Electronic Records Management Strategy

Overview

The arrival of the Information Age means that much of our history is now recorded in electronic format, including your agency's activities. Because of that, you need to develop a strategy for managing electronic records. A government agency's electronic records management strategy must conform with legal mandates, as well as reflect your preferred management practices and technological options.

Because different stakeholders throughout an enterprise have different needs and roles in electronic records management, the development of your electronic records management strategy requires joint planning, communication, and training.

When you begin to develop your electronic records management strategy, you should aim for a policy that integrates:

- The legal framework as it applies to your agency

- All interested stakeholders (e.g., record creators, the public, information technology staff, records management staff)

- All relevant aspects of your electronic records

- Your preferred management procedures and technologies

- Long-term storage and access needs (both legal and operational)

A sound, integrated strategy reflects the relationship between records management and your operations, and ensures that you manage records in a way that supports your daily work, supports long-term operational needs, and meets your legal requirements.

Legal Framework

Your strategy must conform with the legal mandates in such areas as:

- Providing public accountability

- Distinguishing public from restricted records

- Creating records retention schedules and carrying out disposal actions

- Developing and sustaining a trustworthy process for electronic records management

Legal mandates include the following:

- Wyoming Public Records Act – WPRA (Wyoming Statutes 16-4-201 through 16-4-205) (available at: http://legisweb.state.wy.us/statutes/titles/title16/c04a02.htm), which requires government agencies keep records to fulfill the obligations of accountability and which mandates that your records be accessible to the public, unless categorized as restricted by the state legislature. It further stipulates that records which are created electronically will be available to the public in the same way other state records are and will be legally admissible in court.

- Wyoming Statutes 9-2-401 through 9-2-419 (available at: http://legisweb.state.wy.us/statutes/titles/title09/c02a04.htm), which establishes the Wyoming State Archives and the State Records Committee for the orderly identification, management and disposition of all state and local government records using legally approved records retention schedules.

- Computer Crimes (Wyoming Statutes, 6-3-501 through 6-3-505) (available at: http://legisweb.state.wy.us/statutes/titles/title06/c03a05.htm)

- Executive Branch Electronic Mail Policy (Executive Department, Executive Order - 1999-4) (available at: http://www.state.wy.us/governor/press_releases/execorder/1999/pre1999-4.html)

- Executive Branch Digital Imaging (Executive Department, Executive Order – 1993-2)

- Uniform Electronic Transactions Act (UETA) (Wyoming Statutes, 40-21-101 through 40-21-119) (available at: http://legisweb.state.wy.us/statutes/titles/title40/CHAPTER21.htm) and Electronic Signatures in Global and National Commerce (E-Sign), a federal law (available at: http://thomas.loc.gov/cgi-bin/query/z?c106:S.761:). Both UETA and E-Sign address the issue of the legal admissibility of electronic records created in a trustworthy manner and address the issue of applying a paper-oriented legal system to electronic records.

- Executive Branch Electronic Mail Policy (Executive Department, Executive Order - 1999-4) (available at: http://www.state.wy.us/governor/press_releases/execorder/1999/pre1999-4.html) This executive order requires all executive branch agencies to treat e-mail which are transmitted as part of state business as a state record and that all state employees be trained in the policy.

Key Concepts

As you develop an electronic records management strategy, you will need to be familiar with the following key concepts:

- The State of Wyoming's definition of a record

- Records series

- The components of an electronic record

- The records continuum

- Records management goals

- Long-term retention approaches

- Records retention schedules

- Storage options

Definition of a Record

Wyoming Public Records Act – WPRA (Wyoming Statutes 16-4-201 through 16-4-205) defines government records as:

> "Public records" when not otherwise specified includes the original and copies of any paper, correspondence, form, book, photograph, photostat, film, microfilm, sound recording, map drawing or other document, regardless of physical form or characteristics that have been made by the state of Wyoming and any counties, municipalities and political subdivisions thereof and by any agencies of the state, counties, municipalities and political subdivisions thereof, or received by them in connection with the transaction of public business, except those privileged or confidential by law.

In short, an official record includes all information, *regardless of format*, created or used in the course of governmental business functions or transactions.

An *electronic record* is a record created, generated, sent, communicated, received, or stored by electronic means. Like paper records, electronic records require a long-term records management strategy.

For more information, refer to the *Preserving and Disposing of Government Records* booklet. (See Annotated List of Resource at the end of these guidelines.)

Records Series

Your electronic records need to be organized into records series. A *records series* is a set of records grouped together because they relate to a particular subject or function, or result from the same activity. All records fall into a records series, and each records series should be managed according to an appropriate records retention schedule. If there is no retention schedule established for a record series, all records in that series need to be retained until a retention schedule has been established.

By managing related records as a group, you can efficiently preserve and dispose of your records. For example, all records (regardless of format) relating to a particular committee's activity on a single issue may constitute a records series that must be preserved in an orderly fashion.

Your agency will need to organize its own records series based on its unique needs within the legal framework.

Record Components

The components of any record include:

- *Content*. Factual information in the record that documents government business

- *Context*. Information that shows how the record is related to the business of the agency and other records

- *Structure*. Technical characteristics of the record (e.g., file format, data organization, page layout, hyperlinks, headers, footnotes)

Records Continuum

Aside from reflecting your legal requirements, a successful long-term records management strategy reflects the records management continuum.

The records continuum concept reflects the idea that different stakeholders create, use, manage, and retain records, not in discrete stages, but at different points throughout the record's existence. The continuum concept recognizes that records pass through identifiable stages; however, these stages are reference points, not separate functions. In other words, a record is not simply created, passed to a records manager for short-term storage, and then passed to an archivist for long-term storage. Instead, each person's activities will have an effect on all the others in the continuum. Their roles and responsibilities should be coordinated, not organized autonomously.

The continuum concept outlines four actions that recur throughout the life of a record. These actions are:

- *Identification*. Determining what constitutes a record

- *Intellectual control*. Making decisions about the record

- *Provision of access*. Enabling users to access the records

- *Physical control*. Managing the physical location and format of the record

Each person who touches the record performs one or all of these activities. For example, the records creator, records manager, and archivist all manage the physical location of the record. Therefore, all these people should collaborate on a comprehensive and well-managed electronic records management strategy.

Records Management Goals

Although the specific strategy that your agency develops and implements will be unique, all strategies share common goals. No matter what your final strategy, the records that exist in your agency should be:

- *Trustworthy*. Trustworthy records contain information that is reliable and authentic. For more information on determining the trustworthiness of information, refer to the *Trustworthy Information Systems Handbook*. (Download information is included in the Annotated List of Resources at the end of these guidelines.) A key aspect to trustworthiness is legal admissibility, i.e. whether your records will be accepted as evidence in court.

- *Complete*. Your records should have all the information necessary to ensure their usefulness throughout the entire retention period of the record series. You will also need to capture and maintain the necessary metadata about your records. *Metadata* is the "data about the data" that documents the relationship of the record to your agency's activity and to other records. Metadata ensures that you can find your records. Metadata includes such elements as the record's creator, the date of creation, and the record series to which the record belongs.

- *Accessible*. You must be able to access and locate your records in a way that meets your needs and the needs of all other concerned parties. Some records may need to be immediately accessible, while others may not. As outlined in the WPRA, records are assumed to be accessible to the public, unless categorized as restricted by the state legislature.

- *Durable*. You also want to ensure that your records are durable. In other words, they must be accessible for the designated records retention period and stored, as appropriate, on a medium of a quality to ensure their accessibility and legibility

  - If data/information is or can be deleted or changed, can the obsolete or superseded data be removed from the system or storage device easily and economically, as allowed by the retention schedule?

Long-Term Retention Approaches

You have two viable, often compatible, approaches for the long-term, records with over 5 year retention:

- *Conversion*. When you convert a record, you change its file format. Often, conversion takes place to make the record software independent and in a standard or open format. For example, you can convert a record created in WordPerfect by saving it as a Rich Text Format (RTF) file (an open format), or to Microsoft Word (a proprietary format). (For more information on file formats, refer to the *File Formats* guidelines.)

- *Migration*. When you migrate a record, you move it to another computer platform, storage medium, or physical format. For example, when you migrate records, you may need to migrate them to another storage medium to ensure continued accessibility. For example, if you migrate records from magnetic tapes that deteriorate, you may need to migrate the records to a compact disk to ensure continued accessibility.

As you consider conversion and migration, consider which media are appropriate for long-term retention. You may discover that another medium (e.g., paper or microfilm) is the best option. For records which have been identified as permanent, the only two medium, at the present time, which meet the archival test are paper and microfilm. You may also determine that you want to combine approaches, such as converting all files to an open format and migrating them to a single platform and storage medium. (For more information on storage media, refer to the *Digital Media* guidelines.)

Records Retention Schedules

Your electronic records management strategy will need to include the identification which records retention schedules contain electronic records. A records retention schedule is a plan for the management of record series listing the types of records and how long they should be kept. The purpose of a records retention schedule is to serve as an on-going authorization for the management and disposition of records.

As we mentioned above, all record series need to be identified in a record retention schedule. The schedule gives the legal authority to manage the record series. The Electronic Records Unit of the WSA is responsible for assisting agencies in the identification of record series being created or stored electronically. The Electronic Records Unit will make arraignments to meet with your agency's Records Officer and the Information Technology section to start the process of inventorying your electronic record series. This process may be accomplished by agency or by program areas within your agency depending on the size and complexity of your agency. Once all electronic record series are identified, record retention schedules will be written and submitted to the State Records Committee for review and approval. (For more information on the State Records Committee, refer to the *Introduction*.) With the State Records Committee's approval your agency will have the legal authority to manage and destroy or delete your electronic records.

Storage Options

Your options for storage include:

- *Online*. Properly designed storage in your computer system may provide full access to appropriate users. Online access means that the record is accessible immediately through your network. This option maintains the greatest functionality. (For more information on the design of your storage solution, please see *Directory/File Folder Format* guideline.)

- *Nearline*. Nearline storage includes storage in a system that is not a direct part of your network, but that can be accessed through your network (e.g., a compact disk that you can read on your personal computer). This option maintains a moderate amount of functionality.

- *Offline*. Offline storage refers to storage on a system (e.g., a DLT tape library) that is not easily accessible through your network. You can only access records in offline storage by using the offline storage system. This option retains the least amount of functionality, while still maintaining records in an electronic format.

- *Paper*. Printing records onto archival-quality paper for permanent storage may be acceptable as long as the complete record, including all components and necessary metadata, is included.

Key Issues to Consider

Now that you are familiar with some key concepts in electronic records management, the Electronic Records Unit staff is available to meet with your agency and use the questions below to assist you as you develop your strategy. The careful consideration of these questions will help ensure that:

- All relevant stakeholders agree to the process and are ready to use the procedures outlined in the strategy once it is implemented

- The strategy meets your legal requirements, such as public accountability, records retention schedules, and trustworthiness

- You maximize efficiency by working with other agencies and gaining from their experience

Discussion Questions

- What legal issues do we face? Who will need access to our records (e.g., the public, other government agencies)? Do we have information that *must* be accessible to the public? Do we have information that is restricted and must *not* be disclosed to the public (e.g., social security numbers, adoption records)?

- Can we use the records retention schedules we already have in place, or do we need new records retention schedules approved by the State Records Committee?

- What are the roles of different groups and individuals in our organization in ensuring a coordinated process? How can we facilitate planning, communication, and cooperation among all individuals who create and use the electronic records? What level of control should different individuals and groups have?

- Can we cooperate with other government agencies to streamline the process and save money or time?

- What best practices can we identify and apply to our own situation?

- What is the life cycle of our data? When should we capture records? How can we describe our records continuum? At which phases along our continuum do we need to actively manage the record? Would we benefit from developing a model of our operational process to aid in this discussion?

- How will we ensure long-term preservation and access? What are our requirements under the law?

- What are our options for long-term retention? What are the advantages of each option? How would each option work in our particular situation? What is our budget?

- What technological resources do we have available? How much of our chosen process can we or should we automate?

- What sort of appraisal process will we use to determine which records to keep? How will we ensure that this process identifies all records as defined by the law?

- What staff training do we need to ensure the staff complies with the new procedures and policies?

- What elements of the electronic records do we need to keep (e.g., text content only, graphical appearance, interactivity)?

- What metadata do we need to collect and preserve?

Annotated List of Resources

Primary Resources

Dollar, C. M. *Authentic Electronic Records: Strategies for Long-Term Access*. Chicago: Cohasset Associates, Inc., 2000.

This book provides a comprehensive overview of electronic records management, with chapters on key concepts, long-term access, best practices, and developing an action plan. The book also includes a comprehensive bibliography, as well as useful appendixes covering such topics as technology for records management, electronic records preservation costs, conversion standards, media life expectancies, and a preservation metadata model.

Hunter, G. S. "Storage, Handling, and Preservation Best Practices." In *Preserving Digital Information, A How-To-Do-It Manual*. New York: Neal-Schuman Publishers, Inc., 2000: 53–93.

These hands-on recommendations provide practical information for electronic records storage, handling, and preservation. Topics covered include useful information on the deterioration of magnetic media, recommended storage conditions, proper care and handling, file formats (including advantages and disadvantages of different formats), and other best practices.

Minnesota Historical Society, State Archives Department. *Trustworthy Information Systems Handbook*. Version 2, August 2000.
<http://www.mnhs.org/preserve/records/tis/tis.html>

This handbook provides an overview for all stakeholders involved in government electronic records management on how to ensure that their information systems are accountable to elected officials and citizens through the creation of reliable and authentic information and records. The handbook discusses the characteristics that define trustworthy information. A series of worksheets in the handbook helps you evaluate and refine a system to ensure trustworthy information.

Saffady, W. *Managing Electronic Records*. 2nd ed. Prairie Village, Kan.: ARMA International, 1998.

This book provides a thorough discussion of the basic principles of electronic records management. Chapters include concepts and issues, electronic storage media and formats, file formats, the inventory of electronic records, retention schedules, managing vital electronic records, and managing files and media. It also includes a comprehensive glossary and bibliography.

Stephens, D. O. and R. C. Wallace. "Electronic Records Retention: Fourteen Basic Principles."
The Information Management Journal 34 (October 2000): 38–52.

Providing a brief, but complete, overview of the basic principles of electronic records management, this article also contains practical guidelines for developing an electronic records management strategy.

Additional Resources

Barata K., P. Cain, R. Routledge. *Principles and Practices in Managing Financial Records: A Reference Model and Assessment Tool*. London: International Records Management Trust, Rights and Records Institute, 2001.
<http://www.irmt.org/index2.html>

Of particular interest to the public sector, this handbook provides an overview of international best practices in the management of electronic financial records.

Bill Number S-761. Washington, D.C.: Library of Congress, 2001.
< http://thomas.loc.gov/cgi-bin/query/z?c106:S.761:>

This site provides the results of a search for E-Sign legislation in the Thomas database of legislative information on the Internet. The site lists five versions of the bill (including the final enrolled bill) for the 106th congress (1999–2000). The site provides a downloadable file of the bill, plus links to other information about the bill in the Congressional Record and committee reports.

COOL, Conservation OnLine. Stanford: Stanford University Libraries, 1994.
<http://palimpsest.stanford.edu>

A compilation of materials from other sources about electronic conservation, this web site includes links to resources on disaster recovery, electronic media, electronic formats, and storage environments.

International Council on Archives, Committee on Electronic Records. *Guide for Managing Electronic Records from an Archival Perspective*. Paris: International Council on Archives, 1997.

This handbook provides a comprehensive overview of electronic records management from an archival perspective. It provides useful information on key concepts, such as life-cycle management, legal issues, technological issues, and implementation tactics, for all readers.

InterPARES Project. Vancouver: School of Library, Archival and Information Studies, University of British Columbia, 2001.
<http://interpares.org>

This web site is a comprehensive resource for information about the InterPARES Project. This project is an international research initiative to develop a theory and methods for permanent electronic records preservation. The site includes white papers, links to additional resources, presentations, and workshop listings.

Public Records Office, Records Management, Electronic Records. Surrey, United Kingdom: Public Records Office, National Archives, 2001.
<http://www.pro.gov.uk/recordsmanagement/eros/default.htm>

Published by the Public Records Office of the United Kingdom, this site provides a wide range of information, including downloadable documents on the management, appraisal, and preservation of electronic records; how to incorporate a policy on electronic records management; and toolkits for compiling an inventory of electronic records collections.

UETA Online. Napa, CA: Carol A. Kunze, 2000.
<http://www.uetaonline.com>

This web site, published by Carol Kunze, an attorney specializing in UETA-related issues, provides information and updates about UETA, and the status of UETA in the United States Congress.

Special thanks to the Minnesota State Archives for their help in the development of this guide.