

CHICO STATE ENTERPRISES/MERIAM LIBRARY REGIONAL COPYRIGHT EDUCATION RESEARCH PROJECT

The Meriam Library at California State University, Chico, in partnership with Arizona State University Library in Tempe, Arizona and Portland Community College Library in Portland, Oregon, seeks to determine the need for and availability of copyright education for library professionals in the Western United States. The Western Rural Copyright Education Research Pilot Project will document the ability of library professionals in the Western U.S. to respond to copyright questions, determine their needs for training, locate barriers to effective training, identify copyright training specialists and programs, and document possible new ways to deliver copyright training across a large, dispersed population throughout a geographically challenging region. This planning grant will inform future projects to develop regionally sensitive copyright professional development opportunities and communities. This project will serve as a model for others to study the copyright education level and needs of library personnel and other education professionals in the U.S.; the data will be openly shared to allow cross-regional comparisons (and analyses of needs in library subspecialties). This proposal is submitted to the Laura Bush 21st Century Librarian program as a Community Catalyst grant in the project category of Continuing Education. The project duration is one year; we seek \$80,826 in funding from IMLS to undertake this project.

Statement of Broad Need

Libraries, with their strong commitments to both the creators of copyrighted works and the users of those works, are places where copyright issues abound. As library work increasingly encompasses open educational resources (OER), digital collections, electronic reserves, streaming media, scholarly publishing and non-traditional online educational opportunities, the volume and complexity of copyright decisions continue to expand. The recent COVID-19 pandemic helped shed light upon this increased need as evidenced by the number of recent blog posts, webinars, and statements discussing the application of copyright and fair use by libraries and educational institutions in times of emergency¹. Previous studies have demonstrated that library personnel often feel unprepared to make routine copyright decisions² and that 80% of library professionals received no copyright/IP-specific training as part of their graduate curriculum.³ These national-level surveys evaluating copyright literacy have focused on academic and public libraries.^{4,5} Other types of libraries, such as public, special, or tribal libraries, tend to be overlooked and underrepresented in copyright education opportunities or assessments.

¹ <https://tinyurl.com/tvnty3a>

² <https://doi.org/10.1016/j.acalib.2014.03.009>

³ <https://doi.org/10.1016/j.acalib.2015.08.004>

⁴ <https://doi.org/10.1016/j.acalib.2014.03.009>

⁵ <https://doi.org/10.1080/15228959.2016.1184997>

Significant strides have been made toward increasing access to high-quality professional development for library professionals around copyright. Online offerings like MOOCs, webinars, and webcasts and in-person one-time trainings at conferences and workshops are widely available. In recent years, two programs of in-depth, in-person copyright education have been developed in response to specific needs: Library Copyright Institute⁶ (LCI) in North Carolina and the Copyright First Responders⁷ (CFR) network at Harvard University in Massachusetts. While the programs differ in their particulars, the premise of each is that front-line library personnel benefit from both deep, systematic training in copyright and from the opportunity to participate in local or regional communities of practice in which they can maintain and continue to develop their copyright practices. Both are also responsive to specific regional or institution specific needs. CFR was developed to facilitate communities of practice within large, multi-library academic institutions. LCI was developed to serve smaller, under resourced institutions that might not have a copyright expert on staff.

Our project takes as its central assumption that effectively and sustainably building capacity around copyright in all kinds of libraries is challenging and that different regions of the country may require different approaches to meet this challenge most successfully. Most of the initiatives targeting copyright education for library professionals are provided by institutions and individuals located on the East Coast (including CFR and LCI). Requiring cross-country travel either for participants or expert trainers is not a sustainable model for providing educational opportunities at scale. Many Western states are geographically larger and less densely populated, making it difficult to gather a significant number of personnel in one location without considering lengthy travel times and lack of public or group transportation options. Additionally, travel to other states may be restricted, either through proximity to services, financial support, institutional policies regarding health and safety, or by legislative action. Educational opportunities and communities of practice are difficult to sustain when participants are isolated as the only copyright expert, if any, in their library system, region, or state. Finally, library personnel in school, tribal, or special libraries face additional barriers to accessing specialized professional development or communities of practice. For example, school library personnel may have restrictions on absences during the academic year or be required to find substitutes for any absences. Many school libraries, as well as special or tribal libraries, may only have one or two personnel on staff, meaning that any absences necessitate closing the library, which, in addition to limited resources for training, decreases opportunities for taking any non-essential training.

⁶ <http://library.copyright.institute/>

⁷ <https://osc.hul.harvard.edu/programs/copyright/first-responders/>

While online options such as MOOCs, webinars, and webcasts do provide access to training, these works are often not coordinated into synthetic learning experiences and may not be sufficient to build copyright competency at scale. It may be difficult to make time in one's schedule to attend a webinar/webcast, or to receive the support and encouragement to work through an uncredentialed MOOC. These one-time trainings are difficult to incorporate into a training plan, although recent assessments of in-person copyright workshops show that even a one-shot training session can show a demonstrated increase in ability to cope with copyright decisions⁸. Additionally, while most libraries in the U.S. are able to offer internet access no matter how remote, many rural areas still lack the infrastructure needed to provide the high-speed internet access⁹ needed for webinars, webcasts, or MOOCs.

At the 2013 Continuing Education Summit hosted by IMLS and OCLC¹⁰, a group of library professionals in leadership positions met to discuss continuing education strategies, needs, and barriers for library personnel nationwide. Some of the barriers they identified represent many of the same barriers we wish to test, such as lack of available time, resources, funding, and/or support; but they also included possible difficulties with staying abreast of trends and topics and the challenge of remaining motivated to continue learning. Administrators identified leadership challenges based on resource limitations and lack of knowledge regarding who is responsible for learning policy enforcement. By documenting the barriers and preferred methods of learning about copyright in this region, we expect that the findings of this research will help inform the national conversation about the state of and need for copyright education for front-line librarians. This project will also serve as a model for other regions that want to perform a similar assessment.

This project will build upon some of the work that is being done by the Library Copyright Institute team, as well as the Copyright First Responders Program, but differs in its scope. As a Catalyst project, we intend to test our assumptions regarding levels of copyright expertise among library personnel, as well as to determine whether there are unique needs or challenges inherent in the Western states region. We will explore and identify the level of copyright confidence and expertise among library personnel of all library types in these states. Additionally, we will identify the level of institutional support for professional development opportunities and explore what barriers prevent library personnel from participating in professional development. Finally, we will explore how library personnel prefer to learn about copyright. Our ultimate goal is to use our survey and focus group results to inform future

⁸ <https://doi.org/10.1353/pla.2018.0045>

⁹ <https://www.pewresearch.org/fact-tank/2019/05/31/digital-gap-between-rural-and-nonrural-america-persists/>

¹⁰

<https://www.webjunction.org/content/dam/WebJunction/Documents/webJunction/CE-Summit-Report-with-Addendum.pdf>

projects to develop regionally sensitive copyright professional development opportunities and communities.

Our project has the support and encouragement of other related initiatives, such as the organizers of the Library Copyright Institute and Copyright First Responders, as well as organizations who will benefit from our results, including the Maricopa Millions OER project¹¹ in Arizona and Open Education Library Services in Oregon¹². Both Maricopa Millions and Open Education Library Services in Oregon will benefit from increased copyright expertise and support from the library professionals in their communities. Letters of support are included in the appendix as Supportingdoc1.

Project Design

The purpose of this project is to identify copyright needs at libraries within the Western states region, learn about specific barriers to participating in professional development opportunities, and understand more about preferred professional development options. For this project, we will distribute a survey, using state and regional library association email distribution lists. After an initial analysis of the survey responses, we will conduct focus groups to seek a deeper understanding of our initial data and, if needed, clarification on any unexpected survey results. We intend to use the data from this project to inform future development of regionally sensitive copyright professional development opportunities and communities.

As the attached CVs demonstrate, this proposal combines four librarians with significant copyright expertise, representing geographically dispersed states in the West, along with a research faculty member with focus group and survey expertise.

Patrick Newell, Dean of Meriam Library at CSU, Chico, began providing copyright information to faculty, staff, and students in 2002 at Fresno State; he recently led the development of copyright information pages and education programs for the 23 California State University Libraries. He has been engaged with the American Library Association's copyright committee since 2004 (under various committee names, currently the Copyright Legislation, Education, and Action Network) in leadership roles as Chair and on projects, including the creation and hosting of CopyTalk, a semi-regular webinar presenting information about copyright and intellectual project issues, which began in in 2013.

Rachel Bridgewater, Copyright Librarian at Portland Community College and co-facilitator of Copyright First Responders Pacific Northwest, has been providing copyright support and education for the library community since 2006, when she began leading online copyright

¹¹ <https://maricopamillions.wordpress.com/maricopa-millions-website/>

¹² <https://openoregon.org/>

classes for the Association of College and Research Libraries. She is a regular presenter on copyright locally and regionally and teaches copyright and OER classes for the School of Library and Information Management at Emporia State University. As co-facilitator for Copyright First Responders Pacific Northwest since 2018, she organized training for, and supports the ongoing continuing education of, approximately 70 library personnel from the Orbis Cascade Alliance, a consortium of academic libraries in the Pacific Northwest.

Karen Grondin, Licensing and Copyright Librarian at Arizona State University, provides copyright guidance and education to ASU Library staff, with a focus on Course Reserves, Interlibrary Loan, and streaming media. She started in this role in 2018. Prior to this she worked in both private and public universities in support staff and professional librarian positions. Between 1997 and 2008 she was the Lead for Course Reserves and Digital Services at Fletcher Library, on the Arizona State University's West campus, during which time, she regularly communicated with faculty regarding fair use related to their course reserves.

Anali Perry, Scholarly Communication Librarian at Arizona State University, has been providing copyright guidance and education to ASU faculty, staff, and students for over ten years. In addition, she is an expert presenter for the Association of College and Research Libraries' Roadshow, *Scholarly Communication: From Understanding to Engagement*. She brings broad experience in developing and delivering copyright professional development opportunities to a variety of audiences and an active awareness of copyright needs in libraries.

Lori Weber, Professor of Political Science at CSU Chico, has developed, administered, and analyzed university-wide civic engagement curriculum assessment data for over ten years at her home institution and, for the past four years, extended this research to another highly diverse California State University in the Los Angeles area. She has over thirty years survey research experience, including large-scale survey research funded by NSF, Kettering Foundation, American Association of Colleges and Universities.

We have already developed the survey instrument and initial focus group questions in preparation to administer the survey if our project is approved (Supportingdoc2). We are in the process of seeking clearance from the California State University-Chico Institutional Review Board (IRB) to undertake the survey and focus groups. We see little risk in this study, either to project participants or institutions. Initial conversations with the IRB indicate that they concur with the minimal risk involved and that this study is likely exempt from a full review by the IRB. As detailed in the attached Schedule of Completion, once the project funding cycle begins in August 2020, we are prepared to recruit and hire a project management assistant and graduate student assistants. We plan to administer the survey in October through

mid-December of 2020, analyze the survey results and recruit focus group participants in January 2021. We will conduct the focus groups during the month of February 2021. Once focus groups have been completed, we will use the recordings to create transcriptions in early March 2021. We intend to complete our analysis of the focus group data by the end of April 2021, and draft our final report over the course of May and June of 2021, to be completed by July 1, 2021.

We have designed the survey to specifically gather information about how copyright applies to and impacts the work of library professionals, different organizations' approach to copyright, the level of the organizational support for professional development (e.g. release time, financial support), what professional development opportunities are available, and which methods are most preferred. We have also included demographic questions about type of library, position focus, and location. Finally, we ask separate questions about willingness to participate in future focus groups. The survey will be administered using the Qualtrics survey platform.

The scope of our survey is to seek responses from as many library professionals as possible within the Western region, defined for our purposes as Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. In order to reach this targeted group, we will distribute the survey primarily through state and regional library association email lists, focused regional association networks, and personal contacts (initial list included in Supportingdoc2). To improve response rates, we will provide an incentive of entering a drawing to win one of four \$500 gift cards for participation. In addition, we are working with regional library schools, including those with distance education programs, to identify student workers that reside in the targeted states to hire as local contacts to promote survey participation to professionals in their communities. These graduate student research assistants will send out regular reminders to participate in the survey until the close date.

We recognize that by targeting library associations as a primary distribution method, we will not reach library professionals who are not members of their local associations. We also recognize that, due to our project team's composition, we are likely to have a better participation rate from academic library professionals. We hope to improve non-academic responses by carefully crafting our invitation to target a broad audience, limiting academic jargon, providing a broadly appealing incentive, and inviting potential participants to forward the survey invitations to their own relevant professional networks. Additionally, we hope to generate interest and awareness of the survey by submitting proposals to related conferences occurring in 2020, such as the Miami University Library Copyright Conference, and the Arizona Library Association Conference, as well as reporting at the American Library Association's

Copyright Legislation and Education Advisory Network (CLEAN)¹³ meetings at Midwinter and Annual Conference. We will also hire a project assistant to help manage the budget and route communication, and will recruit a graduate student studying survey analysis who will be working on this project for the year as part of their program of study.

Broad participation across all of the identified populations, including librarians at different institutions (public, special, academic, libraries) will be a major indicator of success. We will evaluate the survey data to analyze response rate weekly, and we will use this data to encourage participation from smaller respondent groups using the state-based library students as primary points of contact.

Once we have the survey responses, our research faculty team member will lead the data analysis with the help of graduate student assistants. Survey responses that are received from professionals outside of our identified area scope will not be included in the data.

Our second stage for the project is conducting focus groups, selected from survey participants who indicated they would be willing to participate. We intend to conduct up to eight focus groups with up to ten people each. Each focus group participant will be rewarded with a \$50.00 gift card. The focus groups will be conducted using Zoom, which allows participants to choose whether to attend via computer (using internet access) or via telephone, which will compensate for participants for whom internet access or bandwidth is unreliable. We will send each participant the focus group questions in advance of the meeting. We will record each focus group session using the Zoom record function. These recordings will be used to create a full text transcription of the conversation, using graduate student assistants to create the transcription, which will then be verified by the project team. The recordings themselves will not be kept once transcriptions are completed. We will create anonymized transcripts for dissemination and analysis.

We have a list of initial preliminary focus group questions that we will modify as needed after reviewing survey results. We intend to organize focus group participants by type of organization such as public, academic, special, and school libraries, as well as a specific group that includes library leadership/administrators. By including a specific library administrative focus group, we hope to gain insight to their perceived need for and barriers to copyright education at the organizational level as they relate to strategic planning and budgets. This will also help address the view that individuals, without a high-level understanding of organizational issues or strategic planning, may not always be in the best position to identify

¹³ a group that loosely coordinates groups across ALA divisions engaged with copyright education

their own training needs¹⁴. Finally, we will also have a focus group that targets copyright educators. We will use polling software to select times across different time zones that are convenient for our participants.

Analysis of the transcripts will be led by our research faculty member using standard qualitative data analysis software such as ATLAS.ti or NUDIST. We will code for keywords to compare and contrast with survey results.

The final report will include persistent links to the report, data, survey, and codebooks. In addition to our final report on the status of copyright education and training needs submitted to IMLS, we will share our findings widely with the library community through the American Library Association (and subsidiary organizations), national and regional copyright and policy networks, conference presentations, and published articles, as well as the Association for Library and Information Science Education. We will make our data, final report, recommendations, and any further research outputs freely and openly available to others through multiple open repositories, using appropriate open licenses. Details about data storage, preservation, and dissemination are included in the attached Digital Project Form. Persistent links to these resources will be included in all of our dissemination outlets.

Diversity Plan

The region in which this work will take place includes four majority-minority state (California, Hawaii, Nevada, and New Mexico) with a high percentage of Hispanic and Asian residents¹⁵. The broader region is also home to the Apache, Navajo, and Pueblo native communities, three of the largest tribal organizations recognized by the Federal government (along with many smaller tribes, though some are not recognized by the Federal government), indicating this area contains some of the largest largest Native American communities as a proportion of the total population, among a broader diverse population. The region contains significant cultural, racial, and religious diversity (among other types of diversity) which we hope to engage through librarians in the region who participate in this study.

We will work with state and regional library associations to identify library personnel, not only at large academic or public library systems, but also at rural, tribal and school libraries. We believe that personnel in rural, tribal, and school libraries are often more restricted in their ability to participate in professional development opportunities, most likely due to funding, staffing, technological, or geographical limitations.

¹⁴ <https://educopia.org/lam-education-needs-assessments-bridging-the-gaps/>

¹⁵ <https://www.baltimoresun.com/opinion/op-ed/bs-ed-op-0809-minority-majority-20170808-story.html>

Additionally, library personnel in rural and tribal libraries are less likely than their counterparts at larger academic or public libraries to have received a professional library degree, and also less likely to have received any training regarding copyright. Their need for copyright expertise is just as critical as any other library professional. By including rural, tribal, and school libraries in this survey, we hope this will provide evidence of specific needs that will point toward useful and possibly novel strategies for providing training.

To promote participation by a diverse group of participants, the survey will be promoted through regional email distribution lists that focus on types of libraries such as the School Library Association, Medical Library Association, Public Library Association, and the Special Library Association. To solicit participation from traditionally underrepresented groups the survey will be promoted to APALA: Asian Pacific American Librarians Association, the Black Caucus of the American Library Association, CALA: Chinese American Librarians Association 華人圖書館員協會, and REFORMA. In these instances, messaging will specify that the survey instrument is open to the Western states as described in the Project Design. The survey instrument itself is also designed to identify submissions from outside the Western states.

To ensure broad participation in focus groups, we will try to ensure that participants from a broad range of library types and from traditionally underrepresented groups. As described in the Project Design, we will use Zoom for the focus groups. Zoom is especially suited to support these efforts as users without a stable internet connection are able to call in to a meeting. It also includes good support for accessibility. Finally, we will work with attendees ahead of time to provide clear instructions on using Zoom and will address technical issues if they come up during the meetings.

Statement of Broad Impact

As we've discussed, while there have many opportunities and methods for providing copyright professional development to library personnel over the years, there is little documentation or needs assessment to inform these efforts. We expect our results to establish the foundation for future regional and national projects, to document copyright training needs, develop plans to bridge existing barriers to copyright education, and to construct effective regional communities of practice and copyright education models for library personnel.

We anticipate that other regions will adapt our survey to learn of local barriers and become better prepared to serve the needs of their local communities and regions. Use of this survey will help identify ways to expand and grow these communities to a broader, more inclusive audience. Others may decide to use the survey on a smaller scale to drill down and identify local issues.

We envision that our project will help determine if existing copyright training meets the needs of the library personnel in the region or if barriers to copyright education exist. We recognize that this gap analysis in information policy education could potentially go beyond copyright education. The survey could be adapted to determine need for and barriers to many different types of knowledge and skills needed by library professionals.

By identifying the need for and barriers to copyright education, we are identifying areas for copyright educators to address while simultaneously taking initial steps towards developing a national network of library personnel who are conversant in issues surrounding copyright. Ideally, as a result of our work, educational opportunities will be opened up to a broader audience. With a stronger understanding of copyright and the support of a large network, libraries will be better able to educate their communities about copyright, support decision making, and, ideally, make greater use of the rights granted to the public and institutions by copyright law.

Budget Summary

We request \$80,826 as Total Project Costs from IMLS to complete this project; we have not indicated a cost share for this project as it is not required for a project at this level of funding. Our request includes \$36,795 for Salary & Wages (with \$2,579 for Fringe Benefits) for the research team, \$7,680 for Contracts and Subawards, \$9,244 for Student Support, and \$5,000 for Other Costs. The Total Direct Costs total \$61,298, with \$19,528 requested for overhead (at the institution's negotiated Federal rate of 41.5%).



DIGITAL PRODUCT FORM

INTRODUCTION

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to digital products that are created using federal funds. This includes (1) digitized and born-digital content, resources, or assets; (2) software; and (3) research data (see below for more specific examples). Excluded are preliminary analyses, drafts of papers, plans for future research, peer-review assessments, and communications with colleagues.

The digital products you create with IMLS funding require effective stewardship to protect and enhance their value, and they should be freely and readily available for use and reuse 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

If you propose to create digital products in the course of your IMLS-funded project, you must first provide answers to the questions in **SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS**. Then consider which of the following types of digital products you will create in your project, and complete each section of the form that is applicable.

SECTION II: DIGITAL CONTENT, RESOURCES, OR ASSETS

Complete this section if your project will create digital content, resources, or assets. These include both digitized and born-digital products created by individuals, project teams, or through community gatherings during your project. Examples include, but are not limited to, still images, audio files, moving images, microfilm, object inventories, object catalogs, artworks, books, posters, curricula, field books, maps, notebooks, scientific labels, metadata schema, charts, tables, drawings, workflows, and teacher toolkits. Your project may involve making these materials available through public or access-controlled websites, kiosks, or live or recorded programs.

SECTION III: SOFTWARE

Complete this section if your project will create software, including any source code, algorithms, applications, and digital tools plus the accompanying documentation created by you during your project.

SECTION IV: RESEARCH DATA

Complete this section if your project will create research data, including recorded factual information and supporting documentation, commonly accepted as relevant to validating research findings and to supporting scholarly publications.

SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS

A.1 We expect applicants seeking federal funds for developing or creating digital products to release these files under open-source licenses to maximize access and promote reuse. What will be the intellectual property status of the digital products (i.e., digital content, resources, or assets; software; research data) you intend to create? What ownership rights will your organization assert over the files you intend to create, and what conditions will you impose on their access and use? Who will hold the copyright(s)? Explain and justify your licensing selections. Identify and explain the license under which you will release the files (e.g., a non-restrictive license such as BSD, GNU, MIT, Creative Commons licenses; RightsStatements.org statements). 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.

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.

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.

SECTION II: 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.

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

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG, OBJ, DOC, PDF) you plan to use. If digitizing content, describe the quality standards (e.g., resolution, sampling rate, pixel dimensions) you will use for the files you will create.

Workflow and Asset Maintenance/Preservation

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

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period. Your plan should 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).

Metadata

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

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

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).

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, delivery enabled by IIIF specifications).

D.2. Provide the name(s) and URL(s) (Universal Resource Locator), DOI (Digital Object Identifier), or other persistent identifier for any examples of previous digital content, resources, or assets your organization has created.

SECTION III: SOFTWARE

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 or similar functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

Technical Information

B.1 List the programming languages, platforms, frameworks, 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), URL(s), and/or code repository locations for examples of any previous software your organization has created.

Access and Use

C.1 Describe how you will make the software and source code available to the public and/or its intended users.

C.2 Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

SECTION IV: RESEARCH DATA

As part of the federal government's commitment to increase access to federally funded research data, Section IV represents the Data Management Plan (DMP) for research proposals and should reflect data management, dissemination, and preservation best practices in the applicant's area of research appropriate to the data that the project will generate.

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

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 sensitive information? This may include personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information. If so, detail the specific steps you will take to protect the information while you prepare it for public release (e.g., anonymizing individual identifiers, data aggregation). If the data will not be released publicly, explain why the data cannot be shared due to the protection of privacy, confidentiality, security, intellectual property, and other rights or requirements.

A.4 What technical (hardware and/or software) requirements or dependencies would be necessary for understanding retrieving, displaying, processing, or otherwise reusing the data?

A.5 What documentation (e.g., consent agreements, data documentation, codebooks, metadata, and analytical and procedural information) will you capture or create along with the data? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the data it describes to enable future reuse?

A.6 What is your plan for managing, disseminating, and preserving data after the completion of the award-funded project?

A.7 Identify where you will deposit the data:

Name of repository:

URL:

A.8 When and how frequently will you review this data management plan? How will the implementation be monitored?