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. EDMS functionality is often integrated into Content Management (CM) systems. These systems combine additional functionality such as website management with workflow tools, standard templates and access rights.

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. 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)[1].   The decision to use an EDMS requires significant planning and analysis.

Examine the advantages offered by an EDMS in light of your legal requirements as a government agency. For more information on applicable rules and statutes refer to the *Legal Framework* chapter of these guidelines and the Minnesota State Archives' *Preserving and Disposing of Government Records*[2].

Key Concepts

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

---

[1] Minnesota Statutes, Chapter 13. http://www.revisor.leg.state.mn.us/stats/13/
[2] Minnesota Historical Society. *Preserving and Disposing of Government Records*. Minnesota State Archives. May 2008. http://www.mnhs.org/preserve/records/docs_pdfs/PandD_may2008.pdf

- Government Standards

- Document workflow integration

- Basic functions

- Optional functions

- Basic process for selecting an EDMS

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[3], 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 and your agency. 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

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

---

[3] Department of Defense. *Electronic Records Management Software Applications Design Criteria Standard*. April 25, 2007. http://www.dtic.mil/whs/directives/corres/pdf/501502std.pdf

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* chapter of these 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 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 *Electronic Records Management Strategy* chapter of these 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*. EDMS systems do not always include the ability to perform records management functions. Those that offer records management functionality are sometimes referred to as Electronic Document and Records Management Systems (EDRMS). In addition to these systems, stand-alone records management software, referred to as Records Management Applications (RMA), are 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. EDRMs and RMAs 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[4], Design Criteria Standard for Electronic Records*

---

[4] Department of Defense. *Electronic Records Management Software Applications Design Criteria Standard*. April 25, 2007. http://www.dtic.mil/whs/directives/corres/pdf/501502std.pdf

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 an 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* chapters of these 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.

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* chapter of these 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 to ensure records in the system remain trustworthy over time.

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. To help with these decisions, 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.

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 current and future needs? What are the current and future 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? Will back-file records be included? Review general and agency specific retention schedules and dispose of documents the agency is not required to retain.

- Which formats do we use now and which formats are we likely to use in the future?

- What metadata do we need to include? Who will manage it?

- How does the legal framework affect our discussion and decision? Think about how document acceptability issues affect future interaction with the legal community.

- How do we use records now? How will we use records in the future? What records do we need to share and store?

- Are 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.

- 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? Consider how automation adds value to your current process.

- 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. *Analysis, Selection, and Implementation of Electronic Document Management Systems (EDMS)*. Silver Spring, Md.: Association for Information and Image Management International, June 2009.
http://www.aiim.org/documents/standards/ARP1-2009.pdf

> As recommended practice, the information in this document provides readers with a set of procedures and activities to be considered and/or practiced during the analysis, selection, and implementation of a document management system.

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, 2002.
http://www.project-consult.net/Files/AIIM+ARP1+2002.pdf

> This 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.

National Archives and Records Administration (NARA). *Recommended Practice: Developing and Implementing an Enterprise-wide Electronic Records (ERM) Proof of Concept Pilot*. March 2006.
http://www.archives.gov/records-mgmt/policy/pilot-guidance.html

> Information on how to plan, develop, and evaluate a proof of concept pilot application as a method for exploring new technologies.

National Archives and Records Administration (NARA). *Guidance for Building an Effective Enterprise-wide Electronic Records Management (ERM) Governance Structure.* December 2005.
http://www.archives.gov/records-mgmt/policy/governance-guidance.html

> "This document defines governance and its importance to the success of IT projects, the purpose and function of that governance, how project-specific governance (such as those instituted for enterprise-wide ERM) fits within and alongside other established governance structures and the risks attendant in the absence of good governance."

National Archives and Records Administration (NARA*). Recommended Practice: Evaluating Commercial Off-the-Shelf (COTS) Electronic Records Management (ERM) Applications.*

November 2005.
http://www.archives.gov/records-mgmt/policy/cots-eval-guidance.html

> To be used as a case study as agencies examine system requirements, this document summarizes the "Environmental Protection Agency's (EPA) experience identifying the COTS products that would best meet the needs of agency staff for both Electronic Document Management (EDM) and Electronic Records Management (ERM) functionality".

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.