

ELECTRONIC DOCUMENT MANAGEMENT SYSTEMS

Summary

An electronic document management system (EDMS) is a software program that manages the creation, storage and control of documents electronically. The primary function of an EDMS is to manage electronic information within an organization's workflow. A basic EDMS should include document management, workflow, text retrieval, and imaging. Not all EDMSs have records management capability. To qualify as a records management system, an EDMS must be capable of providing secure access, maintaining the context, and executing disposition instructions for all records in the system. Before implementing a system you must determine how it fits into your overall records management strategy. Increasingly, EDMS functionality is integrated into Content Management (CM) systems. These systems combine additional functionality such as website management with workflow tools, standard templates and access rights.

Government Standards

Government agencies are subject to government regulations and standards in the selection of an EDMS. The state's Architecture Oversight Committee (AOC) has approved and issued a state standard for electronic document management systems. [Follow this link to view the standard.](#) This Electronic Document Management Systems guideline and the Digital Imaging guideline have been incorporated into that standard.

The Federal guidelines are set forth in the *Department of Defense 5015.2-STD, Design Criteria Standard for Electronic Records Management Software Applications* but they may not meet your specific legal and practical requirements. Therefore, you must carefully examine if the EDMS supports:

- ◆ Adequate security for the protection of confidential records
- ◆ Adequate access to open public records
- ◆ Ability to capture and manage electronic records (if your EDMS has this function) in a way that meets legal requirements for trustworthiness, completeness, accessibility, legal admissibility, and persistence.

Selecting an EDMS Solution

If you decide to use an EDMS, your selection requires a careful, considered balance between your legal requirements and your technological options. Use of an EDMS is not a panacea for implementing your electronic records management strategy. You should not assume that the records management requirements for a government agency are built into an EDMS. In fact, the use of an EDMS can lead to records management problems, especially for government agencies with specific legal requirements. The decision to use an EDMS requires significant planning and analysis.

Each vendor's EDMS has different degrees of functionality. In an EDMS designed for the private sector, the functions available may not allow you to meet your legal requirements as a government agency. For example, an EDMS designed for the private sector may be unable to:

- ◆ Manage all the required file formats that constitute government records
- ◆ Preserve the record's required metadata
- ◆ Ensure trustworthiness
- ◆ Provide adequate security of confidential information and records

For example, an EDMS may improve collaboration during document development. However, the EDMS also may create multiple copies of a document and may not provide the access security you need to protect confidential records.

Therefore, examine the advantages offered by an EDMS in light of your legal requirements as a government agency. This guideline will assist you in considering the merits of an EDMS. For information on relevant statutes, refer to the Legal Framework section at the end of this document.

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State Term Contract

Several companies that provide Electronic Document Management System (EDMS) solutions are eligible to do business with the State of South Carolina under state contract. Click here to see a list of these companies:

www.cio.state.sc.us/itmo/contract/osp/DocManage/Index%20.htm

Just remember that all EDMS systems may not have records management capability. However, it may be possible to use the metadata from an EDMS solution to implement records management.

Key Concepts

As you discuss the merits of an EDMS for your agency, you will need to be familiar with the following key concepts:

- ◆ Document workflow integration
- ◆ Basic functions
- ◆ Optional functions
- ◆ Content Management
- ◆ Basic process for selecting an EDMS, CM or RMA software

Document Workflow Integration

Ideally, you should look for an EDMS that will help you integrate and automate document management and records management. The right EDMS may increase the ease of this integrated management.

Consider your agency's document workflow. An EDMS should support your workflow needs and enable you to capture and manage records as part of your daily work (one of the requirements for records to be accepted as evidence under the law).

To learn more about which documents are records, refer to the *Records Management in an Electronic Environment* guideline.

Basic Functions

At a minimum, look for an EDMS that provides:

- ◆ **Security control.** This function controls which users have access to specific information. Any system that you use must be able to protect confidential records as defined by the *South Carolina Freedom of Information Act*.
- ◆ **Addition, designation, and version control.** The EDMS should allow users to add documents to the system and designate a document as an official record. It should also automatically assign the correct version designation.

- ◆ **Metadata capture and use.** The EDMS should allow you to capture and use the metadata appropriate for your agency.

Optional Functions

You may also want an EDMS that can provide:

- ◆ **Records management.** EDMS systems do not always include the ability to perform records management functions. Those that offer records management functionality are sometimes referred to as an Electronic Document and Records Management System (EDRMS). In addition to these systems, stand-alone records management software, referred to as a Records Management Application (RMA), is available. A records management system must be able to provide secure access, maintain the record's context within a record series, and automate the execution of disposition instructions for all records in the system. RMAs and EDRMSs often require individual users to make decisions as to which documents qualify as records, thereby adding a layer of complexity to the work process. As a result, suitable training for all users is of utmost importance to a successful implementation. Federal guidelines are set forth in the *Department of Defense 5015.2-STD, Design Criteria Standard for Electronic Records Management Software Applications*. Bear in mind that even though an EDMS may meet all the Department of Defense guidelines, it may not meet all the requirements for your agency. Therefore, you must also consider any legal requirements applicable to your agency. Due to the impact on users and the additional expense associated with successful implementation, successful incorporation of records management software into your agency will require patience, ongoing management support, and consistent availability of resources.
- ◆ **Storage.** This function will allow you to store documents within the EDMS or to centrally manage your adjunct storage system.
- ◆ **Free-text search.** This function allows users to search every word in the entire document or a specified group of documents. Other systems search only metadata.
- ◆ **Hypertext links.** Some EDMSs will provide hypertext links from one document to another to facilitate navigating and browsing among related documents.

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◆ **Automatic conversion.** Some EDMSs will automatically convert one file format to another when the file is designated as a record (or at another specific point in the workflow). For more information on conversion, refer to the *Records Management in an Electronic Environment* guideline.

◆ **Compound document management.** Some EDMSs manage compound documents better than others. Compound documents are single documents that contain multiple elements (e.g., text, photographs, video, hypertext links).

With so many developers and systems currently on the market, the list above describes only a few of the optional features that your agency may be interested in.

Content Management

Content Management (CM) software combines typical EDMS functionality with additional features such as Digital Asset Management and website management that supports sharing of different digital media across an organization. Depending on your agency's present and future needs, this software may minimize the need to purchase additional software to manage diverse types of content separately. CM software is roughly divided into two categories. First is Web Content Management software used to manage complex websites where content changes rapidly and collaboration occurs across many departments. For additional information about managing web content, see the *Web Content Management* guideline. The second type is Enterprise Content Management (ECM) software that integrates various features such as workflow and digital imaging with digital asset management, Web CM, and records management. As with EDMS software, records management capability within CM software is often an optional feature. Consequently, records managed by CM software must be identified and a plan for their disposition established.

Basic Process for Selecting EDMS, CM or RMA software

The following basic process for selecting, implementing, and managing an EDMS should serve as a baseline for you to develop a more specific process for your agency. The basic process includes:

◆ **Needs assessment.** The first stage is to work with internal stakeholders and to understand your legal obligations and unique needs. If you wish to use the software package for records management, be sure that you identify trustworthiness, completeness, accessibility, legal admissibility, and persistence as needs (as discussed in the

Records Management in an Electronic Environment guideline). Consider not only your immediate needs, but also your long-term requirements.

◆ **Vendor selection.** You will need to carefully select an EDMS vendor and may need to issue a request for proposal that sets forth your legal requirements and vendor selection criteria. You may contact other South Carolina government agencies with similar systems and gather as much information as you can about potential EDMSs as they are used in government agencies. As mentioned earlier, the services and products of several companies can be purchased under state contract.

www.cio.state.sc.us/itmo/contract/osp/DocManage/Index%20.htm

◆ **Implementation plan.** You will need to work with the vendor and internal stakeholders to develop a comprehensive implementation plan. The plan should include a:

- Technological implementation plan that outlines how and when the system will be installed and tested
- User implementation plan that includes training and system rollout

◆ **Deployment.** As detailed in your implementation plan, you will need to install and test the system and train users.

◆ **Management.** As you use the system, you will need to continue to manage and refine your use of the system.

Throughout each of these stages, you will need to document the entire process, including needs assessment, implementation, management, and refinement. You will also need to document the system itself, including hardware, software, operational procedures, and security measures. Refer to the *Trustworthy Information Systems Handbook* guideline for information on documenting such a process.

Additional suggestions for selecting an EDMS, CM or RMA software

◆ Form a team that includes representatives from your agency's upper management, information technology group, records management team, and legal department as well as users and content creators.

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- ◆ Determine your organization's present and future needs and the needs of your stakeholders.
- ◆ Decide if the EDMS is just for workflow management or if you want to use it for records management as well.
- ◆ Consider how automation adds value to your current process. Think about how your records fit into your current workflow and how you might need to modify your workflow to accommodate an EDMS. Determine at which points in your workflow you will need to capture records.
- ◆ Determine which records you want to capture and manage using an EDMS and if back-file records will be included. Review general and agency specific retention schedules and dispose of documents the agency is not required to retain.
- ◆ Determine if the records are adequately organized and indexed to facilitate retrieval. Ensure that the records are filed properly and correct all mis-filings before system implementation.
- ◆ Determine the formats presently used and consider which formats you are likely to use in the future.
- ◆ Think about metadata including what kinds of metadata you need, how much will you want to include and who will manage it.
- ◆ Consider how the legal framework of your agency affects your discussions and decisions. Think about how document acceptability issues affect future interaction with the legal community.
- ◆ Consider how you use records now and how you will use records in the future. Determine what records you need to share and store.
- ◆ Resolve how you will dispose of records in the EDMS. Find out if the system will enable you to transfer, destroy, convert, and/or migrate records easily.
- ◆ Establish the roles and responsibilities of groups and individuals in terms of electronic records management.
- ◆ Consider what features are essential to your agency in a document management system. Decide what features might be the most useful elements of a document management system and what your budget permits.
- ◆ Determine how you will mesh a new system with systems currently in place (e.g., e-mail systems, databases, word processing systems).

Legal Framework

For more information on the legal framework when considering an Electronic Document Management System, refer to the *Records Management in an Electronic Environment* guideline in the Electronic Records Management Guidelines and Appendix A6 of the *Trustworthy Information Systems Handbook* guideline. Also review the requirements of the:

- ◆ South Carolina Public Records Act [PRA] (*Code of Laws of South Carolina, 1976, Section 30-1-10 through 30-1-140, as amended*) available at www.scstatehouse.net/code/t30c001.htm, which supports government accountability by mandating the use of retention schedules to manage records of South Carolina public entities. This law governs the management of all records created by agencies or entities supported in whole or in part by public funds in South Carolina. Section 30-1-70 establishes your responsibility to protect the records you create and to make them available for easy use. The Act does not discriminate between media types. Therefore, records created or formatted electronically are covered under the Act.
- ◆ South Carolina Freedom of Information Act [FOIA] (*Code of Laws of South Carolina, 1976, Section 30-4-10 through 30-4-165 as amended*) available at www.scstatehouse.net/code/t30c004.htm, which supports government accountability by ensuring the right of citizens to inspect or copy public records. The establishment of fees, formal public notification, and restrictions limiting public disclosure of certain records is covered.
- ◆ Health Insurance Portability & Accountability Act of 1996 [HIPAA] (Public Law 104-191), which establishes security and privacy standards for health information. The Act protects the confidentiality and integrity of "individually identifiable health information," past, present or future. Visit the HIPAA website at www.hhs.gov/ocr/hipaa/ for additional information.

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Annotated List of Resources

Primary Resources

Association for Information and Image Management International. *Implementation Guidelines and Standards Associated with Web-based Document Management Technologies*. Silver Spring, Md.: Association for Information and Image Management International, 2001.

www.aiim.org/standards.asp?ID=25019

This downloadable document contains a set of recommended practices for the implementation of selected web-based document management technologies. The document provides specific recommended activities for each phase of implementing such technologies.

South Carolina Department of Archives and History. *Trustworthy Information Systems Handbook*. Version 2, March 2007.

<http://arm.scdah.sc.gov/erp/tishandbook.htm>

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 and 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.

Discipline Road Map for EDMS

EDMS standards published by the CIO & the AOC.

Information Technology Management Office —

Division of the State CIO

State Term Contracts for Electronic Document Management Systems

Additional Resources

AIIM International

www.aiim.org

This web site is published by the Association for Information and Image Management (AIIM). AIIM is an international professional organization for “users and suppliers of the content, document and process management technologies that drive e-business.” The site includes information about events, articles, industry studies, and white papers. The web site also includes a products and services vendor directory.

ARMA International

www.arma.org

Published by ARMA International, this site focuses on strategic information management issues for records and information managers, information technology professionals, imaging specialists, archivists, librarians, and others. The site includes a buyer’s guide and virtual trade show of industry vendors, as well as publications, a bookstore, white papers, industry news, legislative updates, and information on industry standards.

Boiko, Bob. *Content Management Bible*. Wiley. 2004.

www.wiley.com/WileyCDA/WileyTitle/productCd-0764573713.html

This book describes the various components of content management systems and the processes used to create such a system. It also includes a primer identifying content and details how a CM system is used facilitate collaboration across an organization.

Preserving Electronic Records Stored in an RMA (PERM)

This web site provides information on the joint project between the State Archives of Michigan and the San Diego Supercomputer Center to develop and test a model for the preservation of electronic records in the State of Michigan’s records management application (RMA) environment.

Records Management Application Compliance Testing

<http://jitic.fhu.disa.mil/recmgt>

This site lists vendors with EDMS products that have been tested and approved by the federal government. The site provides links to the vendor’s web sites. The site also provides access to a number of federal guidelines for records management, including the DOD Standard 5015.2 Design Criteria Standard for Electronic Records Management Software Applications.

Records Management Application Pilot Project

www.michigan.gov/hal/0,1607,7-160-17445_19273_21738-74194--,00.html

This web site provides information on the State Archives of Michigan project to install and test a Records Management Application software. In addition to the progress reports there is information on the vendor selection process and a business process analysis.