

# Toward a Common Understanding

## INSIGHTS ON INTER-AGENCY STATE ELECTRONIC RECORDS TRANSFER

December 2019

PREPARED WITH THE  
GENEROUS SUPPORT OF



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# CONTENTS

Foreword	ii
Executive Summary	iii
Survey Highlights	iv
Communications Challenges	iv
Opportunities	iv
Introduction	1
Project Methodology	2
Presentations	4
Inter-agency Records Transfer Survey Findings	5
Demographics	5
<b>Figure 1.</b> Percentage of Agency, CIO, and Archives Respondents	5
Records Eligibility	5
<b>Figure 2.</b> Agencies Identified Permanent Records	5
Transfer Requirements	5
<b>Figure 3.</b> Transfers to Archives by State Agencies	6
<b>Figure 4.</b> Transfer Protocols Supported Reported by Group	6
Preservation Planning	6
<b>Figure 5.</b> When Agencies Communicate with Archives	7
<b>Figure 6.</b> Engagement of Archives in Technology Refresh Cycle	7
Systems of Record	7
<b>Figure 7.</b> All Three Respondent Groups	7
Collaboration and Communication Opportunities	8
Records Eligibility	8
Transfer Requirements	8
Preservation Planning	8
Systems of Record	9
About CoSA	9
About NASCIO	9
About Preservica	9
Appendix 1: Inter-agency Records Transfer Survey	10
Appendix 2: CoSA Member Pre-survey	20
Appendix 3: State Inter-agency Electronic Records Transfer Checklist	22

# FOREWORD

Government agencies in US states, territories, and the District of Columbia create millions of public records on an annual basis that must be captured and managed in accordance with respective recordkeeping laws, mandates, and good practices. Increasingly, these records are ‘born-digital’ and the proliferation of information technology platforms, applications, and storage options across all levels and branches of government bring significant risks to retaining and preserving permanent government records. These risks also extend to analog records converted to digital formats for preservation and public access.

Risks include the obsolescence of software and hardware, the fragility of digital media, lack of dedicated resources to manage electronic records, and a lack of understanding among state agencies about digital records preservation techniques and standards. Exacerbating these issues is the reality that effective electronic records management remains a low priority and largely underfunded mandate in state government. For the state, territorial, and district archives with a mission to identify, preserve, and provide access to permanent government records with historical value to current and future users, the challenges are manifold.

This report documents the genesis, implementation, and findings of a research project targeted at shedding light on current practices associated with the inter-agency transfer of permanent electronic records undertaken by the Council of State Archivists (CoSA) and sponsored and supported by Preservica. Preservica has been a corporate sponsor of CoSA since 2015, and shares the association’s commitment to preserve and provide access to permanent government records.

Support and feedback from the National Association of State Chief Information Officers (NASCIO) was instrumental to the success of the survey and report. Support for this publication was also provided by the Institute of Museum and Library Services (IMLS) through a National Leadership Grant to the Council of State Archivists (CoSA) for Archives Collaborating and Cooperating with External Strategic Stakeholders (ACCESS), a project of the State Electronic Records Initiative (SERI).

# EXECUTIVE SUMMARY

In meetings with CoSA's leadership, Preservica representatives learned of the Board's strong interest in research projects that could help describe and quantify the nature and scale of electronic records management challenges. The Board's vision was to use research findings to further engage state and territorial government officials in recognizing and addressing the risks to state government electronic records, as well as strengthen ongoing collaborative efforts with allied professional groups.<sup>1</sup>

A research project was jointly developed based on the premise that long-term and permanent records held by agencies, many in centrally-managed enterprise systems, might not be adequately protected from risks of file format and digital media obsolescence. In addition to better understanding which systems agencies use to manage the electronic records eligible for transfer to the state archives, the project planned to identify gaps in processes, guidance, and accountabilities impacting records transfer between agencies and archives.

Once a project team was in place and the National Association of Chief Information Officers became a partner, a survey was developed and fielded to state archives and state government agencies. The survey (Appendix 1) was issued on April 17, 2018, and closed on May 8.

The final survey focused on permanent records appraised for transfer to the archives. Representatives from 27 states and territories responded to the survey. Archives staff were the second most frequent responders and IT unit staff the smallest number of respondents.

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<sup>1</sup> Allied professional groups CoSA has worked closely with include: NASCIO, NGA, NASS, COSLA.

## SURVEY HIGHLIGHTS

Agencies were asked if they had identified permanent state electronic records to be transferred to the archives.

- 40% of responding agencies had identified permanent state records to be transferred to the archives
- 60% either had not identified any permanent records or were unaware if they created permanent state electronic records
- 60% of archives reported that they have a current list of permanent state government records that they expect to receive from each of the agencies
- Nearly half (42%) of responding agencies were unaware of permanent records transfer requirements

While technical infrastructure is undoubtedly the foundation for many inter-agency transfer of capabilities in state government, agencies are largely unaware of IT agency support for transferring permanent state electronic records to the archives.

- 55% of reporting IT agencies support their state agencies in the transfer of their permanent state electronic records to the archives
- Only 5% of state agencies reported that transfer to the archives is an IT-supported activity.

Furthermore, responses underscored a lack of common understanding about where permanent state electronic records are created or stored.

## COMMUNICATIONS CHALLENGES

The majority of agency respondents reported that they communicate with the archives on an ad hoc basis. Given the increase in technology refresh cycles and backlog of electronic records yet to be transferred, this gap in proactive communication is troubling.

IT agencies and archives both reported that archives are rarely consulted in many of the stages of technology refresh. Failure to understand the life cycle requirements of electronic state records while developing/managing the technologies used to create, provide access to, and maintain those records represents a significant risk and lost opportunity.

## OPPORTUNITIES

However, opportunities for increased collaboration and communication exist.

- Routine communications between archives and agencies about permanent records on specific electronic records management topics is one way to significantly increase networking between archives, IT and record producing agencies. Not only would regular and scheduled engagements help the archives to anticipate and plan for accessions, they could serve as a reminder for IT support and agencies to schedule resources and validate transfer protocols.
- Archives and agencies can dialogue, using inventories of archival holdings and current retention schedules, to identify which records are permanent and where there is a requirement to transfer to the archives.
- Agencies should map the permanent records series they create to the systems and repositories they use. State CIOs and IT agency staff should analyze the maps from agencies and document which systems of record under their care are impacted and then research options for transfer. Archives can become more familiar with the systems and software used by agencies, identify records and metadata requirements for transfers, and help IT develop workflows.
- With relatively few state electronic records transfer guidelines in place, archives have an opportunity to define the common practice for electronic records transfer and develop transfer practices that will support the needs of the agencies in a standardized, routine way that the archive can successfully manage.
- Since the majority of permanent records transfers are currently ad hoc and manual, the archives have a clear opportunity to support agency staff and engage the IT agency to consider automated transfers.
- State CIOs should include archives staff in planning activities in order to proactively address life cycle and transfer requirements.



# INTRODUCTION

In 2017, the Council of State Archivists (CoSA) published *A National Risk: The State of State Electronic Records Report*, which chronicled the association's work to advance electronic records management and digital preservation capabilities through its flagship program, the State Electronic Records Initiative (SERI). Launched in 2011, SERI has delivered tools, education, and resources to help states and territories build capacity to take on the challenges of electronic records management and digital preservation.

While significant progress has been made in the six years of continual program development and improvement, the report offered the stark recognition that “coordinated effort to ensure the safety and security of our permanent digital government records is still in its infancy.”<sup>1</sup>

In meetings with CoSA's leadership, Preservica representatives learned of the Board's strong interest in research projects that could help describe and quantify the nature and scale of electronic records management challenges. Preservica has been a corporate sponsor of CoSA since 2015, and shares the association's commitment to preserve and provide access to permanent government records. The Board's vision was to use research findings to further engage state and territorial government officials in recognizing and addressing the risks to state government electronic records, as well as strengthen ongoing collaborative efforts with allied professional groups.<sup>2</sup>

In fall 2017, Preservica submitted a research proposal identifying the backlog of electronic records appraised for permanent retention and

transfer to the state archives—but still within the custody of the records owning agency—as the focus of a research project. The inspiration for this project's focus came from the final section of the 2017 report where the author acknowledged that “CoSA still has far to go in helping its members stem the loss of an exponentially growing backlog of government records in digital format.”<sup>3</sup> While most archives have legal custody of a backlog of materials waiting to be processed, the goal of this study was to look upstream for collections of electronic records eligible, but not yet transferred, to the archives.

The premise of this research focus was that long-term and permanent records held by agencies, many in centrally-managed enterprise systems, might not be adequately protected from risks of file format and digital media obsolescence. In addition to better understanding which systems agencies use to manage state electronic records that are eligible for transfer to the state archives, the proposed research project could potentially identify gaps in processes, guidance, and accountabilities impacting records transfer between agencies and archives.

We posited that with insights gained through the electronic records backlog survey, CoSA could potentially identify ways to increase awareness and support for more coordinated approaches among stakeholders to advance electronic records protection and preservation. Opportunities could be explored with CoSA's named ACCESS (Archives Collaborating and Cooperating with External Strategic Stakeholders) partner associations in its Institute of Museum and Library Services National Leadership Grant Project.

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<sup>1</sup> Council of State Archivists. “The State of Electronic Records Report.” 2017, page 2.

<sup>2</sup> Allied professional groups CoSA has worked closely with include: the National Association of Chief Information Officers, the National Governors Association, the National Association of Secretaries of State, and the Chief Officers of State Library Agencies.

<sup>3</sup> Council of State Archivists, “The State of Electronic Records Report,” 2017, page 3.

# PROJECT METHODOLOGY

Following acceptance of Preservica's sponsorship proposal by CoSA, the Backlog Research Project team was formed, which included:

- Barbara Teague, CoSA Executive Director
- Sarah Koonts, State Archivist, State of North Carolina
- Veronica Martzahl, Digital Records Archivist, Commonwealth of Massachusetts
- Allen Ramsey, Assistant State Archivist, State of Connecticut
- Michelle Gallinger, CoSA Consultant and SERI Coordinator
- Lori Ashley, Industry Market Development Manager, Preservica

During a series of initial planning meetings, the project team explored the scope and approach for the research effort. Deliberations included which allied partners to invite to participate and whether to limit the scope to permanent archival electronic records or include long-term (10+year retention) records which share risks associated with digital fragility, technology obsolescence, and file format migration.

Drawing on the Recommended Practice for a Producer-Archive Interface Methodology Abstract Standard,<sup>4</sup> a list of requirements and routine actions between records producers (state agencies) and archives was drafted. Each item in the list was tagged with "Agency," "IT," or "Archives" to indicate primary and shared accountabilities. From this exercise, the project team confirmed the criticality of the IT function in facilitating the transfer of records from agency to archives and identified NASCIO as a priority named partner for the survey. CoSA Executive Director Barbara Teague engaged NASCIO's Executive Director, Doug Robinson, and secured early support for the research effort. Project team members provided regular updates to the SERI Steering Committee and gathered feedback on the developing research scope and plans.

On the advice of the CoSA Executive Committee during a project status meeting held during the 2018 CoSA Annual Conference, the project team set out to narrow the scope of the research project. It was determined that a pre-survey with CoSA members would be most helpful in this regard.

The project team re-convened in September 2018 and began drafting a short survey to be sent to CoSA members in the fall. The team hoped to validate and expand its draft list of systems and storage methods in use by agencies. Finally, the survey would be used to assess the confidence level of CoSA members regarding long-term management and transfer capabilities of electronic records by agencies, and to find opportunities to improve transfer capabilities.

Recognizing that midterm elections for numerous state-wide positions<sup>5</sup>, including governorships in 36 states, three U.S. territories, as well as for the Mayor of the District of Columbia, would demand the attention of many of CoSA's members, the project team determined that deployment of the full survey would need to wait until spring 2019. NASCIO anticipated that as many as two dozen CIO positions might be impacted by the election outcomes<sup>6</sup> and agreed to the revised release date.

Thirty-six state and territorial archives responded to the pre-survey, revealing a range of agencies that regularly transfer archival records and associated records types. The most common responses covered records created by elected officials (for example, the Governor, Lt. Governor, or, in some cases, the Secretary of State), constitutional officers, and the Legislature. These same offices, with the addition of state courts, Attorney General, Transportation, Environmental Management, and a few other executive branch agencies, appeared in the "wish list" of the responding archivists. With regard to confidence level on lifecycle management of long-term and

<sup>4</sup> International Organization for Standardization, Standard 20652-2006, which identifies, defines, and provides structure to the relationships and interactions between an information producer and an archive.

<sup>5</sup> Council of State Archivists, "The State of State Records," 2019. 30% of state archives and records management programs report to the Secretary of State's office. The Secretary of State is an elected official in most jurisdictions.

<sup>6</sup> John Thomas Flynn, "NASCIO at 50 Years, 24 New State CIOs since 2018," Federal New Network, May 16, 2019. <https://federalnewsnetwork.com/ask-the-cio-sled/2019/05/nascio-at-50-years-24-new-state-cios-since-2018/>

permanent electronic records, the results validated the stated goals of the survey effort.

- **83%:** Respondents concerned about systems capabilities and storage methods used by agencies to efficiently transfer archival electronic records and metadata to the state archives for preservation and access.
- **71%:** Respondents concerned about records systems capabilities and storage methods used by agencies to ensure the long-term readability and authenticity of non-archival electronic government records.

From the pre-survey results it was evident that most responding archives did not have a clear line of sight into the applications and storage methods used by agencies to create and manage permanent government records, with the exception of email, social media, websites, ECM and shared drives. It was equally clear that the number and diversity of agencies and offices that the respondents expected or hoped would send electronic records on a regular basis were more than could be reasonably handled in the backlog survey.

The project team agreed to limit the focus to transfer by agencies of electronic records appraised for permanent archival preservation. The survey was then renamed the Inter-agency Records Transfer Survey.

The project team focused its efforts on a scaled back set of activities and capabilities used by electronic records-producing agencies (with support from internal or external IT) to transfer custody of state government records appraised for permanent preservation to the state or territory archives for preservation and access. Further refinement resulted in lists of common records/storage systems and transfer protocols with assistance from NASCIO. The three key stakeholder groups for the survey were identified:

- **Records Producers:** agencies that produce electronic state government records that are appraised for permanent preservation and have an obligation to transfer the records to the archives
- **IT Support:** internal agency, central state IT, or third-party information management and technology support units that manage records or storage systems used by state agencies and/or the communications systems that must be used during inter-agency records transfers

- **Archives:** agencies with mandates to appraise, describe, ingest, preserve and provide access to permanent archival state government records

As work on the survey questions neared completion, the approach for distribution was finalized. CoSA and NASCIO would each send members an email invitation with a link to the survey. The cover email encouraged association members to forward the survey link to state agencies.

After filling out a few demographic fields and self-identifying their respective roles (agency, IT or archives), participants were presented with a series of questions on a set of core topics that included:

- Awareness of permanent records appraised for transfer to the archives
- Transfer protocols and practices
- Identification of software and data management systems containing permanent records
- Inter-agency communication and collaboration
- Availability of guidance and standards
- Preservation planning

The final question in each version of the survey invited the respondent to provide CoSA with any comments relating to the inter-agency transfer of records.

The survey (Appendix 1) was issued on April 17, 2018 and closed on May 8. Follow-up reminders were sent by Michelle Gallinger and CoSA's Executive Director through CoSA and NASCIO communications channels to help boost participation.

The survey was still open when Barbara Teague and Lori Ashley made a presentation about the research project at the Best Practices Exchange Conference on April 29, as part of a combined session. The presentation described key focus areas and pre-survey highlights which helped to inform the project's methodology.

Analysis of the results by Michelle Gallinger began shortly after the survey close. Preliminary results and a series of compare and contrast charts were reviewed by the project team in mid-June. A list of transfer-related links on state archives sites was compiled and a checklist of actions to improve inter-agency records transfer was drafted. Further analysis and recommendations for presenting



the findings was approved by the project team by mid-July. They also tentatively identified the potential to collaborate with NASCIO on guidance materials to educate stakeholders on good practices and techniques for transferring electronic records between systems and agencies.

Lori Ashley updated the presentation slide deck with the latest charts. Alejandra Dean, Assistant Digital Records Archivist at the Massachusetts State Archives (and SERI Tools and Resources Committee co-chair) was recruited to co-present at the upcoming NAGARA conference. Lori briefed Alejandra on the project background and findings, and together they strengthened the presentation deck and prepared speaker notes. Eighty-percent of those who attended the session on July 20th found the information “very useful” or “somewhat useful” and two attendees commented that the final report would likely be of interest to NAGARA members.

At the 2019 CoSA Member Meeting in Austin, TX, Michelle and Lori presented the research findings.

The presentation included a screenshot of the draft action checklist and a tentative timeline for the survey report to be issued.

## **PRESENTATIONS**

- Best Practices Exchange, Collaboration Strategies for Transfer, Preservation, and Access (Combined session)/Digital Government Records Preservation: Backlog Research Highlights, April 29, 2019 - Columbus, OH
- NAGARA, Digital Government Records Backlog Research Highlights, July 20, 2019 - St. Paul, MN
- CoSA Membership Meeting, Interagency Records Transfer Survey Highlights, August 3, 2019

Following the annual meeting, Michelle and Lori were tasked with drafting a report on the project. The next section of this report details the findings of the Inter-agency Records Transfer Survey and is followed by a section on opportunities for advancing collaboration and coordination among the permanent record producing agencies, technology support agencies, and the archives.

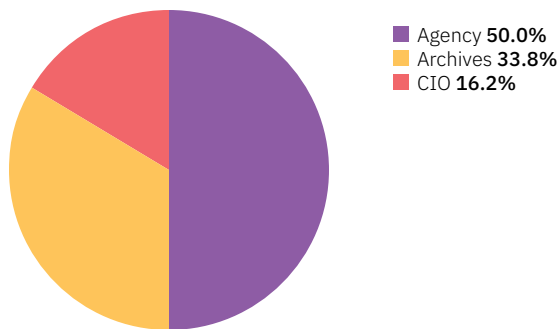
# INTER-AGENCY RECORDS TRANSFER SURVEY FINDINGS

## DEMOGRAPHICS

Representatives from 27 states and territories responded to the survey. Archives staff were the second most frequent responders and IT unit staff the smallest number of respondents.

The majority of respondents were agency staff, with the majority of those being from the State of Maryland. The extraordinary response from Maryland state agencies was due to the communication of a Maryland State Archives staff member who repeatedly reached out to encourage response from the state's agencies.

**Figure 1.** Percentage of Agency, CIO, and Archives Respondents



## RECORDS ELIGIBILITY

State records are appraised for permanent historical value and eligible to be transferred to the archives based on the records retention schedules of that state. Questions in the survey addressing records eligibility were designed to assess whether agency, IT and archives staff were aware of pending permanent electronic records transfers. While agencies have long transferred archival records in paper format, management and transfer of electronic records requires additional skills and resources.

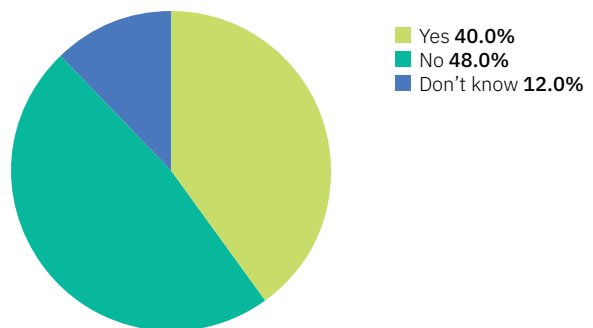
The survey focused on permanent records appraised for transfer to the archives. Agencies were asked if they had identified permanent state electronic records to be transferred to

the archives. Only 40% of responding agencies had identified permanent state records to be transferred to the archives; 60% either had not identified any permanent records or were unaware if they created permanent state electronic records.

While this response might suggest that a significant portion of electronic records are not properly managed for permanent storage, it is difficult to gauge the depth of the problem because responses from archives are not in synch with the responses from the agencies. Almost 61% of archives reported that they have a current list of permanent state government records that they expect to receive from each of the agencies.

From the pre-survey and survey results it appears that the archives know which permanent state records have come to them in the past and are aware agencies have permanent electronic records that have not yet made it to the archives. The differences between the reporting by archives and agencies for permanent archival records that are eligible for transfer would seem to validate the proposition that a backlog exists and should be addressed.

**Figure 2.** Agencies Identified Permanent Records



## TRANSFER REQUIREMENTS

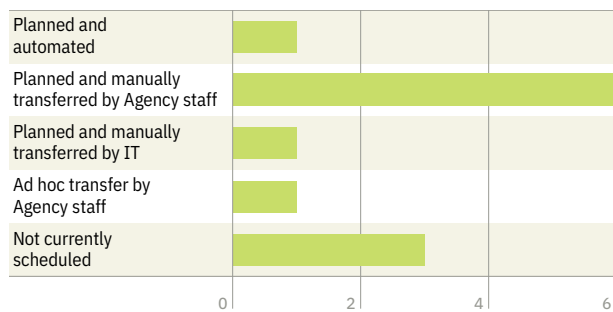
Less than half (42%) of responding agencies were unaware of permanent records transfer requirements. While some responding archives had current electronic records transfer guidelines, others commented they felt the need to update

their guidelines or did not have formal guidelines in place.

Agencies were asked to report how and when they transferred permanent state records to the archives. Relatively few ad hoc transfers and relatively few planned-and-automated transfers were reported.

Given the exponential growth in electronic records and storage,<sup>7</sup> manual scheduling and transfers are insufficient to match the scale and diversity of government records. The gap in readily available guidance and lack of planning for records transfer is noteworthy. Pre-configuring records systems and automating transfer to ease the burden on agencies and increase the number of records preserved and available for use will require closer collaboration between record producing agencies and archives.

**Figure 3. Transfers to Archives by State Agencies**

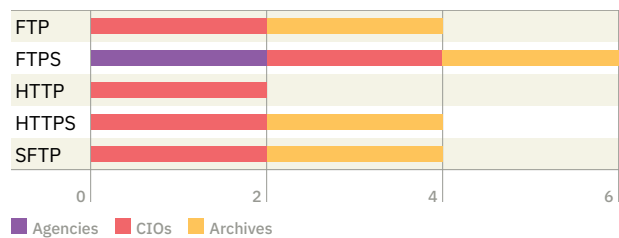


While technical infrastructure is undoubtedly the foundation for many inter-agency transfer capabilities in state government, agencies are largely unaware of IT agency support for transferring permanent state electronic records to the archives. Only 5% of agencies reported that transfer to the archives is an IT-supported activity.

Thirty-percent of archives reported having full IT support for state electronic records transfer. The remaining 70% of respondents indicated additional opportunities for IT support around records transfer. This response correlates with responses from IT agencies, 55% of whom reported supporting agencies in the transfer of their permanent state electronic records to the archives.

This fractured understanding among stakeholders is reflected in the reporting of the transfer protocols shown in Figure 4. Although agencies were the largest group of survey responders they identified only one kind of transfer protocol supporting their transfer activities. Archives confirmed the availability of numerous electronic records transfer protocols; the notable exception was that archives did not believe HTTP transfer was supported. IT agencies identified all listed transfer protocols as being supported for transfer of electronic state records.

**Figure 4. Transfer Protocols Supported Reported by Group**



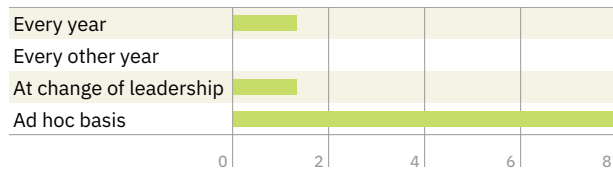
## PRESERVATION PLANNING

Preservation planning includes a number of tasks from creation to maintenance, transfer, and preservation of electronic records designed to protect the integrity and usability across systems and custodians. The questions posed in the survey were intended to determine at what stages of electronic record creation and use the planning work between agencies and archives takes place. One way to determine if agency and IT staff are planning for preservation is to identify when they communicate with the archives.

The majority of agency respondents reported that they communicate with the archives on an ad hoc basis. Most agencies do not have formal or scheduled communication with state archives. Communication happens, for instance, at conferences, meetings, in hallways, or when organizations require specific information. Given the increase in technology refresh cycles and backlog of electronic records yet to be transferred, this gap in proactive communication is troubling.

<sup>7</sup> National Association of State Chief Information Officers, "State Archiving in the Digital Era," 2018, page 3. [https://www.nascio.org/Portals/0/NASCIO\\_CoSA\\_Pub18.pdf](https://www.nascio.org/Portals/0/NASCIO_CoSA_Pub18.pdf). Between 2006-2016 there was a 1693% growth in state and territorial electronic records. This represents the 445% growth in electronic state records versus the paper records in state and territorial archives.

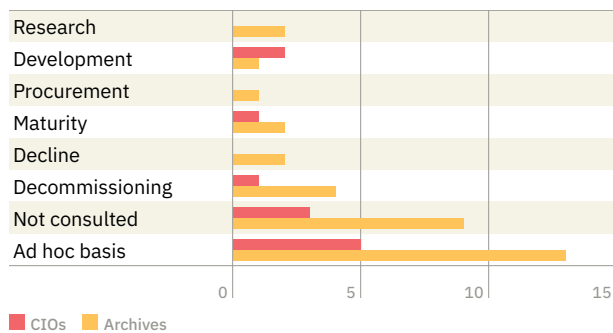
**Figure 5. When Agencies Communicate with Archives**



In some states, changes of leadership have spurred increased communication. In others, an annual meeting has been scheduled. Increased and regular communications between record-producing agencies and the archives is one way to potentially address the backlog of permanent electronic state records at agencies.

IT agencies and archives both reported that archives are rarely consulted in many of the stages of technology refresh. Failure to understand the lifecycle requirements of electronic state records while developing/managing the technologies used to create, provide access to, and maintain those records represents a significant risk and lost opportunity. It is not surprising ad hoc manual processes are relied upon by agencies since the systems of record aren't designed or configured to automate lifecycle actions.

**Figure 6. Engagement of Archives in Technology Refresh Cycle**



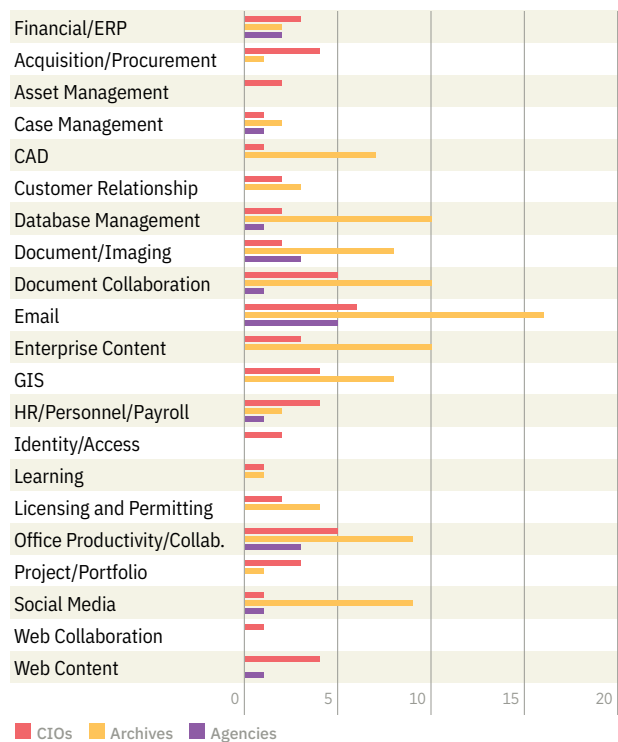
**SYSTEMS OF RECORD**

State information technology environments are complex and dynamic. Temporary and permanent government records are created and stored in a variety of software and data management systems that are managed by agency staff and central IT support, as well as third parties.

All three responding groups were asked to indicate systems of permanent records from a list of common software application types.

Agency responses indicated permanent state electronic records are managed in a relatively small number of software and data management systems. IT agencies responded they expected to find permanent state electronic records in every software and data management system on the list. Archives indicated permanent state electronic records were likely to be found in many, but not all, systems. These responses further underscore a lack of common understanding about where permanent state electronic records are created or stored.

**Figure 7. All Three Respondent Groups**



# COLLABORATION AND COMMUNICATION OPPORTUNITIES

Even with a relatively small sample size and the narrow snapshot in time represented by the survey findings, significant gaps in understanding and coordination among the responding agencies regarding the requirements, timing and methods for transferring permanent electronic state government records are apparent. This section identifies some potential opportunities for increased collaboration and communication based on the topic areas covered in the survey.

An Inter-Agency Electronic Records Transfer Checklist (Appendix 3) was created by the backlog research project team to help CoSA members develop their own guidelines for transfer within their respective state, territory or district. It may also serve as a useful starting point for discussions with the State CIOs office.

## RECORDS ELIGIBILITY

**OPPORTUNITY** It appears that there are ample opportunities to increase routine communications between archives and agencies about permanent records. Twice yearly exchanges on specific electronic records management topics are one way to significantly increase networking among archives, IT, and record-producing agencies. Not only would regular and scheduled engagements help the archives to anticipate and plan for accessions, they could serve as a reminder for IT support and agencies to schedule resources and validate transfer protocols.

**OPPORTUNITY** It appears from the survey results that even agencies with established histories of sending paper records to the archives have not sufficiently mastered the routing, identification, and transfer of permanent electronic records. Archives and agencies can dialogue, using inventories of archival holdings and current retention schedules, to identify which records are permanent and where there is a requirement to transfer to the archives. These discussions could also serve to explore expectations about cutoff practices and opportunities to discuss transfer options.

## TRANSFER REQUIREMENTS

**OPPORTUNITY** Only 39% of responding archives have created and circulated guidelines to agencies about how to transfer permanent state electronic records. Some archives that have circulated guidelines recognized that their materials need to be updated. This is clearly a gap that can be addressed by the CoSA community through established education and resource-sharing mechanisms. Once documented, the archives can engage and educate stakeholders on good practice methods and approaches.

Archives can seek ways to collaborate with their state CIOs to garner support for timely and efficient transfers. There is an opportunity to define common practice for bulk records transfer and drive down the amount of human touch (and the cost) each record requires to transfer and then to process.

With relatively few state electronic records transfer guidelines in place, archives have an opportunity to define the common practice for electronic records transfer and develop transfer practices that will support the needs of the agencies in a standardized, routine way that the archive can successfully manage. State archives can update or create their electronic records transfer guidelines and use Appendix 3, the State Interagency Electronic Records Transfer Checklist, to do so. Archives could use the checklist to begin working with state CIOs and state IT to clarify transfer capabilities and preferred protocols for agencies to use.

## PRESERVATION PLANNING

**OPPORTUNITY** The backlog of records appraised for permanent preservation by the archives, but stuck in upstream records systems, was validated by the survey responses.

Since the majority of permanent records transfers are currently ad hoc and manual, the archives have a clear opportunity to support agency staff and engage the IT agency to consider automated transfers. Since technical support is undoubtedly key to improving these capabilities, attention and



support from agencies, archives, and state CIOs will be needed.

**OPPORTUNITY** The amount of human involvement needed to prepare, transfer, manage, and provide access to permanent state electronic records could be reduced by greater involvement of archives staff in technology refresh cycles.

State CIOs should include archives staff in planning activities in order to proactively address life cycle and transfer requirements.

Routine and timely transfers could help reduce records systems storage needs and costs. Separating out the permanent electronic records from the temporary records might also improve timely disposition of the temporary records.

## **SYSTEMS OF RECORD**

**OPPORTUNITY** The survey helped to illustrate the confusion among stakeholders regarding where permanent records series are being managed in state government electronic information systems.

Building consensus and a clear line of sight into systems and software used by agencies will require a concerted effort by all three of the surveyed groups. Agencies should map the permanent records series they create to the systems and repositories they use. State CIOs and IT agency staff should analyze the maps from agencies and document which systems of record under their care are impacted and then research options for transfer.

Archives can become more familiar with the systems and software used by agencies, identify records and metadata requirements for transfers, and help IT develop workflows. Familiarity with systems and software used in state agencies can help the archives plan for technical requirements for transfer.

**OPPORTUNITY** Establishing regular, scheduled, and consistent communication among CIOs, state agencies, and state archives about their systems and software will greatly help the archives plan for seamless records transfers that will benefit everyone.

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### **ABOUT COSA**

Formed in 2002, the Council of State Archivists (CoSA) is a national nonprofit using 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. For more information, visit [www.statearchivists.org](http://www.statearchivists.org).

### **ABOUT NASCIO**

Founded in 1969, the National Association of State Chief Information Officers (NASCIO) represents state chief information officers (CIOs) and information technology (IT) executives and managers from the states, territories and District of Columbia. NASCIO's mission is to foster government excellence through quality business practices, information management and technology policy. NASCIO provides state CIOs and state members with products and services designed to support the challenging role of the state CIO, stimulate the exchange of information and promote the adoption of IT best practices and innovations. From national conferences to peer networking, research and publications, briefings and government affairs, NASCIO is the premier network and resource for state CIOs. For more information, visit [www.NASCIO.org](http://www.NASCIO.org).

### **ABOUT PRESERVICA**

Preservica is changing the way organizations around the world protect and future-proof critical long-term digital assets. Available in the cloud (SaaS) or on premise, our award-winning active digital preservation software has been designed from the ground-up to tackle the unique challenges of ensuring digital information remains accessible and trustworthy over decades.

It's a proven solution that's trusted by a growing number of governments, archives, libraries, museums and businesses around the world including the City of Boston, University of Notre Dame, Associated Press, MoMA, Transport for London, World Bank, Yale University and 21 US state archives including Texas, California, and Massachusetts. For more information, visit [www.preservica.com](http://www.preservica.com).

## APPENDIX 1

# INTER-AGENCY RECORDS TRANSFER SURVEY

The following questions were aimed at three stakeholder groups: 1) agencies responsible for the creation of permanent government electronic records; 2) agencies responsible for enterprise IT systems and support; and 3) agencies with the mandate to preserve archival government records. The invitation was via an email to state CIOs via the National Association of State Chief Information Officers (NASCIO), and state, territorial, and the District of Columbia archivists via the Council of State Archivists (CoSA). After self-identifying their affiliation, respondents were directed to questions designed for them.

### **COSA INVITATION**

The Council of State Archivists (CoSA), with support from its corporate sponsor Preservica, is conducting survey research examining interagency transfer practices for permanent state electronic records. CoSA also appreciates the cooperation of the National Association of State Chief Information Officers (NASCIO) in formulating and distributing this survey. By participating in this short survey, you can help identify challenges and risks relating to electronic records transfer.

The survey has been designed to capture three perspectives: Agency, State IT, and State Archives. Please select the perspective you best represent at the start of the survey. You will then be routed to the relevant page in the survey.

For each perspective, there are 13 or 14 questions, that will take 10-15 minutes for your response. Thank you for your participation and for helping CoSA with this research project.

Questions? Contact Michelle Gallinger, CoSA Consultant, at [mgallinger@gallingerconsult.com](mailto:mgallinger@gallingerconsult.com).

### **1 Organizational information**

State or Territory Organizational unit: \_\_\_\_\_

Parent Agency, if applicable: \_\_\_\_\_

### **2 Contact information**

Name \_\_\_\_\_

Title \_\_\_\_\_

Email address \_\_\_\_\_

**3 Please select the description that best describes the perspective that you represent in responding to this survey:**

- Agency – State or territorial government unit or organization that produces electronic government records scheduled for transfer to the Archives
- IT – State or territorial government unit or organization that provides technical information management systems and support services to Agencies
- Archives – State or territorial agency that has legal mandate and authority to take control of government records with appraised historical value for preservation and management

### Agency Questions

**4 Does your Agency have permanent electronic records identified for transfer to the Archives?**

- Yes
- No
- Don't know

**5 If yes, are these transfers:**

- Planned and automated
- Planned and manually transferred by Agency staff
- Planned and manually transferred by IT
- Ad hoc transfer by Agency staff
- Not currently scheduled
- Other (please specify): \_\_\_\_\_

**6 Which of the following data management systems contain permanent electronic records that your Agency intends to transfer to the Archives? (Permanent records are defined in your state’s records retention schedule.) Please check all that apply.**

- |  |   |
|--|---|
| <input type="checkbox"/> Accounting, Billing, Budgeting, and Financial Management ERP (such as CGI, Oracle, SAP) | <input type="checkbox"/> Geographic Information Systems (such as ArcGIS, ArcInfo)                           |
| <input type="checkbox"/> Acquisition/Procurement System  | <input type="checkbox"/> Human Resources/Personnel/Payroll Management (such as PeopleSoft, Kronos, Workday) |
| <input type="checkbox"/> Asset Management  | <input type="checkbox"/> Identity and Access Management (such as Centrify, Ping, RSA)                       |
| <input type="checkbox"/> Case Management (such as Clio, Alfresco)  | <input type="checkbox"/> Learning Management (such as Saba)   |
| <input type="checkbox"/> Computer Assisted Design (CAD)  | <input type="checkbox"/> Licensing and Permitting Office  |
| <input type="checkbox"/> Customer Relationship Management (such as Dynamics, Salesforce, ZenDesk)                | <input type="checkbox"/> Productivity/Collaboration (such as Google Suite, Office 365)                      |
| <input type="checkbox"/> Database Management (such as SQLserver, Oracle, MySQL)                                  | <input type="checkbox"/> Project and Portfolio Management   |
| <input type="checkbox"/> Document and Imaging Management (such as FileNet, Image Plus, LaserFiche)               | <input type="checkbox"/> Social Media (such as Facebook, Twitter)   |
| <input type="checkbox"/> Document Collaboration platform (such as SharePoint, Google Docs)                       | <input type="checkbox"/> Web Collaboration Software (Slack, Zoho)   |
| <input type="checkbox"/> Electronic Mail (such as Gmail, Outlook)  | <input type="checkbox"/> Web Content Management (such as Drupal, WordPress)                                 |
| <input type="checkbox"/> Enterprise Content Management (such as Open Text, ECM, OnBase)                          | <input type="checkbox"/> Other (please specify): _____  |

**7 Are you aware of the Archives’ requirements for electronic records transfer?**

- Yes
- No

**8 Does your Agency communicate on a regular basis with the Archives to negotiate terms and timing for electronic records transfers?**

- Yes
- No
- Don’t know

**9 If yes, what is the frequency of communication:**

- Every year
- Every other year
- At changes of leadership
- Other (please specify)

**10 Has your Agency ever used IT support for interagency electronic records transfer?**

- Yes
- No
- Don't know

**11 Does your Agency transfer data to the Archives via external media?**

- Yes
- No
- Don't know

**12 Does your Agency transfer data to the Archives via a network?**

- Yes
- No
- Don't know

**13 If yes, which of the following transfer protocols are used? (Please check all that apply.)**

- FTP - File Transfer Protocol
- FTPS - FTP over SSL
- HTTP - Hypertext Transfer Protocol
- HTTPS - HTTP over SSL
- SFTP- SSH File Transfer Protocol
- Other (please specify): \_\_\_\_\_

**14 Are there permanent electronic records eligible for transfer that your Agency has not yet transferred to the Archives?**

- Yes
- No
- Don't know

**15 If yes, please state the reason(s) the records have not yet been transferred:**

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**16 Do you have any other comments on interagency records transfer in your state to share with CoSA?**

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**IT Agency Questions**

**17 Does your IT unit support Agencies that are required to transfer permanent electronic records to the Archives?**

- Yes
- No

**18 If yes, please list the agencies:**

**19 Do you know which data management systems managed by your IT unit contain permanent electronic records? (Permanent records are defined in your state’s records retention schedule.)**

- Yes
- No

**20 If yes, please identify. Please check all that apply.**

- |  |   |
|--|---|
| <input type="checkbox"/> Accounting, Billing, Budgeting, and Financial Management ERP (such as CGI, Oracle, SAP) | <input type="checkbox"/> Human Resources/Personnel/Payroll Management (such as PeopleSoft, Kronos, Workday) |
| <input type="checkbox"/> Acquisition/Procurement System Asset Management   | <input type="checkbox"/> Identity and Access Management (such as Centrify, Ping, RSA)                       |
| <input type="checkbox"/> Case Management (such as Clio, Alfresco)  | <input type="checkbox"/> Learning Management (such as Saba)   |
| <input type="checkbox"/> Computer Assisted Design (CAD)  | <input type="checkbox"/> Licensing and Permitting Office  |
| <input type="checkbox"/> Customer Relationship Management (such as Dynamics, Salesforce, ZenDesk)                | <input type="checkbox"/> Productivity/Collaboration (such as Google Suite, Office 365)                      |
| <input type="checkbox"/> Database Management (such as SQLserver, Oracle, MySQL)                                  | <input type="checkbox"/> Project and Portfolio Management   |
| <input type="checkbox"/> Document and Imaging Management (such as FileNet, Image Plus, LaserFiche)               | <input type="checkbox"/> Social Media (such as Facebook, Twitter)   |
| <input type="checkbox"/> Document Collaboration platform (such as SharePoint, Google Docs)                       | <input type="checkbox"/> Web Collaboration Software (Slack, Zoho)   |
| <input type="checkbox"/> Electronic Mail (such as Gmail, Outlook)  | <input type="checkbox"/> Web Content Management (such as Drupal, WordPress)                                 |
| <input type="checkbox"/> Enterprise Content Management (such as Open Text, ECM, OnBase)                          | <input type="checkbox"/> Other (please specify): _____  |
| <input type="checkbox"/> Geographic Information Systems (such as ArcGIS, ArcInfo)                                |   |

**21 Which protocols and networks are available to support Agency transfers of electronic records to the Archives? (Please check all that apply.)**

- FTP - File Transfer Protocol
- FTPS - FTP over SSL
- HTTP - Hypertext Transfer Protocol
- HTTPS - HTTP over SSL
- SFTP- SSH File Transfer Protocol
- Other (please specify): \_\_\_\_\_

**22 Are you aware of transfer requirements and standards promulgated by the Archives?**

- Yes
- No

**23 If yes, please provide link**

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**24 Has your IT unit promulgated guidance on interagency transfer of electronic state government records?**

- Yes
- No

**25 If yes, please provide a link to these standards or protocols.**

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**26 Does your IT unit provide technology support to the Archives?**

- Yes
- No
- Don't know

**27 At what point in the technology refresh or replacement cycle is the Archives consulted to plan for the transfer of permanent electronic records?**

- Research
- Development
- Procurement
- Maturity
- Decline
- Decommissioning
- Archives is not consulted
- Archives is consulted on ad hoc basis
- Other (please specify): \_\_\_\_\_

**28 Are there permanent records stored in data management systems your IT unit manages that have not yet been transferred to the Archives?**

- Yes
- No
- Don't know

**29 If yes, please state the reason(s):**

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**30 Do you have any other comments on interagency records transfer in your state to share with CoSA?**

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**Archives Agency Questions**

**31 Does the Archives have a current list of permanent state government records it expects to receive from each Agency?**

- Yes
- No
- Don't know

**32 If yes, when was the last update?**

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**33 Does the Archives know which data management systems contain permanent electronic records scheduled for transfer? (Please check all that apply.)**

- |   |  |
|---|--|
| <input type="checkbox"/> Accounting, Billing, Budgeting, and Financial Management ERP (such as CGI, Oracle, SAP) Acquisition/Procurement System | <input type="checkbox"/> Geographic Information Systems (such as ArcGIS, ArcInfo)  |
| <input type="checkbox"/> Asset Management   | <input type="checkbox"/> Human Resources/Personnel/Payroll Management (such as PeopleSoft, Kronos, Workday) Identity and Access Management (such as Centrify, Ping, RSA) |
| <input type="checkbox"/> Case Management (such as Clio, Alfresco)   | <input type="checkbox"/> Learning Management (such as Saba)  |
| <input type="checkbox"/> Computer Assisted Design (CAD)   | <input type="checkbox"/> Licensing and Permitting Office Productivity/Collaboration (such as Google Suite, Office 365) Project and Portfolio Management                  |
| <input type="checkbox"/> Customer Relationship Management (such as Dynamics, SalesForce, ZenDesk)   | <input type="checkbox"/> Social Media (such as Facebook, Twitter)  |
| <input type="checkbox"/> Database Management (such as SQLserver, Oracle, mySQL)   | <input type="checkbox"/> Web Collaboration Software (Slack, Zoho)  |
| <input type="checkbox"/> Document and Imaging Management (such as FileNet, Image Plus, LaserFiche)  | <input type="checkbox"/> Web Content Management (such as Drupal, WordPress)  |
| <input type="checkbox"/> Document Collaboration platform (such as SharePoint, Google Docs)  | <input type="checkbox"/> Other (please specify)  |
| <input type="checkbox"/> Electronic Mail (such as Gmail, Outlook)   |  |
| <input type="checkbox"/> Enterprise Content Management (such as Open Text, ECM, OnBase)   |  |

**34 Has the Archives promulgated guidance on how to transfer electronic state government records?**

- Yes       No       Don't know

**35 If yes, please provide a link to these standards or protocols.**

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**36 Does the Archives have adequate IT support to manage the regular transfer and ingest of electronic records from Agencies?**

- Yes  
 No  
 Don't know

**37 Are you aware of the transfer protocols used by IT to support interagency record transfers?**

- Yes
- No
- Don't know

**38 If yes, which ones are used? (Please check all that apply.)**

- FTP - File Transfer Protocol
- FTPS - FTP over SSL
- HTTP - Hypertext Transfer Protocol
- HTTPS - HTTP over SSL
- SFTP- SSH File Transfer Protocol
- Other (please specify): \_\_\_\_\_

**39 Does the Archives have integrity and virus checking tools to support the ingest of electronic state government records?**

- Yes
- No
- Don't know

**40 At what point in the technology refresh or replacement cycle is the Archives consulted to plan for the transfer of permanent electronic records?**

- |                                      |  |
|--------------------------------------|--|
| <input type="checkbox"/> Research    | <input type="checkbox"/> Decommissioning                       |
| <input type="checkbox"/> Development | <input type="checkbox"/> Archives is not consulted             |
| <input type="checkbox"/> Procurement | <input type="checkbox"/> Archives is consulted on ad hoc basis |
| <input type="checkbox"/> Maturity    | <input type="checkbox"/> Other (please specify): _____         |
| <input type="checkbox"/> Decline     |  |

**41 Is the Archives aware of permanent electronic records eligible for transfer that have not yet been transferred by Agencies to the Archives?**

- Yes
- No
- Don't know



**42 If yes, please state the reason(s):**

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**43 Do you have any other comments on interagency records transfer in your state to share with CoSA?**

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# COSA MEMBER PRE-SURVEY

## Backlog Research Pre-survey Questions

The following questions were distributed to the state, territorial, and the District of Columbia archivists.

### Question 1: Identifying Information

- Your Title/Role
- Your State/Territorial Archives Agency
- Email address
- Parent agency

**Question 2:** Please identify three state or territorial agencies/departments that regularly transfer permanent archival electronic records to your state archival agency for preservation and access.

**Question 3:** For the agencies listed in Question 2, please identify at least one example of records series per agency.

**Question 4:** Please identify three state or territorial agencies/departments from which you would like to receive more regular transfers of permanent archival electronic records to your state archives agency for preservation and access.

**Question 5:** For the agencies listed in Question 4, please identify at least one records series per agency.

**Question 6:** Are you concerned about the capabilities of any source systems or storage methods used by agencies in your state/territory to ensure the long-term readability and authenticity of non-archival electronic government records?

**Question 7:** If yes in Question 6, what systems or storage methods used by agencies apply? Write in the name of specific applications, if possible.

- |  |   |
|--|---|
| <input type="checkbox"/> Shared network drive  | <input type="checkbox"/> Online collaboration system (Box, Google, SharePoint, etc.)                  |
| <input type="checkbox"/> Disk or tape backup system  | <input type="checkbox"/> Enterprise Resource Planning (ERP) system                                    |
| <input type="checkbox"/> Enterprise Content Management (ECM) system                        | <input type="checkbox"/> Line of business application (finance, correspondence, case management)      |
| <input type="checkbox"/> Digital Asset Management (DAM) system                             | <input type="checkbox"/> Geospatial (GIS) system  |
| <input type="checkbox"/> Document and Records Management (EDRMS) system                    | <input type="checkbox"/> Design or engineering system   |
| <input type="checkbox"/> Email   | <input type="checkbox"/> Laboratory equipment   |
| <input type="checkbox"/> Human Resources Information (HRIS) system (i.e. Peoplesoft, etc.) | <input type="checkbox"/> Social media   |
| <input type="checkbox"/> Healthcare systems  | <input type="checkbox"/> Websites or website content management system (i.e. WordPress, Drupal, etc.) |
|  | <input type="checkbox"/> Write in: _____  |

**Question 8:** Are you concerned about the capabilities of any source systems or storage methods used by agencies in your state/territory to efficiently transfer permanent archival electronic records and metadata to your state/territorial archives agency for preservation and access?

**Question 9:** If yes in Question 8, pick all systems or storage methods used by agencies that apply. Write in the name of specific applications, if possible.

- |  |   |
|--|---|
| <input type="checkbox"/> Shared network drive  | <input type="checkbox"/> Online collaboration system (Box, Google, SharePoint, etc.)                  |
| <input type="checkbox"/> Disk or tape backup system  | <input type="checkbox"/> Enterprise Resource Planning (ERP) system                                    |
| <input type="checkbox"/> Enterprise Content Management (ECM) system                        | <input type="checkbox"/> Line of business application (finance, correspondence, case management)      |
| <input type="checkbox"/> Digital Asset Management (DAM) system                             | <input type="checkbox"/> Geospatial (GIS) system  |
| <input type="checkbox"/> Document and Records Management (EDRMS) system                    | <input type="checkbox"/> Design or engineering system   |
| <input type="checkbox"/> Email   | <input type="checkbox"/> Laboratory equipment   |
| <input type="checkbox"/> Human Resources Information (HRIS) system (i.e. Peoplesoft, etc.) | <input type="checkbox"/> Social media   |
| <input type="checkbox"/> Healthcare systems  | <input type="checkbox"/> Websites or website content management system (i.e. WordPress, Drupal, etc.) |
|  | <input type="checkbox"/> Write in:  |

**Question 10:** Other comments or suggestions

# STATE INTER-AGENCY ELECTRONIC RECORDS TRANSFER CHECKLIST

State archives can use this document as a framework to develop or update records transfer procedures for receiving permanent state electronic records. The guidelines developed by state archives can then be shared with state agencies to facilitate the effective transfer of permanent state electronic records.

## Prior to Transfer

- Clearly define roles and responsibilities for management, transfer, and preservation of electronic records. For example, define what agencies can expect the archives to offer and what tasks the archives would like agencies to complete before transfer.
- Engage with state or agency information technology (IT) to include agency, archives, records management in analysis and planning efforts for software application upgrades, refresh, and decommissioning. The objective is to ensure electronic government records are managed through their entire lifecycle, including during interagency transfer.
- Engage with state or agency IT to identify and promulgate transfer protocols and tools for interagency records transfer.
- Engage with state or agency IT to identify and support virus protection scanning and fixity tools that are available to agencies to use. A state should plan to use the same checksum algorithm (for example, MD5, SHA-1, SHA-256) for both the agency and the archives to ensure that the data transfers properly.
- Communicate with agencies about the retention schedules they should use to identify permanent state government electronic records to be transferred.
- Archives should define and communicate metadata standards.
- Archives should define and communicate preferred file formats.
- Identify the preferred file formats your archives plans to support for various content types and communicate them to the agencies prior to transfer.
- Archives should define rules, standards, and the available tools for transfer of electronic records appraised for archival preservation to be used by agencies.

### TYPICAL SUPPORTED TRANSFER PROTOCOLS ARE:

- File Transfer Protocol Secure (FTPs)
- Hypertext Transfer Protocol Secure (HTTPS)

### TYPICAL SUPPORTED TRANSFER MEDIA ARE:

- Flash drives
- Portable external hard drives

## Transfer

Agencies should:

- Notify the archives when records have met their retention to initiate preparation and transfer procedures.
- Gather all metadata on records to be transferred and work with the archives to determine which metadata is part of the record and has long-term value.
- Perform a virus scan on the electronic records prior to transfer.
- Establish fixity for electronic records and create checksums prior to transfer.
- Complete a transfer form describing the electronic records and their extent, condition, and any other information necessary to identify records and their context.
- Retain the permanent electronic state records being transferred until the archives confirms receipt and validates integrity of the files.

## Metadata Requirements

Archives should specify the administrative, descriptive, and technical metadata that agencies should include with the electronic records transfer. Typical requirements include:

- Originating agency and personnel contact information.
- Retention schedule information including creator, classification/taxonomy, retention, exemptions, etc.
- Record Series or Title and associated dates (if applicable).
- Approximate size/extent and formats of the records being transferred.
- Any agency-generated metadata (or data sourced from originating systems) that comprises a part of the record or adds context or value to the records.

## Post-Transfer

Archives should:

- Quarantine the transferred data and perform its own virus scan.
- Note fixity information provided by the agency.
- Run an independent checksum using the same algorithm to confirm that the file transferred without incident. Archives should record both checksums to reference for future fixity checks.
- Establish a schedule for checking fixity to maintain integrity of electronic records.
- Migrate any damaged, obsolete, or at-risk files to more stable formats (assuming no loss of fidelity).