

Electronic Document Management Systems

Summary

An electronic document management system (EDMS) is an off-the-shelf software program that serves as an access portal to other applications. The primary function of an EDMS is to manage electronic information within an organization's workflow. Only a few EDMSs include records management capability, so if you choose to use an EDMS, you must be sure that it works within your records management strategy. For example, you must be sure it is able to capture a record and provide access security.

Legal Framework

If you choose 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 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. 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 not-public 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 not-public records as defined by the Minnesota Government Data Practices Act (MGDPA) [Minnesota Statutes, Chapter 13] (available at: <http://www.revisor.leg.state.mn.us/stats/13/>).

Therefore, examine the advantages offered by an EDMS in light of your legal requirements as a government agency. These guidelines will guide you in considering the merits of an EDMS.

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
- Government standards
- Basic process for selecting an EDMS

Document Workflow Integration

You should look for an EDMS that will help you integrate and automate document management and records management at each point in your agency's records continuum. As discussed in the *Electronic Records Management Strategy* guidelines, records should be managed as part of a continuum, rather than as having discrete stages in a life cycle. The right EDMS may increase the ease of this integrated management.

Consider your agency's document workflow. An EDMS should mirror your workflow 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 *Electronic Records Management Strategy* guidelines.

Basic Functions

At a minimum, look for an EDMS that provides:

- *Security control.* This function controls which users have access to which information. Any system that you use must be able to protect not-public records as defined by the MGDPA.
- *Addition, designation, and version control.* The EDMS should allow users to add documents to the system and designate a document as an official government 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.* An EDMS may integrate and automate records retention schedules, document status designations, and address other aspects of a unique workflow records continuum. Remember that the inclusion of records management functions is the exception.
- *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.
- *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 *Electronic Records Management Strategy and Long-Term Preservation* guidelines.)
- *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.

Government Standards

Government agencies are subject to government regulations and guidelines in the selection of an EDMS. 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 the State of Minnesota. Therefore, you must also consider State of Minnesota legal requirements. You must carefully examine if the EDMS supports:

- Adequate security for the protection of not-public records
- Adequate access to public records
- Ability to capture and manage electronic records (if your EDMS has this function) in a way that meets legal requirements for parameters such as trustworthiness, completeness, accessibility, legal admissibility, and durability
- All electronic formats included in the official definition of a government record

For more information on these rules and statutes, refer to the *Introduction* and Appendix D of the *Trustworthy Information Systems Handbook*. Also review the requirements of:

- Official Records Act [Minnesota Statutes, Chapter 15.17] (available at: <http://www.revisor.leg.state.mn.us/stats/15/17.html>), which mandates that government agencies must keep records to fulfill the obligations of accountability. This statute also stipulates that records should be of a permanent quality. If you are going to use an EDMS for records management, be sure that the EDMS can preserve your records as long as legally required.
- Records Management Act [Minnesota Statutes, Chapter 138.17] (available at: <http://www.revisor.leg.state.mn.us/stats/138/17.html>), which establishes the Records Disposition Panel to oversee the orderly disposition of records. Consider how you will dispose of the records if you are using the EDMS for records management.
- Minnesota Government Data Practices Act (MGDPA) [Minnesota Statutes, Chapter 13] (available at: <http://www.revisor.leg.state.mn.us/stats/13/>), which mandates that government records should be accessible to the public, unless categorized as not-public by the state legislature. Any EDMS must be able to protect not-public information and records and provide access to records to authorized members of the public. Even if you do not use the EDMS for records management, you must be certain that the system protects not-public information.
- Uniform Electronic Transactions Act (UETA) [Minnesota Statutes, Chapter 325L] (available at: <http://www.revisor.leg.state.mn.us/stats/325L>) 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 issues of the legal admissibility of electronic records created in a trustworthy manner and the application of the paper-oriented legal system to electronic records.

Basic Process for Selecting an EDMS

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 understand your legal obligations to determine your unique needs. If you wish to use the EDMS for records management, be sure that you identify trustworthiness, completeness, accessibility, legal admissibility, and durability as needs (as discussed in the *Electronic Records Management Strategy* guidelines). Be sure to think of not only your immediate needs, but also your long-term requirements.

- *Vendor selection.* You will need to carefully select an EDMS vendor. You may need to issue a request for proposals that sets forth your legal requirements and vendor selection criteria. You may also contact other Minnesota government agencies with similar systems. In short, you will want to gather as much information as you can about potential EDMSs as they are used in government agencies.
- *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. You can refer to the *Trustworthy Information Systems Handbook* for information on documenting such a process.

Key Issues to Consider

You should consider your operational and records management requirements, including the legal framework you operate in as a government agency, as well as your desired product features and agency-specific workflow in order to select an appropriate EDMS.

Use the questions below to consider whether to pursue an EDMS, as well as how to select a vendor. Take a long-term approach in discussing these questions. Consider the types of documents and records you create now and which types you may create in the future. Remember to think of your records as needing to be managed along a continuum, rather than in discrete stages.

Discussion Questions

- What are our needs? What are the needs of all involved stakeholders?
- Do we want to use the EDMS just for workflow management or do we want to use it for records management as well?

- Which records do we want to capture and manage using our EDMS?
- Which formats do we use now and which formats are we likely to use in the future?
- What metadata do we need to include?
- How does the legal framework affect our discussion and decision?
- How do we use records now? How will we use records in the future? What records do we need to share and store?
- How do our records fit into our current workflow? How may we need to modify our workflow to accommodate an EDMS? At which points in our workflow do we need to capture records?
- How will we dispose of records in the EDMS? Will the system enable us to transfer, convert, and/or migrate records easily?
- What are the roles and responsibilities of groups and individuals in terms of electronic records management?
- What features are essential to us in a document management system? What features might be the most useful, but nonessential, elements of a document management system? What is our budget?
- How will we mesh a new system with systems currently in place (e.g., e-mail systems, databases, word processing systems)?

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.

<<http://standards.aiim.org>>

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.

Document Management Avenue

<<http://www.documentmanagement.org.uk>>

This web site provides information and links to white papers, vendors, and related sites. The site also provides news, answers frequently asked questions, and lists events for documentation management professionals.

Minnesota Historical Society, State Archives Department. *Trustworthy Information Systems Handbook*. Version 4, July 2002.

<<http://www.mnhs.org/preserve/records/tis/tis.html>>

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.

The PC Technology Guide

<<http://www.pctechguide.com>>

This site is a comprehensive resource on all aspects of the personal computer. Topics include hardware, software, computer use, and digital media.

Additional Resources

AIIM International

<<http://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

<<http://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.

Records Management Application Compliance Testing

<<http://jitc.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.

Preserving the Electronic Records Stored in an RMA (PERM)

<<http://www.sdsc.edu/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.