisory Group and VPOs will meet via video conferencing in September to review progress of teams and identify mechanisms for instituting support for teams as needed. The third meeting of the project teams with

the Advisory Group and VPOs will occur in October via video conferencing and focus on a review of any results realized to date and include in-depth discussions of preliminary recommendations, including sustainability of research models and potential to scale.

January 2021 through June 2021

A fourth meeting of the project teams with the Advisory Group and VPOs will occur in February via video conferencing to review any results to date and preliminary recommendations, including sustainability of research models and potential to scale. The Advisory Group and VPOs will meet via video conferencing in March to review progress of teams and provide input into the agenda of the second in person meeting of project teams. The final meeting will occur in person in May and focus on project teams' presentations of results and final recommendations with the Advisory Group and a broader set of stakeholders including the Public Library Association, Association of College & Research Libraries, ACRL Rare Books and Manuscript Section, Society of American Archivists, Jisc, Association of American Colleges & Universities, and National Center for Education Statistics and the Integrated Postsecondary Education Data System.

Project Personnel

The ARL deputy executive director, Sue Baughman, will serve as the project director, committing five hours per week to the program (14.2% FTE). Baughman will provide leadership to the VPOs and Advisory Group as well as liaise with the ARL Research and Analytics Committee and project teams. She will provide budgetary and project reporting oversight. She has deep experience in project management and leading multi-faceted projects. She has co-chaired the Library Assessment Conference for the past four years, an event that attracts over 600 assessment practitioners.

The grant project will also be supported by a number of other ARL staff:

- Director of the research and analytics program, will contribute expertise in research methods and data collection for a total of two hours per week (.06% of the equivalent of one FTE). ARL is currently conducting a search process for the director position.
- Administrative team, consisting of four professionals, will assist with scheduling, event planning, financial and grants management, procurement, and other duties. The total time committed to the project by the administrative team is two hours per week (.06% of the equivalent of one FTE). Amy Bulgrien, Assistant Director for Program Coordination, serves as the team leader for this group.
- Financial services team, consisting of three professionals, that will provide assistance with budgetary tracking and disbursement of consultant fees for approximately one hour per week (.03% of the equivalent of one FTE).

Five VPOs will be selected based on an expression of interest and ability to meet requirements including skills in research and assessment methodologies and tools and project management. The VPOs will provide project management support, facilitate meetings for the project teams, and ensure that research processes are on track. ARL is currently conducting a search process to identify the VPOs.

The consultant services of a data analyst will assist all project teams in developing data collection systems and other strategies to identify data elements, interpreting and analyzing data, and identifying ways to visualize data. The consultant services of a social scientist will also be secured to assist teams to plan their use of qualitative and quantitative research methods to maximize research protocols and results. Requests for proposals will be circulated to identify both consultants (data analyst and social scientist).

Project Evaluation

The project Advisory Group is responsible with the PI for the overall evaluation of the grant project. This evaluation will be an iterative process over the course of the grant as the pilot project and practice brief teams develop, implement, and complete their research projects. Key questions that will be addressed include: (a) how does the project extend the learnings to stakeholders such as campus leadership, faculty, and students; and (b) how will the research results reach the widest possible audience and, in particular, individuals who will implement future research using the models.

Diversity Plan

ARL has long been committed to developing programs that advance diversity and inclusion (D&I) goals within the Association and within the professional community. It is a central feature of the 2019–2021 Action Plan that includes the ARL Academy; Diversity, Equity, and Inclusion; Member Experience, Research and Analytics; Scholars and Scholarship; and Policy and Advocacy as strategic priorities. Each new project that ARL undertakes is evaluated for intersections with diversity, equity, and inclusion and the degree to which the project advances those goals. This process ensures that these critical issues are central to everything that the Association does.

National Impact

ARL member libraries will begin to contribute to a larger assessment data collection pool that address the missions and goals of their institutions. Research libraries will use the pilot project and practice brief templates to implement their own investigations of research topics and questions that address issues important to their individual institutions. The ARL community will collectively identify the important data elements that better reflect what is most useful to research libraries in support of their institutions. These efforts will support the Association's ability to effectively address issues and strategies viewed as important by the membership.

With this project initially reaching a subset of the research library community with all 124 ARL libraries, libraries of all types will be able to use the models, from governmental libraries, to public libraries, to special libraries. Libraries of varying sizes will benefit from this project. Smaller libraries with limited staff will be able to use the research and models to answer key questions without the need to replicate the research. The pilot projects and resulting models will foster a culture of assessment in libraries through participation in formal, methodologically sound research projects. The new models will support the identification of data points for collection by libraries and distribution of information that substantiate library impact to institutional decision-makers and within the research and learning ecosystem. Libraries will be able to collaborate and compare data and methods with peers on topics highly-relevant to the individual library and pool research expertise and resources for collective benefit. This project will develop staff skills, define what is needed for ARL to sustain this over time while serving local assessment needs, and contribute to building communities of assessment practice. Through a range of communications strategies including briefings, reports, in-person discussions at key conferences, and by sharing information widely on the ARL website and through other means, libraries nationally and globally will benefit from this project. Ultimately, libraries of all types will be able to transform the way in which they tell their stories of impact and value.

Research Library Impact: Pilot Models for Scalable and Sustainable Assessment

Schedule of Completion



DIGITAL PRODUCT FORM

Introduction

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to federally funded digital products (e.g., digital content, resources, assets, software, and datasets). The products you create with IMLS funding require careful stewardship to protect and enhance their value, and they should be freely and readily available for use and re-use by libraries, archives, museums, and the public. Because technology is dynamic and because we do not want to inhibit innovation, we do not want to prescribe set standards and practices that could become quickly outdated. Instead, we ask that you answer questions that address specific aspects of creating and managing digital products. Like all components of your IMLS application, your answers will be used by IMLS staff and by expert peer reviewers to evaluate your application, and they will be important in determining whether your project will be funded.

Instructions

All applications must include a Digital Product Form.

- Please check here if you have reviewed Parts I, II, III, and IV below and you have determined that your proposal does NOT involve the creation of digital products (i.e., digital content, resources, assets, software, or datasets). You must still submit this Digital Product Form with your proposal even if you check this box, because this Digital Product Form is a Required Document.

If you ARE creating digital products, you must provide answers to the questions in Part I. In addition, you must also complete at least one of the subsequent sections. If you intend to create or collect digital content, resources, or assets, complete Part II. If you intend to develop software, complete Part III. If you intend to create a dataset, complete Part IV.

Part I: Intellectual Property Rights and Permissions

A.1 What will be the intellectual property status of the digital products (content, resources, assets, software, or datasets) you intend to create? Who will hold the copyright(s)? How will you explain property rights and permissions to potential users (for example, by assigning a non-restrictive license such as BSD, GNU, MIT, or Creative Commons to the product)? Explain and justify your licensing selections.

The Association of Research Libraries will hold the copyright for all digital products created for this grant. The digital products (Narrative, page 8, “The ARL.org website will host all materials and communications.”) hosted on the ARL.org website will hold a CC-BY license, meaning potential users are free to share and adapt the resource. As a policy, except where otherwise noted, content on the ARL website is subject to a CC-BY license (see <https://www.arl.org/copyright>).

A.2 What ownership rights will your organization assert over the new digital products and what conditions will you impose on access and use? Explain and justify any terms of access and conditions of use and detail how you will notify potential users about relevant terms or conditions.

The Association of Research Libraries will assert ownership of the new digital products, and all new products hosted on ARL.org will assume a CC-BY license. If the Association changes its policy about licenses of publicly hosted materials, the copyright information listed on <https://www.arl.org/copyright> will change.

A. 3 If you will create any products that may involve privacy concerns, require obtaining permissions or rights, or raise any cultural sensitivities, describe the issues and how you plan to address them.

It is possible that in the course of their work, the project teams will collect personally identifiable information or other data involving privacy concerns, such as names of individuals involved in interviews and focus groups, individuals who submit surveys, and individuals included in user demographic datasets or instruction sessions. Project teams are responsible for maintaining the data for their projects—ARL will not host that data. ARL will host on ARL.org templates, checklists, papers, practice briefs, guidelines, blogs, messages to the ARL membership, and other reports that the project teams submit. Presentations and reports given during the ARL Association Meetings and 2020 Library Assessment Conference may also be posted online. The ARL Association Meetings webpage is ARL.org, and the Library Assessment Conference webpage (libraryassessment.org) is hosted and maintained by ARL. It holds the same copyright as ARL. Project Teams will be asked to ensure all identifying information or other data with privacy concerns will be scrubbed from all resources to be posted by ARL. The PI of the grant will review all resources before they are posted to ensure anonymity.

Part II: Projects Creating or Collecting Digital Content, Resources, or Assets

A. Creating or Collecting New Digital Content, Resources, or Assets

A.1 Describe the digital content, resources, or assets you will create or collect, the quantities of each type, and the format(s) you will use.

Each pilot project and practice brief team will produce semi-annual progress reports and produce or publish outputs such as templates, checklists, papers, practice briefs, guidelines for replicating research in the local context, and evidence-based articulations of practical applications of the research. Outputs in addition to the reports are at the discretion of the project teams, as is their frequency. Reports will be posted to ARL.org in .PDF format. Outputs in addition to the reports may be posted as .PDF, .docx, .xlsx, or .gdoc—whatever is most beneficial for the output (for example, a template may be posted as a .docx or .gdoc for ease of user replication). Each cohort of project teams will be responsible for blogging about their projects and/or contributing to regular communications with the ARL membership. The ARL staff publishes one official communication to the membership per month. This official communication is sent via email and does not get posted to ARL.org. Blogs will be hosted on ARL.org and may be more or less frequent than one per month. Another forum for presenting projects and their results will occur during the twice-yearly ARL Association Meetings and the 2020 Library Assessment Conference. There are four ARL Association Meetings to occur during the timeframe of the grant, and one Library Assessment Conference. As a part of these meetings, presentations may be hosted online and will be in .PDF format.

A.2 List the equipment, software, and supplies that you will use to create the content, resources, or assets, or the name of the service provider that will perform the work.

Reports and other outputs will be created and formatted using a mix of Google Docs, Microsoft 365 products (mostly Word and Excel), and Adobe Creative Cloud products (mostly InDesign). The project teams will create the resources, and the ARL staff will format and post the resources on ARL.org. As of May 2019, the ARL.org website will be hosted on WordPress, as is libraryassessment.org.

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG) you plan to use, along with the relevant information about the appropriate quality standards (e.g., resolution, sampling rate, or pixel dimensions).

.PDF, .docx, .xlsx, .gdoc, .indd

B. Workflow and Asset Maintenance/Preservation

B.1 Describe your quality control plan. How will you monitor and evaluate your workflow and products?

Project teams will be provided with templates for reports. Formatting for other outputs will be determined by the project teams. All outputs will be collected by the PI, who will review outputs before sending them to ARL staff for review, formatting, and posting to ARL.org.

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period of performance. Your plan may address storage systems, shared repositories, technical documentation, migration planning, and commitment of organizational funding for these purposes. Please note: You may charge the federal award before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period of performance of the federal award (see 2 C.F.R. § 200.461).

As all digital products created for this grant will be hosted on ARL.org, they will be subsumed into the general operating budget for web storage to support the Association's website after the grant ends. It is ARL's policy to keep documents and resources related to grants permanently; thus, all the digital products will be available permanently.

C. Metadata

C.1 Describe how you will produce any and all technical, descriptive, administrative, or preservation metadata. Specify which standards you will use for the metadata structure (e.g., MARC, Dublin Core, Encoded Archival Description, PBCore, PREMIS) and metadata content (e.g., thesauri).

N/A

C.2 Explain your strategy for preserving and maintaining metadata created or collected during and after the award period of performance.

N/A

C.3 Explain what metadata sharing and/or other strategies you will use to facilitate widespread discovery and use of the digital content, resources, or assets created during your project (e.g., an API [Application Programming Interface], contributions to a digital platform, or other ways you might enable batch queries and retrieval of metadata).

N/A

D. Access and Use

D.1 Describe how you will make the digital content, resources, or assets available to the public. Include details such as the delivery strategy (e.g., openly available online, available to specified audiences) and underlying hardware/software platforms and infrastructure (e.g., specific digital repository software or leased services, accessibility via standard web browsers, requirements for special software tools in order to use the content).

The digital content will be publicly available on ARL.org. This website is accessible via all standard web browsers.

D.2 Provide the name(s) and URL(s) (Uniform Resource Locator) for any examples of previous digital content, resources, or assets your organization has created.

Previous similar digital content can be found on the Publications & Resources section of ARL.org (<https://www.arl.org/publications-resources>). A recent report that was written to encompass the discussion at a meeting can be found on the following webpage (<https://www.arl.org/component/content/article/6/4714>) as well as the accompanying .PDF (<https://www.arl.org/storage/documents/publications/2019.01.25-arl-ssrc-meeting-on-open-scholarship.pdf>). The report was originally created in Google Docs and then formatted in InDesign before being exported as PDF to be post on ARL.org. A presentation given at a recent Association Meeting has its own webpage (<https://www.arl.org/component/content/article/6/4624>) as well as accompanying .PDF document hosted on the website (https://www.arl.org/storage/documents/2018.09.26_FLMM_McCray_OpenScience.pdf). The presentation was originally created in PowerPoint and then saved as a PDF when uploaded to the website.

Part III. Projects Developing Software

A. General Information

A.1 Describe the software you intend to create, including a summary of the major functions it will perform and the intended primary audience(s) it will serve.

A.2 List other existing software that wholly or partially performs the same functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

B. Technical Information

B.1 List the programming languages, platforms, software, or other applications you will use to create your software and explain why you chose them.

B.2 Describe how the software you intend to create will extend or interoperate with relevant existing software.

B.3 Describe any underlying additional software or system dependencies necessary to run the software you intend to create.

B.4 Describe the processes you will use for development, documentation, and for maintaining and updating documentation for users of the software.

B.5 Provide the name(s) and URL(s) for examples of any previous software your organization has created.

C. Access and Use

C.1 We expect applicants seeking federal funds for software to develop and release these products under open-source licenses to maximize access and promote reuse. What ownership rights will your organization assert over the software you intend to create, and what conditions will you impose on its access and use? Identify and explain the license under which you will release source code for the software you develop (e.g., BSD, GNU, or MIT software licenses). Explain and justify any prohibitive terms or conditions of use or access and detail how you will notify potential users about relevant terms and conditions.

C.2 Describe how you will make the software and source code available to the public and/or its intended users.

C.3 Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

Part IV: Projects Creating Datasets

A.1 Identify the type of data you plan to collect or generate, and the purpose or intended use to which you expect it to be put. Describe the method(s) you will use and the approximate dates or intervals at which you will collect or generate it.

A.2 Does the proposed data collection or research activity require approval by any internal review panel or institutional review board (IRB)? If so, has the proposed research activity been approved? If not, what is your plan for securing approval?

A.3 Will you collect any personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information? If so, detail the specific steps you will take to protect such information while you prepare the data files for public release (e.g., data anonymization, data suppression PII, or synthetic data).

A.4 If you will collect additional documentation, such as consent agreements, along with the data, describe plans for preserving the documentation and ensuring that its relationship to the collected data is maintained.

A.5 What methods will you use to collect or generate the data? Provide details about any technical requirements or dependencies that would be necessary for understanding, retrieving, displaying, or processing the dataset(s).

A.6 What documentation (e.g., data documentation, codebooks) will you capture or create along with the dataset(s)? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the dataset(s) it describes?

A.7 What is your plan for archiving, managing, and disseminating data after the completion of the award-funded project?

A.8 Identify where you will deposit the dataset(s):

Name of repository:

URL:

A.9 When and how frequently will you review this data management plan? How will the implementation be monitored?