Electronic Records Management Guidelines
Records Management in an Electronic Environment

Legal Framework
Public Records Act
The Public Records Act (PRA) (Code of Laws of South Carolina, 1976, Section 30-1-10 through 30-1-140, as amended) available at https://www.scstatehouse.gov/code/title30.php, governs the management of public records created by all agencies or entities supported in whole or in part by public funds in South Carolina. Although legal responsibility for records created in your office rests primarily with your agency, the Public Records Act permits the South Carolina Department of Archives and History (SCDAH) to assist in the decision-making process and intervene if necessary to prevent unlawful record destruction.

The SCDAH is empowered to do any of the following:
• Establish and develop standards, procedures, techniques, and schedules for the management of public records.
• Examine all public records, including those otherwise restricted.
• Act to preserve and protect permanently valuable public records.
• Survey agency record keeping practices and make recommendations for improvement.
• Conduct information and training programs in all phases of information and records management.
• Determine the medium in which archival records must be maintained or transferred to the department, including those records in electronic formats.
• The SCDAH director may order the removal of records from agency environments that do not meet Department regulations for records storage.

In addition, your agency must:
• Cooperate with the SCDAH and establish and maintain an active continuing program of records management.

Did you know that “The chief administrative officer of any public body in charge of public records or creating, filing, or keeping public records is the legal custodian of these records and is responsible for carrying out the duties and responsibilities of this chapter which are assigned to public agencies, bodies, offices, or subdivisions. He may appoint a records officer to act on his behalf.” – Code of Laws of South Carolina, 1975, Section 30-1-20
• Assist the SCDAH in conducting inclusive inventories and developing schedules mandating records retention by series.
• Dispose of records with an authorized retention schedule, according to SCDAH procedures.

South Carolina Uniform Electronic Transactions Act (UETA)
Enacted in 2004, the South Carolina Uniform Electronic Transactions Act [UETA] (Code of Laws of South Carolina, 1976, Section 26-6-10 through 26-6-210) facilitates electronic commerce and electronic government services by legally placing electronic records and signatures on equal footing with their paper counterparts. UETA officially repeals the 1998 South Carolina Electronic Commerce Act [Code of Laws of South Carolina, 1976 Section 26, Chapter 5]. The purpose of UETA is to establish policy relating to the use of electronic communications and records in contractual transactions. This law does not require the use of electronic records and signatures but allows for them where agreed upon by all involved parties.

While technology-neutral, the law stipulates that all such records and signatures must remain trustworthy and accessible for later reference as required by law. Similarly, the federal Electronic Signatures in Global and National Commerce (E-Sign) Act [U.S. Public Law 106-229] also encourages the use of electronic documents and signatures, although it goes further to provide some guidelines regarding standards and formats. For more information on UETA see Appendices A6 and A7 of the Trustworthy Information Systems Handbook.

The terminology used in these Guidelines comes from the records management and archival professions. Other information professionals such as programmers, database managers, and networking specialists may use similar vocabulary. Certain terms in this document may be defined differently than what you are familiar with and may require careful scrutiny to avoid confusion. To make better use of these Guidelines, you should acquaint yourself with the terms and definitions italicized in this section as well as those in the Glossary.

What are Electronic Records?
Data vs. Records
Data consists of raw information in its simplest form. Data can be numbers or text captured on a variety of storage devices including computer hard drives and removable media or simply consist of written information on a piece of paper.

Records, on the other hand, have evidential value that describes the origins, functions and activities of your agency. In addition, the content of your records have informational value significant to researchers. Records are characterized by their context, content, and structure.

Electronic records, as defined by the Uniform Electronic Transactions Act, are records created, generated, sent, communicated, received or stored by electronic means. The term can refer to both analog (i.e. audio and videotapes) and digital formats. Electronic records can be created electronically or
produced by scanning materials in other formats.

Public records, as defined by the Freedom of Information Act [Code of Laws of South Carolina, 1976 Section 30, Chapter 4] and the Public Records Act include:

... all books, papers, maps, photographs, cards, tapes, recordings, or other documentary materials regardless of physical form or characteristics prepared, owned, used, in the possession of, or retained by a public body...

Therefore, records created and stored electronically must be managed according to the law.

Characteristics of Records

Content is data organized into a useful format for a specific use. An online report that includes text, photographs and illustrations is an example. In your agency, content is aggregate information that relies on a specific format.

Context provides descriptive information that connects your records to other records and business functions. Examples of context include name of creator, department name, dates, subject, etc. that describes how the record is related to the business of an agency and other records produced by an agency. Context is captured and maintained electronically by using metadata. For more information on metadata see Criteria Group 5 in the South Carolina Trustworthy Information Systems Handbook.

Structure refers to the appearance and arrangement of the content, essentially its format. For example, data may be formatted using HTML for display on the web or placed into a PDF document for reading electronically or printing. Once printed, paper becomes the new format.

Value refers to a record’s usefulness, significance, or worth to your agency. Putting it simply, records have value. Your records are created and maintained to serve a variety of purposes with administrative, legal, fiscal, or historical reasons being the most common. Since not all records are equal, their value is dependent on how they are presently used as well as how they may be used in the future.

Information can be data, content, or records, and an information system can store each type independently or collectively.

Characteristics of Recordkeeping Systems

An information system stores data in discrete chunks that can be recombined and reused without reference to the documentary context. It holds informational content that can be manipulated at will. A recordkeeping system provides a record of business transactions within the proper documentary context. An information system becomes a recordkeeping system when either part or all of it is used to support an agency’s recordkeeping requirements. A recordkeeping system must be designed to manage and retrieve information admissible for legal actions and available as evidence for audits. This is accomplished through the development of policies that promote the creation and maintenance of trustworthy systems to produce authentic and reliable records. A trustworthy system is crucial to achieve an accurate and dependable picture of your agency’s business. To determine if your
systems are trustworthy refer to the *South Carolina Trustworthy Information Systems Handbook*. Because recordkeeping systems are design-dependent, the best ones are created using established agency records policy. Since agencies are legally responsible for all records they create, existing recordkeeping systems can and should be brought into compliance with agency recordkeeping procedure.

**Record Series**
All records belong to records series. A record series is a set of records relating to particular subjects, functions, or activities. Each records series should be managed according to an appropriate records retention schedule. By managing related records as a group, you can efficiently preserve and/or dispose of your records as required. Keep in mind that your agency will need to organize its own records series based on its unique administrative, legal and fiscal requirements.

**Why Manage Electronic Records? Three Reasons**

1. **Legal Liability**
Electronic records, like paper records, are subject to specific South Carolina statutes. The South Carolina Public Records Act mandates that public agencies manage all records, regardless of physical format. Failure to manage these records responsibly could result in costly lawsuits, court-imposed sanctions, fines and imprisonment. The Public Records Act permits records custodians to destroy agency records without the fear of legal repercussions only when acting under the authority of retention schedules created in cooperation with SCDAH.

2. **Costs Associated with Storing Electronic Records**
As the costs of data storage become cheaper you may be tempted to keep everything that you create electronically. While this approach will provide continued access to every record, keeping unnecessary records will create an inefficient and unnecessarily expensive system in the long run. In addition to the cost of the media, all data storage requires suitable management that adds to your overall maintenance costs. These include:

- periodic backups and restoration
- quality and error checking
- relocation of records to near-line or offline systems
- system performance evaluations
- meeting additional data protections demands

To calculate your total storage costs, add the cost of hardware, software and software licenses, databases, servers, system administration personnel, maintenance, backups, media, and floor space.

Moving unused records to near-line or offline storage media such as CDs or flash drives is an acceptable solution, but it is not without concerns. Potential management issues
include scheduling time to refresh CDs or flash drives as well as planning for data migration and/or conversion of records to current media and data formats that are readable by your present system software and hardware.

Remember, storing your records electronically is not without costs. It requires careful planning and management including the implementation of a records management plan to oversee the records and information in your systems and reduce the amount of information in a logical and legally acceptable manner. Attempting to satisfy every “just in case” scenario by maintaining superfluous information on your systems will result in unnecessary expense to your agency. Lowering the costs of storage requires that electronic records be managed under predetermined schedules. Devising a records management plan that keeps only those records needed to meet your business and legal requirements provides a less expensive and sensible solution.

3. Historical Aspects of Electronic Records
As you read through this document you will encounter several reasons to improve your electronic recordkeeping. An often-overlooked reason is that some records your agency creates are historically valuable. Because your records reflect the decisions and efforts made to accomplish the mandate of your agency, researchers, both internal and external to your organization, as well as historians may want to reference them over time. Without the knowledge derived from properly maintained records, lessons that might otherwise be learned and applied may go unrealized.

Records Retention Schedules
A records management strategy should include records retention schedules for any records you produce regardless of physical format. A records retention schedule lists the types of records by series, provides a brief description of each series, and determines how long they should be kept including their final disposition. The purpose of a records retention schedule is to authorize the management and disposition of records. As an added benefit, disposing of records according to a retention schedule releases you from any legal liability [Code of Laws of South Carolina, 1976, as amended, Sections 30-1-90 & 30-1-100]. Record retention schedules are designed to manage records and not the media they are stored on. Series that include multiple formats (paper, electronic, audio, etc.) should be managed under a single schedule.

From the Public Records Act
“No records of long term or enduring value created, including those filed, kept, or stored electronically, or those records converted from paper to magnetic, optical, film, or other media in the transaction of public business may be disposed of, destroyed, or erased without an approved records schedule.”

General Schedules
Most government entities produce common types of records that are covered under general records retention schedules issued by SCDAH. These schedules are flexible enough to allow most agencies to apply them to generic record series. For example, financial records are common throughout all state and local
government and applying a general retention schedule offers a quick and effective management solution for these records. General records retention schedules exist for records common to state agencies, public colleges and universities, counties, municipalities and school districts.

Your agency can use the general records retention schedules where they apply. General schedules for state and local government entities are available at https://scdah.sc.gov/records-management/schedules.

**Specific Schedules**
You may also choose to employ a specific retention schedule for a particular series of records produced by your agency. These schedules apply to records unique to your agency and where a general schedule will not meet your recordkeeping needs. SCDAH staff work closely with agency personnel to create specific retention schedules. A specific schedule applies only to the agency that initiated it, you are required to submit any proposed changes to SCDAH for approval. Any changes must be approved by your agency and by SCDAH.

**Records Life Cycle and Records Continuum**
The traditional concept of records management, known as a life cycle, recognizes that records pass through noticeable stages from creation to use, and finally, to disuse and disposal. The records continuum enhances the life cycle stages by taking into account the dynamic nature of electronic records that includes dependence on time and circumstance. In other words, a record is not simply created, passed to a records manager for storage, and then passed to an archivist for permanent retention. Instead, each person’s activities will affect all the others in the continuum. The continuum model anticipates that records managers and archivists will work closely with records creators earlier, even before a record is created, to develop a comprehensive electronic records management strategy.

It is important to remember that not all records have uses beyond the reasons that they are created for. In fact, the majority of records that your agency creates have no use beyond their original purpose. Applying the life cycle and continuum models will help you gain perspective about how your agency creates, uses and efficiently manages records.

**Developing an Electronic Records Strategy**
When should you develop an electronic records strategy? Because maintaining and providing access to accurate, reliable and timely information is essential to achieving goals in any organization, the simple answer is the earlier the better. Although electronic records management can be implemented at anytime, you can improve the effectiveness of your system by establishing a plan before the first record is ever entered into your system. The best times to develop an electronic records strategy are:

- At system design and procurement
- When replacing or upgrading information systems
- During a business process analysis and reengineering project

Establishing a records strategy saves time and money and lowers the risk of embarrassment resulting from misplaced or missing records.
As with paper records, your electronic records strategy requires careful planning and effort. A suitable plan should be in place before applying any technological solutions such as digital imaging or installing data management software. A useful plan might include determining how and why records will be created and used, how long they will need to be retained, and what procedures will be used to make them available to users whenever they are needed.

**Recommended Practices**

Given today's evolving legal environment, agencies and local governments must produce and maintain reliable, complete, and accurate business records — records that will be acceptable for legal, audit, and other purposes. To this end, agencies will need to review thoroughly, and perhaps modify, agency information systems and records management policies. Good planning will protect valuable information not only from loss and corruption but also from the risk that it will be challenged in court.

State and local government managers can use the practices set out below as a guide to establish the foundation for producing legally-admissible electronic records when they are developing or making changes to an automated system. This guide is not intended to replace the need to consult your IT department. For an Electronic Records Management Program to be successful, your IT department must be involved.

**Designing a system**

**Records system or not?**

If you will be using your system to record business transactions or to support other agency recordkeeping requirements, you will need a recordkeeping system. A system that will meet requirements is a system that has been carefully designed by applying records management techniques and supported by reliable documentation. Through design and documentation, you should be able to provide information on:

- what data are put into the system
- what data it produces
- access to and use of records
- the update cycles of records
- rules for adding and deleting information to records
- routines for the disposition of records

In short, your system should be able to provide information on the **content, structure, and context** of your records.

**Analyze business processes**

You should describe procedures for conducting each of your major business functions, chart how each works, and devise rules for each function the system will support to ensure the procedures you use will meet your legal obligations as well as practical requirements. When you do this, you will know what records are needed, how they should be organized for access, and how long they will need to be maintained for administrative, legal, audit, or historical purposes.

**Ensure soundness of design**

It is a good idea to form a design review team that includes your legal counsel, operations manager, records officer and internal auditors. The team should make certain that the design complies with agency internal requirements before you begin to operate your records system. Additionally, the team should review
the *Trustworthy Information Systems Handbook* provided by the State Archives to be sure that the design will safeguard the authenticity and reliability of the records it holds.

**Build in controls**
Your records system will require built-in controls governing access, security, user verification, and routines for the SCDAH-approved disposition for all records. To that end, you should include a set of internally-consistent rules to cover the creation, maintenance, retrieval and disposition of each set of records when you design the system.

**Establish trustworthy records through documentation**
To meet your needs and the requirements of auditors and court officials, you must be able to explain the purpose of your system and describe the way it functions. You must also be able to identify the records it supports, describe their contents, and show you have established various controls to protect their authenticity. The *South Carolina Trustworthy Information Systems Handbook* provides an efficient way to analyze your systems for trustworthiness.

**Process documentation:** You will need to document business activities and business applications.

**Program documentation:** Managers should maintain policy and procedure manuals for all business activities that require recordkeeping.

**Technical documentation:** Managers should maintain adequate and up-to-date technical documentation for all business applications supported by the records system.

Documentation will provide information on access to records, describe fully and accurately the procedural controls used to produce the records, and show that the records have been created and maintained during the normal course of business by consistent methods by that conform to established business practices. Technical documentation should include:

1. *User manuals.*
2. *Record layouts,* which describe the contents of each record in terms of the length, position, and information contained in each of its data fields.
3. A list of codes and other information needed to read or process records.

**Authorization:** Managers should write out access procedures, issue user IDs, and assign passwords to show that only authorized individuals originate or modify records.

**Training:** Managers may have to document the training required for those who create or have access to records. They may also have to establish a link between what the job titles of users authorize and what individual job descriptions show they have been trained to do.

**Audit trails:** Managers should document every transaction — each use of a record — by building in audit trails. For more information about evaluating your system audit trails see *Criteria Group 3* in the *South Carolina Trustworthy Information Systems Handbook.*

**Audits:** Managers should schedule periodic audits to confirm that established procedures are followed and that accurate records are produced. They should document the
frequency of audits, the results of audits, and the independence of auditors.  

**Retention:** Managers must be able to provide documentation on the life cycle of all records served by the system.

1. *Electronic records.* Managers must be able to identify all business records, the electronic media on which they are stored, the maximum time span they will remain on each medium, and the Archives-approved disposition for all.

2. *Documentation records.* Under the terms of the South Carolina Public Records Act, the records you generate to document your processes are considered official public records. Managers, therefore, must establish Archives-approved dispositions for all these records as well.

**System documentation**

You should maintain at least one set of system documentation for as long as the system could be subject to court review, audit review, or SCDAH requirements. You should document the operation of the system, the integrity and security of the system, and the reliability of hardware and software. System documentation includes the following:

- **System operations:** Managers must maintain an operations manual describing each electronic records system for as long as records in the system are to be kept. The operations manual will describe the procedures that control the resources the system is using or has used. Factors include the system hardware, all versions of software, the dates each version of software was used, and the measures taken to show that they system has operated properly and that no deceptive practices have been followed. For more information about evaluating your system documentation see **Criteria Group 1** in the *South Carolina Trustworthy Information Systems Handbook.*

- **System security:** Managers should develop and maintain documentation of security procedures, including those to prevent unauthorized access to, additions to, modification of, or deletion of records. For more information about evaluating your system security see **Criteria Group 2** in the *South Carolina Trustworthy Information Systems Handbook.*

- **Data Recovery:** Managers should develop and document procedures for data recovery. These procedures should include practices like regular system back-ups or off-site or mirror site storage to protect records during disasters like power interruptions. For more information about evaluating your data recovery and disaster preparedness see **Criteria Group 4** in the *South Carolina Trustworthy Information Systems Handbook.*

- **System migrations:** Managers should develop and document procedures used to convert records from one medium or technology to another. Only with careful planning and documentation will you be able to safeguard the authenticity and reliability of your records and provide continued access to them for as long as they are needed.

**Custody of Permanent Records — Archives or Agency?**

Permanent records, those used to document an agency’s actions and provide historical information, represent a tiny fraction of what your organization produces. In many cases the SCDAH collects and manages less than three percent of the total amount you create. As of 2017, SCDAH is able to take custody of your agency’s permanent electronic records.
Instructions for the transfer of permanent electronic records, as well as the Electronic Records Transmittal Form, are available at https://scdah.sc.gov/records-management/forms.

To arrange for a transfer of permanent electronic records please contact the Records Management Division, Electronic Records Supervisor at (803) 896-6203.

**SCDAH Electronic Records Program**
The Department of Archives and History offers advice and training to other state and local government agencies facing electronic records management issues and concerns. The major functions and activities of the SCDAH electronic records program are to:
- Work with agencies and local governments to ensure that records management programs encompass electronic records.
- Provide guidance and assistance to agencies to ensure that recordkeeping requirements are included in new or updated systems.
- Assist agencies and local governments in identifying archival electronic records.
- Assist agencies and local governments in appraising and scheduling electronic records.
- Concentrate record appraisal efforts on systems likely to yield needed archival documentation.
- Work with agencies and local governments to determine the appropriate formats and media for the preservation of and access to archival electronic records over time.
- Transfer selected archival electronic records to the State Archives for preservation and access.
- Develop guidelines and training to assist agencies and local governments with managing electronic records.
- Ensure that electronic records issues are considered in the development of any surveys and procedures developed by the SCDAH.

**Storage Media**

**Storage Options**
As part of a records management plan for electronic records, you will need to determine where and how these records will be stored. This decision will be based on the likelihood of access to those resources versus the overall cost in maintaining them. Your options for storage include online, near-line, and offline. For more information about storage media see the Digital Media guideline.

**Preservation of Electronic Records**

**Long term approaches**
You have two viable, often compatible, approaches for the long-term retention of your records:
1. **Conversion.** When you convert a record, you change its file format or media. Conversion often 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 guideline.) Scanning paper documents as digital images is an example of media conversion. In some cases maintaining your electronic records digitally is not the best solution. There is no recognized combination of
hardware, software or media that presently qualifies as archival storage. For records requiring long-term (e.g. 10-99 years) or permanent (archival) retention, conversion to a non-electronic format should be considered. Reformatting options include:

**Paper.** Printing records onto archival-quality paper for storage may be acceptable as long as the complete record, including all components and metadata, is included. Electronic records should be saved in paper format if they have long term or permanent status with no feasible way to preserve them electronically.

**Microfilm.** As with paper, saving electronic documents to microfilm should be reserved only for special situations. Since it will be difficult to add additional documents at a later date and preserve original order, these series should be complete and non-active.

2. **Migration.** When you migrate a record, you move it to another, possibly similar, computer platform, storage medium, or physical format to ensure continued accessibility. Migrating records to the same type storage media, such as from older magnetic tapes to newer tapes to avoid deterioration is known as refreshing the media. 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. 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* guideline)

### Annotated List of Resources

#### Primary Resources


*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 topics such as technology for records management, electronic records preservation costs, conversion standards, media life expectancies, and a preservation metadata model.*


*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.*


This handbook provides an overview for all stakeholders involved in government electronic records management. Topics center around ensuring accountability to elected officials and citizens by developing systems that create reliable authentic information and records. The handbook outlines the characteristics that define trustworthy information, offers a methodology for ensuring trustworthiness, and provides a series of worksheets and tools for evaluating and refining system design and documentation.

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.

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

This site provides the full text and a summary of the 761st Bill of the 106th Congress. The site provides a history of the bill, amendments, sponsors, actions taken, etc. The site also provides links to related bills and other information about the bill in the Congressional Record and committee reports.

https://www.statearchivists.org/resource-center/resource-library/
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.

InterPARES Project Trust.
https://www.interparestrust.org
This web site is a comprehensive resource for information about the InterPARES Project. The project concluded in 2012, but its findings and work product have been placed
in an international trust. This project was 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.

ISO/AWI 13008: 2012 Information and Documentation: Digital Records Conversion and Migration Process
https://www.iso.org/standard/75569.html
This standard, from the International Organization for Standards, offers a set of guidelines for organizations to follow when transferring electronic records from one hardware or software to another. This standard is under review. A new edition will be published in 2020.

National Association of Government Archives & Records Administrators
https://www.nagara.org
NAGARA is the preeminent professional association dedicated to federal, state, and local government records and those who manage them. The site provides a resource library and webinar archive that cover topics ranging from basic electronic records management to emerging technologies and long-term preservation.

National Archives of the United Kingdom. How to Manage Your Records.
https://www.nationalarchives.gov.uk/information-management/manage-information/
Made available by the National Archives 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.

https://www.uniformlaws.org/committees/home/librarydocuments?communitykey=2c04b76c-2b7d-4399-977e-d5876ba7e034&tab=librarydocuments
This website, run by the Uniform Law Commission, also known as the National Conference of Commissioners on Uniform State Laws, provides information and updates about the Uniform Electronic Transactions Act. It also offers some guidance on implementing the law and how it relates to the Federal ESIGN Act.