A NATIONAL RISK:

The State of State Electronic Records Report, 2017

By Barbara Teague, CoSA SERI Consultant

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FOREWORD

Through hard work and dedication, the Council of State Archivists successfully launched the State Electronic Records Initiative (SERI) in 2011. This important endeavor allowed all state and territorial archives to move forward in electronic records management and digital preservation. SERI has become our flagship program and is vitally important to the success of our organization going forward. Our success, however, is quite fleeting. The pressures of collecting and managing digital government records are only going to increase. The volume and complexity of electronic records compound these pressures. Resources will continue to be constrained. Our challenges will endure.

It is with these thoughts in mind that we announce the publication of A National Risk: The State of State Electronic Records Report, 2017. This report and call to action, written by Barbara Teague, CoSA Program Consultant, examines the progress SERI has made over the past seven years in the improvement of electronic records and digital preservation capabilities in the 56 states and territories. From assessment to planning and action, the report traces the development of SERI’s programming and outreach efforts, and raises an urgent call to action in support of creative approaches to secure the safety and security of state government digital records and information.

CoSA is very grateful for the grant funding from the Institute of Museum and Library Services (IMLS) and the National Historical Publications and Records Commission (NHPRC) for initial funding for SERI. Additionally, I thank IMLS for making this report on the SERI program possible.

I would like to especially thank Barbara Teague for her exceptional work in researching, compiling and drafting this document. I would also like to acknowledge and thank Libnova whose generous support made the distribution of this work possible.

Timothy Baker
CoSA President
and
Maryland State Archivist
EXECUTIVE SUMMARY

Despite years of effort by state archivists and records managers, digital government records remain in danger of being lost, deleted, misplaced, or misappropriated in many states. Loss of government records and data potentially jeopardizes our physical safety, official transparency and accountability, and individual rights. A National Risk: The State of State Electronic Records Report, 2017 examines the work of the Council of State Archivists (CoSA) and the fifty-six state and territorial government archives in preserving these digital records for future generations.

State government electronic records are in danger because most states do not adequately fund or support initiatives for electronic records management and digital preservation. Recordkeeping remains a relatively low priority in state government, even though records are key in documenting policies, actions, and the intent of the government. The proper care and preservation of government records is fundamental to sustaining our democracy and to protecting our rights as citizens. Increased state and territorial investment is vital to the long-term stability of electronic records management programs nationwide. On average, state and territorial governments spend 0.007% of their budgets on archives and records management. With such minimal investment and attention, our state governments are in danger of losing important digital information that can never be retrieved, putting our nation and its identity at risk. Digital records are more at-risk than paper records because of the fragility of digital media, obsolescence of systems and software, migration issues, and the increased technical expertise needed to properly manage and preserve electronic materials.

Acknowledging the urgent need for state and territorial governments to establish and to commit support for electronic records and digital preservation programs, the Council of State Archivists, the national association of all fifty-six state and territorial archivists, launched the State Electronic Records Initiative (SERI) in 2011 to effect improvements in these crucial areas. CoSA has long been involved in promoting best practices for managing, preserving, and providing access to government records of historic value. Its members are skilled in developing materials that are of use to other state archives, partners, and stakeholders. CoSA's membership has a history of working effectively together on collaborative projects and in convening groups to seek solutions to key issues, including prior projects concerning local government records and disaster preparedness. This strong record of strategic project management helped CoSA model SERI as an effective collaborative program.

CoSA approached the challenges of electronic records management and preservation with the SERI initiative, recognizing the need to assist all members with capacity building. Each state and territory has its local challenges, so CoSA cannot and does not prescribe one solution. Instead, SERI helps each state and territory assess its status and provides tools and shares knowledge on a variety of technologies, tools, and resources to assist its members in improving their electronic records management and digital preservation programs. With the majority of state archives having joint records management and archival programs, CoSA members can also concentrate on the entire record lifecycle. Without this focus on individual improvements in each state and territory,
CoSA's efforts through SERI have resulted in demonstrable, incremental improvements in electronic records management and digital preservation.

States rated their electronic records management and digital preservation programs at the beginning of the SERI initiative in mid-2011 and again in March 2017, nearly six years later. CoSA asked that states consider their programs through the entire lifecycle of a record, from records management contacts to permanent digital preservation. These responses show that CoSA’s efforts through SERI have resulted in demonstrable, incremental improvements in electronic records management and digital preservation in the fifty-six state and territorial government archives, with most of states showing gradual improvement.

In evaluating six years of continual program development and improvement, CoSA and its members have come to recognize that the coordinated effort to ensure the safety and security of our permanent digital government records is still in its infancy. As the following table illustrates, although positive change has occurred, many challenges remain. For example, in 2011, 41% of state and territorial archives reported

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of State Archives</th>
<th>2011 (n=54)</th>
<th>2017 (n=56)</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Have an electronic records program that addresses all stages of the life cycle</td>
<td>5</td>
<td>15</td>
<td>9%</td>
<td>27%</td>
</tr>
<tr>
<td>B: Have an electronic records program, but it does not address all stages of the life cycle</td>
<td>17</td>
<td>21</td>
<td>32%</td>
<td>38%</td>
</tr>
<tr>
<td>C: Have started an electronic records program, but little or nothing has been implemented</td>
<td>19</td>
<td>15</td>
<td>35%</td>
<td>27%</td>
</tr>
<tr>
<td>D: Have not yet begun tackling electronic records</td>
<td>13 (9 state archives and 4 territorial archives)</td>
<td>5 (3 state archives and 2 territorial archives)</td>
<td>24%</td>
<td>9%</td>
</tr>
</tbody>
</table>
having a full or partially operating electronic records management program. Even though that increased to 65% in 2017, 65% is still a failing grade, considering that digital information is central to an ever-growing number of online programs and services in all fifty-six states and territories. Of that 65%, or thirty-six state archival agencies, only fifteen state archives have a fully functioning electronic records management and digital preservation program in 2017. If only fifteen archives, or 27% of state archives, are providing standard management and care for electronic records, the fragility of the records that are being created in the remaining 73% of states is of paramount concern.

The answers do demonstrate general progress toward stronger and more effective electronic records management and digital preservation programs in state governments. In 2011, thirty-two state archives indicated little or no action in the establishment of an electronic records program; that number decreased to twenty in 2017, with only five of those twenty, or 9% of all state and territorial archives, indicating that they had no electronic records program. Incremental changes in most state and territorial archives has been evident throughout the SERI program, and more improvements are expected as state archives staff implement programs and services for electronic records and digital preservation.

We face a critical moment in the history and public service mission of our nation’s state and territorial archives. As custodians of digital media produced since the latter decades of the twentieth century, state archivists must guarantee the retention and ongoing accessibility of these records. Effective management of electronic records requires knowledgeable involvement throughout the lifecycle of a record, to ensure proper creation, use, preservation, and access. This is especially true as the management of electronic records is substantially more complex than managing paper-based records.

CoSA will continue SERI as part of an active plan to further improve management and preservation of digital government information through sustaining current initiatives while also creating new and innovative programs to support the management and preservation of government records. CoSA will look for assistance from partners, stakeholders, and others to help ensure the survival of these critical records.

As custodians of digital media produced since the latter decades of the twentieth century, state archivists must guarantee the retention and ongoing accessibility of these records.
FUTURE INITIATIVES SUMMARY

Over the next decade, CoSA will continue its progress in the improvement of electronic records management and digital preservation in all fifty-six state and territorial archives, concentrating on the following areas:

**Promote awareness about the criticality of managing and preserving government electronic records, and the urgent need for action**

CoSA will continue to increase awareness among state and territorial government officials of the importance of managing and preserving records and to emphasize the urgent need to fully manage government electronic records to ensure our nation’s future safety and security.

**Collaborate with allies, stakeholders, and users of government information**

CoSA will continue to work with current partners, and will emphasize outreach to allied groups, to increase awareness of and support for state archives in managing electronic records and digital preservation issues.

**Create comprehensive and sustainable programming for electronic records management and digital preservation in state and territorial archives**

CoSA will support a comprehensive SERI program, and its board and members will continue to examine ways to increase fiscal support for this program.

**Increase engagement of CoSA member**

CoSA will continue to improve communication and outreach with its members. CoSA will also coordinate efforts among state archives to increase the number of cooperative projects and to share programs, services, and lessons learned in electronic records management and digital preservation of state government records.

**Strengthen SERI’s continuing education and training program for state archives staff**

CoSA will remain committed to sustaining and improving its successful continuing education and training program for state and territorial archives staff, and will issue a training plan in conjunction with this report.³

**Improve PERTTS portal and CoSA resources**

CoSA will continue to sustain and enhance the [Program for Electronic Records Training, Tools, and Standards (PERTTS) portal](https://www.pertts.org) to provide a comprehensive resource for information on electronic records management and digital preservation, freely available for all.

**Think and act creatively**

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. How prepared are we to meet the challenges facing us?
INTRODUCTION AND CONTEXT

A National Risk: The State of State Electronic Records Report offers an examination of electronic records and digital preservation programs in state archives over the past fifty years. The report will concentrate primarily on a program begun in 2011 by the Council of State Archivists (CoSA), the State Electronic Records Initiative (SERI). The report will examine SERI’s positive effect on state and territorial archives and records management programs and summarize CoSA’s future initiatives for SERI over the next decade.

CoSA’s mission is to strengthen the fifty-six state and territorial archives in their efforts to preserve America’s historical records. State archives manage and collect government records that form the foundation of American society by documenting government, promoting history, and securing rights. Government records protect life, property, and citizens’ rights; maintain order and operation of governments; serve as the foundation of our nation’s information infrastructure; and protect community. Although located within various state agencies (Secretary of State’s Office, state library agency, state historical society, or an independent agency, all state archivists and records managers serve as the stewards of government information, preserving and providing access to records in their care regardless of format. As outlined in CoSA’s 2013 publication The Importance of State Archives:

“State archives play a critical role in preserving the nation’s history and the rights of its citizens. The dramatic growth in state government activity during the twentieth century was accompanied by an exponential surge in the production of permanent records. Government records face unprecedented threats and opportunities, and state archives are evolving to meet the challenge.”

State government electronic recordkeeping has undergone a revolution over the past fifty years, as mainframe computers gave way to minicomputers,
personal computers, increasingly intricate desktop applications, relational databases, virtual servers, cloud computing, mobile applications, and the Internet of Things. Governments are gathering information at an exponentially greater rate than could have been contemplated when archivists first began dealing with “machine-readable records” in the 1970s. As technology became more sophisticated, archivists and records managers expanded their skill sets to become more adept with technical aspects of government records to ensure that electronic records would be preserved and accessible in the future. While paper records often survive despite benign neglect, the inherent fragility of digital media places electronic records in greater danger of damage or destruction. Electronic objects require special vigilance, and each passing day of inaction to secure and preserve them further endangers the future of government electronic records.

The development of SERI marked a major step for CoSA in its leadership and support role for the state and territorial archives; it was a transformational milestone in the process of improving their capabilities in managing electronic records and digital preservation of government records. SERI’s mission of improving electronic records management and digital preservation in state and territorial archives continues, as the capacity of most state archives to manage electronic records has increased. In recognition of the impact of electronic records on state archives, SERI recently became CoSA’s first grant initiative to be incorporated into the ongoing work of the organization. In making SERI a core focus, CoSA recognizes that state archivists and records managers must become experts in managing and preserving the electronic records created by government; otherwise little to no evidence of government policies, actions, and programs from the digital age will be available for future generations.

CoSA is a small organization that depends on corporate sponsors and grant funding for activities outside its core administrative work of supporting state archival agencies. Its resource limitations are due to the ongoing struggle of its fifty-six members to recover from the 2007-2008 economic downturn. Through a succession of grants over the past decade, however, CoSA has increased its institutional capacity to manage larger scale programs that effect improvements in state archival and records management in its member institutions. In taking a stronger leadership role in specific programming, first in disaster preparedness and now in electronic records and digital preservation issues, CoSA is helping secure government records for future preservation and use in the states.

The challenges of managing electronic records continue to grow as government increasingly conducts its business through digital channels. In 1996, thirteen state archives held electronic records as part of the state archives collection, primarily in the form of optical disks and magnetic tapes. Twenty-seven states held accessioned electronic records at the end of 2006 with that number increasing to fifty-two states and territories holding electronic records ten years later, at the end of FY2016. With this increase in volume of permanent digital records, states often did not have the infrastructure or expertise to properly care for these records, accessioning or accepting material without processing or proper management. There is an increased need for expertise in electronic records and digital preservation, especially with the amount of electronic holdings in state archives expected to continue the rapid growth experienced over the past decade.
CoSA is committed to 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.”” CoSA is confident that SERI will continue to be a key component in improving the capacity of all the states and territories to preserve and provide access to government records.
I. ELECTRONIC RECORDS PROGRAM DEVELOPMENT IN STATE ARCHIVES

When the federal government, especially the National Archives and Records Administration (NARA), began evaluating electronic records issues in the 1970s, state government archives followed their lead. In the 1980s, the National Historical Publications and Records Commission (NHPRC) funded the first of many electronic records projects in state archives, beginning its role as a catalyst for state archives’ electronic records projects for the next four decades. Wisconsin and Kentucky received the first grants from NHPRC for electronic records, or “machine-readable” records projects. These initial projects were designed to integrate management of government records in electronic format within the states’ archives and records management programs, providing those institutions with a foundation on which to build the electronic records and digital preservation programs that exist in those states today. Margaret Hedstrom featured these states, along with Alabama and New York, in “Electronic Records Management Program Strategies,” a 1993 publication that outlines successes and challenges in the development of electronic records programs in a variety of institutions.

A working meeting of electronic records experts sponsored by the NHPRC produced the 1991 Report of the Working Meeting: Research Issues in Electronic Records. This group sought to “identify issues; describe research opportunities, methodologies, and projects; and determine priorities for projects contributing to the better management of archival information in electronic form.” It recommended that electronic records projects focus on four areas: analysis, advocacy, action, and research and development. For the latter area, the working group recommended that the following ten questions form an electronic records research agenda for the archival profession:

• What functions and data are required to manage electronic records in accord with archival requirements? Do data requirements and functions vary for several types of automated applications?
• What are the technological, conceptual, and economic implications of capturing and retaining data, descriptive information, and contextual information in electronic form from a variety of applications?
• How can software-dependent data objects be retained for future use?
• How can data dictionaries, information resource directory systems, and other metadata systems be used to support electronic records management and archival requirements?
• What archival requirements have been addressed in major systems development projects and why?
• What policies best address archival concerns for the identification, retention, preservation, and research use of electronic records?
• What functions and activities should be present in electronic records programs and how should they be evaluated?
• What incentives can contribute to creator and user support for electronic records management concerns?
• What barriers have prevented archivists from developing and implementing archival electronic records programs?
• What do archivists need to know about electronic records?14

While *Research Issues in Electronic Records* identified only two state archives with functioning electronic records programs—the Kentucky Department for Libraries and Archives and the New York State Archives—several other states had begun to develop rudimentary electronic records management and digital preservation programs with NHPRC funding. Twelve state archival agencies received NHPRC electronic records grants during the 1990s, with ten additional grants for electronic records projects being awarded by the NHPRC during the following decade. These grants primarily funded consultants to assess electronic records capabilities and provide recommendations, to start electronic records and digital preservation programs in the state archives, or to provide training for state government officials in electronic records management. Several projects, however, began to explore digital preservation or the use of specific formats, including a 2007 NHPRC grant to the State Archives of North Carolina that involved several other states in a collaborative email preservation project, and a 2007 grant to the California State Archives for a project to preserve geospatial records. Many of these NHPRC projects provided a foundation for active electronic records and digital preservation programs, while others resulted in minimal ongoing impact after the expiration of the grant funding. These projects increased knowledge in the states, providing a foundation for ongoing exploration and development and, in some instances, forming the basis of several continuing state programs.

NHPRC funded other projects that, while not directly granting funds to a state archival agency, created a lasting effect on improving programs for digital government information. In 1994, for example, NHPRC funded the University of Pittsburgh Recordkeeping Functional Requirements Project to develop criteria to ensure that electronic records systems create and maintain records that are comprehensive, authentic, and tamper-proof. Staff from several state archives participated in the project, working to incorporate the requirements into government records systems. This project was critical in the creation of standards and best practices for recordkeeping systems that continue today.

The University of Pittsburgh hosted one of the most noteworthy events for state archivists and state archives staff during the nascent development of electronic records programs. Over several summers from 1989 to 1994 and again in 1996 and 1997, the National Association of Government Archives and Records Administrators (NAGARA) provided training for state archivists and state archives staff on issues in electronic records program
management. The Advanced Institute for Archival Administration, known fondly as “Camp Pitt,” was supported initially by the Council on Library Resources and then by NHPRC, eventually training eighty-eight archivists from thirty-five states. “Camp Pitt” prepared state archivists to make necessary management decisions and provided many programs with the tools and skills needed to start or strengthen electronic records and digital preservation programs.16

Victoria Irons Walch, CoSA’s founding executive director, discussed the development of state electronic records programs in her article, “State Archives in 1997,” as part of a special issue of the Society of American Archivists’ journal The American Archivist.17 Walch noted the importance of “Camp Pitt,” as well as state archives’ participation in information resource management and information policy development, in the development of Government Information Locator Services (GILS), and in increased expertise in using information technology and the internet to access government records.

At the time of Walch’s article, several states seemed poised to develop well-rounded electronic records management programs. Although funding from NHPRC provided seed money for state archival agencies to begin managing electronic records, “Camp Pitt” provided meaningful training that helped many state archivists move to start programs within their states. Several state archivists and their staff members developed extensive knowledge about electronic records, but, unfortunately, only a few states demonstrated measurable progress.

Although no statistical study has examined the issue, this stagnation might be attributed to several factors: a lack of state appropriations to sustain the work of federal grant projects, staff turnover of thought leaders in state archives, and a failure of state archives to establish and maintain relationships with IT agencies and to insert archival and records management concerns into IT governance structures.

Many state and territorial archival and records management programs have traditionally looked to the National Archives and Records Administration (NARA) for leadership in archival administration and innovation, and waited on the development of NARA’s Electronic Records Archives (ERA), for which a contract was awarded in 2004. Many state archivists believed the ERA would also be a solution for the states, as the plan for a scalable system that could also be used by other institutions remained under discussion. As outlined in Building an Electronic Records Archive at the National Archives and Records Administration: Recommendations for Initial Development, in NARA’s strategic planning documents, and in a series of General Accounting Office reports, the ambitious plan for the ERA was not actually constructed as envisioned. Instead, after a prolonged development process, NARA deployed specific instances of ERA for Federal Records and Presidential Records between 2008 and 2011. NARA continues developing ERA 2.0, currently in a successful pilot, to further refine the system. For state and territorial archives, the scalable system that some had expected to be applicable to individual state government archival and records management programs did not come to fruition.

In 2005, the Library of Congress assumed a leadership role in digital preservation through its National Digital Information Infrastructure Preservation Program (NDIIPP). NDIIPP convened a series of workshops with all fifty states to discuss the status of preservation of digital information created in the states. The summary of the workshops notes:

“But few governments have taken steps to ensure their digital information is adequately preserved. State libraries and state archives traditionally have managed, preserved, and provided public access to significant government information in paper, and their duty typically extends to the digital realm as well. Most libraries and archives are having serious trouble fulfilling this digital
responsibility. They are overwhelmed by a host of technical, organizational, and other shortcomings.”

NDIIPP announced the first grants in the Preserving State Government Information Initiative in 2008, with four collaborative project grants in which at least twenty-one states participated in one or more projects. These grants, organized around substantial work products and themes, encouraged collaboration among states. The assistance from the Library of Congress and the widely-inclusive NDIIPP projects helped many state archives plan for the creation of digital preservation programs, helped foster a collaborative network that would later be strengthened during the SERI initiative, and increased knowledge about digital preservation in the participating states. Those NDIIPP collaborations were:

- Arizona State Library, Archives and Public Records led four states in the “Persistent Digital Archives and Library System (PeDALS)” project. This project worked to establish a low-cost, highly automated information system capable of ingesting, preserving, and providing access to significant quantities of state data.
- Minnesota Historical Society led seven states in “A Model Technological and Social Architecture for the Preservation of State Government Digital Information” project. This project worked with legislatures in the participating states to explore enhanced access to legislative digital records and to implement a trustworthy information management system. This project also later included funds for the Kansas Historical Society’s Kansas Enterprise Electronic Preservation (KEEP) project.
- North Carolina Center for Geographic Information and Analysis led a three-state project, “Geospatial Multistate Archives and Preservation Project (GeoMAPP).” This project worked to replicate large volumes of geospatial data among several states to promote preservation and access.
- Washington State Archives led eight states in a “Multi-state Preservation Consortium.” This project added additional states to a centralized regional repository using the Washington Digital Archives framework.

At the end of NDIIPP’s State Government Information Initiative, Dr. Christopher “Cal” Lee analyzed the four projects in States of Sustainability: A Review of State Projects funded by the National Digital Information Infrastructure and Preservation Program (NDIIPP). This report includes a comprehensive overview of electronic records and digital preservation activity in all the states prior to the beginning of the NDIIPP projects, and serves as the most detailed guide to electronic records and digital preservation activities, as well as providing a thorough analysis of each of the NDIIPP projects. This is a valuable resource for detail on each state, although territories are not included. Dr. Lee noted the successes of the four NDIIPP projects including:

- Building on a Diverse Set of Strengths
- Building Bridges across Professional Communities
- Persistence in the Face of Dramatic Changes and Challenges
- Beginning with Prototypes and Building Incrementally
- Adopting Modular and Decomposable Approaches
- Preparing for Formal Agreements and Flexibility of Arrangements

Dr. Lee’s recommendations for states in moving forward with electronic records and digital preservation work included:

- Adopt Robust Strategies
- Continue to Look Outward
- Pick a Mode of Contribution and Act on It
Although CoSA’s planning for SERI began prior to the release of this report, Dr. Lee’s insights, shared in draft reports and in discussions, helped formulate the SERI program.

Unfortunately, the Library of Congress did not continue NDIIPP grants to the states after this initial round and the NDIIPP grant program is now defunct. The investments of NDIIPP and NHRPC funding, however, enabled many states to start a rudimentary electronic records and digital preservation program, and provided several states with a deeper expertise in policy development, governance, and the use of tools and resources. Although grant funding is inadequate to manage core state government functions that require sustained institutional funding, state archives began, in incremental steps, to make some progress on electronic records and digital preservation issues. CoSA’s 2007 State of State Records Report and its supplement, the Report of the Blue Ribbon Panel, outlined continuing issues with electronic records in the states, including lack of technical expertise with electronic records; the small number of staff devoted to electronic records, with twenty-one states reporting no electronic records or digital preservation staff at all; and a growing need to manage various types and formats of electronic records, including databases and email. Twenty-seven states had “accessioned electronic records in some form. The quantity and storage media used varied greatly.”

After the 2007 reports, CoSA identified electronic records management and digital preservation as vital strategic issues that required collective action. CoSA leadership and members began to discuss several ways to address issues identified in the growing number of electronic records programs in the states, and in states or territories with no capacity to manage electronic records at all. Work on electronic records was put on hold, however, while CoSA mobilized to support state and local government archives faced with disaster recovery after the 2005 devastation of Hurricane Katrina. CoSA received a $2.6 million grant from the Federal Emergency Management Agency (FEMA) for the Intergovernmental Preparedness for Essential Records (IPER) project. During the next four years, CoSA concentrated on disaster preparedness and recovery training, and on outreach to state and local officials. This grant included information on disaster preparedness for electronic records, including ensuring that both analog and digital records are included in continuity of operations plans.

The IPER project included a component that called on state and territorial archivists to coordinate with the state’s disaster preparedness/emergency management coordinator and the state Chief Information Officer (CIO), and to attend a national kick-off conference to prepare for IPER training with those state officials. For many state archivists this provided an opportunity to work with the state CIO on an urgent issue of equal concern — saving the state’s electronic data in the event of a disaster. Several state CIOs and state archivists continued to work together on disaster preparedness issues throughout the grant and beyond, although with high turnover in state CIO positions many of the connections quickly dissolved.

As IPER ended, CoSA again began to explore the best ways to assist with the mounting pressure on state archival programs to manage, preserve, and provide access to electronic state records. CoSA’s biennial statistical survey of state archives continued to reveal the growth of electronic records holdings, with electronic records management being a perennial area of concern. CoSA’s 2013 State of State Records Report, a follow-up to the 2007 analysis noted that:

“Holdings of electronic records have accelerated rapidly in the last six years. Earlier CoSA survey reports expressed concern about the slow rates at which state archives were acquiring these types of records, with only 77 terabytes in FY2006 and 246 terabytes in FY2010. The FY2012 survey found 426 terabytes.”
Although several states operated active electronic records management projects in the 1990s and 2000s, many of the federally-funded initiatives fell short of creating ongoing and sustainable programs. A handful of states managed to support electronic management programs and start digital preservation programs, but they were the exception. The disparity of electronic records management programs in the states, including whether state archival agencies were involved in managing the entire records lifecycle or only in the preservation of archival records, and the lack of funding in most states, concerned CoSA’s leadership and membership. CoSA embraced the challenge of assisting all states and territories in improving and/or creating electronic records management and digital preservation capabilities. With that strategic decision, CoSA began planning SERI in 2011.
II. SERI PHASE I — ASSESSMENT

At the CoSA annual meeting in Nashville, Tennessee in July 2011, CoSA formed the State Electronic Records Initiative (SERI) Steering Committee to plan and oversee an effort to assist state and territorial archives with electronic records and digital preservation programs. The committee looked at the statistical reports that CoSA had compiled on state and territorial archival programs, developing a general idea about ways to improve electronic records management and digital preservation in the states. The committee, however, wanted more data about each state’s specific needs for creating or improving their state’s electronic records programs.

Because CoSA wanted to plan for data-driven action, SERI began with an intensive data-gathering effort designed to evaluate the status and current needs for the management and preservation of electronic records in the fifty-six state and territorial government archives. Each state archives and records management program completed a written survey about its existing electronic records program, and then participated in extended follow-up telephone interviews.

The data collected in the survey and telephone follow-up allowed CoSA to develop a composite nationwide profile of state archives’ efforts to create, fund, and maintain state electronic records programs, and to organize and plan a wide-ranging program for improvement. The State Electronic Records Initiative — Phase I: Report on the Surveys and Interviews revealed an extremely precarious situation, with over 50% of state and territorial archives having minimal or non-existent electronic records programs and only 39 states and territories accessioning electronic records into their collections. Of those accessioning records into their collection, few prescribed preservation actions to ensure the survival of those records. In many states, a lack of funding, training, and IT support created additional barriers to implementation of electronic records and digital preservation programs.
The surveys and report documented the serious condition of state electronic records, even in states with a functioning program for electronic records. For example, comments on the survey included one from a state archivist who said, “Our program is only in its infancy and the timing of its development against the backdrop of an economic recession is unfortunate.” Another reported that the state’s electronic records program was “in transition. We’re behind many state agencies, which have started doing their own thing with their records.”

The surveys and the Phase I report provided anecdotal and statistical information to help form the basis of SERI programming for the next five years. In addition to detailed statistical data, state archivists responded to the survey with requests for continuing education focused on the rapidly developing electronic records and digital preservation fields. They also asked for a systematic way for the community to share and discuss best practices and standards to assist with capacity building. The survey provided, for the first time, aggregated data about state government electronic records from all fifty-six states and territories, revealing the risky situation these jurisdictions faced in managing and preserving state government electronic records.

The report suggested that CoSA take a leadership role in four areas:

- Serving as a clearinghouse for information about electronic records and digital preservation for state archives;
- Leading in advocacy, outreach, and collaboration;
- Providing training for state archives staff; and
- Working with funding agencies on developing projects to improve electronic records and digital preservation in state archives.

CoSA completed the SERI Phase I report in early 2012, with the assistance of consultant Phil Bantin. Institute of Museum and Library Services (IMLS), Library Services and Technology Act (LSTA) grants from Indiana and Kentucky funded CoSA’s initial surveys, reports, and planning, first with $60,000 from the Indiana State Library and then with an additional $60,000 from the Kentucky Department for Libraries and Archives.
III. SERI PHASE II — PLANNING AND ACTION

As the SERI Phase I assessment report neared completion, the SERI Steering Committee convened a meeting with its special advisory board that included representatives from the National Archives and Records Administration, the National Association of State Chief Information Officers, and the University of North Carolina at Chapel Hill. The group met to analyze preliminary results from the survey, outlining SERI’s activities around a five-year plan that confronted the gravest deficiencies in state government digital preservation and electronic records management. At a meeting in Lexington, Kentucky in October 2011, the SERI Steering Committee and its advisors outlined four specific areas of need, as demonstrated in the draft SERI Phase I Report. The four areas for priority action included:

- **Education and training:** to provide both introductory and more advanced programs in electronic records management and digital preservation for state archives staff responsible for managing and preserving government records;

- **Standards and tools:** to share relevant standards, guidelines, policy documents, best practices, and tools that could be adapted for use by state archives, and to develop models and guidance where none yet existed.

- **Advocacy and awareness:** to educate key stakeholders about the rapidly expanding threats posed by inadequate management of digital records and the critical need to ensure long-term access, preservation, and authenticity; and

- **Governance:** to integrate electronic records and information management requirements into planning, procurement, systems development, and operations.²⁵

CoSA’s approach gave equal weight to each of the focus concentrations, working toward incremental progress in each. This involved deploying volunteer subcommittees organized around every area, with members drawn from state and territorial archives and coordination provided by the Steering Committee with oversight by the CoSA Board.
Since funding for electronic records and digital preservation programs was limited in the states and territories, securing grant funding for different facets of SERI work was of paramount importance. The SERI Steering Committee and CoSA Board and staff worked to procure and then administer three major grants during 2012-2017. These grants were:

A National Historical Publications and Records Commission (NHPRC) grant of $150,000 for the development of the web-based portal, Program for Electronic Records Training, Tools, and Standards (PERTTS), to provide resources for electronic records management and digital preservation freely available to all;

An Institute of Museum and Library Services (IMLS) Laura Bush 21st Century Librarian Program grant of $489,880 for SERI’s Strategic Training and Education Program (STEP), for continuing education and training in electronic records and digital preservation for state archives staff; and

An IMLS National Leadership for Libraries Program planning grant of $50,000 for the Archives Collaborating and Cooperating with External Strategic Stakeholders (ACCESS) Action Plan, to write a plan for working with collaborating organizations on advocacy and outreach for electronic records management and digital preservation issues in state government.27

These three grants helped CoSA provide resources and training for state archives staff, allowed for increased knowledge and skill, and resulted in the outline of a plan to create a wider understanding of and collaborations for electronic records management and digital preservation of state government records.

2012 Self-Assessment

While the CoSA and the SERI Steering Committee continued to plan for future SERI programs, the Steering Committee also looked for additional ways to quantify data from the 2011 written survey and follow-up telephone interviews. CoSA needed a measurable way to assist state and territorial archives with specific actions to improve their digital preservation programs, so that changes could be tracked over time. The committee chose a self-assessment tool based on the Digital Preservation Capability Maturity Model (DPCMM) developed by Charles Dollar and Lori Ashley and modified for CoSA’s use by a team led by Beth Shields of Kentucky and Matt Veatch of Kansas. The DPCMM provides a simplified framework for two ISO standards, the Open Archival Information System (OAIS) Reference Model and Audit and Certification of Trustworthy Digital Repositories, 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, while not a perfect indicator of success, provides a measuring tool and general overview of strengths and weaknesses in state archival digital preservation programs.

All fifty-six states and territories completed the initial self-assessment in late 2012, as both the PERTTS and STEP federal grants began. The self-assessment results provided CoSA with a detailed overview of the digital preservation needs of each state and territory. It also helped each state determine the status of its electronic records programs and identify critical focus areas. Each state and territorial archivist received the individual assessment results for his/her state. A small subgroup of the SERI Steering Committee received all individual state assessment scores for tabulation and analysis purposes only.
This 2012 assessment provided guidance for SERI programming for the next five years. The assessment highlighted positive change in several states, particularly in states with longer-tenured electronic records programs. The self-assessments revealed that, though some states had developing and improving programs, all states were weak in several, if not all, component areas. The average scores for two components, collaborative engagement and security, were markedly higher than the other thirteen components. State and territorial archives averaged their weakest scores in the integrity, designated community, and governance components. All state and territorial archives completed a second assessment in mid 2015.

The DPCMM tool remains available to state archives and records programs, allowing continued monitoring of progress toward more comprehensive electronic records programs. Grant funds from the NHPRC supported further development and enhancement of the self-assessment tool.

SERP Framework

CoSA created the State Electronic Records Program Framework (SERP), to help states and territories understand and document the strength of their electronic records and digital preservation programs. The SERP Framework elements are based on elements within the DPCMM, with guidance on how to improve digital preservation capabilities within each element. The Framework elements are:

- Policy
- Strategy
- Governance
- Collaboration
- Technical Expertise
- Open Standards/Neutral Formats
- Designated Community
- Electronic Records Survey
- Ingest
- Storage
- Device/Media Renewal
- Integrity
- Security
- Preservation Metadata
- Access

Where possible, the SERP Framework provides guidance on increasing electronic records and digital preservation capabilities documented by the DPCMM self-assessment. Actions necessary to move an organization from one level to the next are generally self-explanatory. The SERP Framework itself, with detailed information about each preservation action, provides guidance for state archives staff in setting priorities for their programs and serves as a teaching tool for understanding the context of digital preservation. The SERP Framework helps explain digital preservation actions to staff in state archives and remains a useful tool for mapping a process for creating and improving digital preservation programs.

Tools and Resources — PERTTS

Information-sharing about electronic records best practices and tools is one of the keys to success for improving state and territorial archives. The SERI Steering Committee planned to construct a sustainable platform that would provide the archival, records management, and digital preservation communities with a comprehensive link to resources, including standards, best practices, and tools. In 2012, CoSA applied for an NHPRC grant to create the Program for Electronic Records Training, Tools, and Standards (PERTTS), a portal on the CoSA website that would serve as the hub for accessing information resources, training, and education, including webinars.
The two-year grant project began in January 2013. It focused on two areas:

• Providing one-stop access to in-depth information about standards, best practices, and tools for the management and preservation of electronic records, and

• Delivering education and training to ensure that these standards, best practices, and tools are widely and effectively implemented.

With the assistance of contractor Carol Kussmann and the oversight of the Steering Committee, the SERI Tools and Resources Subcommittee managed the development of a web portal designed to fulfill these needs. The subcommittee established a definitive pool of resources, with the goal of strengthening the capacity of states and territories to manage and preserve electronic records by providing a framework for in-depth information on electronic records management and preservation programs. While the technical framework for the portal was under development the subcommittee gathered information in three broad areas — 1) tools; 2) standards; and 3) policies, best practices, and guidelines.

To familiarize CoSA members and staff with the portal, PERTTS volunteers gave presentations at several conferences to share information and gather ideas and resources for the portal. A PERTTS Portal Workshop, held in August 2014 during the CoSA/NAGARA/SAA Joint Annual Meeting in Washington DC, helped increase understanding on contributing to and using the portal. There, sixty-nine attendees from thirty-six states and territories received instructions on using the portal, becoming familiar with the resources available. Attendees also shared their experiences with choosing and adding material to the portal and discussed gaps in available resources.

The workshop also featured information on the DPCMM self-assessment. DPCMM authors Charles Dollar and Lori Ashley shared information on the SERP Framework to provide workshop participants with specific ideas on how to improve individual programs and services, thereby increasing self-assessment scores.

The portal created an immediate impact as states shared policies, procedures, information about software and tools, job descriptions for electronic records archivists, and many other documents and articles. This rich resource now provides a means for state archives staff to find information quickly and efficiently about other state and territorial archives programs. The portal continues to grow and to make additional information available. It has value not only for the state archives community, but for other archivists, records managers, and librarians as well.

By the end of the two and a half year grant, the PERTTS project funded the development of the portal, the SERP framework, and refinement of the DPCMM self-assessment.

**Education and Programming — STEP**

Education and training for state archives staff is a key point of emphasis in SERI, as it will enhance the ability of state and territorial archives to manage digital government information. The SERI Steering Committee designed the Strategic Training and Education Program (STEP), based on the analysis of responses to the SERI Phase I surveys. The program was funded by the Institute of Museum and Library Services (IMLS) Laura Bush 21st Century Librarian Program with a $489,880 grant and supplemented by additional support from CoSA, the state and territorial archives, and the NHPRC PERTTS grant. The STEP plan included three ambitious components: scholarships to support attendance at webinars and conferences related to electronic records management and digital preservation issues; group training in weeklong, face-to-face electronic records institutes, with a curriculum specific to state archives; and the creation and presentation of webinars on digital preservation and electronic records topics.
Scholarships

The IMLS grant initially provided $1,000 scholarships to each state and territory to fund continuing education scholarships for electronic records training, meeting the critical needs for immediate training while planning for the electronic records institutes was underway. Due to cost savings in institute expenses and other areas, the SERI Steering Committee could allow additional funds for scholarships, over the initial $1,000 amount, during the last two years of the grant period. Over the four years of the grant, staff members from all fifty-six states and territories attended SERI training sponsored by the IMLS grant. Forty-seven states, four territories, and the District of Columbia all applied for and received scholarship money to attend electronic records training. Three states and one territory did not apply for scholarship funding, but did attend the SERI Electronic Records Institutes.

Many state archives staff used scholarship money to attend the Best Practices Exchange (BPE). A particularly beneficial annual conference for archivists and librarians managing digital information, BPE encourages discussion on work-in-progress and collaborative digital projects.35 This conference convened four times during the grant period with state archives staff in regular attendance, including 34 individuals who attended using SERI scholarship money. Each conference featured presentations on aspects of SERI and on technical and innovative projects from college and university libraries and archives, state governments, and federal offices, making this one of the most productive venues for increasing knowledge about electronic records management and digital preservation. As one SERI scholarship recipient noted, “BPE is always a wonderful time to learn more about specific initiatives and projects in states - more time to interact and discuss than that in a traditional conference.”36

CoSA also facilitated scholarships to provide access to online training classes offered by the Society of American Archivists (SAA) and the Association for Information and Image Management (AIIM). CoSA members received access to online AIIM course modules such as Electronic Records Management, Information Governance, and Taxonomy and Metadata. Funding covered two AIIM classes for each state and included one certification test in each class. As these classes were online, many state archives chose to view them together as a team, allowing multiple people to benefit from the training even though only one person would receive the certification. An unlimited number of state archives staff members could also apply for scholarships for specific courses in the SAA Digital Archives Specialist (DAS) certificate training. These included Information Architecture, Standards for Digital Archives, and Metadata Overview for Archivists.37 Again, these classes were often used as staff group training opportunities. For SAA classes, additional certification tests could be purchased for a nominal fee. Fifty-three archivists from thirty-one state and territorial archives attended the DAS classes. During the grant period, several state archives staff received or made considerable progress toward achieving a DAS certificate from SAA with assistance from CoSA’s SERI scholarships.

The scholarships proved extremely beneficial, allowing staff to attend training geared to their specific educational needs. Nine states used scholarship funds to send an additional attendee to one of the SERI Electronic Records Institutes. Others used scholarships for classes on digital curation and metadata offered by Lyrasis, electronic records management courses from ARMA, pre-conference workshops on electronic records management or digital preservation at regional archival association meetings, or workshops on specific technologies and tools.

Electronic Records Institute Planning and Development

The grant supported three weeklong face-to-face training institutes: an Introductory Institute, followed by two Advanced Institutes. These
institutes offered targeted training on electronic records management and digital preservation to state archives staff, centering on the unique challenges of managing digital government information.

SERI’s Education Subcommittee developed curriculum outlines for the Introductory and Advanced Institutes and created a list of potential instructors for each topical section. Concentrating first on the Introductory Institute, the selected instructors used the committee’s final outlines to expand content based on their expertise and teaching experience. After the SERI subcommittees reviewed, revised, and approved the outlines, the instructors completed the curriculum by developing lectures and slides, lab exercises, group activities, handouts, and a list of recommended readings. The Education Subcommittee also developed several resources for the Introductory Institute participants, including an Electronic Records Bibliography and a Glossary of Electronic Records Terms.

Curriculum development for the Advanced Institutes emphasized more in-depth exploration of topics discussed in the Introductory Institute, as well as demonstrations and discussions. Both curriculum development processes yielded valuable instructional materials that also served as guidance for undertaking management and preservation actions in state and territorial archives.

**Introductory Electronic Records Institute**

Hosted by the Indiana State Archives, the Introductory Electronic Records Institute took place July 8-12, 2013 in Indianapolis, Indiana. The DPCMM self-assessment had clearly documented that knowledge varied widely between states. So that each state would be exposed to the same baseline of knowledge for all state and territories, the Introductory Institute was designed to provide training to staff from state archives that had the lowest score on the DPCMM.

Thirty-one state archivists, electronic records archivists, records managers, and IT professionals from twenty-four states, four territories, and the District of Columbia attended. Institute instructors were: Mike Wash, then Chief Information Officer for the National Archives and Records Administration; Pat Franks, Master of Archives and Records Administration (MARA) Program Coordinator at San Jose State University; and Christopher “Cal” Lee, Associate Professor at UNC-Chapel Hill. Matt Veatch, Kansas State Archivist, served as the moderator. Doug Robinson, Executive Director of the National Association of State Chief Information Officers (NASCIO), also spoke about state IT priorities and trends, and shared ideas about collaborating with state chief information officers. The institute curriculum included a wide range of electronic records related topics that were covered through lectures, lab exercises, group discussions and activities. Topics included policies and strategies, governance, records management, acquisition, preservation, and access. At the end of the week, the participants drafted action plans to identify next steps for improving their state’s electronic records program.

In addition to formal classroom instruction, the Introductory Institute also provided a setting for the attendees to create a network of colleagues with similar challenges and goals. One attendee expressed what others also indicated in the final evaluations, “It is very valuable to network and converse with others about their states, their environments and their issues. It aids in reaffirming that there is no perfect world out there and no one gets it right all the time. This works as a motivator to persevere and break down the task into more simple, manageable steps. It makes the ultimate goal seem more attainable.” Many of the participants noted that they were usually unable to attend conferences or other continuing education activities due to budget constraints or travel restrictions, and reaffirmed the importance of this training.

Institute evaluations were overwhelmingly positive, with all attendees indicating that the
One attendee noted, “I feel more confident in my ability to interact with electronic records archivists and IT professionals, and how to formulate the necessary questions for each of them. We have a better understanding of what the archives can accomplish and what needs to be left to the IT department, as well as some ideas to foster collaboration between the two.” Another said, “The institute affirmed that the steps we’ve taken toward developing an electronic records management system have been good ones. It also gave me insight into some areas which we had not considered.”

Advanced Electronic Records Institute

CoSA held two Advanced Electronic Records Institutes, one hosted by the Library of Virginia in Richmond, Virginia on March 31-April 4, 2014 and another by the Utah State Archives in Salt Lake City, Utah on October 20-24, 2014. The timing of the institutes was purposeful, as it gave those that had participated in the Introductory Institute time to implement ideas prior to attending the second event. The curriculum was identical at the two locations, and participants generally attended the one closest to them.

Seventy archivists from states, territories, and the District of Columbia attended one of the Advanced Institutes, with forty-nine states, five territories, and DC represented. The Advanced Institutes reflected a broader range of participants, including state archives staff and IT managers. As with the Introductory Institute, the week began with attendees sharing information about the status of their state’s electronic records program, their roles in their repositories, and their expectations for the institute. Nancy McGovern and Kari Smith, Massachusetts Institute of Technology Libraries, served as the primary Institute instructors. Cal Lee, University of North Carolina at Chapel Hill, and Courtney Mumma, Artefactual, Inc. assisted with instruction. Matt Veatch, Kansas State Archivist, served as the moderator. The institute covered a wide range of electronic records topics through lectures, group exercises, role-based breakout discussions, and tool demonstrations. Lecture topics included organizational context, policy development and implementation, standards for long-term management of electronic records, prioritizing challenges, digital repository management using Open Archival Information System (OAIS), digital forensics, workflows and microservices, assessment, designated communities, and cost allocation. Exercises focused on program attributes and analysis; mapping policies, metadata, roles, and resources to a standards-based framework; best practices for uses of redaction; and constructing workflows.

Attendees also participated in informal discussion groups, with topics including planning, assessing resources, workflow, and self-assessment. Attendees, instructors, and other state archives staff presented daily tool demonstrations on the APPX Axaem system, Preservica, HP TRIM, BitCurator, a Drupal-based TRAC tool, and Archivematica.

Institute Outcomes and Action Plans

By bringing staff from many states together, the institutes also helped staff realize that they shared common issues and concerns with those in other state and territorial repositories, encouraging long-term strategic planning and shorter-term actions for all states and territories. Staff from about twenty states and territories with less mature electronic records and digital preservation programs attended the Introductory Institute. Staff from all fifty-six state and territorial archives attended at least one of the electronic records institutes, with 101 attendees as a combined total for all three institutes.

The institutes’ impact lasted far beyond the week of training. In addition to sparking ideas for new projects and collaborations, and creating a community of expertise from which to draw, each institute participant created an action plan for his/her institution. Each attendee’s action plan outlined goals for starting or improving an
electronic records program, and included specific steps to be undertaken to achieve those goals. The planning document asked attendees to consider the following:

- What are the first steps to improving your electronic records program?\textsuperscript{49}
- How will you apply skills and concepts covered at the Institute in your action plan?
- Who will be involved in your plan?
- What challenges do you anticipate in achieving these goals?
- What resources will you need?
- What is the timeline for completing your goals?

State archives’ action plans included a variety of goals. The most common goals for Introductory Institute attendees were: sharing information from the institute with staff at their institution, creating an electronic records management and digital preservation policy, and connecting with their state IT agency.

The action plans also included guidance for attendees on choosing two components from the DPCMM on which to improve, outlining action steps, identifying responsible parties and resources, and developing a timeline. Introductory Institute attendees chose Digital Preservation Policy and Collaborative Engagement as the most frequently cited components in their action plans. Advanced Institute attendees chose the following components (listed in rank order), with the top selection being Digital Preservation Policy, a necessary first step in a successful program.

- Digital Preservation Policy – 12 states
- Digital Preservation Strategy – 5 states
- Archival Storage – 5 states
- Electronic Records Survey – 4 states
- Governance – 3 states
- Designated Community – 3 states
- Collaborative Engagement – 3 states
- Integrity – 3 states
- Technical Expertise – 2 states
- Open Standards/Neutral Formats – 2 states
- Ingest – 2 states
- Access – 2 states
- Device/Media Renewal – 1 state
- Security – 0 states
- Preservation Metadata – 0 states

Introductory Institute attendees who subsequently attended one of the Advanced Institutes generally worked on refining their plan, or selected additional areas on which to concentrate. Other attendees at the Introductory Institute chose goals based on creating improvements in their state and territories.

For the Advanced Institutes, the Education Subcommittee updated the Introductory Institute action plan form with supplementary questions related to internal awareness and support, external support for electronic records programs, and financial support. The action plans for many who attended one of the Advanced Institutes included advocacy and outreach to state agencies and funders to share information about the importance of electronic records management and digital preservation; securing funding for program expansion; and evaluating and testing software for improved technology to accession and preserve digital government information.

Post-Institute Follow-Up with State and Territorial Archives

CoSA leadership prioritized continuing active relationships with institute participants to encourage progress on their newly developed action plans. CoSA used existing data from the self-assessment, the initial SERI surveys of all states and territories, and data from the institutes to assist each state and territory specifically, fostering progress, enhancing relationships
within CoSA and SERI programs, and developing opportunities for collaboration among programs. CoSA regularly contacted most institute attendees via email and/or telephone to discuss development and progress of electronic records programs/activities, and to follow up on action plans created during the institutes.

Follow-up webinars allowed institute attendees to gauge progress toward goals and to track work on each institution’s work plan. A listserv for state archives staff and others involved in SERI programs and training promoted further discussion and information sharing. Webinars and conference calls sponsored by CoSA and SERI provided information about specific aspects of electronic records and digital preservation program management, including advocacy plans, writing preservation policies, or specific technical issues.

Working as a SERI contractor, Beth Shields of Kentucky managed institute follow-up with attendees for a year after the Advanced Institutes. She maintained an active relationship with institute participants in 50 of the fifty-six states and territories, by checking on progress on actions plans and offering advice and assistance to state archives staff around the country. Several states drafted digital preservation policies and actively pursued collaborative efforts within their state during this time.

Electronic Records Institute in Puerto Rico

The lead archivist from Puerto Rico attended both the Introductory and Advanced Institutes, and later coordinated work with the CoSA SERI Steering Committee and the Archivo General de Puerto Rico to plan a two-day on-site training for all government archivists and agency records managers in the territory. The training, held in San Juan on June 21-22, 2016, offered a shortened version of the Introductory Institute, with emphasis on key areas, such as digital preservation, electronic records management, and advocacy for electronic records.

The co-chairs of the SERI Education Subcommittee, Sarah Grimm of Wisconsin and Sarah Koons of North Carolina, prepared and presented the streamlined instructional materials. Although many in attendance spoke English well, there were various levels of expertise, particularly with the technical subject vocabulary, so a translator provided on-site simultaneous translation services. Ninety government stakeholders, archivists, and records managers, along with staff from the Archivo General de Puerto Rico, attended the training, providing broad impact in the Puerto Rican government. This event raised awareness of the Archivo General in the territory and helped educate many records creators and records officers on the basics of electronic records and digital preservation.

SERI Educational Webinars

Throughout 2013-2014, the first two years of STEP, the SERI Education Subcommittee and the Tools and Resources Subcommittee created and offered fifteen topical educational webinars. Hosted either by state archives staff or subject matter experts, the webinars were supported by the IMLS or the NHPRC grants. Several webinars relating to the Introductory Institute were offered as pre-requisites, including a webinar on the Open Archival Information System (OAIS) and an advocacy webinar from the SERI Advocacy and Outreach Subcommittee on working with stakeholders. The subcommittee also presented a post-institute webinar on creating meaningful advocacy messages for different audiences. Other webinars topics, presented by Tools and Resources Subcommittee or Education Subcommittee members, and other volunteers from state archival programs included: social media preservation, email preservation, hiring electronic records staff, and open source tools.

These webinars were informative and very well-received within CoSA. They offered many state archives staff the opportunity to take the lead in presenting a webinar on a topic of interest, thereby sharing their knowledge with others.
The webinars continued the collaborative and cooperative nature of the institute training, by allowing staff to learn from their colleagues around the country and helping them feel less isolated. State archives staff began to rely on their colleagues in other institutions around the country to help in moving forward.

CoSA-Preservica Practical Digital Preservation Webinar Series

Begun in 2015, the CoSA-Preservica Practical Digital Preservation Program webinar series allowed CoSA to partner with one of its corporate sponsors, Preservica, to focus on digital preservation basics as well as specific topics in digital preservation. The first webinars in the series offered a multi-part in-depth training on the key concepts and processes of the digital preservation lifecycle — ingest, data management, storage, preservation, administration, and access. A summary of next steps followed, to guide attendees on moving forward on digital preservation projects. In addition to the basic instruction, specific topics included automating email archiving and preservation and providing public access to digital archives. The 2015-2016 series ended with a summary of the program and provided examples and case studies of real-world digital preservation.

This jointly-sponsored series continued in 2016-2017. Building on the first series, the next iteration expanded to include webinars for audiences outside of CoSA, such as senior managers, budget officials, chief information officers, information technology staff, and agency records officers. These webinars for other stakeholders in state governments helped broaden awareness of the importance of electronic records and the need for increased emphasis on digital preservation. The webinars for records officers attracted a large audience, with many attendees from various state and local agencies, representing institutions other than state archives, and offered specific processes and practical advice for following records retention schedules for electronic records in government offices. While the webinars for senior officials provided an overview of digital preservation, the training for state archives staff focused on digital preservation, including overviews of digital storage choices and audio-visual file preservation, among others.

Advocacy and Outreach

Although CoSA has an Advocacy Committee that monitors and provides input on a wide range of issues related to state archives and records management programs, the SERI Steering Committee established a separate SERI Advocacy and Outreach Subcommittee to concentrate specifically on broadening support for and increasing awareness of electronic records preservation and access issues. This subcommittee’s initiatives included creating Electronic Records Day; assisting the SERI Education Subcommittee in providing advocacy training to state archivists through several webinars; helping to devise social media campaigns for various issues and special events; coordinating blog posts on electronic records and digital preservation programs in state archives, including the State Electronic Records Spotlight Blog that shares examples of electronic records and digital preservation highlights from several state archives; and coordinating planning to increase CoSA’s outreach to national associations and professional groups with interest in electronic records management and digital preservation.

Electronic Records Day

The SERI Advocacy and Outreach Subcommittee created a successful outreach initiative in establishing and growing Electronic Records Day observances. In 2012, CoSA/SERI established the first annual Electronic Records Day on October 10 (10/10 was chosen as the annual date, for its symbolism as the digits representing bits and bytes in computer programming). Within the larger Archives Month in October, Electronic Records Day promotes awareness of the additional
challenges presented by electronic records, and the risks of ignoring preservation strategies for electronic records.

A small but well-received first Electronic Records Day grew steadily into increasingly popular annual events over the next five years. For the inaugural Electronic Records Day observance, CoSA and several of its state archives members, secured gubernatorial proclamations, participated in social media campaigns, and held webinars or on-site events at state archives buildings. Other early participants included the Society of American Archivists, the National Archives and Records Administration, the National Association of State Chief Information Officers, and the National Association of Secretaries of State. By the fourth and fifth annual Electronic Records Day events, supporters included over sixty different entities (archives, libraries, universities, museums, professional organizations, vendors, and individuals) using social media, posting on Twitter and other platforms with the hash tag #ErecsDay. In 2012, press coverage was generally in state or local papers, but by 2015-2016, Electronic Records Day was featured in several publications for state government officials, including Gov Loop and StateTech.45 Also in 2016, tweets included postings from the US Embassy in Cyprus and a few archives and newspapers in Spain.

CoSA created promotional material for Electronic Records Day, including a logo and various tip sheets about electronic records. Promotional and educational material expanded annually, as interest continued to grow. On Electronic Records Day in 2016, CoSA offered a webinar for both state and local government employees on managing records as technology changes to offer guidance on current issues in electronic records management to a wider audience.46

Collaboration and ACCESS

In 2014-2015, CoSA and SERI identified potential partners and stakeholders in state government electronic records management and digital preservation in Archives Collaborating and Cooperating with External Strategic Stakeholders (ACCESS), a one-year National Leadership for Libraries planning project funded by the Institute of Museum and Library Services. This grant resulted in an environmental scan of stakeholders and collaborators and a plan for engaging a diverse group of national partners, stakeholders, and other organizations to work collaboratively on increasing access to digital government records and information. CoSA identified relationships with current partners, allied organizations, and other groups as vital in furthering understanding of the need for critical attention to digital government information in the states. State and territorial archives and records management programs acknowledge that designated communities and allied organizations are critical to the management and preservation of and access to digital government records and information. Similarly, other government information professionals also recognize that cross-sector collaboration is essential to successful digital records and information management. Critical to these strategies is CoSA's continuing efforts to promote appropriate resource allocation for the long-term management and access of electronic state records.

Working with contractor Michelle Gallinger, CoSA/ SERI developed the ACCESS Action Plan after analyzing and assessing outreach and engagement methods aimed at partners, stakeholders, and other organizations with an interest in digital government records and information. The plan provides an outline for outreach, awareness, and advocacy for SERI, and for further engagement with collaborators to ensure long-term preservation of essential state government records. Through this plan and the partnerships forged to implement it, CoSA and SERI are raising awareness with cooperating organizations on a range of digital preservation and electronic records management topics.

The CoSA ACCESS Action Plan details the goals, opportunities, strategies, and metrics for CoSA’s
ongoing involvement with external stakeholders. Some of CoSA’s core strengths emerged during work on the ACCESS action plan including:

• **Advocacy results:** Many communities know CoSA as an organization that provides information, education, and advocacy on electronic records management and digital preservation.

• **Thought leadership results:** CoSA provides critical opportunities for community response to emerging or ongoing digital preservation problem areas.

• **Standards and best practices results:** CoSA is considered a critical resource by the archives and preservation community, bolstering its reputation and influence.

Certain ideas in the ACCESS Action Plan are being implemented, though no additional funding is available for these activities. CoSA members are volunteering time to reach out and collaborate with other professional groups, and the Tools and Resources Subcommittee is working on best practices guidance documents requested by some of CoSA’s partner groups. While progress on this is slow, with only part-time volunteers available to do the work, CoSA continues to be responsive to these requests from allied organizations.

### 2015 Self-Assessment

To measure progress in both the NHPRC and IMLS grants, state and territorial archives completed the DPCMM self-assessment on two separate occasions, with all fifty-six states and territories completing self-assessment in late 2012 and again in mid-2015. In comparing the 2012 results to the 2015 results, of the fifty-six institutions:

- 77% of the institutions increased their score (43)
- 9% of the institutions maintained the same score (5)
- 14% of the institutions had a decrease in score (8)

Of the 43 governments with score increases, the cumulative score increased by 450 points, or an average of 10.47 points per state.

Of the 8 states and territories that decreased, the cumulative decrease was 38 points, or 4.75 points per institution.

The net increase in scores was 412 points.

Of the 15 components comprising the assessment, the highest average gains in specific components for individual participants occurred in the following:

- Security — gaining an average of 2.26 points
- Device/Media Renewal — gaining an average of 2.10
- Ingest — gaining an average of 2.00

The highest net gains occurred in the following components:

- Security — 40 points
- Technical Expertise — 39 points
- Open Standards/Neutral Formats — 35 points

The highest overall gains occurred in the following components:

- Integrity — 261.5%
- Designated Community — 89.7%
- Governance — 70.6%

Many of the higher scores in the technical categories of the DPCMM were the result of several states beginning to use commercial digital preservation products between the first and second assessments, either through the purchase of a fully functioning digital preservation system or specific tools for individual components, such as a check-sum tool for integrity and fixity evaluation. Other increases, such as in designated community and governance, were the result of states taking the first steps at creating a state digital preservation policy or plan, including working with the state government community and creating or being included in existing governance structures.
The SERI Steering Committee has interpreted many of these gains as states making considerable progress while working to fulfill their Electronic Records Institute Action Plans.

The following components saw the highest number of states with lower scores in the second assessment:

- Collaborative Engagement — 9 states
- Archival Storage — 7 states
- Device/Media Renewal — 7 states

The overall lower scores occurred both in states that lost key staff members or which experienced a decrease in funding between the two assessment periods. There were also a few states that had misinterpreted one or more questions on the initial assessment and, in becoming more knowledgeable about digital preservation in the three ensuing years, were able to answer the second assessment with more relevant information.

The averages of the scores within each of the 15 components are compared in the following table:

**Table 3. SERI Self-Assessment Scores by Component**

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

The changes in the 2012 and 2015 assessment scores indicated promising improvements in all components of the assessment. Most decreases in individual state scores were due to increased understanding and realistic scoring of components of the DPCMM, or to a change in circumstances or staff at the state archives. Overall, gains outweighed losses, with an upward trend in composite scores for all the states and territories.
IV. SERI PHASE III — LOOKING FORWARD

By the end of 2015, the SERI initiative had made substantial progress on many items on the SERI Phase II agenda, centering on three areas of concentration: education and programming, tools and resources, and advocacy and outreach. SERI’s multifaceted efforts in concentrating on these three areas resulted in the development of online resources for CoSA and others interested in electronic records preservation; educational opportunities and training for state archives staff on electronic records management and digital preservation; and an increase in awareness of the necessity of preserving electronic records across the nation, through the identification of potential partners, collaborators, and allies who could assist long-term efforts to preserve and provide access to electronic records.

In September 2015, representatives of CoSA, including past and current SERI Steering Committee members, contractors, and staff, met in Indianapolis, Indiana. They comprised the SERI Phase III Summit Committee, tasked with reviewing the 2015 self-assessment data, training results, and a survey on SERI programming to plan for Phase III of SERI. The Summit Committee compared and analyzed the results of both the 2012 and 2015 self-assessments, and evaluated the results of the SERI Education Subcommittee’s December 2014 survey to gauge needs for further education and training in the states and territories. The SERI Education Subcommittee planned to concentrate its efforts over the next several years on the topics that had elicited the most responses on the survey. High interest topics included digital preservation case studies, application of preservation metadata, transfer of digital items, workflows for transferring specific formats, and project management.48

The Summit Committee also discussed and prioritized next steps for SERI, including refining the specific charge of each SERI Subcommittee, requesting that the CoSA Board and the SERI Steering Committee develop a sustainability plan and funding strategies for SERI programming, and planning to revitalize each of the subcommittees through additional volunteers, and through reassignment of tasks, including combining the
Governance Subcommittee with the Tools and Resources Subcommittee. Many of the future initiatives listed in this report are based on the work of the Phase III SERI Summit Committee.

General plans for 2016 and 2017 included focusing efforts on completing the IMLS grant by continuing to provide training in digital preservation and electronic records; continuing subcommittee work on education, outreach, and tools; examining the impact of SERI through this report; planning for sustaining and integrating SERI objectives into CoSA's ongoing work; and seeking additional funding by applying for grants to further SERI objectives.

For the last six months of the IMLS grant, contractor Barbara Teague completed grant activities, helped coordinate SERI programs, and compiled this report. She will remain as a consultant for SERI after the grant project ends.
V. SUCCESSES AND LESSIONS LEARNED

Over the past six years, many challenges have been met while others await future action. Overall, SERI has been an overwhelming success, having a noticeable impact on elevating electronic records and digital preservation programs in all fifty-six state and territorial archives. In analyzing both the improvements documented through the DPCMM and the impressions shared in several surveys throughout SERI’s existence, including a recent survey completed by CoSA members at the end of the IMLS training and education grant, SERI activities have had a substantial and lasting impact on improving electronic records and digital preservation in state and territorial archives.

Successes

The IMLS Laura Bush grant for education and training achieved its objectives, providing training for staff in all fifty-six state and territorial archives at several levels appropriate to various stages of institutional preparedness and offering a wide array of targeted training on general and specific topics. The grant allowed CoSA to train staff from state archives with non-existent or negligible electronic records programs, teaching them how to think about and work with electronic records. For staff in state archives with stronger programs, the grant provided more technical and specific training. The institutes, attendance at the Best Practices Exchange conference, and scholarships to a variety of training events helped invigorate state archives programs and staff, providing a commonality of purpose, and resulting in more knowledgeable care of state government electronic records. With the solid foundation provided by the education initiatives in both the IMLS and NHPRC grants, CoSA now has the experience needed to build on for future progress.

Overall, SERI has been an overwhelming success, having a noticeable impact on elevating electronic records and digital preservation programs in all fifty-six state and territorial archives.

The development of the PERTTS Portal, and training for its users, marked a significant step in
providing access to a wealth of resources useful for electronic records and digital preservation. The portal collects state archives and records management programs best practices and standards for easy access through the CoSA website. The portal provides links to resources of interest to government archivists and to the larger archival and records management community as well. With no ongoing support to help identify additional resources and improve search and access mechanisms, however, it may prove difficult to effectively manage the portal in the future.

SERI has been instrumental in strengthening CoSA as an organization, acting as an engine in driving CoSA’s effectiveness and relevance. With a limited membership of fifty-six state and territorial government archives, CoSA cannot grow through additional memberships. Growth must come in other ways, including this initiative that helped CoSA focus on priorities and targeted action on behalf of government records nationwide. SERI also reached out to staff members in state archives, engaging them in SERI subcommittees and other working groups within CoSA. The camaraderie of the institutes, training events, participation in subcommittee work, and development of a resource portal has helped CoSA train and prepare a core group of archival colleagues who will work together over the next several decades to increase proficiency with digital records in state archives and who, themselves, may represent the next generation of state archivists.

SERI also saw improvement in electronic records management and digital preservation in all states and territories. While a few states and territories realized only incremental changes, most used SERI programming to benefit their work and enhance their programs. CoSA’s plan to ensure that no state or territory remained behind in this initiative, regardless of its electronic records program’s sophistication, worked to the benefit of all member institutions.

CoSA has also 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 also by reaching out to archivists and librarians in non-governmental institutions as well. Many of the webinars and educational opportunities created by CoSA, as well as the information resources in the portal, have wide applicability to electronic records management and digital preservation programs in any type of institution, not just state government archives. For example, some state archives have the statutory responsibility to work on records management and archival issues with local governments. The resources developed through SERI are also useful for local government officials responsible for archives and records management. University archivists and records managers, librarians, and other public officials have attended the webinars or accessed recorded versions, which are freely accessible in the portal along with other resources.

With SERI, CoSA has built a keen sense of community and purpose. CoSA members work together collaboratively, sharing challenges, successes, and questions in webinars, meetings, and on listservs, including one specifically for SERI issues. With SERI, 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 throughout the grants. 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.
State and territorial archivists, equipped with an informed perspective on a range of records-related topics, are uniquely positioned to evaluate and discuss broad issues of technology, legality, privacy, security, transparency, and accountability in multiple contexts.

The SERI project solidifies and elevates CoSA’s position as an action-oriented thought leader, highlighting its expertise at the intersection of government, electronic records, digital preservation, and citizen engagement. State and territorial archivists, equipped with an informed perspective on a range of records-related topics, are uniquely positioned to evaluate and discuss broad issues of technology, legality, privacy, security, transparency, and accountability in multiple contexts.

Most notably, particularly through the ACCESS project, SERI strengthens CoSA’s collaborations with other professional organizations representing state governmental officials. By maintaining an open dialogue with its counterpart organizations, CoSA facilitates the collaboration of state archivists with influential executives and managers, such as Governors, Chief Information Officers, and Secretaries of State.

By having an open dialogue with counterpart organizations on how CoSA and state archivists can best collaborate with other state officials, CoSA members are positioned to support their state’s Governor, Chief Information Officer, Secretary of State, and other influential executives throughout state and territorial governments. CoSA’s growth as a catalyst for starting discussions and asking important questions has been enhanced by SERI and will continue as CoSA finds more opportunities to convene influential groups and facilitate significant discussions on the preservation of and access to digital government records and information. CoSA’s goal is to continue to expand its collaborative outreach, focusing on this role as a key to success in future organizational work.

Lessons Learned

In addition to the many positive changes brought about by SERI projects, the CoSA Board, the SERI Steering Committee and its subcommittees, and the membership also cite challenges in the lack of emphasis on certain aspects of electronic records and digital preservation work, and in incomplete projects and tasks.

SERI did not undertake a records management assessment. The DPCMM generally measures institutional capability for records already accessioned into the archives; it does not provide an adequate means of assessment for a broad spectrum of proactive records management initiatives developed during the early part of the lifecycle of a record, prior to its transfer to archival custody. The DPCMM will, of course, continue as an important assessment tool for CoSA members to use for longitudinal comparisons on digital preservation improvements, with the acknowledgement that it does not adequately measure the effectiveness of records management programs. CoSA may also investigate a quantifiable assessment for the records management life-cycle for use by all states and territories.

Governance was identified as one of SERI’s four principal areas of concentration in 2011, acknowledging the importance of a stable, participatory decision-making process for records issues within the state or territorial governance structure. A subcommittee made several efforts to organize work around governance issues, including examining different governance models, looking at each state’s governance structure, and defining governance best practices for records management and digital preservation issues. By having an open dialogue with counterpart organizations on how CoSA and state archivists can best collaborate with other state officials, CoSA members are positioned to support their state’s Governor, Chief Information Officer, Secretary of State, and other influential executives throughout state and territorial governments. CoSA’s growth as a catalyst for starting discussions and asking important questions has been enhanced by SERI and will continue as CoSA finds more opportunities to convene influential groups and facilitate significant discussions on the preservation of and access to digital government records and information. CoSA’s goal is to continue to expand its collaborative outreach, focusing on this role as a key to success in future organizational work.

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to state, the Governance Subcommittee faced difficulties in finding a common ground for positive action within SERI. The Governance Subcommittee was dissolved and its work became part of the Tools and Resources Subcommittee in 2015, with the work on governance yet to be defined. CoSA may concentrate further on governance issues as SERI continues, to delineate best practices in various scenarios and to examine strategies for management within existing governance models.

While the public and government officials are concerned with accountability and transparency, it is often difficult for them to connect newsworthy issues to the daily work of state archives and records management programs around the country. Very few elected officials, journalists, or residents make the connection between a records retention schedule, good recordkeeping practice, and the long-term availability of government information for public use. Records laws and recordkeeping best practices and policies do not generate the same level of interest that Freedom of Information Act (FOIA), or open records laws do. While FOIA is concerned with access to information after its creation, state archives and records management laws focus on the process of creating and preserving the record to ensure future access. This inability to relate access to government records to a strong interest in records creation and preservation is baffling to archivists and records managers, who view the continuum of records from creation to preservation to access as one integrated process. This is even more evident with electronic records, as the fragility of digital content requires more vigilance and technical expertise to ensure survival throughout its lifecycle, given the plethora of media and formats in which records are created in today’s rapid technology changes. CoSA continues to focus on emphasizing the importance of government records to the American people and the centrality of those records to everyday life.

**Staffing** is an age-old issue for archives, because processing and providing access to archival records has historically been labor-intensive. From picking up boxes filled with records at the end of a gubernatorial administration, to shelving those records in the archives, to spending hours arranging and describing the records for public access, and then adequately staffing a public service area, many person-hours are required for the physical care and intellectual control of government records. The custodial burden for electronic records requires even more time, resources, and skills, as more rigorous information technology, metadata, and preservation procedures are needed along with skilled records managers and archivists to appraise, ingest, and preserve electronic information. Electronic records require specific initial attention when being analyzed through the records inventory and description process, as particular technical requirements must be noted, and when being accessioned into the archives for ongoing custody in a digital preservation system. Staffing requirements do not decrease for electronic records archives from those of paper records, but often involve more technical and specified knowledge than is needed for the custody of paper records. CoSA will continue to assist state and territorial archives with information to help make the case for increased staffing and adequate resources to handle digital government information.
Recruitment and retention of staff, particularly electronic records and digital preservation archivists, has not been a focus in the SERI initiative. Finding and keeping qualified staff, however, is a dominant factor in a stable electronic records program. Many states with strong programs face diminished capacity when a staff person departs, often for a position with a higher salary in a university or in the private sector. CoSA plans to work with states and through several of its committees to look at attracting and retaining staff experienced in electronic records issues, by reaching out to undergraduate and graduate schools to familiarize students with career opportunities in state archives, by explaining the benefits of public service work, and by supporting existing staff with continuing education and training.

Continuity of personnel involved in SERI occasionally has been an issue, as the program has depended on a rotation of volunteers and contractors who were sometimes unable to continue participation in a project or committee after their job obligations expanded or their funding expired. This has resulted in somewhat disruptive transitions and has often curtailed the development of institutional knowledge about certain aspects of the work. CoSA, however, does have a core group of state archivists and staff interested and involved with SERI for the long-term. That group serves as a mitigating influence on turnover from contractors and volunteers on grant work. In 2017, the CoSA Board made the commitment to expand the services of one of its contractors, a former state archivist involved in SERI from its beginning, to concentrate on SERI activities and programs. The Board plans for gradual expansion of this part-time coordination work as it seeks additional funding.

The larger context of CoSA’s SERI project is not always apparent in the focus on state archives and records management programs. While making improvements within state archives, CoSA has not, with any consistency, looked toward the library, digital preservation, and digital humanities communities that might have an impact on electronic records and digital preservation work. CoSA has shared interests with digital preservation, digital humanities, and digital library projects, but has made only limited efforts to be involved in these related activities. CoSA should also more closely examine information technology frameworks and standards, and take advantage of current interests in other professions, especially information technology. With IT’s increased interest in security, CoSA can relate several of its preservation challenges to security standards, including the CIA Triad (Confidentiality, Integrity and Access). CoSA will plan to take advantage of its role as a convener of various groups to explore the context of SERI’s work within other initiatives and projects, looking at the commonalities in the broader context of digital preservation and electronic records management.
VI. SERI — FUTURE INITIATIVES

SERI has improved state government electronic records and digital preservation programs over the past six years. Yet, SERI as an emphasis and program for CoSA must continue, because the need for knowledge and best practices for electronic records management and digital preservation of state government records is mandatory for good government. Even with an effective training and education program, a rich portal of resources, and a renewed emphasis on advocacy for state archives electronic records programs, these efforts need constant attention and improvement to continue building capacity among our membership. Advocacy and awareness are central to progress and CoSA must remain a prolific collaborator with other professional associations.

CoSA is committed to assisting its members in continuous improvement of their electronic records management and digital preservation programs. To ensure the continued safety and security of state government digital records and information, the following actions are a priority for CoSA, for CoSA’s partners, and for all those concerned about continued creation of and access to records that document the actions and policies of state government.

Promote awareness about the criticality of managing and preserving government electronic records, and the urgent need for action.

CoSA will continue to increase awareness among state and territorial government officials of the vital importance of managing and preserving records. Elected and appointed officials in state and territorial governments must be more aware of the importance of government records as the foundation for government actions, to increase efficiency and transparency, and to ensure that documentation of policies, programs, and services is available in the future. CoSA will assist its members by providing state and...
territorial archivists with the informational tools needed to illustrate the potential for damage, security breaches, and unnecessary spending when agencies and governments fail to establish electronic records management and digital preservation programs.

While the volume and formats of digital records increase exponentially, changes in attitudes and funding to support management and preservation of state electronic records continues to move at a glacial pace. In FY 2016, the total of state and territorial government budgets reached nearly two trillion dollars. Out of that amount, an average of .007%, or a little over 112 million dollars, was allocated to archives and records management. A miniscule allocation for archives and records programs in the states and territories does not equip or prepare the state archives to handle the increasing number of electronic records created by government. If government recordkeeping could be tracked on a Doomsday clock, as some scientists track the possibility of nuclear destruction, the government records clock would be close to that metaphorical midnight.

Collaborate with allies, stakeholders, and users of government information

CoSA will continue to work with current partners and will emphasize outreach to allied groups, to increase awareness of and support for state archives in managing electronic records and digital preservation. CoSA will continue to build stronger relationships with influential national associations of government officials to help raise awareness among their members about electronic records management and digital preservation.

CoSA will partner with the National Association of Chief Information Officers (NASCIO) to assist states and territories in engaging state information technology professionals to address key common issues and to cooperate on the management and preservation of state government digital information. CoSA will also assist states and territories in creating stronger relationships with in-state stakeholders and users by providing educational and outreach materials on specific electronic records management issues to the National Governors Association (NGA), the National Association of Secretaries of State (NASS), and the Chief Officers of State Library Agencies (COSLA).

Create comprehensive and sustainable programming for electronic records management and digital preservation in state and territorial archives

CoSA will support a comprehensive SERI program over the next decade, and its board and members will continue to examine ways to ensure sustainability and fiscal support.

The incremental successes of the SERI program must continue, with certain issues accelerated based on current needs and priorities. SERI’s emphasis on creating improvements in education and training, advocacy and awareness, and tools and resources has been effective and must expand. CoSA’s Sustainability Task Force is investigating ways to maintain and grow SERI and other CoSA programs over the next decade. Further information will be forthcoming from the CoSA Board in 2017, with strategies to strengthen not only the SERI program but CoSA’s overall programs as well.

The SERI Steering Committee is moving forward with additional grant proposals to support work in two areas of immediate need. Those are:

- collaborating with allied professional groups to support improved electronic records management and digital preservation in the states and territories; and
• performing an environmental scan to discover existing shared testing environments for digital preservation tools.

Although grant funding is necessary to support SERI’s ambitious program, this work is too important for CoSA to depend solely on grant funds. CoSA’s Board and the Sustainability Task Force seek to discover additional programmatic support for SERI program coordination. As a small but necessary start, at the beginning of 2017, one of the CoSA contractors began working on SERI as part of CoSA programming assignments. This is the first time a CoSA staff/contractor working on SERI has been supported with non-grant funds.

Increase engagement of CoSA members

CoSA will continue to improve on communication and outreach with its members. CoSA will also help coordinate efforts among state archives to increase the number of cooperative projects, and to share programs, services, and lessons learned in electronic records management and digital preservation of state government records. State archivists and their staff members have been engaged in SERI programs for the past six years, with much progress facilitated by many CoSA members and staff. To ensure continued accomplishments in the future, this engagement must continue.

Strengthen SERI’s continuing education and training program for state archives staff

CoSA will remain committed to sustaining and improving its successful continuing education and training program for state and territorial archives staff. SERI’s emphasis on education and training for state archives staff has resulted in significant gains in knowledge and skills. Because the infusion of dedicated grant funds allowed for a four-year focus on training and continuing education, CoSA members made great strides in their ability to deal with electronic records management and digital preservation issues. The multifaceted approach of offering scholarships for individual training, face-to-face electronic records institute training, and basic and advanced webinars has proven to be a satisfactory combination. Sustaining the same level of training without continued grant funds or other funding will prove challenging, but CoSA has created a sound education and training blueprint for success in the future.

CoSA will issue a more detailed training plan as part of the IMLS grant. Highlights of the plan include:

• continuing to work with partners to provide training in digital preservation, and to increase co-branded training events;
• leveraging training materials from the electronic records institutes and webinars into sustained live or on-demand training programs;
• investigating feasibility of offering periodic electronic records institutes for state archives staff;
• working with graduate programs in archives, library, and information science to prepare and recruit electronic records and digital preservation archivists to work in state archives programs;
• creating a mentoring program for electronic records staff; and
• creating a CoSA Electronic Records speakers bureau for webinars and in-person training and collaborating with other archival speakers’ bureaus.
Improve PERTTS portal and CoSA resources

CoSA will continue to sustain and enhance the PERTTS portal to provide a comprehensive resource for information on electronic records management and digital preservation. With the PERTTS portal, CoSA's SERI program created a rich resource of documentation and links to materials for all aspects of digital preservation and electronic records management. During the NHPRC grant that funded the portal, CoSA hired a consultant to assist SERI participants in developing and populating the portal, but now the portal is maintained only by CoSA volunteers. For the portal to remain viable and up-to-date, staff participation in updating and improving its content is imperative. Similarly, increased participation from all fifty-six state and territorial archives will be needed to populate the portal with additional resources.

Think and act creatively

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. How prepared are we to meet the challenges facing us?

Although CoSA has made progress in creating incremental improvements in education and training, resource sharing, and creating awareness, the situation calls for an increasingly bold approach. As documented in the latest DPCMM results from 2015, even after applying multiple, creative solutions during its six-year emphasis on SERI and electronic records, CoSA still has far to go in helping its members stem the loss of an exponentially growing back log of government records in digital format. Even with considerable improvements and increased success in managing, preserving, and providing access to digital government records in most states and territories, much more progress is needed. CoSA must continue to approach digital government records creatively, encouraging continued active engagement by members and new partners, stakeholders, and funders. Every state and territory must also be a leader in developing new projects, reaching new constituencies, and continually educating individuals within their governmental structure on the importance of electronic records.
VII. CONCLUSION

These future initiatives will continue to bring positive and substantial change in all fifty-six state and territorial archives and will provide a framework for SERI programming, outreach, and collaboration. Over the coming years, CoSA's efforts will help ensure that important government records are preserved, secured, and made accessible for future generations. Long-range planning is currently underway within CoSA, as it is in the process of developing a Sustainability Plan, for short and long-term growth, to be voted on by the CoSA membership in July 2017. A primary consideration in the plan is SERI's central and strategic role in CoSA's mission, and how best to integrate SERI programming into ongoing CoSA activities. CoSA recognizes that it is not feasible for the national organization of state archivists and records administrators to work in the twenty-first century without an increasingly strong emphasis on electronic records and digital preservation in all its programs and services.

CoSA has made great strides in helping state and territorial government archives improve their electronic records and digital preservation programs, and the states and territories, in turn, have taken advantage of the opportunities offered by SERI for education and training, access to tools and resources, and advice on improving advocacy efforts. These efforts culminate in the creation of state archival programs that are better prepared to ensure proper management and long-term preservation of records that are vital to our citizens and to our nation. CoSA's work has mitigated somewhat our national risk of losing crucial documentation, and its ongoing plans will provide additional improvements.

As with many changes brought to our world by the proliferation of digital functions, government business continues to expand online, in apps, and in the cloud. With the moving target of changing technologies, CoSA will be challenged to ensure that government records with long-term value are preserved, rather than being deleted, lost, or overwritten. CoSA has experience in facing these issues, and will continue to work with its members to help ensure that government records in all fifty-six states and territories are accessible for generations to come.

SERI will continue as a strong national initiative that will ensure lasting improvements in the preservation of and access to digital government information, particularly if CoSA members, stakeholders, and users of government information provide consistent support. Preservation of and access to records is a paramount function of government, and CoSA will seek sustainable solutions and collaborate with others to ensure the safety and security of electronic records created by government. If widespread solutions and awareness do not increase, then state governments are indeed imperiling our documentary heritage. Without a continuing and vigilant program to safeguard state government digital records, we risk incurring the perpetual, detrimental erosion of our national identity.
VIII. NOTES

Unless otherwise noted, all web citations were accessed and refreshed on May 5, 2017.


2 Of the 56 state and territorial archives, 54 responded the 2011 survey. There were 55 respondents to the 2017 survey. The one state/territory that did not respond in 2017 does not have an electronic records program and was placed in category D in this chart.


10 Chart courtesy of Daniel J. Noonan, Associate Professor and Digital Preservation Librarian, The Ohio State University.

11 CoSA, Importance of State Archives, p. 2


14 Ibid., pp. v-vi.


20 The following list is comprised of original participants in the NDIIPP projects. Additional state participants were added later in several of the projects.


Governance would later be merged into Tools and Resources during SERI – Phase III.


See later section in this report, SERI PHASE II — 2015 Self-Assessments.


Unpublished CoSA materials.

For the Advanced Institutes, this question was modified slightly, as “What steps would you take to improve your electronic records program?”


For an explanation of the DPCMM, see earlier section “2012 Self-Assessment,” p. 17.


IX. ACKNOWLEDGEMENTS

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X. ABOUT THE COUNCIL OF STATE ARCHIVISTS

Formed in 2002, the Council of State Archivists (CoSA) is a national nonprofit that uses collaborative research, education and advocacy to provide leadership that strengthens and supports state and territorial archives in their work to preserve and provide access to government records. Its members comprise the state archivists in the 50 state, 5 territorial and District of Columbia archives. These individuals oversee agencies that hold a legal mandate to document government and protect the rights and history of the American people across our country.

Responding to the explosive growth of electronic records, CoSA began the State Electronic Records Initiative (SERI) project in 2012 to address their long-term care and access. SERI provides critical training and networking to the state archival community in electronic records management and preservation. CoSA administers the PERTTS Portal with open availability to information, resources, and training opportunities. Beginning in late 2017 and running for two years, CoSA will work with a range of allied organizations to promote the importance of electronic records management and digital preservation with a series of guidance materials, conference and workshop presentations, and webinars. SERI’s funding has come largely from the Institute of Museum and Library Services (IMLS) and the National Historical Publications and Records Commission, and from Preservica, who Practical Digital Preservation webinars.