Council of State Archivists: Digital Preservation and Digitization Planning and Access

A. Statement of National Need - The Council of State Archivists (CoSA) proposes a three-year $475,000 National Leadership Project Grant in the National Digital Infrastructures and Initiatives category, to develop and deliver new and expanded technical assistance, educational programming, and training to state and territorial government archives to strengthen their digital records preservation and accessibility capacities. This project spans three sets of realistic and scalable activities: 1) **updated self-assessment tools and best practices guidelines** for digital preservation programs; 2) **direct assistance and mentoring** to improve digital preservation programs, including digitization planning and related policy development; and 3) accelerate development and implementation of digital preservation planning and cultural competence awareness and skill-building **educational and training programs** in a variety of formats, to facilitate continued learning and sharing among archives staff. CoSA will generate guidance documents and companion tools, and leverage partnerships and collaborations to remove barriers many state and territorial archives face in managing, preserving, and providing public access in an ever-expanding and complicated government digital records environment.

State and territorial archives are legally mandated to preserve and provide access to essential evidence of the impact of government on the people of each state. In doing so, they document a wide range of government activity from education to infrastructure, social and mental health services, social and criminal justice, economic concerns, environmental management, emergency services, and government conduct. Collections that were once almost exclusively paper-based are, increasingly, born-digital records. The proliferation of information technology platforms, applications, and storage options across all levels and branches of government bring significant risks to retaining and preserving permanent government records. These risks also extend to analog records converted to digital formats for preservation and public access. Risks also include the obsolescence of software and hardware, the fragility of digital media, lack of dedicated resources to manage electronic records, and a lack of understanding among state agencies about digital records preservation techniques and standards. Exacerbating these issues is the reality that effective electronic records management remains a low priority and largely underfunded mandate in state government, and many existing digital preservation tools, primarily open-source tools, cannot be supported in existing IT infrastructures. The resulting gaps in connectivity, equipment, and digital preservation knowledge create a range of disparities within states and communities regarding public records access. As more records are moved online, the inequities surrounding public access to them also increase, as does the need for archives to better understand the barriers community members face in accessing them. CoSA helps to mitigate some of these gaps by working directly with archives staff to assess capabilities, develop plans and policies, and advise on infrastructure and cultural competency strategies to help state and territory archives reach their designated communities.

In 2018, state and territorial archives responded to nearly 530,000 online, in-person, mail, and phone reference requests from citizens, government officials, teachers, students, researchers, policy makers, and others. Furthermore, the COVID-19 pandemic limited in-person access to essential government records due to closures or reduced hours in state and territorial archives, underscoring how vulnerable access to government data is, even when that data is in high demand. In response, 97% of state and territorial archives reported in CoSA's 2020 Calls to the States they were expanding their online resources and programs. "Our mandate hasn't changed because of the pandemic," says New York State Archivist Thomas Ruller. "What has changed is the ante has been upped on the types of records people want access to, and they want access faster and better." State and territorial archives know robust access to online records resources is the answer to meeting growing national information needs, but many are challenged by lack of staff, a comprehensive digital management and preservation infrastructure, training, technology, or financial resources. Recognizing that state and territorial archives are at varying stages of development with their digital preservation programs, this project aims to create multiple opportunities for CoSA and its members to learn and work collaboratively to increase management and preservation of, and access to, digital government records.

This proposed project complements and builds upon the extensive work CoSA has delivered in its State Electronic Records Initiative (SERI), which it began in 2011. SERI was started to increase capacity for electronic records management and digital preservation in state archives by improving education and training for state archives staff, providing tools and best practices for preservation and access of state archives' digital records, and assisting with advocacy and outreach for better care of state government electronic records. Since SERI's inception, it has been sustained with $1.02 million in federal grant funding, over $800,000 in in-kind support from CoSA members, and $70,000 in corporate support. IMLS funding was received to develop and implement two major SERI projects: 1) the SERI **Strategic Training and Education Program** (STEP) (2012-2017), which provided intensive training and other educational resources for state and territorial archives staff on electronic records and digital preservation; and 2) two grant projects supporting planning (2014-2015) and implementation (2017-2020) of **ACCESS: Archives Collaborating and Cooperating with External Strategic Stakeholders**, which focused on collaborating with other associations representing state government officials, such as the National Governors Association, the National Association of State Chief Information Officers, and the National Association of Secretaries of State to increase their understanding of the importance of digital records in documenting government and providing transparent access to evidence about government actions to the public.

The Wyoming State Archivist Kathy Marquis knows firsthand how staff involvement in SERI institutes, committee work, and training opportunities have developed her agency's electronic records management and digital preservation capacities. She says,

> "*When we began work on our digital repository in 2011, few other state archives were attempting such comprehensive management of their digital records. In the years since then we have been able to count on SERI for informed discussions and white papers on topics such as best practices for email preservation. Our ability to discuss this with our State IT staff, assuring them that we are abreast of the latest thinking about managing government email records, has been invaluable*."

The Massachusetts Archives' digital team frequently refers to policy guidance developed through SERI. As recently as February 2021, the MA Archives Digital Archivist, Alejandra Dean, consulted the State Interagency Electronic Records Transfer Checklist and MoVE-IT Project resources when coordinating a digital records transfer with a state agency. Of those resources, Dean says,

> "*Whether it's encountering new file formats or new document management and storage systems, my commitment to ensuring the preservation and access of permanent state government records remains the same. When I have questions or need to learn more about a certain topic, my first stop is always SERI. The best practices documents and educational opportunities that SERI provides have equipped me with the skills necessary to preserving these public records in the long-term*."

In South Dakota, State Archivist Chelle Somsen notes that CoSA and the SERI community have been invaluable to the growth of their electronic records program. Somsen says,

> "*The SERI Institutes and scholarships provided much-needed training for staff, allowing us to develop electronic records policies, a digital processing workflow, and guidance for records creators by 2014, despite our lack of dedicated staff and funding. In 2018 we were able to hire a full-time digital archivist for the first time, and this year we finally received an appropriation to our budget for the electronic records program*."

Doug Robinson, Executive Director of the National Association for Chief Information Officers (NASCIO) notes the importance of NASCIO's partnership with CoSA, saying:

> "*NASCIO relies on CoSA for assistance with digital preservation issues, and our members appreciate CoSA's best practices and guidance documents on digital preservation and electronic records management*

in state government. During CoSA's previous IMLS grant, we collaborated on a publication, State Archiving in the Digital Era: A Playbook for the Preservation of Electronic Records. This helped state CIOs begin to implement digital preservation in enterprise-wide activities and has been useful in helping IT staff understand the complexities of digital preservation. The playbook provides actionable advice to state CIOs which is important because of the constant change in leadership and capabilities due to state CIO turnover."

This project's objectives extend SERI's successful trajectory, which continue to be shaped by direct input from state and territorial archives regarding their education and training needs; by the performance of CoSA members when measured by their use of the Digital Preservation Capability Maturity Model self-assessment; and driven by CoSA's own published research in *A National Risk: The State of State Electronic Records Report, 2017,* an exhaustive report examining the breadth and impact of SERI from its inception, and considering future directions for the program*; State Archiving in the Digital Era: A Playbook for the Preservation of Electronic Records, October 2018; Toward a Common Understanding: Insights on Inter-agency State Electronic Records Transfer, 2019;* and the *MoVE-IT (Modeling Viable Electronic Information Transfers) Final Report, 2021*.

To build upon the success of these projects and to provide further assistance and increased collaboration among state archives to safeguard digital government records, CoSA will use this proposed project to advance its work with state and territorial archives, and its many other collaborative partners to ensure "that rapidly changing technologies do not create a new 'Information Dark Age'."[1] If not managed properly, poorly conceived digital preservation strategies will likely lead to the loss of records, never to be retrieved. The foundational understanding behind this project's objectives and program design rests on two principles: 1) while equitable access is online access, not all online access is equitable; and 2) that without up-to-date and actionable digitization planning that also recognizes the critical issues of public access and its related societal barriers -- supported by policy, procedures, and workflow development -- many archives will continue to struggle to meet their legal mandates, as well as the public's increasing demands for easily accessible trustworthy and verifiable information. CoSA knows that one-size-fits-all solutions are almost impossible to deploy among its members, whose legislative mandates, funding, staffing, and focus vary greatly from state to state. SERI's success has come from individualized, yet collaborative, efforts delivered and sustained directly. This will be particularly true with this project, where access equity issues will also be addressed.

Repeated rigorous self-assessment of CoSA members using the Digital Preservation Capability Maturity Model (DPCMM) has allowed CoSA to successfully document the effectiveness of SERI's education and training efforts for most state and territorial archives. SERI's innovative solutions and collective wisdom fostered a diverse array of training, practical tools, and support structures aimed at building and sustaining digital preservation capabilities in an ever-changing landscape. Among the educational and capacity-building tools CoSA creates are templates, workflows, checklists, policies, surveys, and documentation tools (ACCESS project tools, Modeling Viable Electronic Information Transfers tools, and the Resource Center). As a result, CoSA is in a strong position to build on the progress that has occurred and to continue to assist state and territorial governments to enhance and improve digital management, preservation, and access, and to provide more government records information to the public.

The perilous state of electronic records management and digital preservation in state governments calls for increasingly bold action. Time will not wait for traditional methods and slow approaches to ensure proper digital preservation of our state and territorial government records. Although CoSA has made progress in creating incremental improvements in education and training, resource sharing, and creating awareness, the situation calls for creative and consistent approaches. Even with considerable improvements and increased

[1] Council of State Archivists. *A National Risk: The State of State Electronic Records Report*. 2017. p.7.

success in managing, preserving, and providing access to digital government records in most states and territories, much more progress is needed.

B. Project Design - The project's goals help meet a variety of infrastructure challenges faced by the state and territorial archives staff in their management and preservation of, and access to digital records. These goals align closely with the core goals of CoSA's and SERI's strategic plans, which center the Council's work on increasing the capacities of all 56 state, territorial, and District of Columbia archives to be the most effective stewards possible of the records in their care.

The project's three goals focus on broad sets of scalable activities that will be accomplished in the following order: 1) provide state and territorial archives with updated **self-assessment tools and best practices guidelines and templates** for digital preservation and digitization programs in state government archives; 2) develop and deliver **direct assistance** to state and territorial archives with outdated or no digital preservation plans to develop or update plans; and **mentoring** to archives in need of specific digital lifecycle strategy development. Mentoring will tap colleagues from within CoSA provide advice and assistance, thus strengthening communities of practice; and 3) accelerate development and delivery of **educational and training programs** in the form of webinars, video interviews, virtual mini-conferences, online workshops, and communities of practice that address digital preservation planning, digitization project planning, and cultural competence[2] awareness- and skill-building in tandem with public engagement best practices.

Successful completion of these activities will ensure: 1) each state and territory has a current digital preservation plan with a digitization component and related policies; and 2) broad distribution of tools, guidelines, best practices, and educational activities that increase best practices in and networking for digital preservation and digitization programs. CoSA's staff, members, volunteers, and consultants are uniquely qualified to ensure success of this project and improve access to digital records in state and territorial archives. With a reach to all 56 states and territories, and with at least 25 states currently involved in the CoSA Board, CoSA Committees, and the SERI Steering Committee or its subcommittees, the project will require sustained coordination and oversight from CoSA staff, contractors, and CoSA committee leaders. CoSA is experienced in managing large projects with participants from all states and territories. The CoSA Board and the SERI Steering Committee leadership, along with various subcommittees will ensure that the project focuses on meeting the timeline, goals, and outcomes to assist all CoSA members and users of state archives collections. CoSA's staff and contractors worked successfully within CoSA's coordinated collaboration model during previous grants, yielding substantial results.

1. Self-assessment Tools and Best Practices for Digital Records: Since SERI's inception, CoSA has twice deployed a modified Digital Preservation Capability Maturity Model (DPCMM) as a self-assessment and program evaluation tool with state and territorial archives (in 2012 and 2015), using fifteen basic components to evaluate digital preservation elements and offering a progressive scoring system through each component. Using the DPCMM provided CoSA with a means to assess state digital preservation programs with a numerical benchmark that could be followed over time. The DPCMM self-assessment was modified by CoSA to assess compliance with two ISO standards, the Open Archival Information System (OAIS) Reference Model and Audit and Certification of Trustworthy Digital Repositories, resulting in a simplified measurement tool that afforded an overview of the strengths and weaknesses in state archival digital preservation programs. The opportunity to gather new insight into needed improvements for digital preservation and access in state and

[2] Cultural competence is the ability to understand, communicate with and effectively interact with people across cultures. Cultural competence encompasses being aware of one's own world view, developing positive attitudes towards cultural differences, and gaining knowledge of different cultural practices and world views.

territorial archives, using standard models for mapping progress in various archival components, combined with the value of longitudinal data to understand a project's efficacy, are the reasons CoSA will be deploying and analyzing a third and fourth round of the modified DPCMM over the lifespan of this proposed project.

At this project's outset (Year 1), project personnel will work with CoSA member institutions to complete the DPCMM self-assessment survey. Results from the survey, combined with longitudinal data from the previous DPCMM surveys, will provide the foundation for development and implementation of the project's proposed training, mentoring, and educational activities, as well as greatly support CoSA's evaluation of the effectiveness, efficacy, timeliness, and quality of those activities.

The following table from CoSA's IMLS-funded report, *A National Risk: The State of State Electronic Records, 2017*, illustrates the improvement among states and territories due to CoSA's education and training programs, which were designed at several levels appropriate to various stages of institutional preparedness and offered a wide array of targeted training on general and specific topics, including in-person institutes and workshops, webinars, mentoring, and publications.

Table 3. SERI Self-Assessment Scores by Component

Component	2012	2015	Increase	% Increase
Digital Preservation Policy	47	64	17	36.2%
Digital Preservation Strategy	64	99	35	54.7%
Governance	34	58	24	70.6%
Collaborative Engagement	101	110	9	8.9%
Technical Expertise	70	109	39	55.7%
Open Standards/Neutral Formats	76	114	38	50.0%
Designated Community	29	55	26	89.7%
Electronic Records Survey	63	76	13	20.6%
Ingest	58	86	28	48.3%
Archival Storage	47	72	25	53.2%
Device/Media Renewal	52	83	31	59.6%
Integrity	13	47	34	261.5%
Security	86	126	40	46.5%
Preservation Metadata	43	73	30	69.8%
Access	51	74	23	45.1%
Totals	834	1246	412	49.4%

CoSA's SERI programming has used data from the 2012 and 2015 self-assessments extensively to focus on improving digital preservation and access in state and territorial archives by concentrating on areas of the OAIS model. To date, SERI programming has worked on improving the following DPCMM components: Designated Community, Collaboration, Technical Expertise, Strategy, and Policy. As noted in *A National Risk: The State of State Electronic Records, 2017* most states made progress during CoSA's SERI initiative, while all states and territories still needed to make improvements in some, if not all, areas.

This proposed project calls for deployment of the modified DPCMM self-assessment at the beginning and end of the project. Responses from each round will be aggregated and analyzed, forming the basis for written executive summaries of findings that will be published and shared with CoSA members and other stakeholders. As with the previous surveys, CoSA expects to continue the high level of participation from its members for this third and fourth iterations of the survey, since for the first DPCMM survey, fifty-four states and territories participated, and for the second fifty-five of the fifty-six participated.

Additionally, project consultants will work with CoSA member institutions and SERI committees to refresh the State Electronic Records Program (SERP) Framework, a tool developed by CoSA to help state archives improve their digital preservation programs, based on their DPCMM assessment results. The SERP Framework elements are based on elements within the DPCMM, with guidance on how to improve digital preservation capabilities within each element. As such, the Framework is a useful tool for mapping a process for creating and improving digital preservation programs. Both the DPCMM and SERP Framework were elements of a previous IMLS-funded Laura Bush 21st Century Librarian grant and a grant from the National Historical Publications and Records Commission, both documented in *A National Risk: The State of State Electronic Records.*

2. Direct Assistance and Mentoring to State and Territorial Government Archives: With information from the DPCMM self-assessment and the revised SERP framework, project consultants will work with state and territorial archives staff in Years 2-3 to develop and manage a program of training and mentoring tailored to the needs of individual state and territorial archives. Assistance will focus on creating or updating individual digital preservation plans, policies and workflows that will reference the National Digital Stewardship Alliance levels of digital preservation. Initial emphasis will focus on states with no plan or with plans that have not been updated in the past ten years. Using templates and guidance developed for the CoSA publication, *Digital Best Practice Series: Digitization Projects* (2017), along with adaptable templates, virtual training, and one-on-one consultations, project personnel will collaborate with archives staff to create and/or update plans for preserving born-digital records, digitizing high-use and/or significant government records, and planning for preservation and access to these records.

CoSA recognizes the need to take an inclusive approach to digitization planning and implementation as part of sustained digital preservation and access efforts. Thus, the project team will underscore the importance of incorporating digitization projects into digital preservation plans and programs along with born-digital records, to emphasize that digitization is not a separate function, but included in a digital preservation program.

The project team will develop plans that address the need for strategic collaborations through metadata interoperability and networked finding aid information. CoSA will plan to work with the IMLS-funded project, Building a National Finding Aid Network, to ensure increased findability and access to records in state and territorial archives, as well as other collaborators and projects. Externally, this phase of the project will offer assistance to archives staff to help them identify and begin to address the barriers some residents in their states and territories face when accessing public records online.

A structured mentoring program to reinforce direct assistance will be designed, monitored, and evaluated by the project team. The project team will identify 10-15 state archives having the highest DPCMM scores in selected components to provide tailored, one-on-one support to 10-15 state and territorial archives with lower scores in selected components. By sharing their experiences and insights, mentors will offer practical advice, encouragement, and support with mentees in a safe, collegial environment. The project team will recruit, train, and evaluate mentors, matching mentor expertise with the needs of the mentees. The team will build in periodic check-ins with mentors and mentees to gauge the effectiveness and quality of the program and adjust as needed. Formal summative evaluations will be conducted of mentors and mentees at the end of the project. Participant impressions of their experiences in the program will be captured, along with insights about the program's effectiveness, quality, and value, and their recommendations for continuing and honing the mentoring program.

Direct assistance and mentoring will also focus on measurable steps connected to the SERP framework, such as transfer tools and protocols, and online processing space and access to preservation space. State and territorial archives do not have a common, unifying legal requirement for the management of electronic state records, rather the federated state system results in each state and territory having singular laws, statutes, and regulations

that govern how state records are managed. Likewise, a single storage system would not work for the storage of state electronic records. Some states are part of a state-wide enterprise storage system, some states are restricted to keeping state records within the bounds of the state, and some are free to contract or create preservation services regardless of geographical boundaries. All state and territorial archives do have in common the need to engage stakeholders to create support for preservation solutions that work within the confines of their state/territorial legal requirements. CoSA will work with state and territorial archives to help them develop the materials they need to engage their stakeholders and build support for the preservation of state electronic records. Building support and engagement will increase archives' capacity to manage, preserve, and provide free and equitable access to state government electronic records.

With SERI, CoSA has built a keen sense of community of practice among its members around management, preservation and access of digital records. CoSA members work together collaboratively, sharing challenges, successes, and questions in webinars, meetings, and on listservs, including one specifically for SERI issues. SERI has allowed CoSA members to gain a better understanding of what other states are doing and what lessons can be learned from those activities. CoSA members have also become proficient at connecting with each other through webinars and have used webinars very effectively for sharing information. This sense of community has also increased through SERI's responsiveness to the CoSA membership, deploying frequent surveys to ascertain critical needs and interests of the membership. The project team will continue to nurture this community of practice through online discussion groups, participation in SERI committees, and individual contacts.

3. Accelerate Digital Preservation and Digitization Education and Training for Archives Staff: As a recognized producer of education and training programs, CoSA will build on its existing offerings by developing and delivering education and training programs to its members and the wider archival community in Years 1 - 3, focusing on digital preservation planning and digitization efforts, and cultural competence awareness- and skill-building as they relate to the challenges communities have in accessing government records through their state and territory archives. Beginning in Year 1, Helen Wong Smith, Archivist for University Records at the University of Hawai'i and a cultural competency trainer, will develop and implement online workshops that will set the stage for more in-depth, one-on-one cultural competency training and mentoring in Years 2-3.

Quarterly **education programming** will feature presenters with wide expertise from across the archival profession in formats ranging from webinars to in-depth conversations, recorded interviews, and online community forums. Content will include case studies, best practices, and insights into new research and innovations using the DPCMM and the NDSA levels of preservation as baselines. Educational webinars and online community forums will be augmented by in-depth conversations with thought leaders and virtual mini-conferences. These programs will be recorded and distributed through all CoSA's channels and to other collaborators to ensure the widest audience possible. SERI has a lengthy track record for developing and presenting webinars, which draws upon the expertise of government and non-government archivists, records managers, educators, and consultants to bridge the divide between formal archival training and government archives best practices around digital preservation.

This project's **training components** will feature quarterly hands-on skill building tied to action planning and designed to assist archives staff in mastering new formats and tools. The project team will work closely with trainers, mentors, and mentees to ensure that training responds to participants' greatest needs, as raised in one-on-one assistance and mentoring conversations, or evidenced by the self-assessment results. Training sessions will also offer opportunities for states to share their digital preservation and access achievements, strategies, and challenges with their peers. Training will be conducted via a mix of online formats augmented by periodic,

longer and more intensive in-person gatherings, if safe to do so. As with all aspects of this project, training will be supported with development of targeted, simplified templates and documents, including additional titles in the *Best Practice Guide* publication series, that will be applicable to any archives, not just to government archives. All published documents will be graphically designed to retain a cohesive identity.

All education and training programs will be formally evaluated by the participants as to effectiveness, quality of content, knowledge and approachability of presenters, and usability of content by participants in the short- and long terms. Deployment of the DPCMM at the end of the project will provide another level of evaluation and will continue CoSA's ability for longitudinal tracking of digital preservation capability. Mentors, trainers, and a selection of education program presenters will be assessed for their insights about the project's strengths and weaknesses. Assessment will be structured to incorporate IMLS' four performance measurement categories -- effectiveness, efficiency, quality, and timeliness. Given the three-year timeframe of this project, the project team will have ample opportunities to make education and training program adjustments to best respond to participants' needs.

Indicators of success for this project include:

- Participation of 97% of CoSA members in the first and second round of DPCMM surveys.
- Improvement of 1-2 digital preservation components from the DPCMM in 90% of the state and territorial archives.
- Improvement of selected digital preservation components from the DPCMM in 90% of the state and territorial archives with generally lower DPCMM scores and underperforming digital preservation and access programs, with an emphasis on public access to records.
- Creation of a mentee group of 10-15 state and territorial archives with lower DPCMM scores in the selected components of the DPCMM that, supported through direct assistance, education and training, will improve their digital preservation and access programs.
- Creation of a mentor group of 10-15 state archives with stronger scores in selected components of the DPCMM to assist CoSA with mentoring and assistance to the under-performing state and territorial archives chosen above.
- Participation by 90% of CoSA members in the project's education and training programs.
- Publication and distribution of guidance and program support materials developed during this project via CoSA's website, newsletter, and social media channels.
- One national annual meeting session presentation per year (virtually or in-person) about the project.
- Organization of CoSA members into online communities of practice to support each other in their continuous improvement of selected OAIS components.
- Publication of the analysis of longitudinal DPCMM and periodic reports on the project's progress and outcome in CoSA publications and social media and in at least four other outlets in the archives, library, or information profession, or in state government association newsletters, as well as outreach in numerous conference presentations.

CoSA has made a significant professional contribution in building and growing a community that actively discusses best practices and solutions, not only widening the discussion among state government employees in other professions, but by reaching out to archivists and librarians in non-governmental institutions as well. SERI's webinars, videos, and published guidance documents and reports reach a global audience. For example,

the video, *FAQs on Bit Rot*, has logged more than 500 views since it was posted on CoSA's YouTube channel a year ago. As SERI has relied on the scholarship and work of colleagues across the archival community to further its member education programming and training. It has also produced several research-based reports,

which CoSA has shared widely via its website and with presentations at professional conferences. CoSA is committed to sharing and distributing the resources developed during this proposed project beyond the government archives community to advance the field of digital preservation and access.

C. Diversity Plan - As government agencies, state and territorial archives serve diverse populations of all races, religions, identities, abilities, and ages. In a typical year, state and territorial archives can serve upwards of 500,000 online, in-person, mail, and phone reference requests from citizens, government officials, teachers, students, researchers, policy makers, and others. Yet, government agencies have traditionally done an uneven job of capturing the historical record involving marginalized populations and documenting their experiences through records collection, digitization and enhanced access. Additionally, access to government records is an equity issue for most states and territories, especially those where broadband is weak or non-existent, where both government agencies and residents lack the technology to make records available and access them online; where archives facilities are located outside of urban centers, making them difficult to physically access by public transportation; and where populations are scattered over large distances making physical access to the archives difficult or impossible. COVID-19 brought many of these inequities into stark relief as archives research rooms closed and reference services moved online. Constituents have borne the brunt of the loss of access, especially those in chronically under-resourced communities.

Providing better access to electronic records serves under-resourced populations because it reduces barriers to public information, such as court and vital records, which may be critical to an individual seeking veteran's benefits or proving citizenship, or for simply gaining a better understanding of how their state government works. SERI's efforts have made a positive and sustained difference to the ability of state and territorial archives to build and maintain digital preservation and access infrastructures. But more needs to be done.

In 2020, CoSA featured Helen Wong Smith, Archivist for University Records at the University of Hawai'i, in two programs discussing how cultural competency promotes diversity and inclusion in archives: a webinar and an in-depth conversation. To amplify Smith's recommendations, she will join the project team for all three years of this project to develop training programs and advise members on strategies to help them assess community barriers to records in their archives as part of the direct assistance and mentor phases of this project.

The project team will draw on the diverse perspectives of CoSA's 56 state, territorial, and District of Columbia members through SERI committees and subcommittees, and the Board of Directors to inform project activities, act as mentors and subject matter experts in educational and training activities and assist with project evaluation.[3] CoSA regularly seeks input from its membership for strategic and programming planning, and in surveys regarding needs and challenges. In the annual Calls to the States, CoSA's board members interview the state archivists about what is happening in their archives and discuss where CoSA can be of service. A biennial survey takes a deep dive into the operational challenges and accomplishments of state archives and records management programs. These activities, as well as monthly programming, an active committee system, and lively online communities of practice, have resulted in close working relationships between CoSA and the membership. This proposed project is grounded firmly in the challenges expressed by CoSA's membership.

D. National Impact - CoSA and SERI have been building the capacities of state and territorial archives to better manage and preserve their electronic records and make them more widely accessible to the public. This has been a long-term process that has included many stakeholders among government and nongovernment archivists, records managers, educators, consultants, and vendors. Deployment of the modified DPCMM over time has proven that concentrated education, training, mentoring and technical assistance can lead to systemic

[3] Council of State Archivists Statement on Cultural Equity, Diversity, Inclusion, and Access, October 2020.

change within state and territorial archives by amplifying the value of robust digital preservation and access programs, strengthening digital preservation infrastructures, and, ultimately, helping to close the digital access gap many archives face when serving increasingly diverse communities.

This project moves the work further ahead at a critical time when many states are struggling to fund their legally mandated government archives and support their increased capacity to address digital government records. State chief information officers (CIOs) are a key piece of the sustainability puzzle in terms of advocating for the needs of digital preservation and access. CoSA maintains a strong working relationship with both the National Association of State Chief Information Officers (NASCIO) and the National Governors Association to underscore the importance of sustainable infrastructures for digital government records.

Although CoSA member states and territories are the primary audience, this project benefits many other groups. CoSA will share information with archival and allied associations, such as the Society of American Archivists, the National Association of Government Archives and Records Administrators, the Regional Archival Associations Consortium, the Digital Library Federation, the National Digital Stewardship Alliance, the National Association of State Chief Information Officers, the National Governors Association, and the National Association of Secretaries of State; and archivists, records managers, and researchers from non-government archives, such as universities, corporations, and historical societies to ascertain how the tools and resources being developed are more widely applicable and adaptable to institutions across the library, archives, and museum spectrum.

The following list of project deliverables generally span more than one year of the proposed project, thus affording the project team the opportunity to revise or reconfigure, ensuring their adaptability and usability to participants' needs:

- Updated DPCMM survey instrument for use in Year 1 and Year 3 of the project.
- Analysis and summary report of DPCMM self-assessment administered in Year 1, in comparison to the 2012 and 2015 self-assessments and again in Year 3, in comparison to the 2012, 2015, and 2021 self-assessments.
- Direct assistance and mentoring programs (Years 2-3), to work one-on-one with archives that need the greatest guidance in developing or updating digitization plans, policies, procedures, and strategies for growing their program capabilities.
- Quarterly education and training programs (Years 2-3) focusing on specific needs highlighted in the self-assessments.
- Resources for assessing and decreasing barriers to access to records held in state archives. (Years 2-3)
- Resource development to support direct assistance, mentoring and training, such as checklists, best practice guidelines documents, case studies, surveys and other practical tools and templates. (Years 2-3)
- Additional titles in the *Best Practice Guide* publication series. (Years 2-3)

Project updates and results will be shared widely with CoSA's membership, allied organizations, corporate sponsors, and made available to the entire archives field. Education and training programming will be open to all and, whenever possible, they will be recorded and made freely available on CoSA's YouTube channel. All project programs and products will be promoted via CoSA's social media and month e-newsletter; there will be no restrictions to access, and materials will be available on CoSA's website or in the CoSA Resource Center.

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Schedule of Completion: Year 1 – August 2021 – Jul 2022

Activities	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**
Hire Project Personnel and create work plan for Year 1	X											
Update DPCMM self-assessments		X	X	X	X							
Deploy DPCMM self-assessments to 56 state, territorial, and District of Columbia archives						X	X					
Analyze DPCMM self-assessment responses; draft summary report comparing data from 2012 and 2015 DPCMM self-assessments								X	X	X	X	X
Update SERP Framework	X	X	X	X	X	X	X	X	X	X	X	
Planning for direct assistance and mentoring programs; mentor recruitment and training; resource identification and development										X	X	X
Planning for education and training programs; subject matter expertise/trainer recruitment; resource identification and development									X	X	X	X
Cultural competency online workshops planned and deployed						X	X	X	X	X	X	X
Meetings of project personnel; reporting to CoSA Executive Director	X	X	X	X	X	X	X	X	X	X	X	X
Project evaluation and report to IMLS												X

Council of State Archivists: Digital Preservation and Digitization Planning and Access

Schedule of Completion: Year 2 – August 2022 – July 2023

Activities	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**
Create annual project work plan for Year 2	X											
Implementation of direct assistance and mentoring programs; identification mentee/mentor states; resource identification and development	X	X	X	X	X	X	X	X	X	X	X	X
Implementation of education and training programs; subject matter expertise/trainer recruitment; resource identification and development	X	X	X	X	X	X	X	X	X	X	X	X
Implement cultural competency mentoring and training	X	X	X	X	X	X	X	X	X	X	X	X
Develop and conduct program evaluations						X						X
Research and publication of additional titles in the *Best Practice Guide* series	X			X				X				X
Meetings of project personnel; reporting to CoSA Executive Director	X	X	X	X	X	X	X	X	X	X	X	X
Project evaluation and report to IMLS												X

Council of State Archivists: Digital Preservation and Digitization Planning and Access

Schedule of Completion: Year 3 – August 2023 – July 2024

Activities	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**
Create annual project work plan for Year 3	X											
Implementation of direct assistance and mentoring programs; resource identification and development	X	X	X	X	X	X	X	X	X	X	X	X
Implementation of education and training programs; subject matter expertise/trainer recruitment; resource identification and development	X	X	X	X	X	X	X	X	X	X	X	X
Implement cultural competency mentoring and training	X	X	X	X	X	X	X	X	X	X	X	X
Develop and conduct program evaluations	X											X
Research and publication of additional titles in the *Best Practice Guide* series		X				X				X		
Update and deploy DPCMM self-assessments to 56 state, territorial, and District of Columbia archives	X	X	X	X	X	X						
Analyze DPCMM self-assessment responses; draft and disseminate summary report							X	X	X	X	X	X
Draft and disseminate final project report											X	X
Project evaluation and report to IMLS												X

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.

CoSA releases materials created with grant funding under CC-by 3.0 Users are free to:
Share — copy and redistribute the material in any medium or format
Adapt — remix, transform, and build upon the material
for any purpose, even commercially.
This license is acceptable for Free Cultural Works.

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions — You may not apply legal terms or technological measures that legally restrict

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.

CoSA does not limit access or use of digital products created through grant funding. All are made publicly and freely avaiable online via the CoSA website, YouTube, or other platforms.

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.

Responses and results from individual states on the Digital Preservation Capability Maturity Model (DPCMM) Self-Assessments will be available only to the individual state or to the project team for analysis and reporting. In previous iterations of the self-assessment, CoSA did not share the individual results, but shared results only in the aggregate for reporting and presentations. The individual states may share their results, but CoSA will not release results and scores from individual states and territories.

Other than the results of the DPCMM Self-Assessments, CoSA will not create products with privacy issues.

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.

CoSA will create foundational digital preservaton policies, plans, and workflows for specific state and territorial archives as well as template documents that can be used by any archives. CoSA will create documents in PDF format. Occaisionally documents will be in MS Word.

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.

CoSA will use MS Word, Adobe software, and other standard office software for creating documents.

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.

PDF
Doc

Workflow and Asset Maintenance/Preservation

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

CoSA will have independent experts in digital preservation and state archives practices review content as it is created prior to publication. These volunteer experts will ensure that the policies, procedures, plans, and other documentation CoSA produces will reflect current best practices and offer guidance of the highest quality.

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).

CoSA provides direct access to materials through the CoSA website. Currently, the North Carolina State Archvies maintains preservation copies of the CoSA archives. These materials will be included in that archival workflow.

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).

CoSA will not be producing metadata or linked data as a part of this project.

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

CoSA will not be creating metadata as a part of this project and therefore will not need to preserve it.

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).

CoSA will not be creating metadata as a part of this project.

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).

CoSA plans to make as many documents openly available online as possible. Specific policies for individual archvies may not be eligible to be released openly but can be made available to users upon request. Individual results of the DPCMM self-aseessment are available only to the individual state and to the project team for analysis and reporting.

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.

CoSA maintains significant materials in the CoSA Resource Center, which can be found here: https://www.statearchivists.org/resource-center/resource-library/

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.

CoSA will not be creating software.

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.

CoSA will not be creating software.

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.

CoSA will not be creating software.

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

CoSA will not be creating software.

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

CoSA will not be creating software.

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

CoSA will not be creating software.

B.5 Provide the name(s), URL(s), and/or code repository locations for examples of any previous software your organization has created.

CoSA will not be creating software.

Access and Use

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

CoSA will not be creating software.

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.

Statistical data about the current capacity and capability of state and territorial archvies will be collected at 3 year intervals as a part of this project. We will use a survey based on the DPCMM to collect longitudinal data about the ability of the state and territorial archives to perform aspects of the digital preservation lifecycle. This information will be compared against prior survey responses from the past to provide information about trends in capacity and capability over time.

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?

No, it does not.

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.

No, we will not collect sensitive information.

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

There are no dependencies. CoSA will download the answers from the survey platform before data analysis is performed. CoSA can make available the raw data upon request.

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?

Documentation will be stored in .doc or .pdf formats.

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

CoSA maintains the raw survey data and makes the aggregate data available upon request to researchers.

A.7 Identify where you will deposit the data:

Name of repository:

North Carolina State Archives

URL:

https://archives.ncdcr.gov/

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

CoSA reviews it's digital preservation and data management plans every 5 years. Implementation is a routine part of CoSA's yearly activities.