

A large, stylized graphic of the number '10' in a dark blue color. The '1' is on the left, and the '0' is on the right, both rendered in a thick, rounded font. The background is white, and the number is centered vertically and horizontally.

THE **TEN** ESSENTIALS
OF DOCUMENT MANAGEMENT

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INTRODUCTION

Today's document management systems are usually framework products. They begin with a core system that provides basic functionality, and then accept additional modules to handle specific tasks. This allows the buyer to assemble a system that addresses their particular needs without purchasing unnecessary components. Systems can start small and grow as the organization grows by adding capacity, features and additional users.

Most systems are designed to store and deliver information that goes far beyond traditional scanned paperwork. They can handle any files that can be created or viewed on a user's workstation, such as word processor documents or spreadsheets, emails, faxes, Web contents, Computer Aided Design drawings, digital photographs, voice recordings, or electronic reports.

If your company is already using software systems, integration is vital. Integrating or "image enabling" your existing systems will dramatically enhance productivity and user acceptance while minimizing training. With the right document management system, document retrieval can be a keystroke away for your current applications.

Once a digital information system is in place, you can begin to take advantage of the benefits. You now have complete visibility of every piece of information including the virtual location and its stage of processing. Electronically routing documents through your business process can streamline your workflow procedures. Electronic workflow can deliver dramatic efficiency gains by allowing multiple departments to process electronic documents at the same time.

Digital information lends itself to comprehensive security control. Documents and features can be protected by finely tuned security rules that provide dramatic improvements over traditional file cabinets. Digital information can now be readily produced for audits, easily backed up for disaster recovery or automatically purged at the end of document life.

How many
places do you
search before
you find the
information
you are
looking for?

Do you have
different
storage
strategies
for different
kinds of
information?

TEN

important questions to ask about the document management system you are considering

1. **Can all my corporate knowledge be stored together?**
 - How easy is it to route paper and electronic documents to the system?
 - Does the system offer full-text search options?
 - What file types can be easily entered into the system?
 - Will the system automatically enter incoming faxes and emails?
 - Does the system do COLD/ERM processing of large reports?
 - Is the system folder-based or structured like a database?
2. **How well will the document management system integrate with my current system(s)?**
 - Has the system ever been integrated with my business software before?
 - Can I avoid having to enter information into both systems?
 - How will the system integrate with new business software, should I decide to change?
3. **What is workflow and how will I benefit from it?**
 - How will the system help me to track documents throughout the workflow process?
 - Can the system help implement and enforce company policies?
 - Does the system allow more than one person to work on a document at a time?
4. **Is the system scalable enough to meet my needs, both now and in the future?**
 - How much room do I have to grow with the system?
 - Is there a storage limit?
 - Is the system diverse enough to work across all of the departments of my business and from different locations?
5. **Does the system allow all your business practices to be accomplished remotely?**
 - Can I work remotely through a full-Windows client as well as a browser?
 - Will hardware such as my scanner be able to operate remotely?
 - Can the system operate in a Citrix or a Terminal Server environment?
 - Does the system offer the same security even offsite?

6. How secure is the system?
 - How can I tailor security to suit my needs?
 - What different layers and levels of access does the system offer in terms of security?
 - Can I restrict users from performing different functions such as viewing, printing, emailing or exporting?

7. What efficiency tools should I expect from a document management system?
 - Can I instantly access all of my corporate information?
 - Can I easily stack documents to assemble new documents?
 - How can the system help me fill out forms?
 - Can I edit text of documents scanned in as images?
 - How can I protect sensitive information on a document or highlight important content?
 - How easily can I distribute documents from the system?

8. Does the system have features to support accountability, auditing, and management needs?
 - Does the system track every action performed by each user with details such as workstation, network address, time and date?
 - Can managers easily monitor the progress of employees to help evenly distribute tasks and ensure productivity?

9. What protection does the system provide in the event of a disaster?
 - How soon after a disaster would I be able to access my information and resume business?
 - Does the system provider offer a backup storage solution?

10. Does the system comply with current legal standards and government regulations?
 - Does the system automatically enforce document retention policies?
 - What kind of encryption does the system use for passwords and image storage?
 - Does the system protect all files from being tampered with?
 - Are documents in the system as legally valid as the original?

ACCESSIBILITY

Can all my corporate knowledge be stored together?

Today's corporate users are inundated with information from a variety of sources: email, fax, traditional mail, word processor documents, spreadsheets, reports, and Web information. A document management system should allow users to rapidly send any of these information types to the database along with necessary cataloging or index information. Look for systems that can easily commit any type of file or information source to the system. The more flexible and varied the options, the more likely the system will meet all of your current and future needs.

Paper documents usually comprise the bulk of data stored in a document management system and are often the reason for the document management initiative. Scanning paper documents is a tried-and-true method of information capture. As a mature technology, look for systems that support a wide variety of scanners* and provide extensive productivity features. Scanning is simply running paper through a device; it is **indexing** that presents a challenge. Many advanced systems can read and process barcodes, bubble-forms, recognize specific forms, or use **OCR** to automatically populate index fields.

Microsoft Office applications such as Word, Excel, and Outlook should fully integrate with the document management system. Some systems include short-cuts or buttons embedded directly into Microsoft applications that allow one-click sending to the document management system. These files should be saved in their original file type, so on

retrieval they can be edited, modified, or forwarded with their original application.

Any file type should be easy to route to the system. The document management system should accept any electronic files including digital photos, video, audio, and Computer Aided Design files. Look for drag and drop capability or integration with the Windows operating system that makes sending files to the management system as easy as a right-click and send.

Email now comprises a significant amount of corporate information. It is essential that your selected document management system provides an efficient method for capture, indexing, routing, and retrieving. The system should provide both user-side features for handling email and automated processes that monitor specific email addresses, then automatically capture, index, and route into appropriate queues or workflows.

Faxes received via a network fax device can be inserted directly into the document management system. If your organization has a significant fax volume, look for a system that can capture or assign specific information with inbound faxes; these systems can automatically assign status or route documents according to the phone number on which they were received.

Reports produced by the Host System should be captured directly as text. If any of your systems produce large reports that would normally be printed out on reams of paper, a comprehensive document management system can import these reports directly through COLD/ERM processing, saving a great deal of time and physical resources.

Anything printable can also be sent to the system via a print driver. In other words, any application that can print can directly insert files to the system. This is particularly useful for legacy applications or capturing Web page information. Avoid systems that require printing and then scanning the document that was just printed.

Locating Files

Database systems easily provide instant access to a nearly unlimited number of documents by allowing users to search any desired criteria and return all relevant files. Advanced systems also provide full-text search capabilities, allowing users to search according to content rather than just indexed criteria.

Indexing

The process of assigning descriptive, searchable data to each scanned document.

OCR

OCR or Optical Character Recognition is a software process that “reads” images and returns text versions.

This text can be used to re-create a scanned document or fax for editing, indexing, or full-text searches.

COLD/ERM Processing

Automatic import and indexing of large text reports into smaller files.

INTEGRATION



How well will the document management system integrate with my current system(s)?

It is vital to find a document management system equipped with **integration capabilities** to exchange information with your existing systems. Tight integration is necessary for maximum efficiency and return on investment.

Your current business management software contains extensive information about your customers: account details, personnel information, accounting transactions, etc. Most business processes require users to complete transactions or perform tasks. Document management systems should allow the user to capture information entered during the task process and **automatically assign** it to the associated documents in the document management system. This can eliminate manual indexing, duplicate data entry, and indexing errors altogether. A designated keystroke or “hot key” will instantly index or attach documents to the transaction created in the business application.

To access stored information, well-integrated systems offer **single key document retrieval** from your management system. This effectively “image enables” your existing management application, offering a straightforward retrieval approach that maximizes efficiency while minimizing training and user fatigue.

Integration can be accomplished in **many different ways** depending on the application with which you are attempting to communicate. Advanced systems provide extensive options, not only allowing you to accomplish today’s needs, but provide a platform that can grow and evolve with your company. The more extensive the integration options, the more confident you can be about meeting future needs.

Customer Service Scenario

1. Receive a customer call requesting a copy of a document.
2. Locate client in the management system.
3. Use hot keys to return related documents.
4. Select requested documents and email with a single click.
5. Customer receives a copy of the document within seconds.
6. Discuss the sent documents with the client.
7. Close the customer call.

WORKFLOW

3



What is workflow and how will I benefit from it?

One of the most important benefits of capturing paper documents to electronic files is the ability to **monitor, route, locate and control** documents as they progress through your business process.

Immediate control and visibility. Once a document is committed to the system, it is protected from unauthorized access, loss, or “settling to the bottom of a stack.” It can be tracked and monitored in real time to show the exact location and to report the number of documents in every processing phase, eliminating guess work on the workload of each employee based on the stack of paper in their inbox. You must decide the best point in the workflow process to scan documents. Scanning documents at the first handling point is called front-end scanning; scanning after processing is known as back-end scanning.

Automated Workflow. Users cannot sidestep policy or forget critical steps in the business process because the automated workflow enforces business rules. **Workflow** routes documents or information with absolute accuracy through individual processes established by the administrator. Flexible systems allow easy exception handling and can accommodate even the most complex processes.

Parallel processing. Business tasks that previously moved paperwork from one desk to the next (serial processing) can be dramatically enhanced by allowing multiple (or all) tasks to be accomplished simultaneously.

When selecting a document management system, find one with the flexibility to build workflows that mirror your processes. Some systems may require changes to your existing business processes in order to implement workflow. Instead, **find a flexible system** that can make your current processes more efficient. Verify that the system can route a variety of document sources directly into a workflow. Look for the ability to handle paper documents, faxes, internally created documents, PDFs, electronic files or email, and data entered by customers on your website.

Parallel Processing

Many people performing work on a document simultaneously.

Workflow

The step by step series of tasks or transactions that comprise a business process. In today's document management systems, workflow refers to the automatic routing of electronic documents through these steps.

SCALABILITY

4



Is the system scalable enough to meet my needs, both now and in the future?

Do you think your office is too small for a document management system? Or too large? The fact is, many systems can accommodate a business of any size. By providing **tailored storage options** and modular construction, the system can optimize business processes for companies with a few hundred documents to enterprises with millions of documents.

Plan on more storage. Document management systems are designed to grow as your business grows. Choose a system that handles expansion with ease. As data storage costs continue to fall, many organizations are no longer faced with the need to purge older documents. In fact, many companies want to save “everything forever.” Investigate how the system accommodates expansion. Can it handle additional space on existing servers, additional servers, network storage appliances, or a full migration to a Storage Area Network?

Plan on more departments. Once you begin to take advantage of electronic document management, you will almost certainly want to extend this capability to more departments across your organization. Some document management systems may be so specialized that they only meet the needs of one department. Flexible systems can accommodate the specific requirements of individual departments such as Customer Service, Payroll, Human Resources and Accounting. Each department should be able to customize the system to meet their specific needs. Investing in a system that can function across your entire company will dramatically improve the return on investment.

Plan on more locations. As your company grows, you may be faced with the challenge of accessing centralized information from remote offices or by remote users. Make sure the system you choose supports full functionality over the Internet without requiring dedicated networks or VPNs. In some circumstances, it may be more convenient to utilize a browser interface to access information. This can also allow your company to grant access to authorized clients. Just be sure the system allows complete control over what can be accessed and by whom.

Web-Based vs. Windows-Based Solutions

Web-based solutions offer the flexibility of not having to install software on the user's computer. This is important if you grant access to large numbers of outside users. However, Web-based clients cannot provide the full functionality or sophisticated features of Windows-based clients. If you want maximum benefits from a document management solution, plan on a software deployment to your internal users. A blended solution can provide the best of both worlds: Web access to traveling or external customers and a full-featured client for your internal staff.

REMOTE ACCESS

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Does the system allow all your business practices to be accomplished remotely?

A document management system should provide remote users with all of the **same tools and features** as local users and the same level of security. While offsite or traveling, users should be able to continue normal activities over any Internet connection without the need for dedicated connections or VPNs.

Be cautious of systems only offering Web clients. While Web applications are very convenient from a deployment standpoint, they frequently lack the depth of functionality needed to accomplish all tasks. However, Web applications can be the perfect way to provide controlled access to your customers. Since outside clients typically require only simple search and view, Web access can be an effective method of eliminating the need for software deployment or maintenance. Often, login access can be granted to an organization instead of specified users, thereby eliminating account maintenance.

Expect full compatibility with a Citrix or Terminal Server environment, including print driver functionality. One notable exception is scanning. The Windows operating system requires a directly-connected scanner and will not function with Citrix or Terminal Server. A local scanner and scanning application is required, along with a method of moving information back to the central system. Before choosing a system, thoroughly investigate compatibility with your environment and verify that the security meets your requirements.

SECURITY



How secure is the system?

A document management system is inherently the **most secure way** to store documents. A comprehensive system provides options that enable corporations to tailor security to their needs. The goal is to provide **personalized privileges**, granting access solely to documents pertaining to the user's work.

Security controlled in layers allows very **precise control** over who can and cannot access specific information. User login controls access at the database level, requiring users to have a valid account in order to gain any access to the system. Once authenticated, security rights limit access to individual departments or functional databases. For example, employees in the Shipping department cannot access data from the Human Resource department.

Many well developed systems can also **limit access** to specific features or functions. For instance, it is common to restrict the ability to print, email, or export any information from the system. This prevents sensitive corporate information from being sent to an outside destination. If the system allows independent control over view, modify, or delete rights for features such as documents, notes, or annotations, very precise control can be specified.

Verify that restrictions can be applied to **specific document** classifications or types. You should be able to specify any index criteria or a combination of criteria to apply restrictions. This can make specific documents "invisible" to specified users while providing access to all documents for authorized users. A common example is providing access to documents stored in only the last 12 months for typical users, while allowing access to all records for an audit team.

EFFICIENCY

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What efficiency tools should I expect from a document management system?

A well-designed document management system allows users to complete all previous paper-based tasks with improved efficiency, accuracy, and visibility at every step.

Instant access is one of the primary benefits of a document management system because of the ability to access any information contained in the system in a matter of seconds.

Document assembly is a method of collecting or reorganizing information from multiple sources into a new document. Investigate the ability to quickly and easily collect source documents by sending or dropping them to an assembly area. Features should be available to select single pages from a multi-page source, reorder, annotate, add text, and print or email the new document directly from the assembly area. The ability to rapidly send the new document back to the document management system should also be available.

Forms recognition software aids further processing capabilities by allowing users to scan physical forms into the system and fill them out electronically. The system automatically creates text boxes for typing or data entry directly on the scanned form. The resulting electronic document can easily be routed according to workflows or business processes while being controlled and monitored by the system.

OCR (Optical Character Recognition) technologies allow documents scanned into the system as images to be converted to editable text. This function saves labor by avoiding tedious keying of data to recreate a document into an electronic version. In the past, if a form or document needed to be changed or updated, completely redoing it would have been necessary. A comprehensive document management system can revolutionize this task.

Annotation and redaction capabilities allow users to mark up, highlight, and underline the content of any document, or conceal sensitive information without changing the original. These artifacts are contained in a separate overlying layer that is easily displayed for viewing or printing. The original document remains permanent and unmodified.

Streamlined output tools allow users to quickly and easily output documents. A comprehensive document management system makes it easy to group, print, queue, fax, or email documents with minimal effort.

VISIBILITY



Does the system have features to support accountability, auditing, and management needs?

Many industries require a log of activities in case of internal or external audit. A comprehensive document management system can automatically provide **full visibility and audit tracking** functions for every action performed across the enterprise.

Ideally, a **complete history** of all activity can be produced for each document in the system. From the original capture date and time, including user and initial index values, each time the document is viewed, annotated, re-indexed, or printed, the system creates a log. These transaction logs should be easy to interpret and include: date and time, user identity, activity detail, network address, and the workstation where the activity was performed.

Managers should not only be able to see what actions have already taken place, but also **monitor the status** of work in progress for each employee or department in real time. This brings back the topic of workflow and the ability to provide dashboard-type gauges or reports on the status of all work pending or completed in the system.



PROTECTION



What protection does the system provide in the event of a disaster?

Loss of information in a paper-based system can be caused by a wide variety of events from natural disasters such as floods, tornados, hurricanes or earthquakes. For computer systems, hardware/software failures, power interruptions, malicious activities, or computer viruses can be just as damaging.

Data backups are necessary for any business system and are required by law for organizations that fall under **Sarbanes Oxley**. Fortunately, electronic information is much easier to back up and restore in the event of a disaster than paper files. Document management systems allow you to create and maintain duplicates of all the paper documents in your company at a secondary location.

In the database-like system, records are stored as electronic data on standard computer servers. This redundancy permits efficient backups with conventional methods like tape, data replication, or online backup services. **Data restoration** is relatively easy to accomplish in the event of data loss or a system failure. Ideally, the document management system architecture is designed to allow minimal data transfer for daily or incremental backups.

Many system vendors offer **online backup services** that work in conjunction with their system. This method automatically replicates data located on your network servers to an offsite data center. In the event of a failure, local users can quickly be redirected to the offsite source and operations can continue normally until local systems are restored. If the office facilities are uninhabitable, hosted backup services can allow operations to continue from any location via Web access until facilities are restored.

The Sarbanes Oxley Act

This act targets the accountability of financial practices of publicly traded companies. Sarbanes Oxley assigns liability to CEOs and CFOs in regard to information released in company financials.

R

COMPLIANCE



Does the system comply with current legal standards and government regulations?

Compliance with the broad requirements of government regulations like **HIPAA** and **Sarbanes Oxley** demand a combination of many document management features.

While HIPAA does not provide many specifics on the implementation of information privacy and security, **it sets guidelines** for IT departments and information management systems. HIPAA affects many document management users because it mandates certain practices involving the electronic storage and transfer of “personally identifiable health information.” Organizations must ensure that people access information on a need-to-know basis only and that the scope of the information is limited. For instance, your system administrator is not likely to need access to health information. If they do, an explanation must be stated in writing.

These regulations set expectations for document retention policies, disclosure, electronic security, as well as physical site security. HIPAA also demands encryption, password policies, and system backups, even though it doesn’t specifically dictate how they should be accomplished in order to be compliant.

Sarbanes Oxley Section 1102 makes tampering with documents illegal. Compliant document management systems must provide **permanent, non-modifiable documents** to ensure authenticity. Documents protected by these methods are non-reputable and are considered as legally valid as the original. Documents stored in conventional network folders do not guarantee document authenticity.

Compliance with the broad requirements of government regulations like HIPAA and Sarbanes Oxley demand a combination of many document management features. Document management systems need to provide strong encryption to ensure data integrity. Look for methods like **128-bit AES encryption**, the standard for the Department of Defense, to protect your documents. These standards demand that backups and document retention policies are consistently enforced. Document management systems should be configurable to **automatically perform** scheduled archive or purge activities. A system should allow you to configure and enforce the most complex strategy while making it simple to accommodate changing regulations.

HIPAA

The main goals of HIPAA or the Health Insurance Portability and Accountability Act of 1996 are to improve access to health care services and insurance, promote the transfer of health care information electronically, reduce fraud and ease the administration of health care programs. There are two main components of HIPAA: 1) Health insurance portability (HIPAA Title I) provides continued health insurance coverage for people as they transition from job to job. 2) Electronic transfer and protection of health information (HIPAA Title II) sets standards for the storage and protection of health information, as well as the transfer of information between health care organizations.

FEATURE GUIDE

A vertical stack of books is shown on the right side of the page. The books are of various colors, including dark grey, light blue, and white. To the left of the books, the top edge of a laptop keyboard is visible, suggesting a workspace or research environment. The background is a plain, light color.

When searching for the document management system that best fits the needs of your business processes, consider these features and how they might further the quality of your investment.

ACCESSIBILITY

- ❑ Easy document routing
- ❑ Compatibility with any file type
- ❑ COLD/ERM Processing
- ❑ Easy Scanner integration
- ❑ Database format
- ❑ Full-text search options
- ❑ Automatic fax and email integration

INTEGRATION

- ❑ Business software integration experience
- ❑ Integration with future software
- ❑ Dual information entry

WORKFLOW

- ❑ Current business process accommodation
- ❑ Improved efficiency moving documents through workflow
- ❑ Customized policy enforcement

SCALABILITY

- ❑ Unlimited Storage Space
- ❑ Integration across departments

REMOTE ACCESS

- ❑ Remote Access through client or browser
- ❑ Remote scanning
- ❑ Full operation in Citrix or Terminal Server environment
- ❑ Offsite security

SECURITY

- ❑ Customizable security
- ❑ Layers and levels of access
- ❑ Restrictions on viewing, printing, emailing, and exporting

EFFICIENCY

- ❑ Easy document distribution
- ❑ Easy document assembly or stacking
- ❑ Full-text OCR to edit scanned documents
- ❑ Document Information protection
- ❑ Document Information highlighting

SUPPORT

- ❑ Automatic activity tracking per user
- ❑ Record of every action
- ❑ Managerial monitoring

PROTECTION

- ❑ Fast business continuance
- ❑ Immediate Internet access to information

COMPLIANCE

- ❑ Tamper-proof images
- ❑ Encrypted image storage
- ❑ Rich, encapsulated security model
- ❑ Encrypted passwords
- ❑ Password policies
- ❑ Redaction
- ❑ Event Logging
- ❑ Document retention policies

SCANNER GUIDE

Because most information is entered into the system through this method, a scanner plays a vital role in your document management system. The kind of scanner you should invest in depends on your needs.



❑ **Determine your daily duty cycle.**

Higher-end scanners be able to scan greater quantities in less time. This is referred to as daily duty cycle. Calculate how many documents you will be scanning on a daily or weekly basis so the scanner you choose is equipped with the appropriate capabilities.

❑ **Analyze the documents that you'll be scanning.**

Are your documents 1 page, 2 pages, 100 pages? For smaller documents, a mid-speed scanner may be more beneficial than a high speed scanner. Large documents require higher speed scanners to ensure efficiency. Also consider if you need to scan one or two sides of a document, which requires a duplex scanner.

❑ **Evaluate the image quality that suits your needs.**

Some business processes require higher quality images while others simply need a record of the document. Resolution options (e.g. 72 dpi, 200 dpi, 300 dpi, etc.) and image type (e.g. color, grayscale, or black and white) impact both the image quality and size. To ensure that your scanner meets your current requirements and future needs, consider a scanner that supports a variety of input options including resolution options and image type.

❑ **Decide if you will implement centralized or distributed scanning.**

Centralized scanning processes all documents in a single location often with one high-speed scanner. Distributed scanning suggests individuals using smaller scanners throughout the office.

❑ **Consider a Multi-Function Peripheral Device.**

Choosing an MFP (Multi-Function Peripheral) device that can scan, copy and print means your document management system needs to easily accept and distribute scans in an efficient manner.



ABOUT PAPERWISE

Founded in 1988, PaperWise, Inc. is an enterprise document management and workflow solutions manufacturer focused on providing adaptable and scalable solutions to clients ranging from small firms to Fortune 500 companies. From workflow management and automated document processing, to mission-critical and remote office integrations, PaperWise helps clients take control of their growing mass of information.

The PaperWise platform builds a manageable infrastructure that protects data, documents and files from loss and corruption, while making information instantly available to users. Through third-party integrations and file management optimization, PaperWise provides solutions that work, with a high return on investment and an increase in office efficiency. Headquartered in Springfield, Missouri, PaperWise is an industry leader for document management solutions.

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