

Electronic Document Management Systems

A guide to the benefits, technology, and implementation of electronic document management solutions.

**Protecting yesterday and
today's documents
against loss or damage
for future generations.**

arch
SCAN LLC
archival and scanning services

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I. Introduction- Definition of Document Management

A Document Management System is the organizational process of all documents from the creation to the storage or archiving and eventually to the destruction. An Electronic Document Management System (EDMS) stores electronic versions of all of your documents, usually scanned copies of your paper documents and documents which have been produced electronically. Documents are usually organized into a file/folder system which allows for the fast retrieval through browsing or indexing systems.

A good electronic document management system is one of the best ways to streamline business processes and increase productivity. archSCAN is committed to educating organizations about the technology of document management. Therefore, we have prepared this booklet to give organizations information about electronic document management and its benefits.

II. Benefits of an Electronic Document Management System

Electronic Document Management Systems enable a more efficient distribution of information throughout the organization. Scanning paper documents into a digital format eliminates the many limitations of paper such as labor-intensive duplication procedures, slow distribution, misplaced originals, and the inconvenience of retrieving files from remote locations. EDMS allows for the instant access to information and a greater collaboration within and among departments and offices which improves customer service and satisfaction.

Electronic Document Management Systems make it possible to:

- Manage millions of documents and retrieve the right one in seconds
- Share documents with colleagues
- E-mail and fax files instantly
- Access to documents while traveling
- Publish documents to CD, DVD, external hard drives, intranets, internet, etc
- Back up files and records for disaster recovery

III. Components of an Electronic Document Management System

All EDMS systems should have five basic components:

1. Capture for bringing documents into the system
2. Methods for storing and archiving documents
3. Indexing and retrieval tools to locate documents
4. Distribution for exporting documents from the system
5. Security to protect documents from unauthorized access

1. Capture for bringing documents into the system

There are three primary methods of bringing files into a document management system: scanning paper files, importing electronic documents such as word files, spreadsheets, faxes, emails, and conversion for creating unalterable “read-only” images of electronic files.

Scanning

Scanning a document produces a picture image that can be stored on a computer. It is recommended that documents be scanned at 100% in scale and at a minimum of 200 dpi to ensure the quality of the images. Scanners can handle a variety of paper sizes such as small formats (8 ½ x 11, 11 x 17) and large formats as wide as 36”. Document imaging scanners may also process between 10 to 200 pages per minute and may scan double sided papers.

Importing

Document importing is the process of bringing electronic files such as Microsoft Office documents, graphics, photographs, or emails, into an EDMS. Files can be dragged into the system in their original formats.

Conversion

Converting documents is the process of transforming electronic files (word documents, spreadsheets, etc) into permanent, unchangeable images such as “read-only” PDF or TIFF files. Converting electronic documents bypasses scanning, saves paper and printer ink and produces a cleaner image than scanned paper files. This method of imaging electronic files is best suited for permanent archives.

2. Storage and Archiving

Once the documents have been classified and organized in the system, they must be reliably stored. The storage system must be able to accommodate changing technologies and future growth of the company. There are currently several widely used methods of storing electronic data: CD, DVD, hard drives, intranet, and internet.

As soon as new technology becomes more mainstream and older technologies become outdated, it is necessary to transfer the data into the newer system. Unfortunately, we do not know the lifespan of a CD or DVD, but it is always wise to keep more than one copy and also transfer the information to the company intranet as added protection.

3. Indexing and Retrieval

An EDMS makes the retrieval of documents fast, easy, and efficient through indexing and categorizing information. There are a few different ways of indexing files:

- Full-text indexing
- Index fields, or keyword categories of documents
- Folder/file structure, or indexing by associated document groups

Retrieval is where the quality of the indexing system is most evident. A document should be able to be found quickly and easily. The more a document management system adapts to the organization’s existing

procedures, the less upheaval and training are involved to use the new system and the greater the chances that the system will be used on a daily basis.

Full-Text Indexing

Full-text indexing allows users to locate any word or phrase that appears in the document. To enable this type of indexing, the documents must be scanned using an Optical Character Recognition (OCR) software program. The OCR processes the printed words allowing the computer to be able to understand what is written on the page. However, the technology for OCR is not completely reliable and often misinterprets the information on the page, nor can it read handwriting or images.

Index Fields

Index field searches enable users to comb through millions of records in seconds to find necessary documents. This type of search is helpful when the user is looking for a particular topic or when the database contains images, such as PDF or TIFF files. Index fields can be used to categorize documents, track dates, subject matter, or other information.

Folder/File Structure

This structure allows users to locate documents by browsing. It allows organizations to electronically recreate its existing filing system through a nested folder structure. A flexible folder structure eases the transition from paper filing to electronic filing.

4. Distribution of Information

An EDMS system should make it possible for multiple users to access the same files at the same time and for documents to be distributed to authorized individuals within and outside of the organization over the intranet, by e-mail, through the Web, CD, or DVD.

5. Security

System security is necessary in an EDMS system in order to protect your documents from loss or tampering. A security system should permit every authorized person to perform required duties without compromising the integrity of the database. System administrators should have the tools to grant access and security to the information through passwords.

IV. Compliance and Legal Issues of an EDMS

Many government agencies now accept imaged documents as legal records, meaning that the paper originals can be destroyed, given certain conditions. The regulations may vary by industry, state or region, but most regulations share two common principles: the information must be set in time, meaning that the date and the time of the creation of the digital images must be recorded in an unalterable fashion, and the storage media used by the system must be unalterable.

In general, for an imaged document to qualify as a legal record, the following must be true:

- Records must be stored in an unalterable format, such as CD or DVD
- The system must have controls to ensure integrity, accuracy, and reliability
- The system must provide some type of audit trail to prevent and detect unauthorized creation of, addition to, alteration of or deletion of records
- A complete and accurate transfer of records must be possible
- There must be an indexing system to assist with finding records
- The system must have the ability to print copies of records

Organizations should consult with an attorney on the specific statutes governing their area.

V. Implementation: Addressing Your Business Needs

When an organization is considering EDMS, there are a number of factors to keep in mind:

- How many documents must the system store? Consider both the number of existing documents and the number of documents added annually. This will determine the storage space needed to keep the information.
- How many users will be using the system?
- What business problems need to be solved to reduce costs and improve productivity?
- Are there regulatory compliance issues governing your organization? If so the document management system should have functions that support compliance.

When an organization decides to implement an EDMS system, it requires time, energy, and teamwork to make it work. If it is a well-designed system, it will save organizations more time, space, and money than ever imagined.

VI. About archSCAN

Since 2002, archSCAN has created simple and elegant electronic document management solutions that help organizations run smarter. archSCAN has worked with state and local government agencies, educational institutions, healthcare organizations, religious institutions, architect, engineering, and constructions firms, and many other public- and private-sector organizations.

archSCAN has a highly qualified team of archivists who are skilled in the organizational processes, the scanning of documents, and the creation of custom-made Electronic Document Management Systems to meet each of its clients needs.

archSCAN welcomes the opportunity to answer further questions about document management and to arrange on-site demonstrations of archSCAN document management solutions.

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