The Governance of
Long-Term Digital Information

May 23, 2017

CoSA
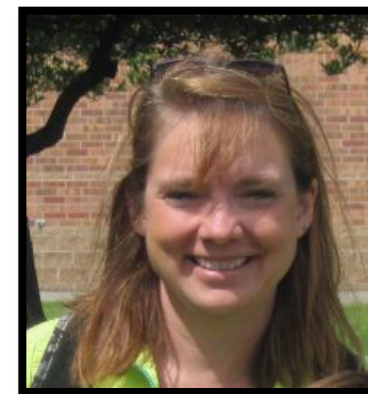Council of State Archivists

Preservica
Digital Preservation

Practical Digital Preservation 2017

Welcome!

PDP Briefings

- Protecting and Preserving Long-Term Digital Information   January 24
  - For IT Professionals & practitioners

- The Governance of Long-Term Digital Information   May 23
  - For Senior Managers & Budget Administrators

PDP "Hot Topic" Webinars   Tuesdays 2-3pm Eastern

- Preserving and Protecting Audio-visual Files   April 11
- Preserving Digitized State Government Records   May 9
- Best Practices in Digital Preservation: International Perspective   June 13

PDP Online Workshops - Digital Preservation 101:

'State Archives and Agencies Putting Digital Preservation into Action'

- Part 1: Practical Training in the Key Concepts   February 14
- Part 2: Practical Training in the Key Concepts   February 28
- Part 3: Case Studies   March 14

Sign up today on the CoSA website – PERTTS Portal > Education -Training

Sarah Grimm
Wisconsin Historical Society

CoSA
Council of State Archivists

Preservica
Digital Preservation

Today's Presenters

Doug Robinson
NASCIO

Sarah Koonts
North Carolina

Lori Ashley
Preservica

Roger Christman
Library of Virginia

David Portman
Preservica

Agenda

- Welcome & Introductions

- The Governance of Long-Term Digital Information: Action Required
  Doug Robinson, Executive Director - NASCIO

- CoSA: State CIO Support & Services
  Sarah Koonts, State Archivist – North Carolina

- Deriving Value From Long-Term Digital Information
  Lori Ashley, Industry Market Development Manager - Preservica

- Challenges and Opportunities Associated with Capturing & Preserving Email
  Roger Christman, Records Archivist – Library of Virginia

- Q&A

Doug Robinson
Executive Director, NASCIO

About NASCIO

- National association representing state chief information officers and information technology executives from the states, territories and D.C.

- NASCIO's mission is to foster government excellence through quality business practices, information management, and technology policy.

- NASCIO provides 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.

Expect 2017 budget cuts in many states - revenue growth of 2%. CIOs pressured to find **cost savings,** driving consolidation, optimization strategies

Continued evolution from the **owner-operator** business model for CIOs – focus on services and hybrid models of delivery

Cybersecurity as a **business risk.** Ransomware, hacktivism and evolving threats. Enterprise strategy, communication and talent

Growing investments in **cloud services**, data analytics, mobile

Advocating for IT **modernization**, agile approaches, procurement reform

Continuing IT **workforce challenges:** retirements, skills gap, recruiting, talent management, workplace innovation

TopTen: State CIO Priorities for 2017

1. Security

2. Consolidation/Optimization

3. Cloud Services

4. Budget and Cost Control

5. Legacy Modernization

6. Enterprise IT Governance

7. Data Management and Analytics

8. Enterprise Vision and Roadmap for IT

9. Agile and Incremental Software Delivery

10. Broadband/Wireless Connectivity

CoSA
Council of State Archivists

Preservica
Digital Preservation

Top Ten: State CIO Priorities for 2017

1. Security
2. Consolidation/Optimization
3. Cloud Services
4. Budget and Cost Control
5. Legacy Modernization
6. Enterprise IT Governance
7. Data Management and Analytics
8. Enterprise Vision and Roadmap for IT
9. Agile and Incremental Software Delivery
10. Broadband/Wireless Connectivity

Where does digital preservation fit with these strategic priorities?

CoSA
Council of State Archivists

Preservica
Digital Preservation

Service models and sourcing options

Adoption of cloud services

Power of data

Changing state IT workforce

Forces of Change

Adaptable

How does your state CIO organization plan to deliver or obtain IT services over the next three years?	2015	2016
Expand existing IT shared services model	62%	72%
Outsource business applications through a SaaS model	55%	66%
Expand existing managed services model	53%	61%
Downsize state-owned-and-operated data center(s)	49%	28%
Expand outsourcing	43%	45%
Introduce a managed services model	26%	17%
In-source some operations that currently are outsourced	17%	19%
Introduce outsourcing as a new service model	15%	17%

Forces of Change: Why Cloud?

Cost savings and efficiency

Flexibility and scalability
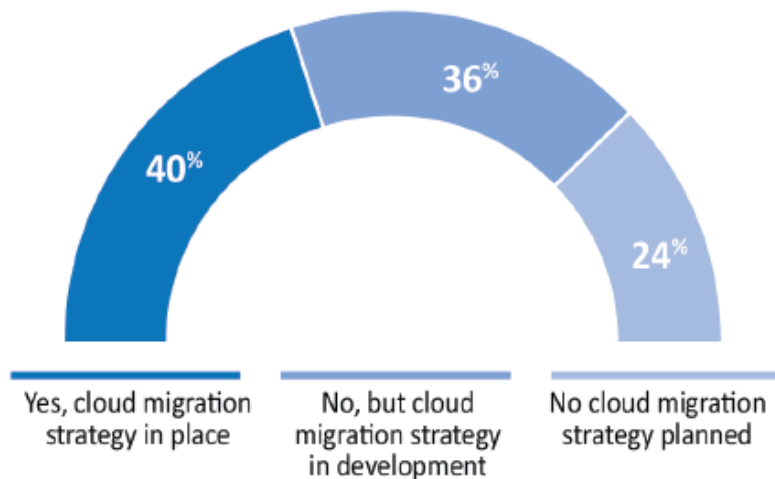
Rapid provisioning

Measured service

Better data and applications security

Shift from capital spend to operating spend

Reduced IT staffing and costs

This transition is disruptive to the traditional notions of state IT. It has serious implications for state budgeting, procurement, legal, business processes, data protection, project and portfolio management.

CoSA
Council of State Archivists

Preservica
Digital Preservation

Does your organization have a strategy to migrate legacy applications to the cloud?

40% Yes, cloud migration strategy in place

36% No, but cloud migration strategy in development

24% No cloud migration strategy planned

Where applications have been migrated to the cloud, what percentage of the applications are hosted in each of the following models?	2016	2015
PRIVATE: Hosted by a single organization and made available to other government users	51%	46%
PUBLIC: Hosted by a third-party entity and openly available	25%	15%
COMMUNITY: Used by a specific community of organizations with a shared purpose	9%	11%
HYBRID: A composition of two or more of the above	16%	28%

Source: NASCIO 2016 State CIO Survey

CoSA Council of State Archivists

Preservica Digital Preservation

Moving to Cloud

What categories of services have you migrated or do you plan to migrate to the cloud?	DONE	ONGOING	PLANNED	TOTAL
Disaster recovery	5%	30%	50%	85%
Citizen relationship management	11%	30%	20%	61%
Digital archives	9%	28%	39%	76%
E-mail and collaboration	32%	38%	21%	91%
Electronic records	0%	36%	34%	70%
Enterprise Resource Planning (e.g., finance, budget, procurement)	5%	37%	21%	63%
Geographic Information Systems	13%	31%	17%	61%
HR / payroll / time and attendance	5%	21%	37%	63%
Identity Management	5%	21%	32%	58%
Imaging	0%	20%	22%	42%
Learning Management Systems	14%	35%	20%	69%
Office productivity (e.g., word processing)	21%	43%	17%	81%
Open data	26%	28%	19%	73%
Program/business applications (e.g. Licensing, Unemployment Insurance, Workers Compensation, etc.)	13%	38%	21%	72%

Source: NASCIO 2016 State CIO Survey

CoSA
Council of State Archivists

Preservica
Digital Preservation

7. Which business model will drive your investments in the next 5 years? (state members only)

29% A. On-Premise, Centralized/Enterprise Model

17% B. On-Premise, Distributed/Federated Model

43% C. Off-Premise, Centralized/Enterprise Model

10% D. Off-Premise, Distributed/Federated Model

State Government Data Landscape

Data stored across multiple systems from multiple agencies in multiple formats

Data quality issues: dirty and messy

Lack of standards, consistency

Data sharing is difficult – format, language, access, culture, myths

Security risks and privacy issues

Little insightful, usable data on "customers"

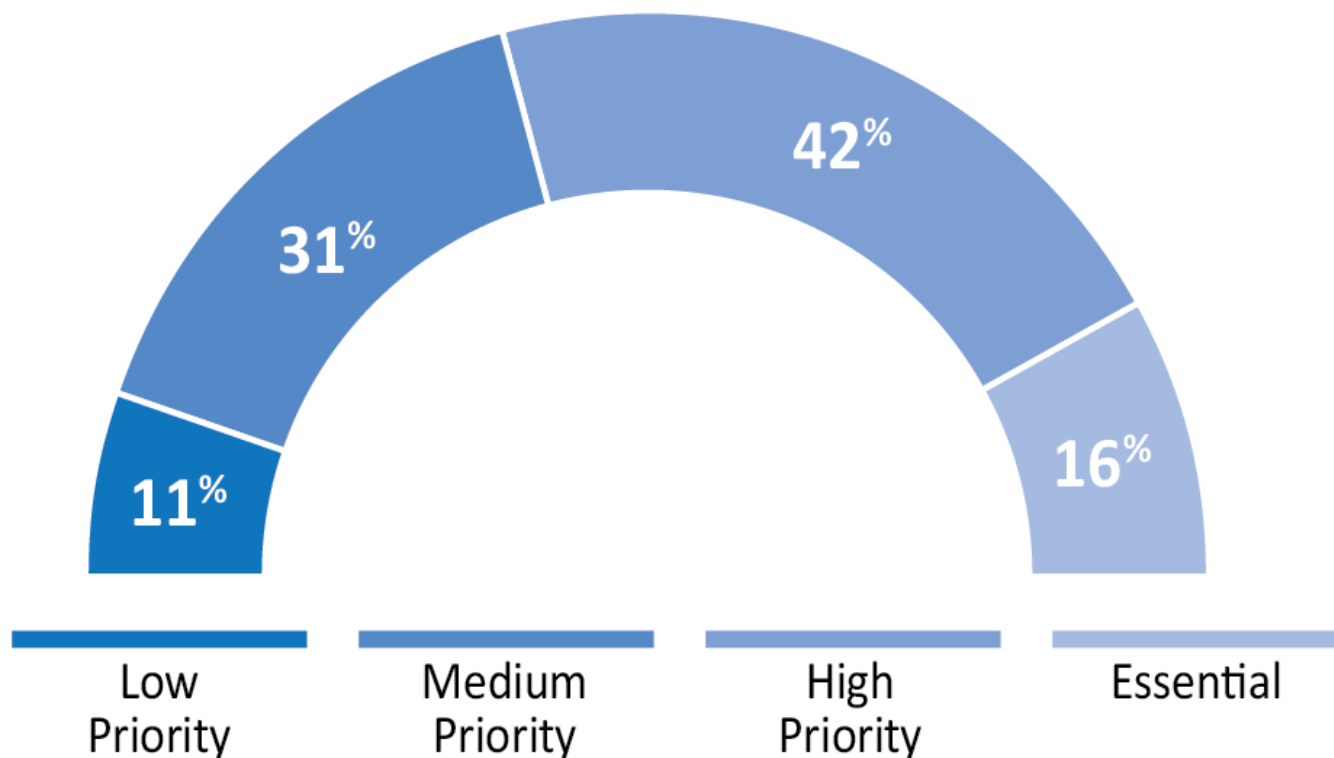# Major Changes in State Data

Structured

Semi-structured

Unstructured

Sources and Format Changing Dramatically

Data Governance and Analytics

Within the state CIO's strategic agenda and operational plans, how would you characterize data governance and management?
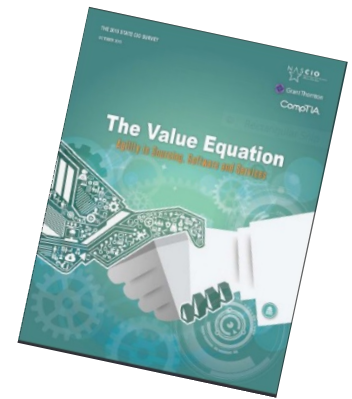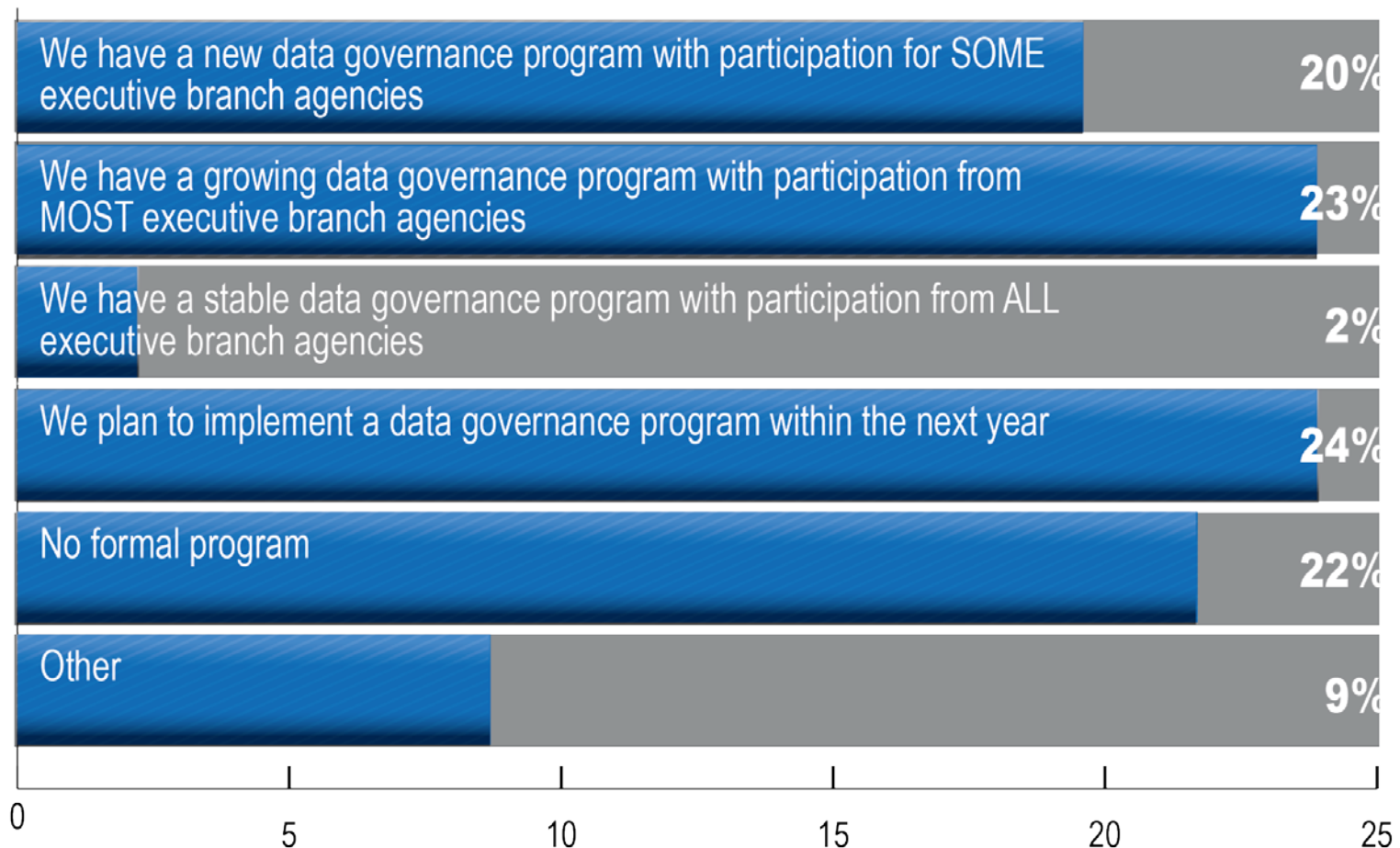
31% — Low Priority
42% — Medium Priority
11% — High Priority
16% — Essential

Managing Data as a Strategic Asset

How would you characterize your data management function in terms of importance and maturity?

We have a long way to go to develop an enterprise view of data and governance of that data as a state asset	47%
We have made some progress in developing operating discipline for managing data	49%
We have a formal data management discipline that includes governance, roles and responsibilities, and tools	2%
We have a formal data management discipline that includes governance, roles and responsibilities, and tools. We are now moving toward data as an enterprise asset	2%

0   10   20   30   40   50

Source: The Value Equation, 2015 State CIO Survey

Which best describes the scope and breadth of your state's enterprise data management program?

Response	Percentage
We have a new data governance program with participation for SOME executive branch agencies	20%
We have a growing data governance program with participation from MOST executive branch agencies	23%
We have a stable data governance program with participation from ALL executive branch agencies	2%
We plan to implement a data governance program within the next year	24%
No formal program	22%
Other	9%

Source: The Value Equation, 2015 State CIO Survey

Enterprise Data Management

What is the current and recommended role of the State CIO Organization in Enterprise Data Management?

Take the lead and advocate for data as a strategic asset — 59% / 41%

Develop an enterprise data strategy — 48% / 52%

Create a formally documented data architecture — 36% / 64%

Convene the stakeholders for data governance decisions — 38% / 62%

Current | Recommended
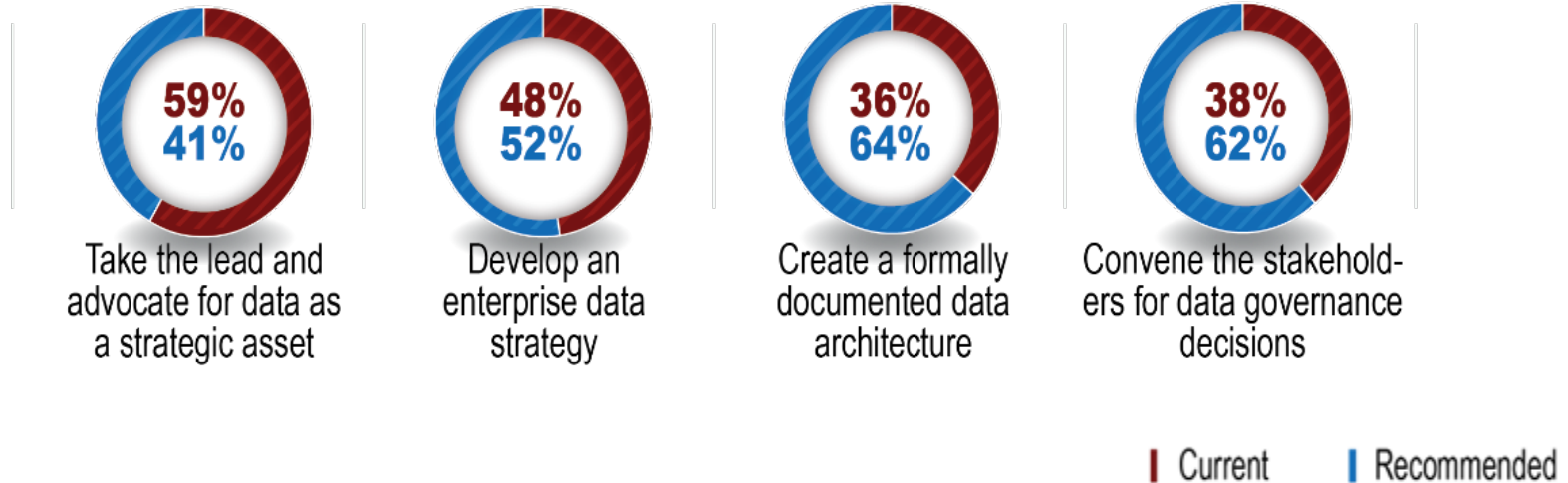
Call to Action

Electronic Records Management and Digital Preservation: Protecting the Knowledge Assets of the State Government Enterprise

PART I: Background, Principles and Action for State CIOs

Ready for the Challenge? State CIOs and Electronic Records
Issues, Opportunities and Best Practices

In 2007, NASCIO recommended the following Calls to Action for the State CIO:

1. Partner actively with your electronic records management and digital preservation function to develop strategies for proactively managing records and digital archives.

2. Support an enterprise approach to electronic records management and preservation.

3. Require attention to electronic records management and preservation in capital investment proposals, and project plans.

4. Create an electronic records management and digital preservation domain under the Enterprise Architecture program to foster collaboration, shared decisions and common enterprise solutions.

What Do We Know? Patterns of Success

Enterprise Governance: Focus on Full Lifecycle of Records

Leverage Statewide Enterprise Architecture

Articulated Strategy and Roadmap for Action

Manage Transition from Active to Permanent Records...by Design

Early Collaboration with Key Stakeholders

Consolidation, Shared Service, Cloud Options

CoSA
Council of State Archivists

Preservica
Digital Preservation

Looking Forward...State IT

Data Management Series Part 1

Data: the Lifeblood of State Government

NASCIO

CYBER DISRUPTION RESPONSE PLANNING GUIDE

THE 2016 STATE CIO SURVEY
SEPTEMBER 2016

GrantThornton

CompTIA

the**ADAPTABLE STATE CIO**

Deloitte
University Press

NASCIO

2016 Deloitte-NASCIO Cybersecurity Study

State governments at risk: Turning strategy and awareness into progress
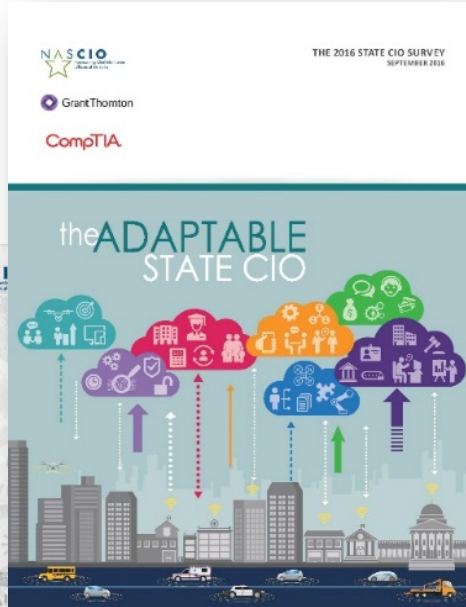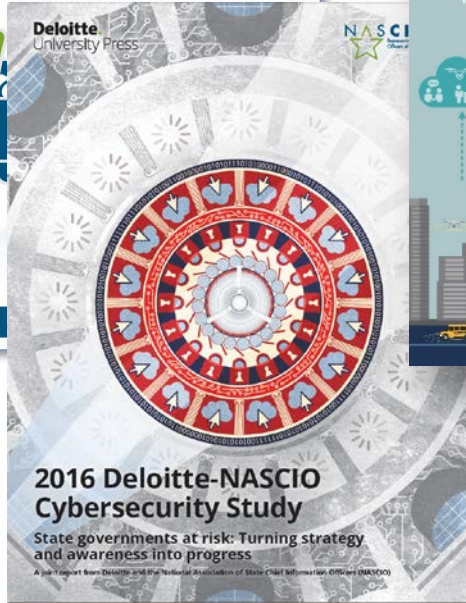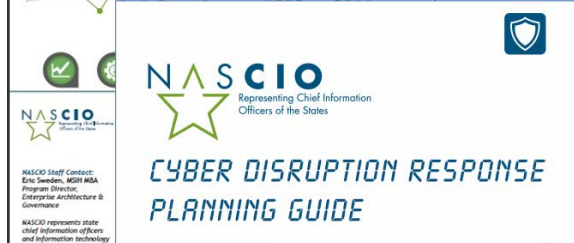
Follow Us

@NASCIO

/NASCIOmedia

/NASCIOmedia

National Association of State Chief Information Officers (NASCIO)

drobinson@nascio.org

CoSA
Council of State Archivists

Preservica
Digital Preservation

Council of State Archivists

Organization serving the 56 state and territorial archives
- Responsive programs and services
- Awareness and advocacy
- Information access and collaboration
- Sustainability

Recent Initiatives
- State Electronic Records Initiative (SERI)
- Intergovernmental Preparedness for Essential Records (IPER)

CoSA
Council of State Archivists

#ERECSDAY WEBINAR AVAILABLE

"The Future is Already Here" --
Managing public records in a changing technological landscape

LEARN MORE

📁 ADVOCACY FOR ARCHIVES

Position papers, advocacy alerts, resources and tools for effectively making the case that archives are critical to healthy, functioning democracies.

🛟 EMERGENCY PREPAREDNESS

Supplementary materials specifically designed by CoSA to introduce and enhance emergency preparedness training for state archives.

💬 STATE ELECTRONIC RECORDS INITIATIVE (SERI)

The PERTTS Portal (Program for Electronic Records, Training, Tools and Standards) provides information on managing and

⚒ STATE HISTORICAL RECORDS ADVISORY BOARDS (SHRABS)

Centralized location for answers that cover the who, what, when, where, and why of State Historical Records Advisory Boards with

State Electronic Records Initiative (SERI)

- Education and Training

- Digital Preservation Capability Self-Assessments

- PERTTS Portal (https://www.statearchivists.org/pertts/)

- Archives Collaborating and Cooperating with External Strategic Stakeholders (ACCESS)

PERTTS Portal

Education-Training

SERP Framework

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

Related/Additional Framework Topics

Electronic Records Resources

SERP Framework

Background

One of the goals of the State Electronic Records Initiative (SERI) is to assist State Archives with increasing their understanding of and capabilities for managing and preserving digital materials. To create a baseline, each State and Territorial Archive took the "Self-Assessment Survey" in 2012. States will be asked to retake their Self-Assessment periodically to see how their programs have improved after going through SERI training programs and educational events. The Framework elements are the same as the sections found in the Self-Assessment.

Framework Description

The SERP Framework was developed as one tool to help archive programs improve their scores on the Self-Assessment. The Framework element are the same as the sections found in the Self-Assessment. The Self-Assessment was based on earlier versions of the Digital Preservation Capability Maturity Model. [Newer versions of the DPCMM are worded differently and may not match the Framework provided here.]

In addition to recounting the "Levels" used in the Self-Assessment, the SERP Framework - where possible - provides information on how to move between levels to assist with increasing preservation capabilities. The steps between the levels are often self explanatory, however sometimes the levels do not have simple steps to get between the levels and may seem to change ideas. In either case, suggestions on how to reach the next level are provided.

NOTE: *Because the Framework is based on the DPCMM there are a lot of assumptions being made about compliance to OAIS and TRAC. Currently the majority of state archives are not able to fully comply with these standards for a variety of reasons - keep this in mind as you work through the levels. Because while reaching and meeting these*

Digital Preservation Capability Maturity Model (DPCMM)
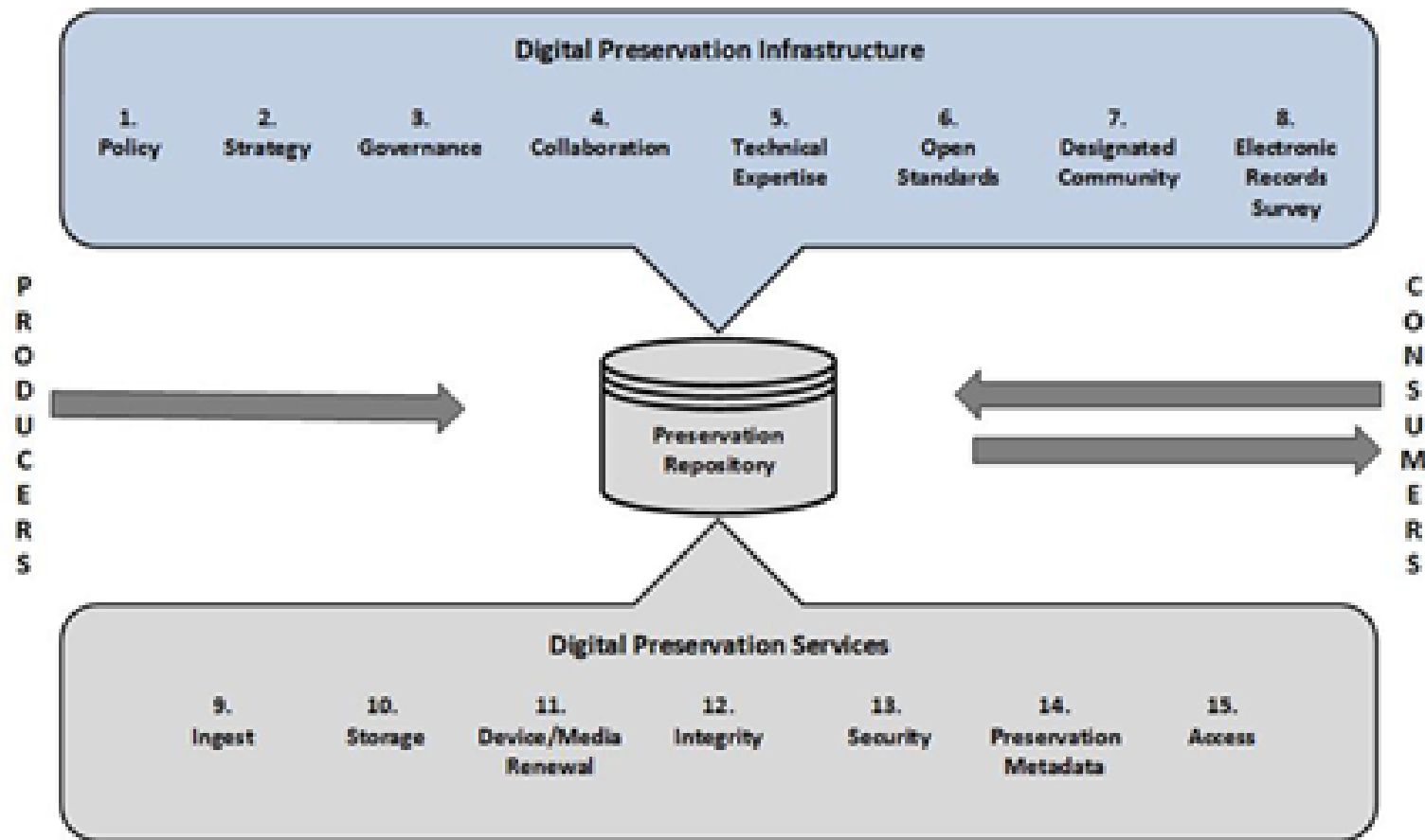
A free, public version of the Digital Preservation Capability Self-Assessment benchmarking tool used by CoSA is available at www.DigitalOK.org

PERTTS Portal

Education-Training

SERP Framework

   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

Related/Additional Framework Topics

Electronic Records Resources

Glossary

Bibliography

Case Studies and Examples

Governance

DEFINITION: The state/territory has a formal decision-making framework that assigns accountability and authority for the preservation of electronic records with permanent historical, fiscal, operational or legal value, and articulates approaches and practices for trustworthy digital repositories sufficient to meet stakeholder needs. Governance is exercised in conjunction with information management and technology functions and with other custodians and digital preservation stakeholders such as records producing units and records consumers and enables compliance with applicable laws, regulations, record retention schedules, and disposition authorities.

Level 0	The state/territory does not specifically address digital preservation requirements in the scope of current governance activities.
Level 1	A project-based digital preservation governance framework is operational or has been successfully completed.
Level 2	The operational state/territory-wide digital preservation governance framework identifies the various roles of stakeholders in the preservation of electronic records.
Level 3	Level 3a: An operational state/territory-wide digital preservation governance framework is in place that assigns accountability and authority for the preservation of electronic records. Level 3b: The state/territory digital preservation governance framework specifies an on-going commitment to the sustainability of an ISO 14721 conforming archival repository.
Level 4	The operational state/territory-wide digital preservation governance framework for digital preservation is reviewed and updated at least every two years to take into account changing technologies and new organizational structures.

Resources

Resources associated with the Governance Framework elements assist with providing background information and useful examples that can be consulted when trying to develop a policy or move forward in the area of policy

Shared Areas of Interest

- Data across the enterprise

- Value of data

- Governance of data

- Legacy data of enduring value

Think of CoSA and Your State Archives for Collaboration on:

- Continuity Planning

- Cost Savings

- Classification

- Community of Best Practices

← → C | 🔒 Secure | https://www.statearchivists.org/connect/resources-state/

CoSA
Council of State Archivists

CONNECT   PERTTS PORTAL   PROGRAMS   RESOURCES   SHRABS

ABOUT   MEMBERSHIP   SPONSORS   CAREERS   BLOG   FORUM   SHOP   CART (0)   CONTACT   LOGIN   Search this site   🔍

Connect

Directory of State Archives

CoSA Committees & Task Forces

Volunteer Opportunities

Events

Listservs

Blog

Forum

CoSA News Brief

Social Media

Directory of State Archives

Keyword Search   Filter   Show All

Alabama Department of Archives and History

State: Alabama
General Phone: 334-242-4441
 # Resources: 2

SHRAB:
http://www.archives.alabama.gov/hrb/

Director
Name: Steve Murray
Email:
steve.murray@archives.alabama.gov
Website:
http://www.archives.state.al.us/index.ht
ml

Alaska State Archives

State: Alaska
General Phone: 907-465-2241
 # Resources: 0
SHRAB:
http://archives.state.ak.us/ashrab/ashra
b.html

Interim State Archivist
Name: Zachary Jones
Email: zachary.jones@alaska.gov
Website: http://archives.alaska.gov/

American Samoa Office of Archives and

Deriving Value From Long-Term Digital Information

Lori Ashley

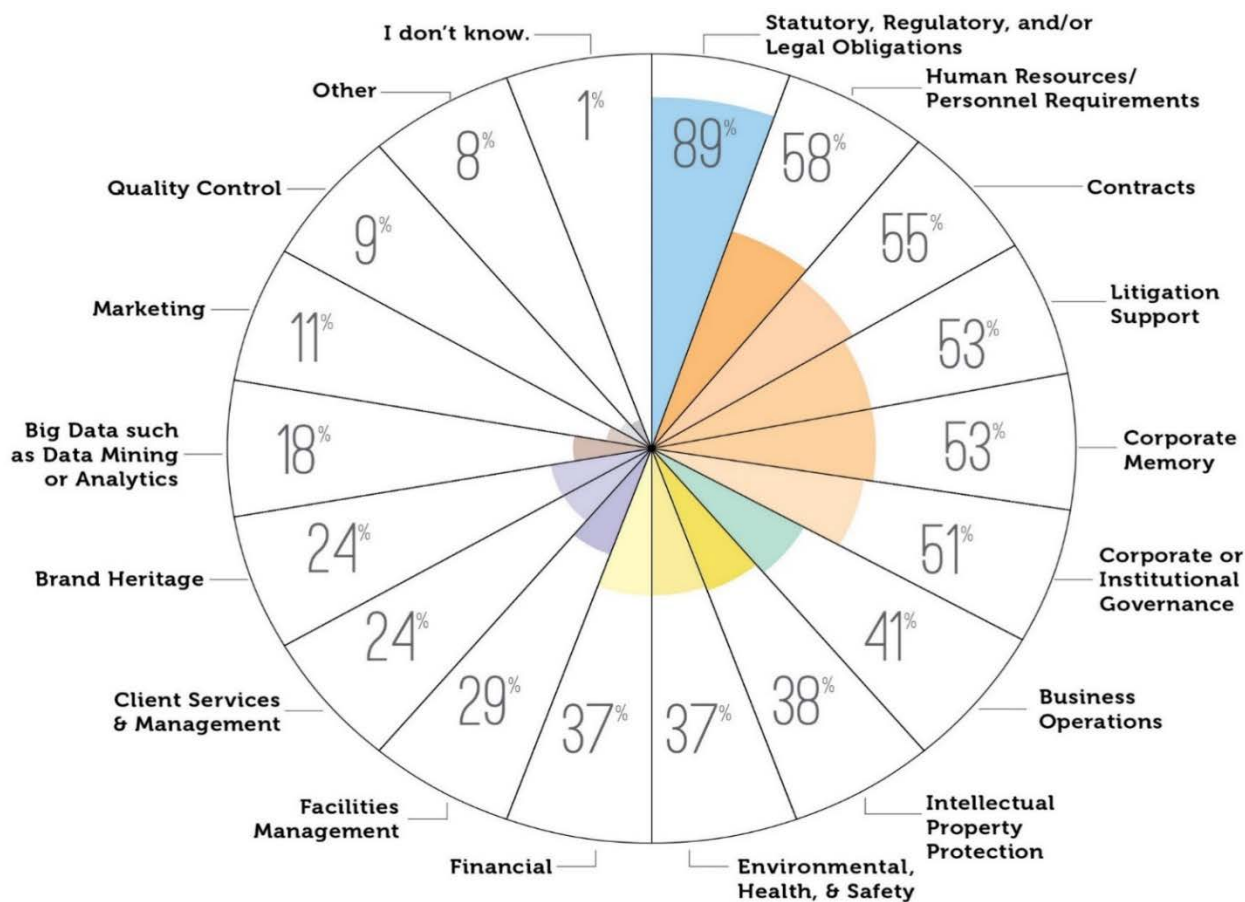### *Industry Market Development Manager*

98% of practitioners report that their organizations have digital records and information they keep or need to keep for **more than 10 years**

Source: Information Governance Initiative, April 2016

MOST ORGANIZATIONS HAVE DIGITAL RECORDS AND INFORMATION THEY KEEP LONG TERM BECAUSE OF THEIR IMPORTANCE

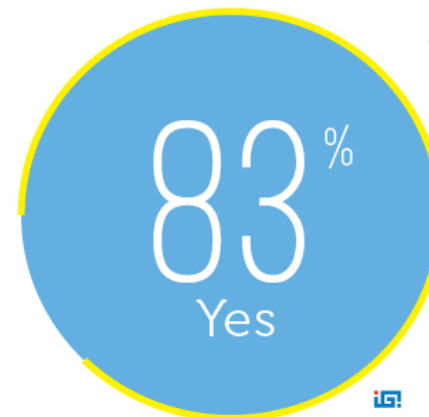Organizations Report a Variety of Reasons Why They Keep Digital Information

- I don't know. — 1%
- Other — 8%
- Quality Control — 9%
- Marketing — 11%
- Big Data such as Data Mining or Analytics — 18%
- Brand Heritage — 24%
- Client Services & Management — 24%
- Facilities Management — 29%
- Financial — 37%
- Environmental, Health, & Safety — 37%
- Intellectual Property Protection — 38%
- Business Operations — 41%
- Corporate or Institutional Governance — 51%
- Corporate Memory — 53%
- Litigation Support — 53%
- Contracts — 55%
- Human Resources/ Personnel Requirements — 58%
- Statutory, Regulatory, and/or Legal Obligations — 89%

What Prevents Us From Realizing Business Value?

The Top 3 Challenges.

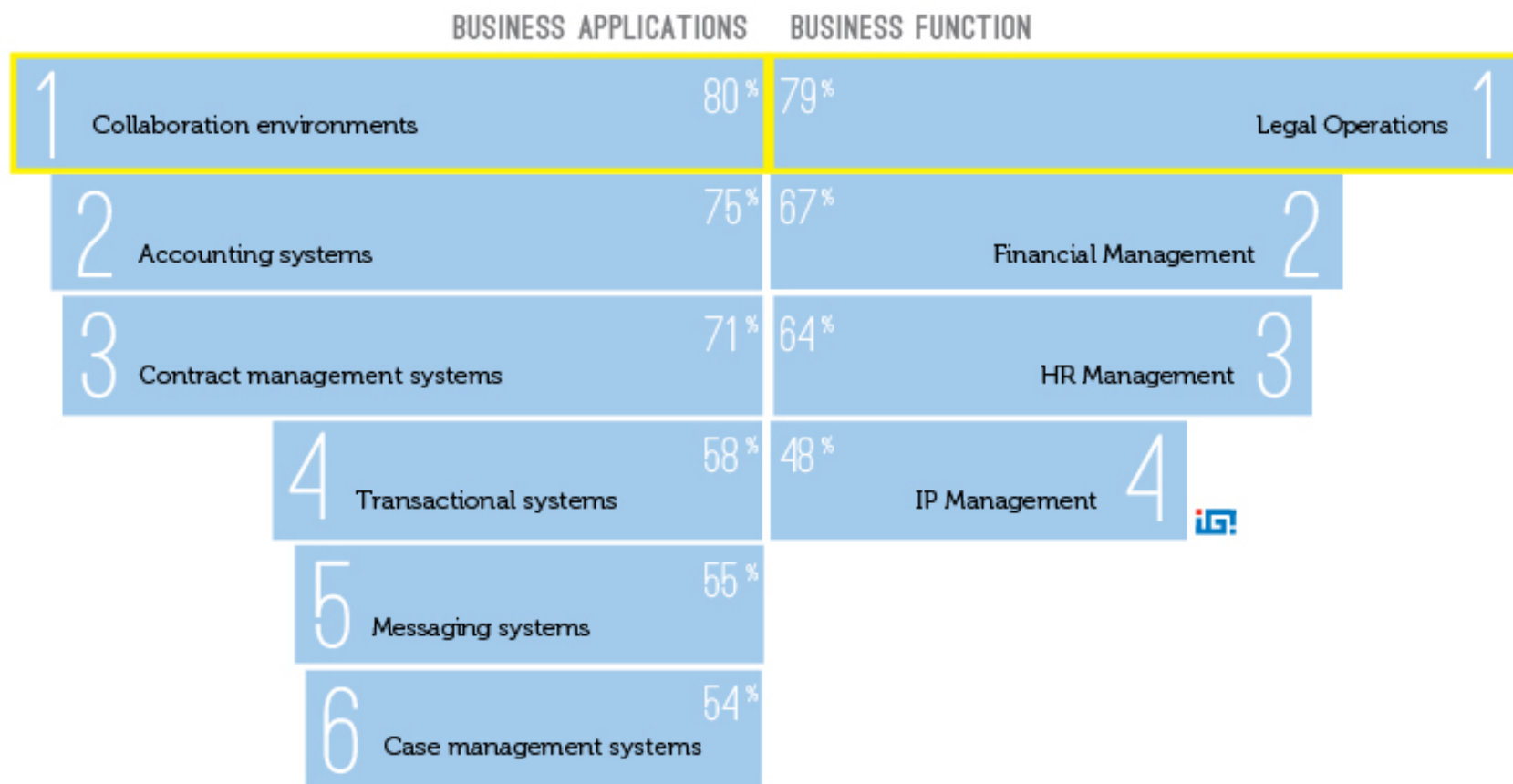Factors preventing organizations from getting business value from their long-term ditigal information.

1

We lack personnel
dedicated to this issue

2

Our capability in this area
is informal or immature

3

We lack the proper tools
or technology

83%

Yes

Do organizations get business value from
long-term digital information?

CoSA
Council of State Archivists

Preservica
Digital Preservation

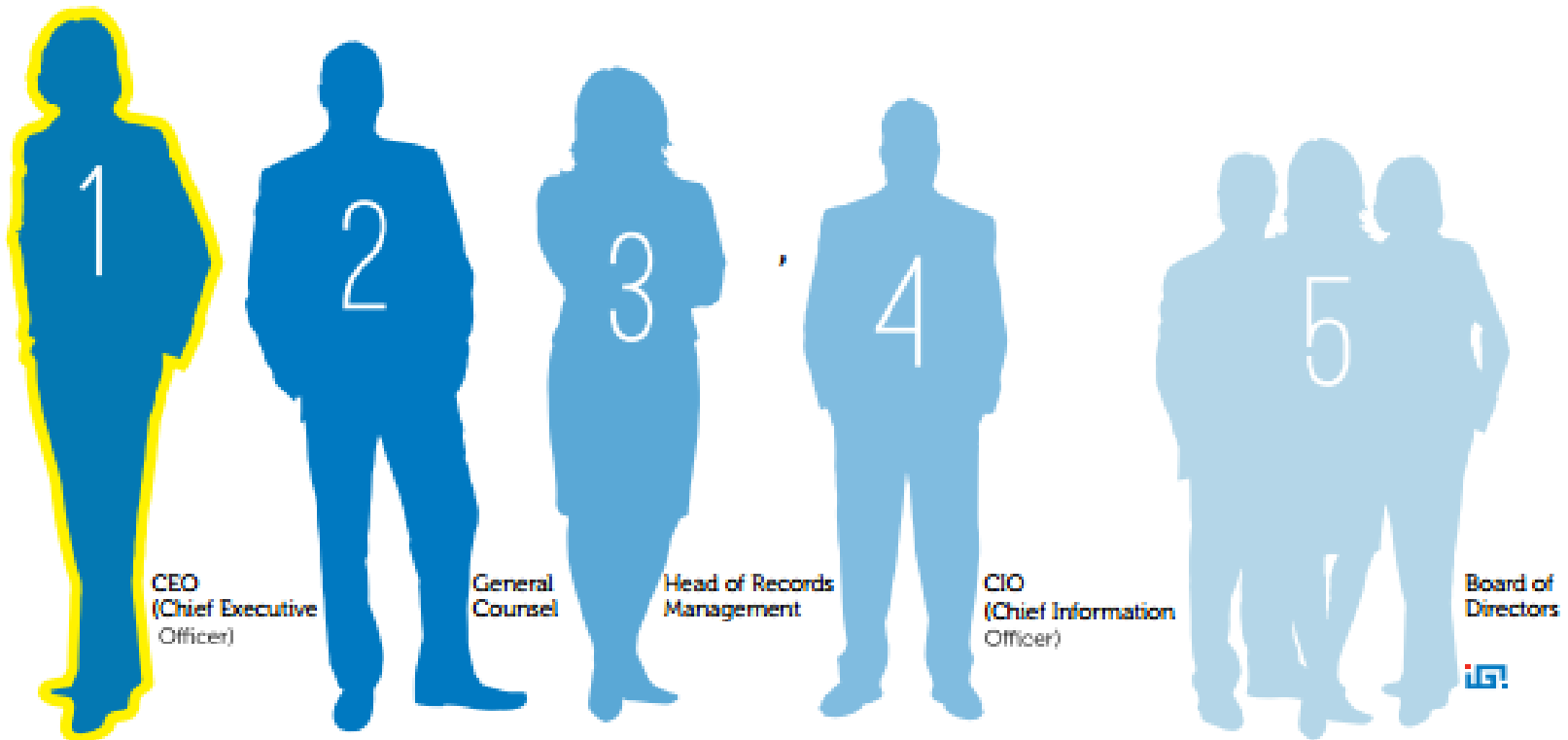# The Departments and Applications That Rely Most On Long-Term Digital Information

A majority identified these business functions as requiring - and business systems as containing - long-term digital information.

BUSINESS APPLICATIONS | BUSINESS FUNCTION

1 Collaboration environments — 80%
1 Legal Operations — 79%

2 Accounting systems — 75%
2 Financial Management — 67%

3 Contract management systems — 71%
3 HR Management — 64%

4 Transactional systems — 58%
4 IP Management — 48%

5 Messaging systems — 55%

6 Case management systems — 54%

CoSA
Council of State Archivists

Preservica
Digital Preservation

WHO BEARS THE BRUNT OF FAILURE? TOP 5 STAKEHOLDERS.

Who is most affected when long-term digital information is not properly preserved **and governed?**

1 — CEO (Chief Executive Officer)

2 — General Counsel

3 — Head of Records Management

4 — CIO (Chief Information Officer)

5 — Board of Directors

Capabilities for Long-Term Preservation & Governance

What IG professionals say is most critical to preserving and governing long-term digital information.

1. Ensuring readability and usability of information — 89%
2. Proving authenticity and trustworthiness — 79%
3. Supporting records retention and disposition requirements — 79%
4. Providing secure access and discovery to business users — 62%
5. Conformance with standards for digital preservation — 59%
6. Automated transfer of records from operational systems to long-term digital preservation systems — 51%

CoSA
Council of State Archivists

Preservica
Digital Preservation

Challenges and Opportunities Associated with Capturing and Preserving Email

Roger Christman

Senior State Governors' Records Archivist

at The Library of Virginia

Adam Raised a Kaine:
Kaine Email Project @ the Library of Virginia

Governor Kaine's Electronic Archival Policy

From:	Paris, Kate
Sent time:	Friday, December 07, 2007 3:07:35 PM
To:	_Governor/Cabinet Staff
Subject:	Electronic Data Archival Policy
Attachments:	Electronic Data Archival Policy Form.doc

The following is a message from the Chief of Staff:

Please sign the attached form indicating that you have read and understand the electronic archiving policy for the Kaine administration. Signed forms should be sent to Dennis Johnson, Director of Support Services, 5th floor PHB.

Governor Kaine's Electronic Archival Policy

I.   Email archiving
   a.   Emails containing "public transaction of business" will be archived in an archive folder created by VITA
   b.   Sub folders will be created to reflect your area's Records Retention and Disposition Schedule (RRDS)
   c.   For questions about what should be archived and where, please see your records officer:
      i.   ADMIN- Joycelyn Blizzard
      ii.   AGRI- Shauna Chavis
      iii.   C&T- Darryl Holt
      iv.   CP- Wendy Hoffman
      v.   EDU- Kendall Tyree
      vi.   FIN- Mike Tutor
      vii.   HHR- Pat Green
      viii. NR- Carol Denson
      ix.   PS- Martha Hazelgrove
      x.   TECH- Tristen Pegram
      xi.   TRAN- Melanie Roberts
      xii.   WF- Megan Root
      xiii. SOC- Alicia Roberts
      xiv.   GOV- Amber Amato
   d.   More guidance on archiving can be found on the LVA website: http://www.lva.lib.va.us/whatwedo/records/manuals/00M-APPA.HTM

VITA created PST Folder Templates

Personally Identifiable Information (PII) is not our biggest challenge…..

**KAINE EMAIL PROJECT @ LVA – PROCESSING BY THE NUMBERS (Updated 10/20/2016)**

	Total Number of Emails	Non-Records	Restricted	Open Records
Series I. Executive Office	138609	48173	16077	74359
Series II. Policy Office	49318	26010	300	23008
Series III. Press Office	53812	31750	127	21935
Series IV. Commonwealth	202952	194814	3819	4319
Series V. Technology	41852	26151	320	15381
Series VI. Public Safety	23236	16462	29	6745
Series VII. Workforce Development	42948	32458	49	10441
Secretary of Health and Human Resources	88186			In progress
Secretary of Natural Resources	93324			In progress
Secretary of Administration	83237			In progress
Secretary of Agriculture and Forestry	5334			In progress
Scheduling Office	12641			
Virginia Liaison Office	102349			
Constituent Services	83736			
Secretary of Commerce and Trade	106611			
Commonwealth Preparedness	84043			
Secretary of Education	180298			
Secretary of Finance	58767			
Secretary of Transportation	37115			
Other	15683			

Why did our records management training/guidance fail?

We were not "Present at the Creation."

- Meetings/training began well after the start of the administration

- Governor Kaine's Electronic Archival Policy was not issued until December 2007 – nearly two years into the administration

- VITA PST folder templates rolled out in late 2007

What is the solution?
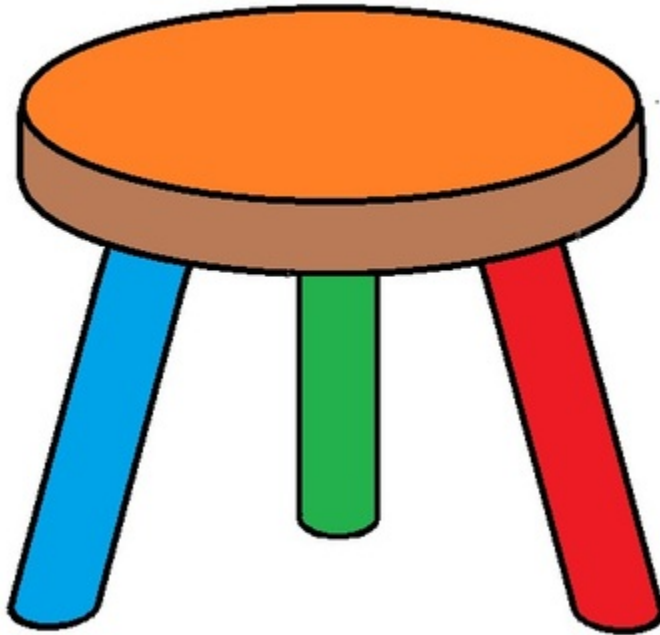
Three-Legged Stool

1. State CIO/IT
2. State Archives/Records Management
3. State Human Resources

For more information about the project:

- **Kaine Email Portal** -
  - http://www.virginiamemory.com/collections/kaine/

- **Kaine Email Finding Aid -**
  - http://ead.lib.virginia.edu/vivaxtf/view?docId=lva/vi00993.xml

- **Kaine Email Blog Posts –**
  - http://www.virginiamemory.com/blogs/out_of_the_box/category/state-records-blog-posts/kaine-email-project/

Contact: roger.christman@lva.virginia.gov

Next Steps & Resources

CoSA/Preservica Practical Digital Preservation Program

PERTTS Portal

https://www.statearchivists.org/pertts/education-training/cosa-preservica-practical-digital-preservation/

Upcoming Conferences
- CoSA: Boise, ID (July 10-13)
- NAGARA: Boise, ID (July 12-15)
- SAA: Portland, OR July 23 – 29

Watch the next LIVE demo

May 25th, 10am US ET, 3pm UK - Register for our live online demonstration of the current Preservica version
Register at www.preservica.com

RESOURCES on Preservica.com

From whitepapers, case studies, videos, resources and past webinars - www.preservica.com/resources

CoSA
Council of State Archivists

Preservica
Digital Preservation

Questions?
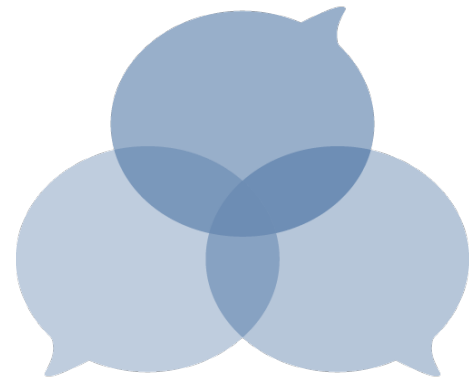
Thank You!

www.preservica.com
info@preservica.com
@preservica
@dPreservation

www.statearchivists.org/