Document Management Overview for Financial Services

A guide to the benefits, technology and implementation essentials of digital document management solutions
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for Financial Services

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Introduction

In a paper-intensive environment, how do you maintain productivity, manage costs and overcome the continual compliance challenge?

The answer is digital document management.

Here at Laserfiche®, we actively support education initiatives to increase knowledge about digital document management. From Webinars to white papers, the Laserfiche Institute™ is committed to providing industry-leading educational resources to help businesses worldwide increase efficiency and productivity.

The purpose of this guide is to help you understand how the right document management solution can make your organization more profitable and efficient, as well as to provide basic guidelines for solution evaluation, selection and regulatory compliance.

From banks to insurance firms, investment firms, accounting firms and other public companies, the cost of complying with recordkeeping regulations continues to rise. In this increasingly stringent regulatory environment, a document management solution’s ability to mitigate expenses while also facilitating compliance with applicable rules has become a crucial consideration.

Beyond compliance, two other important issues to investigate when considering document management solutions are the nature of the software itself and the commitment of the firm you choose to install and support it.

The vendor you choose to facilitate your transition to digital document management will play a major role in the overall success of your investment. The vendor must make the commitment to learn how your organization currently organizes documents, what type of information your firm files and retrieves and the specific rules and regulations your firm must follow.

Document management gives you the power to recapture lost hours, reduce your overhead expenses and increase profitability, while improving the level of service you provide to your customers. Time saved can be devoted to cultivating new customers and generating new revenue. With the right solution—one that fits your organization’s needs and operating style—you can not only devote your staff’s time to more productive tasks, but also empower them to make better-informed decisions.

We hope that you find this new edition of Document Management Overview for Financial Services informative and useful. From all of us at Laserfiche, we wish you the best of luck in your search for a digital document management solution.

James Every
President, Laserfiche Institute
The Potential of a Paperless Office

Anyone who works in the financial services industry knows that paper accumulates quickly. Not only does your firm generate a significant amount of paper, but you must sort, file and store incredible amounts of incoming paper as well.

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<td>• Advisory agreements</td>
<td>• Fund/investment statements</td>
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<td>• Applications</td>
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<td>• Asset allocations</td>
<td>• Quarterly and annual statements</td>
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Even a small investment firm with only 450 to 500 clients could be looking at a minimum of 75,000 new sheets of paper each year. Increase that 100 or even 100,000 times for a large firm or bank, and you have a massive archive of paper that you cannot destroy. As the amount of paper grows, your business pays the price. Paper files are hard to find, easy to lose and costly to reproduce or distribute.

The Business Cost of Paper

A recent BAE Systems study estimates that **80% of employees waste an average of a half an hour daily retrieving information, and that 60% spend an hour or more each day duplicating the work of others.**

Coopers & Lybrand (now part of PriceWaterhouse-Coopers) estimates that:

- **90% of corporate memory exists on paper.**
- **90% of paper is merely shuffled.**
- The average document is copied **19 times.**
- **7.5% of documents are lost daily, while 2-4% of the remainder are misfiled.**
- It costs **$20** in labor to file a document, **$120** to find it if it has been misfiled and **$220** to reproduce it if it is lost.
- Filing volumes double every ten years.

By implementing a truly interactive document management system through a carefully structured implementation plan, your firm can realize the benefits of instant retrieval, simultaneous access to documents, reduced document loss, improved security and a streamlined workflow. You’ll also realize greater productivity and increased profits, and you’ll be able to ensure business continuity in the event of a natural disaster, network failure or other emergency.
What is digital document management?

Digital document management systems are software applications that capture paper and electronic documents and provide for the storage, retrieval, security and archiving of these documents. Records management is a separate discipline focused on the life cycle of records.

The document management process begins with the conversion of paper documents and records to electronic files. Conversion eliminates many of the obstacles created by paper: labor-intensive duplication procedures, slow distribution, misplaced originals and the inconvenience of retrieving files from off-site storage. Because paper files are also costly to process, duplicate, distribute and store, digitizing paper archives ultimately reduces operating expenses and overhead.

All document management systems should have five basic components:

- **Capture and import tools** to bring documents into the system.
- **Storing and archiving functionality** for scanned images and electronic documents.
- **Indexing and retrieval tools** to locate documents.
- **Distribution tools** for exporting documents from the system.
- **Security features** to protect documents from unauthorized access.

Document management applications enable more efficient distribution of and control over information, files and records throughout your organization. These software programs simplify business procedures, document routing and e-mail notification. Document management systems expedite business processes by allowing instant access to information; greater collaboration within and among departments and offices; enhanced security for files and records; and the application of procedures that facilitate compliance with record-keeping requirements imposed by the SEC, FINRA, the Sarbanes-Oxley Act and others.

Document management makes it possible to:

- Manage millions of documents and retrieve the right one in seconds.
- Share documents with colleagues while protecting confidential information.
- E-mail and fax files instantly.
- Access documents while traveling.
- Publish documents to CD, DVD or the Web.
- Back up files and records for disaster recovery.

How document management works for financial services

To implement a successful digital document management solution, you must choose the right system for your organization. The vendor you choose to facilitate your transition to digital document management will play a major role in the overall success of your investment. The vendor must make the commitment to learn how your organization currently organizes documents and what type of information you currently file and retrieve, as well as the specific rules and regulations you must adhere to. The vendor you choose should understand your business because, essentially, you’re establishing a long-term partnership in which you will work in concert to continually analyze the way your document management system can be used to make your practice run more efficiently and profitably. The more you know about your specific organizational needs and goals, the more easily you will be able to work with your vendor to develop a solution that will help you succeed.

If you work in financial services, you likely use a computer to perform all sorts of daily tasks, from scheduling your time to making trades.
You may even have a laptop you use while you are out in the field, traveling, or working from home. You may also have a PDA to check your e-mails and keep in contact with the office. But with all the technology you use on a daily basis, you likely still have a briefcase full of paper files.

Digital document management technology eliminates your need to carry paper files with you on the road or use them in your office. Your current software applications may allow you to review policy or account information on your computer, but in many cases you may not have online access to all the information that is on the paper documents. A quality digital document management solution will allow you to integrate with your primary applications, tying the information on your paper documents to the information kept in your portfolio management or CRM applications.

Document management captures complete documents with no retyping required, turning your paper files into an active database of information. The goal of digital document management isn’t just to eliminate paper—it’s to make your paper files better and more useful.

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Your document management system should not only let you scan in your paper documents, but should also allow you to import all your electronic files. With a document management system, you will be able to organize all types of documents, including:

- Applications
- Checks
- Correspondence
- 401(k) information & files
- Illustrations
- Mortgage documents
- Proposals
- Quarterly statements
- Tax returns
- Buy / Sell tickets
- Client invoices
- Daily receipts
- Graphs
- Loan documents
- Order confirmations
- Presentations
- Research
- Vendor invoices
- Charts
- Commission statements
- Financial statements
- Handwritten notes
- Medical records
- Photographs
- Purchase orders
- Reports
- Wills & trusts
The same document gets filed many, many times in any financial firm. The advisor needs it. A file clerk comes and files it again. Then, someone else needs it, so it gets pulled again. Then, when you go to look for it, it’s sitting on someone else’s desk and the hunt begins. There’s a lot of time wasted looking for documents that are not where they’re supposed to be.

With a digital document management system, you and your staff don’t have to learn a new way to work. You work as you always have, but your records are stored in a secure electronic repository, where they cannot be misfiled.

Your staff members use scanners to capture financial plans, new account forms, investment applications, client correspondence and statements—all your working and archival client records—into a centralized location. You can also import word processing and other electronic documents with simple, drag-and-drop actions. Optical Character Recognition (OCR) technology reads and indexes every word in your documents, enabling full-text searches of their contents—even if you don’t know the exact spelling.

Authorized personnel can then search and retrieve documents instantly with multiple search capabilities. Users view, print and e-mail documents from their desktops, speeding response to requests for information from clients, their attorneys and tax professionals, supervisory staff or others. Documents may also be archived to CD/DVD or securely posted on an intranet or the Internet without HTML coding. You can easily allow clients or off-site advisors to view records over a secure Internet connection.

Comprehensive security measures protect your documents from unauthorized access. Audit trail modules constantly monitor user activity.

Documents published to disc can be accessed but not altered, fulfilling key SEC retention requirements 17a-3 and 17a-4. Compact digital backups can be stored securely and more cost-effectively off-site. Facilitate response to audits, easily assure compliance with multiple FINRA and SEC regulations, speed workflow processing and order approval and track how efficiently your staff is working, all from one easy-to-operate interface.

How can I achieve a rapid ROI?

How can document management help your practice run more efficiently? With a quality document management system, you save more than just time; you increase your profits, increase the value of your business and save money on overhead and staff time. Laserfiche recently sponsored an in-depth study of the return on investment possible for registered investment advisory firms who implement digital document management technology, and the results were impressive.*

- Realize a profit increase from 41.2% to 55.9%, depending on the size of your firm.
- Increase your business value dramatically—from hundreds of thousands of dollars to upwards of $3 million for larger firms.
- Save 8% of annual overhead costs, up to $342,000 for a large firm.
- Help your staff work more efficiently by cutting time wasted on routine tasks, from 1,500 hours for smaller firms, to upwards of 6,000 hours for larger firms.

As financial services organizations grow, economies of scale are achieved, which result in increased efficiency and profitability. However, as organizations grow, they reach stages where they must invest in infrastructure and staffing. These investments are necessary for further growth and ultimately spur greater efficiency and increased profitability.

It is crucial to learn more about how to achieve a considerable return on investment simply by looking for ways to automate wherever possible and by offering a better option to the systems you’ve grown to depend on. Your organization may have achieved success with your current document management system—be it digital or otherwise—but that should not stop you from searching for better options.

**How can I increase efficiency and productivity?**

Imagine being able to locate any information on-demand, while your clients are on the phone, rather than having to put them on hold and search through your files, then come up empty and have to call them back when you’ve finally found the information you need. With a document management system, you can retrieve documents and locate information instantly, satisfying your clients with the information they need and the service they want right when they call, the first time they call.

PriceWaterhouseCoopers recently conducted a study to determine the efficiency of document management systems when compared to traditional search methods. The study tasked a paralegal with finding twenty documents out of 20,000 that had been filed. After sixty-seven hours of searching, the paralegal had located only fifteen out of the twenty documents requested. In comparison, using a digital document management system, the paralegal found all twenty documents in less than three seconds.

**How can I reclaim office space?**

Paper is multiplying at a rapid rate. Coopers & Lybrand estimates that there are over 4 trillion paper documents in the United States alone, and that they are growing at a rate of 22% annually. With 250 million documents created daily, not to mention the addition of 3.4 billion copies and printouts created each day, paper storage is filling all available space.

A dynamic financial services firm creates bulging file cabinets. With digital document management technology, you store digital copies of your records on unalterable media and reclaim office space currently used to house paper. With less space taken up by paper, you are able to use your office space for revenue-generating activities, not storage. You will have room to house another employee or create another conference room, or perhaps even downsize to smaller offices.

Digital document management technology helps you save money on overhead costs—not just paper-related costs—such as photocopying and office supplies, but also on rent for both office space and off-site storage.
How can I increase my firm’s valuation and enhance profitability?

All of your day-to-day and year-to-year efforts to grow your business ultimately lead to one objective: increasing business value by enhancing profitability.

While many organizations have the same net revenue, the one with the lowest overhead is the most valuable. According to a report from Moss Adams, the average financial planner’s office is burdened by inefficiencies and excessive overhead. The report noted that firms with multiple practitioners spend 42.4% of annual revenues on overhead expenses, leading to a 4% after-tax profit. The most costly operating expenses are other salaries (9.9% of gross profit) and rent (5.2%). Reduced paper and storage costs, more efficient staff, less time spent on compliance and faster client service give you a strong competitive edge.

Increase business value by implementing a comprehensive information management system that streamlines daily work processes. Digital document management technology supports efficiency while cutting the costs of compliance and ensuring greater security, privacy, transparency and accountability at every level of your organization. These benefits lead to more satisfied clients, more productive staff members, easier staff and advisor recruitment and retention, and, ultimately, larger revenues.

Digital document management technology eases the organization and transfer of client records, ensuring a smooth transition of your book of business when you choose to retire. An active repository of client information is much more valuable than stacks and stacks of file folders. For obvious reasons, a firm with a systematized, efficient infrastructure is more highly valued, due to lower operational and investment risk, as well as higher profitability. Investment in your practice today means greater dividends when you choose to retire or sell.

How can I improve communication?

A recent IDC study estimates that 80% of company documents are stored on local hard drives, making them unavailable to others unless they are printed and distributed. And that’s for staff working in the same office—what about off-site employees, employees working from home or employees in another office?

If you supervise staff working in satellite or home offices or have to report to another office, you know that constant, simultaneous access to up-to-date business information is critical. Digital document management technology provides immediate, economical document distribution by e-mail, your intranet, secure Internet connection or CD to satisfy these demands of doing business. Clients get what they want and staff gets what they need, while everyone gets the added benefits of reduced labor, copying and mailing costs.

Using your internal network, you and your staff can access documents instantly and simultaneously, whether you are all in the same office or across the globe. E-mail document distribution allows you to send information where it needs to be, whether to satellite offices, compliance officials or independent third parties. Web publishing add-ons allow you to provide online document access securely and cost-effectively to both staff and clients.

How can I enhance my business continuity planning?

Paper is a vulnerable archival medium. Fire, flood, natural disasters and theft threaten the integrity of your paper archives, but duplicating paper documents for off-site storage is an expensive, time-consuming process.

Regulatory authorities expect financial services firms to have considered disaster recovery and business continuity planning issues, including
the possibility of a future significant business
disruption and how to access systems and
replace files in case of a disaster. NASD (now
FINRA) Rules 3510 and 3520 require member
firms to establish business continuity plans
detailing emergency preparedness procedures.
Rule 3510(e) requires member firms to disclose
to customers how their business continuity
plans address the possibility of a future signif-
icant business disruption and their intended
response. Back-up facilities and arrangements
also must be disclosed.

Digital archiving eases compliance by simpli-
fying disaster preparation and recovery and
assuring the long-term accessibility of critical
information. Easily provide your response to
scenarios of varying severity (from organiza-
tion-only to nationwide), enhance your ability
to continue operating during an emergency or
disaster and speed your response time to any
disaster.

With digital document management technology,
you can assure data back-up and recovery, as
well as maintain client contact information
outside the office. Your entire document
repository can be copied to CDs and stored
easily in a secure, off-site location. No more
relying on tape storage or paying for copying,
transportation and off-site storage for thou-
sands and thousands of paper documents. A
quality document management solution with
CD publishing should provide built-in viewers
and indexes on each CD, meaning that you can
provide document access, even if your network
is down or destroyed.

How can I add value to my existing
technology investments?

A quality digital document management
solution should both expand easily as your
practice grows and integrate seamlessly with
existing applications. This combination of scal-
ability and easy integration enhances existing
IT investments while guaranteeing the long-
term utility of your document management
solution.

A document management solution with open
architecture allows you to easily develop
integrations with any non-proprietary software,
providing information on demand and document
collaboration and movement capabilities. An
integration should provide access to supporting
documents from within other applications.

Integrating your document management
solution with your customer relationship
management (CRM), portfolio management or
other practice management software can
increase efficiency for both you and your staff.

Examples of integration possibilities for finan-
cial services firms are with ACT™, GoldMine®,
Advisors Assistant®, Laser App®, Quik!™,
Advent® and other practice management, CRM
and portfolio management applications.

SectionSix, “Implementation Toolkit,” offers much
more information on how integrations can
enhance your document management invest-
ment.

How can I streamline my workflow?

Nearly all financial services organizations
utilize computers to perform daily operations.
By implementing a comprehensive document
management system, you eliminate your
dependence on paper files in the office and on
the road. Workflow technology offers a benefit
that paper files can’t—the ability to automati-
cally route documents and provide e-mail
notifications to staff when activity is required.

A successful workflow solution eliminates the
need to move documents physically from place
to place. No more time spent figuring out who
has the document. No more lost documents. No
more making copy after copy of a document.
Documents are automatically routed to appropriate persons, who remain productive at their desks. Workflow reminds staff of required tasks and notifies supervisors of action and inaction. With workflow technology, you create an environment where your staff perform as responsible professionals whose time is better spent making decisions than making copies.

With digital document management technology, your workflow is streamlined because staff no longer has to collect, transport and file paper documents before taking action. Both you and your staff are able to spend less time searching for information and more time using the information you find. A streamlined workflow allows you to use your staff’s time more productively and efficiently, resulting in a more profitable and responsive organization.
Key Features of Digital Document Management Technology

Your organization generates large numbers of paper and electronic documents. Traditional methods of storing paper and electronic records require a great deal of effort to manage, distribute and find those documents. As your book of business grows, so do your files, and so does the time and effort required to manage them.

Digital document management revolutionizes the management of information and provides the ability to rapidly find, retrieve and share all the documents in your repository. This section will provide you with more information on the key features of digital document management technology—features that make it an ideal system for financial services organizations.

Organization and Daily Use

Organize files in the same manner as your current filing system. Maintain separate files for clients, staff, customers, pending applications and reference information.
Intuitive Visual Interface

You are able to maintain separate folders and documents according to your preferred procedures. For example, financial planners are able to maintain compliance by preserving separate files for life insurance, qualified and non-qualified accounts.

Effective document management solutions should allow you to store scanned documents and electronic documents, such as word processing and spreadsheet files, in their native formats, all within the same folder.
Easy File Viewing

You can easily view your documents using a variety of options:

Open the document to see a single page clearly and legibly.

Or, open with the thumbnail view to see all the pages in your document.
Add Information to Existing Files

To add pages to an existing document, simply open the folder, click Scan and tell the software where to place the newly scanned page. This allows you to use digital document management software not just to archive old files, but to store current client files. You have the same flexibility of paper files, as well as the ability to organize a file folder as you see fit. Place pages in any order you’d like, or create sub-folders for each registration. Flexible folder structure means you can tailor your repository’s organization to fit the way you do business, while the nested folder structure, familiar to any Windows® user, means that training is a snap and navigation is intuitive.
Quick Shortcuts to Files

Using a document management system for active files eliminates the clutter on desks and floors and eliminates the need to leave your desk to get information from the file cabinet. Staff can easily move the files they’re working on into their own electronic folder, or they can easily create shortcuts to these files to access them in seconds.

For example, for client reviews, you can easily set up a review folder and drag the client’s file there, so that all the information is readily available during your meeting.
Add Working Comments

Use sticky notes within the document management system to leave notes regarding what needs to be done on a particular case or for reminders of what information you are looking for. In addition to making notes, you can add hyperlinks to reference other information. These contents become searchable, providing an additional way for you to quickly locate information.
Easily Move Documents

When papers are manually misfiled, it is often nearly impossible to find them again—especially when you need them on short notice.

Within a document management system, you can instantly find any document by searching for words in the document. If a document is misfiled, you can simply drag the document to the proper folder.
Convert Electronic Files to Archival Images

You can create archival-quality images of proposals, research and illustrations that you created using other software programs.

With a digital document management solution, there is no longer a need to print a paper copy for your files and then scan that image, because you can simply convert documents to an archival image, import them directly to your system and place them in the appropriate folder.
Custom Stamps

With your entire mission-critical repository of client information, asset allocations, loan documents, mortgage documents and other essential records in your document management system, you can use custom stamps to track the actions taken on each document, such as “Faxed,” “Filed,” “Reviewed” and “Approved.”
Indexing with Template Fields

Template fields allow you to quickly and effectively cross-reference information, as well as provide other means for narrowing your document searches. Much like an old-fashioned card in a library card catalog, template fields allow you to record metadata about a file so that you can quickly search by subject. Metadata is descriptive information about an object or resource, whether it is physical or electronic, and ranges from information describing the file to information that ties one document to another, such as documents in a folder.

Indexes are custom-designed to meet your specific needs, so you are not restricted by a predefined format. Indexes can store a variety of information including—but not limited to—creation date, client name, account type, fund company or loan type, representative’s name, account number, Social Security number and account status.

A convenient feature of indexes is that you do not have to enter information every time you scan supporting pages into an existing document. The indexes are set at the document level, meaning that if you are adding new pages to a document, these new pages take on the indexed information of the parent document.
Optical Character Recognition (OCR)

OCR enables you to find any document based on a single word, phrase or combination of words contained within a document.

The OCR process translates printed words into alphanumeric characters with near-perfect accuracy, enabling each occurrence of a word to be tracked by the digital document management system. **OCR dramatically reduces the cost of manual indexing while providing improved search capabilities.**

OCR reads every word in your documents and indexes them automatically, so when you need to retrieve them, you can find them quickly and easily.
Search and Retrieval

Intuitive search capabilities such as full-text indexing, fuzzy logic and template fields allow documents to be retrieved instantly. This eliminates time-consuming, manual searches for information through a file cabinet or pile of papers. OCR turns the words on paper documents into active content, creating a database of invaluable information without any data entry.

A full-featured document management solution easily traces historical information on any account or customer. You can digitize archival documents as well as current or active files, eliminating your need to call up records from an off-site storage facility in search of an elusive piece of information.

Search results should give you the ability to target the information you need quickly, allowing you to zero in on the exact line of a given document.
Distribution

Once you have stored your documents in a secure digital repository, you can simply e-mail or fax the information directly to your home office, fund company or loan administrator. If you need a hard copy of the information, you can simply print the files from your document management system.

The system also allows you to share files within your office, simultaneously and without the need to create photocopies. This enables two or more people to work on the same file simultaneously, something that is impossible with paper.

Superior document management systems provide a secure Web distribution solution as well. Authorized staff and clients can access critical information from around the office and around the world. You can browse, search, view and print any documents with standard Web browsers, just as if you were in your office. Publishing documents to the Web should be a dynamic process that is easily managed without HTML coding.

Security

You can control who has access to your files, what content they view and what functions they perform. You can add annotations, including highlighting, stamps and sticky notes, to your documents, or you can redact portions of a document to prevent unauthorized access to confidential information.

Audit trails monitor every action within the system, providing a detailed history of every stored document. You have complete control over your documents, something that is nearly impossible to duplicate with paper files.

To protect you against any possible disaster, complete CD or DVD backups of your entire digital archive, including images, indexes and databases, can be stored off-site, with duplicate copies stored at your local office.
Simplify and Reduce the Costs of Compliance

All financial services firms face the costs of operating in an increasingly complex multi-regulatory environment. A 2006 SIA survey shows that the cost of compliance was $25 billion in 2005, up from $13 billion in 2002. SIA defines compliance costs as a “firm’s overall efforts designed to achieve compliance with all applicable laws, rules, and regulations, and supervision and surveillance requirements.”

The critical issues of data integrity, authenticity and management affect a broad audience in the financial services industry, including securities firms, investment banks, stock brokerages, hedge funds, mutual funds, investment advisors and other financial institutions that deal in securities trading. Given rising global competition and cross-border mergers, achieving successful compliance programs often poses unique challenges.

There are currently over 10,000 U.S. federal, state and local laws and regulations addressing what, how, when and why records must be created, stored, accessed, maintained and retained over increasingly long periods of time. While laws and auditing authorities vary by industry and region, you will find most regulations have many points in common with regard to document management. Two basic principles underlie many of the regulations. First, you must set the information in time. This means that the date and time that images are digitally created on your system are recorded and cannot be changed. This relates directly to the second requirement, which is that the storage media your system uses must be unalterable.

In an increasingly demanding regulatory environment, a document management solution not only improves the bottom line, but also helps limit exposure to civil and criminal liability due to non-compliance.

**General Compliance Guidelines**

- You must be able to retrieve records on demand.
- Your images and database must be stored on acceptable media.
- You must maintain your records in an unalterable format.
- You must be able to store your documents on unalterable media (CD or DVD) or you must use audit trail tracking that clearly identifies the original dates that images were captured into your system.
- For financial planners, a copy of your records must be maintained by a third party, independent from your operation. Copies must be readily available to auditors.
- A complete and accurate transfer of records must be available.
- Your system must have reasonable controls to ensure integrity, accuracy and reliability.
- Your system must have reasonable controls to prevent and detect unauthorized creation of, additions to, alterations of or deletion of records.
- Your system must have an indexing system facilitating document retrieval.
- You must be able to print copies of records when required.
- Your system must be able to cross-reference with other recordkeeping systems and software.
- Your system must have documentation on how the software works and how it is set up.
SEC Regulations

The United States Securities and Exchange Commission (SEC) has primary responsibility for enforcing federal securities laws and regulating the securities industry and the stock market. The SEC was created by Section 4 of the Securities Exchange Act of 1934, commonly referred to as the 1934 Act. In addition to the 1934 Act that created it, the SEC enforces the Securities Act of 1933, the Trust Indenture Act of 1939, the Investment Company Act of 1940, the Investment Advisers Act of 1940, the Sarbanes-Oxley Act of 2002 and other statutes.

The SEC 17A mandates were created by an amendment to the 1934 Act. These mandates cover overall record keeping for the financial services industry, including policies, procedures, customers, accounts, correspondence and transactions. They also cover mandates for maintenance, storage, monitoring and accessibility.

Rule 17a-3 covers document retention requirements—what documents must be retained and for how long. Rule 17a-4 regulates how these documents must be retained. In combination, Rules 17a-3 and 17a-4 require preservation of records in an easily accessible manner. With the advent of computer technology, including word processing software, spreadsheet and financial software and e-mail programs, as well as hardware devices and other media to store electronic information, the SEC updated these rules to include provisions for storage on electronic media.

General electronic document retention requirements state:

- There must be written and enforceable retention policies.
- Data must be stored on indelible, nonrewritable media.
- There must be a searchable index of stored data.
- Data must be readily retrievable and viewable.
- A backup of data must be stored off-site.

For more information on regulations, including SEC and FINRA regulations and important statutory regulations, please see Appendix One, located at the back of the book.

Creating a Culture of Compliance & Innovation

A culture of compliance encourages observance of the law by promoting a positive attitude toward compliance activities throughout your firm. It is reflected in people proactively seeking to understand and act in compliance with legal obligations affecting their work.

Establishing a culture of compliance relies on proactive, persistent risk management. It encourages employees of your organization to:

- Assess information life cycle requirements in the context of the people and processes closest to the documents, faxes, e-mails and records in question.
- Balance compliance mandates for accessing, sharing and storing information with these requirements.
- Insert specific content technologies such as version control, document routing and archiving directly into these processes.

This approach provides a foundation for a culture of compliance that tangibly contributes to standard corporate goals for revenue, customer satisfaction and efficiency. Committing to a culture of compliance eliminates the fear factor traditionally associated with compliance mandates, enabling organization-wide adoption and shared understanding.
To support a culture of compliance, a technology solution must have the following capabilities:

- **Strong workflow**—promotes process automation and enables better allocation of resources.
- **Security**—protects against unauthorized access to or use of information at the individual, role and group levels.
- **Auditing and reporting**—promotes “checks and balances” for reviewing current practices and the ability to adjust as necessary.
- **Distributed architecture**—enables organizational and geographic flexibility with centralized control.
- **Integration**—integrates with document, content, records and/or e-mail repositories, storage and archival systems, and communications-driven hardware devices such as fax machines.
- **Scalability**—accounts for growing volume in paper and electronic communications, as well as increasing numbers of process owners and contributors. In a large financial services organization, for example, it is not unusual to have over one thousand multi-function peripherals supporting communications processes such as scanning and faxing.
- **Performance**—delivers high availability and reliability through techniques such as clustering, load balancing, redundancy and failover.

Tackling compliance challenges requires a proactive, consistent and realistic strategy to achieve transparent risk management—the ability for business managers to seamlessly incorporate compliance policies and practices into daily business processes. A culture of compliance puts strong emphasis on people along with the inevitable focus on business processes and technology. The simple fact is that policies, procedures and technology do not work if they are not accessible and flexible enough for people to use them. The simpler and easier a solution is, the more easily it supports and enables a culture of compliance.

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**Key Capabilities of Document Management Solutions Supporting a Culture of Compliance**

- Enterprise-wide infrastructure approach with distributed architecture.
- Intuitive user interface.
- Mixed-mode support (paper and electronic communications).
- Automated information classification and indexing.
- Intelligent workflow with automated routing and multi-channel distribution.
- Secure capture of compliance metadata to enable auditing and reporting.
- Integration to other compliance components such as e-mail and archival management systems.
- Applicability to multiple business processes.
Reducing the Cost of Compliance

The core of your compliance program isn’t technology, it’s the policies, procedures and people you work with daily. A document management solution can’t automatically make you compliant, but it can ease the burden of complying with increasingly stringent multi-regulatory rules and retention requirements.

Adopting policies for the management of compliant records can be an expensive process, with the major cost factors being the manual procedures required to ensure compliance policies are enforced. Digital archival systems are designed to help automate these processes and reduce the cost of long-term data preservation. The factors in delivering a positive return on investment are:

- **Automation**: Any policy that requires documents to be categorized and tagged with meaningful metadata requires the process to be automated to some degree. Automated metadata capture reduces the cost of cataloging, organizing and tagging documents. Without this capability, many compliance policies are simply unworkable from an economic perspective.

- **Records retention**: Lower the cost of retaining records in accordance with SEC and FINRA guidelines by using records management tools to automatically tag records for retention, transfer, archiving or destruction. Easily apply consistent policies to records in a variety of media, from Web content to archived e-mail messages to scanned images and spreadsheets.

- **Administration**: Managing a large digital archive over a multi-year period can cost much more than the capital expense of the media. Self-management facilities such as self-protection, self-configuration and self-optimization can drastically reduce the long-term cost of running a large online digital archive.

- **Transparency**: One of the greatest strengths of a document management system lies in the way it enables you to manage retention schedules without interfering with any department’s line of business. A well-designed system will handle records management transparently, meaning that once it is set up, it will not interfere with line-of-business, processing or procedures.

- **Remote supervision**: Simplify the supervision of remote offices and eliminate the expenses of postage, overnighting and faxing. Constantly monitor activity without having to leave your office, facilitating supervisory compliance with “know your customer,” money laundering and suitability guidelines.

- **Equipment and maintenance expenses**: A consistent and reliable data retention and disposition policy frees up valuable space on first tier storage. By using a special-purpose storage architecture made up of redundant arrays of commodity servers, disk and network components, document repositories can achieve a low cost per terabyte—roughly equivalent to tape—while still delivering high reliability and immediate access.
Accessibility, Security and Accountability

It is critically important for your firm to strictly control who has access to the original or copies of certain types of data. Archived data should be viewed as a company asset, subject to strict security measures for access and audit trails to provide proof of compliance.

With document management, you can control who has access to your files, what content they view and what functions they perform, from folders and documents down to individual words. You can redact portions of a document to prevent unauthorized access to confidential information. With audit trail functionality, you can track who accesses what document when; what they do with it, from printing to faxing to e-mailing; why they do it; and, finally, water-mark any printed documents with the reason for printing them. Comprehensive security controls of a digital repository actually give your organization more control over your archives when compared with paper documents that anyone can copy, steal or forward.

Like any other corporate data on which a financial services firm relies for business continuity, digital archives need similar protection. This brings up a point that digital archives are often confused with backups used for disaster recovery. In many cases, your archives contain the “document of record” for a particular business event. As such, strategies to protect these assets need to take into consideration retention periods that far exceed the life of operational data. Therefore, your digital archival solution must address long-term data preservation issues.

Your vendor should work closely with your compliance officers to assure that your solution helps avoid the risks of non-compliance while streamlining auditing, third-party storage and other compliance-related recordkeeping procedures.

Using Records Management to Mitigate Risk

Records management is a specialized branch of document management that deals with information serving as evidence of an organization’s business activities. Records management includes a set of recognized practices related to the life cycle of that information, such as identifying, classifying, archiving, preserving and destroying records.

The fundamental concept behind records management is the idea that each record has a life cycle, or stages that every official business record must go through. After a record is created, it must be filed according to a defined, logical scheme into a managed repository where it will be available for retrieval by authorized users. When the information contained in records no longer has any immediate value, the record is removed from active accessibility. Depending on the nature of the record, it is either retained, transferred, archived or destroyed.

The practice of records management involves the following activities:

- Creating, approving and enforcing records policies, including a classification system and a records retention policy.
- Developing a records storage plan, including the short- and long-term housing of physical records and digital information.
- Identifying existing and newly-created records, classifying them and then storing them according to standard operating procedures.
- Coordinating the access and circulation of records within and outside the organization.
- Executing a retention policy to archive and destroy records according to operational needs, operating procedures, statutes and regulations.
The general principles of records management apply to records in any format. Digital records, almost always referred to as electronic records, raise specific compliance and preservation issues. It is more difficult to ensure that the content, context and structure of records is preserved and protected when the records do not have a physical existence.

Records management applications enable the application of systematic controls and policies concerning the life cycle of those records that detail an organization’s business transactions, supporting the automatic enforcement of consistent, organization-wide records policies and reducing the cost of regulatory compliance. Records management applications should allow organizations to file records according to a determined scheme, to control the life cycle of records, to retrieve records based on partial information and to identify records that are due for final disposition. Records management applications must protect records from loss and tampering, while allowing the records manager and other decision makers access to necessary information.

Privacy, data protection and identity theft have all become issues of concern for records managers. The need to ensure that certain information is not retained has brought greater focus to records retention schedules and records destruction. Records management helps financial services organizations—in fact, organizations in all industries—mitigate risk by preventing alteration of important information. Where paper documents are easy to alter, misplace or steal, scanned images, especially those protected by audit trail functionality or burned to optical media like CD or DVD, are nearly tamper-resistant.

"Records management is a sleeping giant of compliance," according to Lee Dittmar, principal and leader of the enterprise governance consulting practice at Deloitte Consulting LLP in Philadelphia. "There's a tremendous amount of data to manage, and most companies don't have the policies or tools to find what they
need when they need it. That represents one of the biggest compliance risks any company can have."

Implementing a records management solution is a formal declaration of your organization’s commitment to compliance and can be a large part of the culture of compliance you create. With a records management solution, you fulfill the two crucial parts of compliance: first, implementing business practices that ensure compliance; and second, being able to show that you are actively managing information in a compliant manner.

Implementation Toolkit

Reconciling the opposing necessities of facing compliance and competitive pressures while delivering exceptional client service and safeguarding customer privacy is a prerequisite for success. A comprehensive document management solution must establish a clear line of sight from the front desk to the field, effectively managing the flow of information across the entire organization.

The document management solution your organization selects should power a holistic approach to compliance and record keeping, allowing not only greater transparency and accountability, but also organization-wide efficiency that strengthens your competitive position. You need to streamline information collection and management, from document capture at the point of creation to long-term records retention.

Regardless of industry, the effects of implementing document management technology are the same: increased productivity and efficiency. While laws and requirements differ by industry, the need to archive documents and records is consistent across all industries. A quality digital document management solution should be developed horizontally to replace filing cabinets, meaning that it should be simple to replicate—or even improve upon—your current filing system, as well as store both scanned images of paper documents and electronic documents in one location.

Whether you work at a bank or a brokerage firm, you need to protect customer information, speed workflow and provide superior client service. By reducing reliance on paper, you help trim overhead costs and have greater control over business records because the day-to-day work takes place within a digital environment.

Implementing a digital document management solution is always a unique undertaking—no organization is quite the same as any other. There are, however, guidelines and considerations that anyone approaching this task should take into account.

Determining Your Organization’s Unique Needs

Performing some type of needs analysis is a crucial step in preparing for your implementation. A comprehensive needs analysis requires a great deal of work and is not something that can be entrusted solely to an outside consultant. Consultants can play a useful role during the needs analysis, but they cannot do everything on their own. During this process, the best thing a consultant can do is play the role of facilitator and help guide your analysis. An experienced consultant will teach you what you need to know and keep team members on task so that the analysis is completed in a timely manner.

Performing the bulk of the analysis internally is also important because it gets team members personally invested in the success of the project. When you know exactly what needs you want to address and how you want to address them, you will be in a much better position to select the best possible solution. Getting people from multiple departments involved early in the process will set the tone for a successful implementation. Furthermore, learning how to work together in the early stages will pay dividends later on when it comes to design, configuration and training.

When you analyze your needs, 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 information
determines how much storage space is needed, the hardware configuration and the cost of the system.

• How many people will use the system concurrently? This determines preliminary software costs, required licenses and server size.

• What departments will be using the system and is it necessary to provide public access? This determines the specific features and security levels needed.

• What business problems need to be solved to reduce costs and improve productivity? This determines which functions of a document management system will be requirements and which are optional. It also helps determine whether plug-ins or customizations are necessary.

• Which compliance regulations affect your organization? The document management system should have functions supporting compliance with those regulations.

• Would you like to integrate your document management program with other software applications, such as your portfolio management software or your CRM system? Because integration issues often increase the time required for implementation of document and records management systems, these concerns should be resolved before investing in a particular system.

• Do you want a turnkey solution or a customized one? This determines the amount of consulting, installation, training, configuration and support needed.

• What type of network is currently used? Will it stay in place, or will it be upgraded? This determines network constraints, system configuration and workstation upgrades.

For assistance determining your document management needs and developing a specific features list that will meet them, please refer to Worksheet Two, located at the back of the book.

Developing an Implementation Plan

Careful planning is one of the most important elements of a successful implementation. Planning needs to begin before the first dollar is spent on the project. Projects have a much better chance of success if someone has documented, in detail, the project scope, system requirements, schedule, business case and technical environment before you begin. As obvious as it may sound, these first steps are frequently not accomplished until the project has already started.

The vendor you choose as your document management consultant should assist you in the creation of a document management implementation plan. If you try to do this in-house, without the assistance of trained professionals, you may miss important elements that would greatly affect the success and cost of your implementation.

The first step in an installation should be a site evaluation by the software vendor to determine proper equipment placement and to identify any network connectivity problems. Hardware installation consists of connecting and setting up all of the components, including installation of the necessary operating systems and drivers. It requires the testing of equipment to ensure proper hardware functionality and network connectivity.

After tests of the hardware have been conducted, the document management software is installed on the document management server and the necessary workstations. It must be tested to ensure operability. Generally, the software vendor will perform these tasks with the collaboration of your organization’s IT personnel.

Designing a clear implementation plan will help your organization adjust smoothly to your new system. An implementation plan will also help you identify the roles of key staff members and how the system will be integrated with your daily operations.
For assistance in developing your implementation plan, please refer to Worksheet Three at the back of the book.

**Implementing a Workflow Solution**

Workflow functionality can increase the benefits of a document management system by automating the routing of documents to various people, eliminating bottlenecks and streamlining business processes. This added functionality is crucial for large offices, for organizations with central and branch offices and for organizations that plan to ultimately expand their system.

A Workflow solution should automatically notify specific users of specific document-management-related system events, based on rules created by the system administrator. It should also generate return receipts and timed responses. If a recipient does not act within a specific time frame, the program should send either a reminder message or a second message to an alternate recipient. An essential component in any procedural workflow system is document automation. A Workflow module should be able to automatically move, copy or delete documents within the repository based on a predetermined set of rules.

The success of any workflow system is not its ability to follow the strict routing and reporting features of a fully automated system, but its ability to handle exceptions to the rules as they arise. An effective workflow system provides the administrator with complete access to on-the-fly routing of documents and information through the system’s folder structure and system security.

Workflow systems should offer administrators drag-and-drop simplicity, an intuitive graphical interface and an easily-understood folder structure. Workflow applications should be ODBC-compliant to facilitate integration and customized application development. As a final component, the workflow solution must provide for comprehensive security reporting through an audit trail function.

Here are some important questions to consider when you are developing your workflow:

1. What different types of documents do you deal with in your workflow processes?

2. Who is expected to act on these documents? Is there an approval process for these documents? What is the rejection process for these documents? What is the current time frame for getting documents approved?

3. Does your organization have complete control over the documents in question? Or are they generated externally? Is it possible to request changes to the forms?

4. What kinds of physical actions currently take place on paper documents? Are they written on? Are they stamped with the date/time? Do they require a wet signature?

5. Are documents processed one-by-one or are they processed in a batch? How are batches identified?

6. Are there processes that split documents into multiple workflow routes? Is there a requirement to marry these documents back up with each other at a later step?

7. Is it necessary to handle attachments/addendums to existing documents already involved in a workflow process?

8. What applications are currently involved in the process? Define the purpose of these applications and how they interact with the process.

9. Is the workflow internal (department-to-department) or external (department-to-external-group)?
10. How many users will be actively involved in the workflow process?

11. To what extent does your organization want your workflow processes to be automated?

With a workflow solution, you increase your organization’s profitability and efficiency by providing an easier line of sight and a simpler way to prove supervision. You can route documents more quickly and make decisions more easily and much more cost-effectively. With quicker decisionmaking, the cost of transactions drop dramatically; for example, a bank that can get a document out the door 30% faster makes that transaction 30% cheaper. Workflow technology provides a way to guarantee not only a rapid response, but also clear supervision.

**Integrating Existing Applications with Your Document Management System**

The most typical question about integration with digital document technology is, Can System X be integrated with System Y? The answer to this question depends upon each system’s architecture. In order to understand this point, you might think of integration as a conversation. In order for two people to hold a conversation with each other, two things must be true:

- Each person must be capable of speaking and hearing.
- Each person must understand the other.

So, when someone asks whether System X can be integrated with System Y, the person is really asking two questions:

- Can System X and System Y transmit and receive data from an external source?
- Can the data from one system be packaged in a way that the other system understands, and vice versa?

The introduction of new software and repositories often creates logistical challenges for the computer support staff of an organization. Document management programs should offer packaged integration tools for simple image enabling, to minimize the burden on IT support staff. To minimize disruptions to business operations, it is essential that a document management system integrate smoothly with other software applications. Financial services organizations are most often concerned about integration possibilities with their customer relationship management (CRM) application, their portfolio management software or their trading application.

**Image enablement** of a third-party application is the most typical type of integration. For example, CRM software stores extensive data on a client, but it doesn’t store related images, such as scanned copies of their asset allocation, correspondence documents, statement or copies of checks they have submitted. These documents supplement the data that is stored in the CRM. Image-enabling the CRM application would allow users to click a button within the application that launches the display of documents supplemental to the client’s contact information.

**Data exchange** involves the transfer of data from one system to another. Usually, the data is moved from another system into the document management system. However, the integration can involve moving the data from the document management application to another system, particularly if you’re using automated data capture. In either case, the reason for this sort of integration is to avoid entering the same data multiple times, and to keep data as up-to-date as possible.

**Data enablement** is the opposite of image enablement. In this case, the user opens another application from within the document
management system. For example, a user could access account information paperwork from within the document management system, click a button and have the associated account information displayed in your organization’s portfolio management application.

These types of front-end integrations are especially important for organizations utilizing documents in a supporting role. These organizations want a document management solution that is as transparent as possible, given that staff members don’t want to learn a new system just to gain access to supporting documentation. Because staff members already have a primary application they use to complete their daily tasks, the best way for them to access documents is through this familiar application. Image-enabling primary applications allows staff to quickly access the documents they need by simply clicking a button or pressing a function key.

The value of front-end integrations are primarily realized in a reduction in training costs. Because staff members already know how to locate records in their primary application, they will not need to learn how to locate documents in the document management system. They will have to learn how to request the type of document they want and, if necessary, how to work with documents in an electronic format. However, this requires less time than teaching them how to utilize the complete system.
Client Stories

Don’t think digital document management will fit the way you do business? Think again—these client stories show you how digital document management works for organizations in all segments of the financial services industry, from banks, CPAs and insurance firms to broker-dealers, RIA firms and financial planners.

Banks/Credit Unions

**Spotlight: Halifax/Bank of Scotland**

*Delivering instant, secure access for authorized staff in European branch offices*

The Halifax/Bank of Scotland (HBOS) Group, recently honored by widely-read financial publication *The Banker* as “U.K. Bank of the Year,” has dramatically upgraded its ability to serve global customers with an Internet-based enterprise paperless office solution from Laserfiche.

Bank of Scotland International, which is part of the HBOS Group, shares nearly one million customer documents with remote offices on the Isle of Man and Jersey, separated by 500 miles. With a few keystrokes, 225 employees on the islands can instantly access customer information, eliminating the old system of faxing queries between the islands.

Customers on six continents rely on the Bank of Scotland International for a wide variety of financial services, including wealth protection, estate planning, international movement of funds and access to investment opportunities.

Given the level of customer enquiries received daily, and the number of new accounts, Laserfiche was needed to help reduce workers’ reliance on paper and handle customer service faster and more efficiently.

“As we explored various document imaging systems, we knew our choice had to be cost-effective,” says Ranald Caldwell, Bank of Scotland International’s Director and Head of Operations. “Laserfiche will reduce our processing costs, improve disaster recovery and clearly enhance customer service. We forecast a full project payback within two years.”
Broker-Dealers

**Spotlight: Geneos Wealth Management**

*Enabling straight-through processing by eliminating paper*

Geneos Wealth Management offers estate planning, investment advice, time management systems and financial planning. With such diverse roles and an eye toward retail rather than institutional bank arrangements, Geneos needs to store, share, search and reference hundreds of thousands of client documents. In addition, the firm’s relationship to its representatives means joint ownership of the majority of their records, requiring access from multiple locations by various individuals.

Geneos management understood the significance of eliminating as much paper as possible from day-to-day operations with a compliant digital document management system. Decision makers saw that the time spent physically searching through paper records and shipping or faxing them from location to location could be better spent delivering financial services.

Any solution would need to keep up with the influx of as many as 60,000 paper documents per week with the ability to securely scan, share, store and route them for approval. It would also have to make documents accessible from the main office in Denver, the 61 OSJ branch offices in 24 states, and 400 representative and affiliated investment advisors across the country.

Geneos management looked briefly at simple scanning solutions, but these were inadequate. Geneos needed an economical way to have its clients scan into a centralized solution while complying with SEC regulations for a clear audit trail. One branch had been using Laserfiche and introduced the product to the home office. “We made the decision to go in the middle of May,” says Dean Rager, CIO. “By September our system was in place in over 50 offices. It was very quick.”

Geneos started using Laserfiche to allow all the branch offices to ensure compliance while scanning their documents into one central repository. Geneos has scanned in over 100 gigabytes of data, keeping up with the 60,000 new documents that come in each week. Laserfiche is handling input from all three virtual print servers and all the firm’s virtual faxing. Since installation, Laserfiche has captured close to a million pages—enough to stretch 150 miles if laid end-to-end.

Geneos also appreciates Laserfiche’s open architecture, and IT staff have used the Integrator’s Toolkit™ to complete a number of integrations between their in-house applications and their document repository. IT staff have also worked with two major clearinghouses to establish a system for submitting paperwork electronically.

“As a major broker-dealer, we route large amounts of documentation to the clearinghouses,” explains Systems Analyst Sean O’Reilly. “We’ve established an electronic document link so that staff can quickly submit documents stored in Laserfiche to either house, simply by clicking a custom toolbar button. Our staff really appreciate the ability to send documents electronically rather than printing and mailing them, and this functionality has taken us a long way toward becoming a fully paperless firm, with greater operating efficiency and system integration.”
CPA Firms

Spotlight: Kennedy & Coe

Eliminating lag time by enabling remote access for satellite offices

Kennedy and Coe, the 56th largest CPA firm in the nation, uses Laserfiche to help its headquarters organize and archive accounts payable, accounts receivable and general ledger information.

Kennedy and Coe, headquartered in Salina, KS, has 23 offices scattered throughout Kansas, Colorado, Nebraska and Oklahoma. Any invoice coming in to those offices must be paid through the accounts payable department located in the home office.

In the past, once the invoice was received and paid, it was kept on file for a year, then sent downstairs for storage. If a question came up about an invoice, someone would have to go through the arduous task of searching for it. “An invoice from several years back could take days to find in the basement,” says Greg Davis, Associate and IT Director of Kennedy and Coe. If a satellite office had a question about an invoice, it would have to be found, copied and mailed or faxed to them, taking up valuable time and company resources.

“With Laserfiche I can look up the invoice myself in a matter of seconds,” Davis says. Employees at Kennedy and Coe can utilize Laserfiche’s advanced folder structure to locate information, or its Boolean search capabilities to pull up a document based on a template or keyword search. “Once our accounts payable person receives and pays an invoice, she scans it into Laserfiche and shreds it. If anyone needs the information they can look it up in Laserfiche. The satellite offices can now call and get the invoice e-mailed immediately without having to wait,” Davis explains.

Laserfiche was installed in a pilot program as part of the company’s overall decision to go paperless. The company currently utilizes a Citrix® server for the satellite offices to access programs and data at the main office, so they can utilize Laserfiche from their computers as easily as those in the home office do.

Currently, the firm administration department is utilizing Laserfiche, and Davis says they plan to move Laserfiche into every department and eventually grant select staff in the home office and satellite offices access to company records. The next step is to take employee data paperless. Laserfiche’s comprehensive security allows access to only those with expressed rights set up by the administrator to view specific folders, documents and even information on a specific document.

“One of our offices is nearly paperless already,” Davis says. “We felt Laserfiche would fit our needs in taking the company paperless and our plans to get rid of our paper in every office.”
Financial Advisors

Spotlight: Woodard Insurance, LLP

Surviving and thriving with digital document management

“Our decision to go paperless was driven not by cost or budget issues, but by the desire to grow our business, tame a paper monster that was consuming every available square foot of office space, improve our customer service and keep up with a rapidly-changing financial planning industry,” says Blake Woodard, Managing Partner of Woodard Insurance, LLP, a Fort Worth, Texas-based firm of financial advisors and insurance professionals. “In our view, we had no choice as to whether to go paperless. You must go paperless if you want to survive and thrive in the financial planning industry.”

“I had looked at several systems,” Woodard remarks, “but Laserfiche offered us the greatest flexibility to work like we always had, only using electronic files instead of paper. Laserfiche used TIFF files instead of proprietary file formats and used SQL as its underlying database, which gave us the ability to move our data to a different system later if we needed to. Also, the SQL platform is scalable as our electronic storage needs grow.”

Woodard Insurance purchased Laserfiche software and installed it immediately. Scanning began in June 2005 and was completed by October. “Within two months, we were realizing great productivity gains, and five months after we began, we were fully benefiting from Laserfiche,” Woodard comments.

One of the benefits Woodard noted was the ability to securely protect confidential information. “Since we shred immediately after scanning and auditing, Laserfiche removed highly-sensitive information from any threat of snoopy eyes, such as building cleaning crews, vendors or just nosy office visitors,” he says.

And then there’s the ability to serve clients with less stress. “We can show clients their applications, investment statements and other documents on our conference room slide screen during our review meetings, discuss documents with them when they call in without hunting them down, or we can e-mail them copies of these documents right from Laserfiche,” Woodard notes.

Woodard Insurance currently scans over 2,000 pages a month into their Laserfiche system. “It solves little problems for us daily,” says Woodard. “The biggest problem it solved was in the first few months when we scanned in our securities client binders. We were completely out of space. Now those $1,200 five-shelf binder cabinets are sitting empty. Anybody want to buy them?”
Financial Planners

Spotlight: Bingham & Hensley

Leveraging technology to enhance existing work processes

Bingham & Hensley, a certified financial planning firm in Kingsport, Tennessee, had serious problems with its existing document management system and wanted a solution.

“We are in our files on a daily basis, and there was no way to easily see the individual files for any given client and no way to easily maintain the separate file folder structure of Life Insurance, Non-Qualified and Qualified folders as dictated by compliance regulations,” says Jeff Bingham, the firm’s Registered Principal. “We were and are solely dedicated to going paperless, but our system at the time was not living up to expectations and was not giving us the solution that we needed.”

After an extensive search of the various document management systems on the market, Bingham & Hensley became immediate fans of Laserfiche the minute they realized how its visual file folder structure could emulate their existing filing system. Not only could Laserfiche store their archival records, but it could also maintain active client files. Laserfiche’s sticky note feature enabled them to make comments on documents or files in their repository, just as they would store handwritten notes in a paper file.

In addition to storing their documents in Laserfiche, Bingham & Hensley also stores illustration and proposal client records. Now, when they want to recall a specific proposal created by any of their financial planning software toolkits, they can quickly access the records and repository from one simple location—their Laserfiche client file.

Bingham & Hensley had the short-term goal of eliminating their seven filing cabinets and scores of storage boxes. Their long-term plan was to provide more efficient service to clients, to spend less time finding files and information, and to be fully compliant with all relevant federal and corporation regulations.

“Our Laserfiche reseller has taken the time to learn our filing system and understand our specific needs to assist us in developing an implementation plan that will help us realize our goals,” Bingham says. “Without a doubt, that is probably one of the biggest keys to a successful document imaging system.”
Insurance Agencies

Spotlight: Bloss & Dillard

Reducing processing time for new insurance policy applications by 20 minutes

Thousands of paper policy documents instantly found their way to underwriters’ computer screens after Bloss & Dillard, Inc. aggressively implemented a paperless system.

The Huntington, West Virginia-based managing general agent (MGA) represents more than 1,500 independent agents throughout four states. Bloss & Dillard handles a wide scope of risks, from simple property to highly-sophisticated excess and umbrella coverage. IT manager Tate Tooley wanted a way to make their 350,000 documents easily accessible.

As each of the 7,000 policies entered the Laserfiche system, Quick Fields™ technology automatically sent the digital documents to the appropriate underwriters. Within hours, the same policies that once required a deep dig through a file cabinet now were a mouse click or two away.

After batch-processing the old documents, Tooley set up Quick Fields to automatically route new policies, e-mail and faxes in the same manner. A paperless mail system soon replaced the mail cart.

“Many of our clients had switched to digital documents and the paperless office in recent years, so we were a little out of date with our paper filing system,” Tooley says. “The key was to mold this new system to our current workflow pattern, with minimum lag time during the integration process.”

Quick Fields also reduced labor costs that would have been associated with such an ambitious project. Without Quick Fields, staff would have had to manually find each folder after scanning it into Laserfiche. Quick Fields saved 20 minutes per policy, which factored out to approximately $23,000 worth of saved labor costs.

“Laserfiche allows users to build a library of digital documents,” comments Nien-Ling Wacker, president and CEO of Laserfiche. “Quick Fields automatically writes the library catalog, so critical information can be shared and re-purposed as organizations see fit.”

“Many companies want to go paperless, but the biggest challenge is finding a solution that molds well to the current system,” says Larry Lambert of nCompass networks, the Laserfiche value-added reseller (VAR) who worked directly with Bloss & Dillard. “Laserfiche could organize the system to mimic what they had been doing for years.”
Offices of Supervisory Jurisdiction (OSJ)

Spotlight: Feenan Financial Group

Saving time and aggravation with built-in compliance features

Tom Feenan, founder of the Feenan Financial Group in Quincy, Massachusetts, calculated early last year that the firm was paying $13,000 per year to rent space for filing cabinets. He vowed that he would rectify this situation and, after a few twists and turns, found Laserfiche and the solution to his problem.

"I thought to myself when I looked at my calculations that day, 'There has to be a more efficient way to do this,'" Feenan says. He conducted an Internet search that included an investigation of SEC requirements regarding the conversion of paper into digital files. He then asked his broker-dealer, National Planning Corporation (NPC) of Santa Monica, California, to support his plan to become a paperless office. National Planning Corporation is one of the world’s largest broker/dealers, serving 2,300 certified financial planners.

"They asked me to wait until they could take a look at the issue from a broader perspective," Feenan says. "Five months later, NPC issued a directive that urged all their member firms to look into document imaging and recommended Laserfiche.

"We purchased it soon thereafter and have been scanning and getting rid of our paper ever since. The file cabinets in the space I measured last year are now gone, and we have been able to put another office in their place."

Feenan says he is extremely impressed with Laserfiche’s performance and believes that going paperless is a new foundation for the continuing success of his firm.

"We saved a half day’s worth of staff time when the compliance officer from NPC was here recently for an audit. We’re finding things faster and we’re starting to look to Laserfiche more often to help us with our daily work. It is already a very worthwhile investment."
Sole Proprietors

Spotlight: Financial Foundations, Inc.

Easing the growth process to enhance profitability and business value

“Personally, I think that every financial advisor has to move eventually to an electronic filing system. It’s not a matter of if, but when,” says Nick Cosentino, president and founder of Financial Foundations, Inc. “In my opinion, it would be impossible to succeed without it.”

Cosentino founded Financial Foundations in 2001, and by 2006, the firm had doubled in size, with assets under management of $135 million. Although he is the sole owner of Financial Foundations, Cosentino was still aware that digital document management would benefit his firm just as much as a larger one. “In fact, I knew we had to implement an electronic filing system if we were going to continue to grow,” he says.

At Financial Foundations, nobody misses their old paper-based processes. “It’s not just the ease of finding things, but the ease of putting things in,” Cosentino points out. “Now we scan, shred and toss all our paper. Desks are neater, there’s less clutter and the piles of paper are completely gone.”

A key concern was not just eliminating paper, but also complying with increasingly-strict NASD (now FINRA) and SEC regulations for retention and documentation. “With compliance the way it is, there were up to ten forms per client, and it was out of control,” he says. “The amount of paper is completely prohibitive.”

Back-office staff are working so much more efficiently that Cosentino is also looking into buying another advisor’s book of business. “We’ll scan the information into Laserfiche and move it over,” he says. “In this industry, when you take on another advisor’s clients, that means all the applications and account forms too, and you have to have that back-office capability. If you’re going to grow by acquiring other practices, you have to transfer accounts, and without this capability, it would be nearly impossible to do without hiring on a significant number of staff. Laserfiche helps you grow in an easier, more cost-efficient way.”

Cosentino believes that growth will continue to be key for his firm as more and more sole proprietors begin to consider retirement. “Personally, I believe that over the next five, ten, even fifteen years, you’ll see a lot of integration and consolidation, and Laserfiche will aid with that,” he continues. “There are so many one-person shops out there. They may have between $30-40 million in assets, but they don’t have a succession plan. Laserfiche works well as a succession plan, because the ability to easily transfer data increases the value of your business.”

Cosentino doesn’t doubt the value of Laserfiche to his business. “Absolutely, if you have Laserfiche, your business is worth more. If you don’t have it, tough luck, because clearly, you will have to implement a digital document management solution eventually, just to keep up. It may cost me up front, but in the long run, I will be in a better competitive position.”
JC Abusaid, Chief Operating Officer of Halbert Hargrove Investment Counsel in Long Beach, California, had a vision of a completely automated and paperless back-office. With over 700 clients, nine Investment Counselors and $1.2 billion in assets under management, Halbert Hargrove is a complex operation. To continue to profitably grow, Halbert Hargrove needed to leverage technology to provide the highest level of client service and achieve scale and operational efficiencies. A flexible, user-friendly, easy-to-operate digital document management technology platform was critical. “We knew that we needed not only the document management aspects, but also the scale and ability to custom integrate into how we did business,” says Abusaid.

“Everything we do begins and ends with client information that we enter, store and manage in GoldMine,” he continues. “Therefore, we needed to use our document management system as not only a storage, search and retrieval system, but also as a document workflow system among our Customer Relationship Management system (GoldMine) and Portfolio Management System (Advent).”

To achieve the vision of a paperless back office, Halbert Hargrove developed a custom publishing system, integrated into Advent, GoldMine and their document management system, that was designed to meet their unique client service and portfolio management needs. Advent automatically generates daily reports with real-time market data, providing updated information on client positions and holdings for Investment Counselors (ICs) to use when making investment and planning decisions. These daily client reports allow ICs to be proactive with clients, along with other professionals such as CPAs and attorneys.

Client reports are automatically fed into the publishing system. Halbert Hargrove’s digital document management system electronically stores these reports and other client documents, offering the additional benefits of intuitive search functions, secure retention and the ability to “move” documents to GoldMine via links on client information pages.

Simultaneously, the publishing system posts the reports to the Halbert Hargrove client website for online viewing via a password-protected site. For those clients who choose electronic delivery of reports, an automatic e-mail from GoldMine alerts the client that there is information on their site, completing a fully-automated workflow cycle.

The publishing system also e-mails links to the custom quarterly reports to clients who have elected to receive electronic reporting. This helps reduce the total amount of paper generated and mailed, while for some clients, no paper is generated at all.

“By having this end-to-end integration, we can be extremely fast, efficient and flexible in responding to client service requests on the fly without having to hang up, search and retrieve the necessary documents, call the client back and end up in a lengthy phone tag back and forth,” Abusaid notes. “Additionally, with one point of entry for client data, we are minimizing errors and our security settings, within our document management system, meet our compliance requirements. Throw in the added benefits of not having filing cabinets clogging up our operational space and the speed in which we can access critical client documents, and we’ve been extremely pleased with what we’ve built.”

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Conclusion

The greater availability and acceptance of document imaging technology, along with rapidly-declining cost of computer systems, make a document management solution a prudent investment.

In an environment where increasing productivity, efficiency and profitability is crucial to long-term success, a document management solution is a business-essential aspect of day-to-day operations. It is a solution that cuts costs, reclaims storage space for revenue-generating activities, allows staff to redirect labor to more productive tasks and simplifies compliance with ever-changing regulations.

A document management system should be flexible enough to adapt to your organizational needs and address the needs of multiple departments. Scalable, open architecture allows you to start small and expand your solution as your needs change.

Document management solutions can work as effectively for a sole proprietor as for a company with a staff of thousands. The key is selecting the system that is the best fit for your organization.
## Worksheet One:
Document Management System Evaluation Checklist

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<th>Capture</th>
<th>System #1</th>
<th>System #2</th>
<th>System #3</th>
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<td>Does the product work with a wide variety of scanners?</td>
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<td>Can you use hybrid and specialized capture devices such as copier-scanners and microfilm scanners?</td>
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<td>Does the system auto-name documents while scanning based on user, date or other values?</td>
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<td>Can you scan additional pages into existing documents?</td>
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<td>Can you perform image adjustments to remove noise, remove lines, crop, rotate and perform other image clean-up?</td>
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<td>Does the system automatically remove blank pages?</td>
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<td>Can you archive electronic documents, including images, text, spreadsheets, PDFs, movies, AutoCAD and sound files, in their native formats?</td>
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<td>Can you send documents to the system from Windows Explorer?</td>
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<td>Can you archive documents from Microsoft applications?</td>
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<td>Can you automatically extract e-mail metadata?</td>
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<td>Does the system support mandatory metadata acquisition?</td>
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<td>Can you import electronic documents and directories by dragging and dropping?</td>
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<td>Can you export and import documents, folders and their metadata by using briefcases?</td>
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<td>Can you convert electronic documents to archival images without printing and scanning them?</td>
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<td>Can you extract text from electronic documents?</td>
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<td>Can you create new folders directly from the Import dialog?</td>
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<td>Is there Unicode support to handle documents in non-English languages?</td>
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<td>Is there form alignment and dropout for precise zone OCR?</td>
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<td>Can you extract template and identification data from images?</td>
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<td>Can you extract data by zone OCR, barcode recognition or Optical Mark Recognition (OMR)?</td>
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<td>Can you look up external metadata keyed by extracted data or data entered manually?</td>
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<td>Can you use extracted data for document or folder naming, indexing or as input to other processes?</td>
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<td>Does the system identify documents by recognizing forms or by matching extracted data?</td>
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<td>Does the system use identification for document separation or individualized processing?</td>
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<td>Can you imprint images with Bates numbers, lookup data or bitmaps?</td>
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<td>Can you schedule document uploading to the repository?</td>
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<td><strong>Storage</strong></td>
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<td>Is the location of document data fully configurable and storable on any network volume?</td>
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<td>Is there a separate document folder hierarchy from physical storage volumes?</td>
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<td>Can you configure volume size and set rollover limits?</td>
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<td>Is there full support for rewritable, read-only, removable or fixed volumes?</td>
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<td>Can you migrate documents to different physical volumes?</td>
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<td>Can you set document content files to read-only for magnetic WORM support?</td>
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<td>Can you transfer document storage volumes with metadata and folder organization intact?</td>
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<td>Can you attach large numbers of documents via portable volumes for additional synchronization?</td>
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<td>Does the system store documents in non-proprietary TIFF and ASCII formats?</td>
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<td><strong>Indexing</strong></td>
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<td>Does the system use templates to associate metadata with documents and folders?</td>
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<td>Can you create different templates for distinct document types?</td>
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<td><strong>Indexing</strong></td>
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<td>Are there constraints forcing users to enter template information in specified formats?</td>
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<td>Is there color-coding to distinguish document types?</td>
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<td>Can you reassign or update templates or fields at any time?</td>
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<td>Are selection lists available to standardize template entries?</td>
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<td>Can you generate searchable text from PDFs and CAD files?</td>
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<td>Can you autopopulate template information to documents from parent folders?</td>
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<td>Does the program support simultaneous OCR from multiple workstations?</td>
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<td>How many languages are supported by the OCR?</td>
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<td><strong>Search and Retrieval</strong></td>
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<td>Are template field searches supported?</td>
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<td>Do full-text searches cover the entire database?</td>
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<td>Are fuzzy searches supported?</td>
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<td>Can you search by security tag, volume, creation or modification date, note text or other criteria?</td>
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<td>Can you save search criteria for repeated execution?</td>
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<td>Are proximity searches supported?</td>
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<td>Can you perform name searches by document or folder?</td>
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<td>Can you combine search criteria to narrow results (Boolean searching)?</td>
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<td>Can you limit search results by folder?</td>
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<td>Are search terms highlighted to show their precise location within returned documents?</td>
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<td>Can you save search results in folders for quick reference and easy access?</td>
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<td>Is there a line of context display to show how the word or phrase is used without retrieving the entire document?</td>
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<td><strong>Distribution</strong></td>
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<td>Does the software offer a flexible print configuration?</td>
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<td>Is there accurate scaling of print output to match the original document?</td>
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<td>Can you e-mail archived documents as TIFF or PDF?</td>
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<td>Is cross-platform retrieval with standard Web browsers supported?</td>
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<td>Can you distribute and archive records on non-erasable media?</td>
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<td>Can you distribute documents on royalty-free CDs and DVDs?</td>
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<td>Do CDs provide built-in search engines for access on any PC?</td>
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<td>Are there Web browser-based document management capabilities (thin client)?</td>
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<td>Can you create published repositories based on search results?</td>
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<td>Can you drag and drop documents into e-mail?</td>
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<td>Security</td>
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<td>Are there storage and security measures supporting regulatory compliance?</td>
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<td>Are there privilege rights controlling administrative functions?</td>
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<td>Are there feature rights controlling functions like scanning, printing, searching and importing?</td>
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<td>Are there access rights determining the level of access for users or groups?</td>
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<td>Are there volume access rights determining permission to import data volumes?</td>
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<td>Are there template field access controls limiting users' ability to see and edit template fields?</td>
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<td>Can you determine effective rights for any user?</td>
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<td>Are rights enforceable for both users and groups?</td>
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<td>Can you enforce password policies, including length, complexity and duration of passwords?</td>
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<td>Are you able to configure maximum idle time before users are automatically logged out?</td>
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<td>Can you allow or deny security rights explicitly through inheritance?</td>
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<td>Is inheritance controlled through flexible scoping options?</td>
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<td>Do security tags place special restrictions on documents and folders?</td>
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<td>Are you able to securely redact sensitive portions of documents?</td>
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<td><strong>Security</strong></td>
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<td>Are there various levels of audit tracking for compliance and accountability?</td>
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<tr>
<td>Can you control security permissions centrally or delegate to department heads?</td>
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<tr>
<td>Is there native support for single sign on?</td>
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<tr>
<td>Can you securely wipe digital records on destruction?</td>
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<tr>
<td>Can you force printouts to include security watermarks for tracking origins?</td>
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<tr>
<td>Can you require users to indicate the reason for document export?</td>
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<tr>
<td><strong>Workflow</strong></td>
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<tr>
<td>Are you able to model work process with an intuitive graphical interface?</td>
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<tr>
<td>Can you automate document movement with rules-based routing?</td>
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<tr>
<td>Can you maintain productivity with automated notifications?</td>
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<tr>
<td>Is audit tracking available to improve accountability?</td>
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<tr>
<td>Can you accommodate ad hoc participation in the workflow environment?</td>
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<tr>
<td><strong>Document Management</strong></td>
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<tr>
<td>Is there an intuitive folder view to make organization easy and flexible?</td>
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<td>Can you display document names, template fields and volume information in the folder browser?</td>
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<tr>
<td>Can you customize metadata display and column view in folders?</td>
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<tr>
<td>Document Management</td>
<td>System #1</td>
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<tr>
<td>Can you rename and reorganize document files?</td>
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<td>Can you track document versions and customize how you search for display versions?</td>
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<tr>
<td>Are there check-in/check-out capabilities?</td>
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<tr>
<td>Is there support for dockable windows, or flexible viewing of images, text, thumbnails and template fields?</td>
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<td>Can you establish document linking relationships?</td>
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<tr>
<td>Can public and private folders be set up to allow document sharing, mail folders and ad hoc workflow?</td>
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<tr>
<td>Can you highlight text and images?</td>
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<td>Can users place sticky notes on documents with searchable text and hyperlinks?</td>
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<td>Can you stamp images with customized or predefined graphics?</td>
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<tr>
<td>Are annotations image overlays that do not modify the original document?</td>
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<td>Are there informational tags to alert users to special properties?</td>
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<tr>
<td>Can you display black and white, color or grayscale images?</td>
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<tr>
<td>Can you edit text files created by OCR?</td>
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<td>What is the maximum zoom magnification?</td>
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<tr>
<td>Does the software support full panning, rotation and contrast?</td>
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<tr>
<td>Records Management</td>
<td>System #1</td>
<td>System #2</td>
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<td>--------------------------------------------------------</td>
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<tr>
<td>Is the system DoD 5015.2 certified?</td>
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<tr>
<td>Using the system, can you integrate records management, document management and imaging in one environment?</td>
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<td>Can you create records from documents already under management?</td>
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<tr>
<td>Can you manage physical records alongside scanned images and electronic documents?</td>
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<tr>
<td>Can you manage digital video, audio and other electronic files?</td>
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<td>Can you define records series from an intuitive interface?</td>
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<td>Can you describe locations of transfers for records series?</td>
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<td>Can you track current locations of transferred records?</td>
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<tr>
<td>Can you screen records for eligibility for transfer, accession or destruction?</td>
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<td>Can you confirm destruction of eligible records?</td>
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<td>Can you find records according to status or location?</td>
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<td>Can you specify multiple events that are necessary before records can be cut off?</td>
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<td>Can you specify trigger events determining which retention schedules apply to records?</td>
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<tr>
<td>Can you configure retention schedules so that superseded records are sent into final disposition?</td>
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</table>
Worksheet Two: Needs Assessment

After you’ve evaluated competing document management systems, you’ll need to assess your organization’s unique needs to determine which is the best fit. This is also your opportunity to determine what you need your system to do—integrate with other software, aid in Workflow processing or simply store and retrieve documents.

Step One: Clearly Identify Your Goals and Objectives

What do you expect a document management system to do for you?

________________________________________________________________________________________
________________________________________________________________________________________

What problems do you need to solve?

________________________________________________________________________________________
________________________________________________________________________________________

How do you plan on using the system?

________________________________________________________________________________________
________________________________________________________________________________________

Do you need the system to interface with current business-critical applications? Which ones?

________________________________________________________________________________________
________________________________________________________________________________________

Step Two: Determine Your Organization’s Unique Needs

How many people will need access to the document management system? How many named users?

________________________________________________________________________________________
________________________________________________________________________________________

How many people will be scanning paper documents?

________________________________________________________________________________________
________________________________________________________________________________________

Do you currently have a network in place?

________________________________________________________________________________________
________________________________________________________________________________________

Do you require new computers?

________________________________________________________________________________________
________________________________________________________________________________________
Do you require computer upgrades?

How many scanners will be required?

What capabilities will you need?

Where does the majority of your paper originate?

What is the weekly amount of new paper coming into your office?

What is the weekly number of new paper and electronic documents generated by your office?

Do you need audit trails or CD publishing?

What are the retention schedules for the documents you store?

What are your size requirements?

*Determine your size requirements by counting the number of file cabinets and storage boxes you have now, as well as the number of new pieces of paper that come into your office on a daily, weekly and annual basis.*

Step Three: Determine How Your Organization Distributes Documents

Do you need to fax or e-mail documents?
Do you have offices in various locations that require copies of your records?

Do you need to take your documents out of the office?

**Step Four: Determine Your Ideal File Structure**
How do you look up information?

What type of information will be stored in the system?

What type of cross-referenced information will you need?

How many document types do you have? (Example: applications, forms, quarterly reports, etc).

**Step Five: Consider Your Daily Procedures**
Who will perform the scanning operations?

What types of information will be scanned?

What are the business processes?

What should be done with paper after it is scanned?
**Step Six: Determine Your Conversion Method**

**Conversion from microfiche or other management systems:**

Who will do the conversion?

________________________________________________________________________________________

________________________________________________________________________________________

How long will it take?

________________________________________________________________________________________

________________________________________________________________________________________

How much will it cost?

________________________________________________________________________________________

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**Back-file conversion:**

Will you convert all your archived records or only a portion of them?

________________________________________________________________________________________

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What archived records need to be converted?

________________________________________________________________________________________

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How many archived records do you need to convert?

________________________________________________________________________________________

________________________________________________________________________________________

Who will perform the conversion?

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How long do you need to retain records?

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Does your office refer to these records? How frequently?

________________________________________________________________________________________

________________________________________________________________________________________

How long will it take to complete the process?

________________________________________________________________________________________

________________________________________________________________________________________
Day-forward:
Will you only scan records from this day forward?

What if you need old documents in storage?

What types of information should be scanned?

Who will perform the scanning?

On-demand day-forward:
Will you scan back files only when required?

Do you want to decrease the number of paper back files over time?
Worksheet Three: Developing an Implementation Plan

In planning your implementation, you may find it useful to refer to the following project planning methodology. Although not all projects will require the formal planning, documentation and reporting described below, understanding the process will be helpful in designing your own project plan.

Requirements Analysis

Performing a thorough requirements analysis is a critical first step to successfully completing a project on time and within budget. The requirements analysis involves the inspection of the documents that will be captured, the processes that will be automated and the ways people will use and interact with the documents once they’ve been digitized. During the requirements analysis, you should examine and document important design factors such as security and retention requirements. Once the analysis is complete, you should prepare a summary report.

Confirm the Architecture

In most cases, the architecture of the proposed solution is developed using whatever information is available. Once the requirements analysis is completed, you should confirm the appropriateness of the proposed architecture. If modifications are required, you should document them, along with the reasons for making each change, in the summary report.

Confirm the Software

Using the information from the requirements analysis, you should confirm that the proposed software solution is appropriately configured and licensed. You should document any required addition (or removal) of applications or licenses in the summary report.

Confirm the Hardware

Information about document types, expected performance, user behavior patterns, retention schedules and expected capture volumes can greatly affect the design of the hardware solution. Once the requirements analysis has been completed, you should confirm that the appropriate hardware configuration has been proposed. If modifications are necessary, you should document them in the summary report.

Confirm Deployment Environments

The deployment environment can have a significant impact on the way you deploy your solution. You should examine network bandwidth, desktop hardware and legacy systems to confirm the solution can be deployed as planned. In the summary report, you should document any changes to the proposed solution based on environmental factors, as well as any required environmental changes.
Planning

The formal work plan will serve as the master schedule by which progress will be measured. You should use the work plan to track all project-related activities and generate scheduled and ad hoc progress reports. No work on the project should begin until you’ve developed the work plan.

Assemble the Project Teams

The work plan should identify the personnel required to complete the project. In most cases, you should include members from each department and from IT, as well as an overall project manager. You should assign roles for each team member and establish a general reporting structure.

Develop a Detailed Project Work Plan

You should logically separate the overall project into distinct milestones, and you should break the milestones into a series of tasks that must be performed in order to achieve each milestone. You should also assign tasks to the appropriate team members in order to clearly define responsibility.

Schedule Status and Milestones Meetings

Regular status meetings help the team to meet milestones and complete the project on time. Because achieving milestones requires team members to complete their assigned tasks, it’s important to develop a realistic timeline for completing these tasks.

Develop a Support Plan

A written support plan helps you ensure that end users and system administrators have access to the proper support personnel when necessary. You should document response times to helpdesk inquiries, and define escalation procedures for more difficult issues. The support plan should also detail helpdesk ticketing procedures and personnel to be notified regarding the status of current issues.

Develop a Communications Plan

In addition to scheduled status and milestone meetings, regular communication between project members is necessary. Additionally, it’s important to provide reports or documentation to management as the project progresses. It’s also important to document the content of each meeting, as well as the decisions that are made, and distribute this information to team members who cannot attend.
**Design**

Design is usually the first milestone of the project plan and should always be documented in detail. You should develop system specifications that meet the needs outlined in the requirements analysis. These specifications should be submitted for approval before the build process begins.

**Build**

The system should be built according to the approved specifications. Any changes that need to be made should be added to the specifications document and agreed upon before they are implemented.

**Test**

Before the solution is rolled out, you should perform comprehensive testing. It’s important to identify issues through testing so that productivity is not hindered once the system goes live.

**Unit Testing**

The proposed solution is made up of individual components that must be installed and tested within their environments. Implementation of a software or hardware component is not complete until it has been thoroughly tested.

**System Testing**

The overall system should be tested to verify that the individual components work together as planned.

**Overall System Architecture Test**

The system should be tested according to the way it will be utilized. You should test functions such as scanning, data extraction, exporting and document routing to verify that they’re working as expected. You should also test hardware components to verify that image quality is acceptable and all devices can communicate with each other.

**Load Testing**

Once you’ve determined that the system works as designed, you should conduct load testing to ensure that it will provide expected performance once it’s in production. You should also test network bandwidth and server I/O under loads to verify that things like scanning at peak capacity won’t affect search and retrieval.
Revise

Based on test results, there may be functional or performance issues that require modifications to hardware or software components. System modifications should require the approval of an appended specification before they’re made.

**Revise the Program**

You should make revisions according to the appended system specifications. You should test new hardware or software components individually to verify that they function as anticipated.

**Regression Testing**

You should conduct regression testing to ensure that modifications don’t adversely affect system components that originally worked as anticipated.

Rollout

The system should be rolled out according to a well-defined plan. You should coordinate all rollout activities, such as pilot testing, change management activities and training, to ensure a smooth transition to the new system.

**Pilot Group**

Before the system is rolled out to the entire user community, you should conduct pilot testing using an appropriately diverse sample. During the pilot program, you should monitor usage patterns to verify that the system will be used as predicted and that system components will support the planned usage. You should also solicit usability feedback and determine training requirements.

**Communication Plan**

You should develop a plan that describes the way project-related activities will be communicated to users. It’s also important to develop a way for users to communicate with the appropriate project team members.

**Pre-Launch Notifications**

If the system launch affects the way people will do their jobs (such as day-forward scanning or workflow requirements), it’s critical to give proper notification of when the system will be launched and how users will be affected. Pre-launch notifications can also act as effective change-management activities, providing a forum for users to discuss any potential questions or worries.

**Launch Notifications**

Launch notifications serve as formal notice of system rollout and should explain what is expected of system users.
Post-Launch Notifications

Post-launch notifications keep the user community abreast of accomplishments, changes and any system-related issues that may affect them.

Training

Providing proper training is critical to the success of the implementation. In most cases, training should be provided onsite, in groups according to role/function and using a copy of the production system.

User Training

User training should be hands-on and conducted in groups, using a replica of the production system. Whenever possible, users should be grouped according to their role or function so that you can target the training as much as possible. You should also schedule follow-up training sessions to address questions that come up after initial system use.

System Administration Training and Procedures

You should encourage system administrators to participate in as much of the implementation process as possible, so they understand how the hardware and software components are configured and work together. System administrator training should cover the overall design of the solution, as well as the way individual components work. It should also cover security configuration, troubleshooting and maintenance. You should pay particular attention to regular maintenance procedures to verify that the system continues to perform as expected.

Define Internal Escalation Path

You should document the way problems are reported, addressed and escalated. Internal support personnel may be trained to address common issues, such as ensuring proper hardware connectivity, resetting passwords, etc. You should give internal support staff system documentation and access to an online knowledge base to assist them with these tasks.

Define Escalation Path to Software Vendor

You should establish lines of communication for escalating issues to your vendor for support. You should also document response times and resolution procedures.

Project Wrap-Up

Once all of the milestones on the work plan are achieved, the implementation is considered complete. Project wrap-up activities may include formal sign-off and a final status meeting.

Publish Project Audit

If included in the work plan, a project audit should be published outlining the project goals, issues faced and final outcome of the implementation.
# Appendix One: Compliance Regulations at a Glance

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Description</th>
<th>Implications for Document Management</th>
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| SEC 17a-3  | While regulatory compliance in general is important for financial institutions, regulations governing securities trading are the most stringent and have set the bar for the rest of the industry. A series of SEC rules referred to in section 17a-4 deals with correspondence between the securities company and its customers. 17a-4 specifies a firm’s record-keeping requirements with regard to purchase and sales documents, customer records, associated persons’ records, customer complaint records and written supervisory procedures. 17a-3 specifies what types of documents have to be retained and for what period of time. | Specifies requirements for archive media:  
  - Document retention enforcement.  
  - Preservation of compliant records in a non-rewriteable, non-erasable format.  
  - Verification of the quality and accuracy of the storage media recording process.  
  - Serializaton of the original and duplicate copies of compliant documents.  
  - Capacity to readily download indexes and records. |
| SEC 17a-4  | Permits mutual fund companies and investment advisors to keep all of their records in an electronic format. Provides guidelines for archiving data. | Specifies requirements that records promptly provide:  
  - A legible, true and complete copy of the record in the medium and format in which it is stored.  
  - Means to access, view and print the records. |
<p>| USA PATRIOT Act | Makes businesses responsible for seeking, detecting and reporting computer trespasses. Banks in particular are expected to identify, discover, gather, amass, investigate and report on financial activity to a far greater degree and depth than ever before. | Increases the scope of documents that may need to be retained. |
| Gramm-Leach-Bliley Act | Targeted at “financial institutions” including banks, credit unions, collection agencies, credit bureaus, check cashing companies, credit counseling organizations, brokers, tax planning and preparation companies, retailers that issue their own credit cards, auto dealers that lease and/or finance, companies that sell money orders and/or travelers’ checks, investment companies, investment advisors and insurance companies. Provides limited privacy protections against the sale of private financial information to third parties. | Requires financial institutions to have an administrative, physical and technical structure to protect the confidentiality and integrity of personal consumer information. |</p>
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<th>Regulation</th>
<th>Description</th>
<th>Implications for Document Management</th>
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<tr>
<td>Sarbanes-Oxley Act</td>
<td>Affects all public companies. Mandates the retention of documents used for financial audits and reporting. Because of stiff penalties, compliance with SOX mandates is a high priority for financial services firms. Criminalizes spoilage and the intentional failure to preserve documents that are—or may one day be—required in litigation.</td>
<td>Documentation must be centrally controlled, on an automated system if at all possible, and test results must provide management-level visibility to weaknesses. All audit materials must be retained for a minimum of seven years.</td>
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<td>NASD (now FINRA)</td>
<td>Each firm must “supervise” their representatives’ activity, including monitoring incoming and outgoing e-mail. Each member shall retain correspondence of registered representatives relating to its investment banking or securities business.</td>
<td>Same archive requirements as SEC 17a-4 above.</td>
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<tr>
<td>NASD (now FINRA)</td>
<td>These rules require member firms to establish business continuity plans detailing emergency preparedness procedures. Rule 3510(e) requires disclosure to customers of how your business continuity plan addresses the possibility of a future significant business disruption and how you intend to respond. You are also required to disclose your backup facilities and arrangements.</td>
<td>Requires you to disclose to your customers how your business continuity plan addresses the possibility of a future significant business disruption and how you intend to respond. Disclosure of backup facilities and arrangements required.</td>
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Appendix Two: Frequently Asked Questions

General

Q. What is a document?
A. A document consists of information stored on one or more pages. It can include images and/or text, plus annotations, and one template (index card).

Q. Does a document management system allow me to edit or alter images?
A. A document management system should not allow the original image to be altered or edited. Annotations should be overlays that do not alter the original document. It is important to protect the original image in order to maintain both the legal status of the document and the integrity of the system.

Q. Do document management systems support audit trails?
A. Yes. A document management system’s audit trail should record username, date, time, document name and action for every instance in which a user accesses a repository or document. Various levels of audit trail logging detail and activity tracking should be available. The system should include a viewer to sort and filter these logs. Audit trails are especially important for regulatory compliance.

Q. What is the standard format used to store images?
A. Black and white images are most commonly stored as standard TIFF files using CCITT Group IV (two-dimensional) compression. Grayscale and color images are frequently stored as TIFF files with JPEG compression.

Q. What is the standard format used to store text?
A. ASCII, which stands for the American Standard Code for Information Interchange, has been the standard, non-proprietary text format since 1963.

Q. How much disk space does a document management system typically require?
A. A single page typically occupies around 50KB of disk space, if the image is stored in TIFF Group IV. Each gigabyte (GB) of storage space, which amounts to only a few dollars, holds approximately 20,000 pages. With the significant drop in prices for hard drives and optical media, it costs much less to store documents in a document management system than on paper.

Q. What if my repository is too big to fit in one data volume?
A. A document management system should allow data and images to be stored across multiple volumes, with each volume residing in a different directory or on a different drive, disk array, CD or MO disk.
**Capture**

**Q. What are the most common hardware and software scanner interfaces?**

A. Many scanners attach to an Adaptec® SCSI card or to a Kofax® image processing board. Most scanners use either TWAIN or ISIS drivers to communicate with the computer.

**Q. How can I scan forms?**

A. Forms processing components often use multiple OCR engines and elaborate data validation routines to extract hand-written or poor-quality print from forms that go into a repository. Because many forms that are scanned were never designed for imaging or OCR, it is essential to have good quality assurance mechanisms in place when scanning forms to correct errors that might occur.

**Q. Can I capture information from multi-function peripherals (MFPs)?**

A. A full-featured document management system allows you to capture documents from different network locations, including MFPs, which are devices that perform any combination of scanning, printing, faxing or copying.

**Q. How can I scan large format documents?**

A. Several manufacturers make scanners specifically designed for large format documents up to E-size (34 inches x 44 inches) and A-0 size (33 inches x 46.8 inches). If you do not have one of these, the document can be reduced in size using a photocopier and then scanned with a normal scanner, or sent to a service bureau that has large format scanners.

**Q. What image resolution should I use?**

A. Most imaging systems can support documents scanned at various resolutions, from 50 dpi to 600 dpi (or more), depending on your scanner. Depending on the purpose and the contents of the page, most documents are scanned in black and white at 300 dpi.

**Q. What about color files or photographs?**

A. Imaging systems should support black and white, grayscale and color images. Color files can be scanned with a color scanner or imported into a document management system. There are a wide range of color scanners on the market. Many document management scanners support color and grayscale.

**Q. How can I scan double-sided documents?**

A. An imaging system should provide two different ways to do this. It should support duplex scanners, which simultaneously scan both sides of a page, as well as simplex scanners, which require the user to scan all the front sides, place the documents in upside down and then scan all the back sides, before the system collates all the pages in the correct order.
Q. Can I scan landscape and portrait pages together?
A. An imaging system should allow you to change the orientation of pages during or after scanning. A well-designed system will also include an option to automatically check and correct the orientation of pages.

Q. How are skewed images handled?
A. Skewed (crooked or tilted) images can adversely affect the accuracy of the OCR process, so an imaging system should include software that recognizes skewed images and compensates for them. This is particularly important when scanning press cuttings on a flatbed scanner or when scanning documents through a worn-out or poorly designed automatic document feeder (ADF).

Q. How can I scan checks?
A. Several manufacturers make scanners specifically designed for checks, which read the magnetically encoded MICR (Magnetic Ink Character Recognition) numbers at the bottom of the check. If you do not have one of these scanners, most checks can be scanned with regular document imaging scanners and OCR-processed as usual, though the MICR numbers will not be read. To integrate MICR information into the repository, the document management system must support check scanning hardware.

Q. What file formats can a versatile system import?
A. A versatile system should be able to import all the file types you encounter in your office. This includes word processing files, spreadsheets and presentations, as well as common image formats such as TIFF Group IV, TIFF Group III, TIFF Raw, TIFF LZQ, PCX, BMP, CALS, JPEG, GIF, PICT, PNG and EPS Preview images. To ensure that your image files will always be accessible, the document management system should use a non-proprietary format for scanned documents. For example, electronic document pages would be printed to the document management system, black and white graphical files would be converted to TIFF Group IV format and color/grayscale images would be converted to TIFF or JPEG.

Q. I have a forms-heavy environment. What is the best way to set up a “capture system”?
A. There are two main methods of capturing information into your document management system: centralized scanning and distributed capture. Centralized scanning is a static process where participants submit documents to a scanner operator. There are designated stations for scanning and indexing/validation. This system does not give you much flexibility in terms of workload, but with a well-trained scanner operator, there is a low error rate. Distributed capture, on the other hand, is a flexible process where users can scan documents from any internal or remote location. Processing is done at the server level, allowing for centralized administration and complete business automation. Distributed capture reduces labor costs and makes documents immediately accessible. The best method for your organization depends on what fits your current business processes and what will be easiest to use.
Indexing

Q. How do I index scanned documents?

A. There are three primary ways to index documents: folder structure, template fields and full-text indexing. Folder structure essentially functions as a visual indexing method that allows users to browse for documents by categories. Template fields categorize documents according to keywords, which can be either manually entered or automatically assigned by the document management program. Full-text indexing is the automated process of entering every word in a document into the index.

Q. What is metadata?

A. Metadata is descriptive information about an object or resource, whether it is physical or electronic. ISO 15489 describes metadata as “data describing context, content and structure of documents and records and their management through time.” Metadata allows users to locate and evaluate data, without requiring each user to recreate it with each use.

One easy way to categorize metadata is to break it into three categories: Descriptive, Structural and Administrative.

- Descriptive: Information describing the content, used for search and retrieval.
- Structural: Information that ties one item with another, such as documents in a particular folder.
- Administrative: Information used to manage and control access to an item, such as security permissions.

Q. How can I use metadata to better index my documents?

A. The first question to ask yourself is, “With my current system, how do I find documents?” This question helps you determine what your descriptive metadata should be. Your goal is to find a balance between what information is necessary and what information is nice to have.

Q. What is OCR?

A. OCR stands for Optical Character Recognition and refers to the way a computer converts words from an unsearchable scanned image to searchable text. OCR is usually necessary in order to use full-text indexing and searches, so it should be included in an imaging and document management system. OCR engines can generally only recognize typed or laser-printed text, not handwriting.

Q. What is the difference between OCR and indexing?

A. OCR is the process of converting scanned images to text files. Full-text indexing is the process of adding each word from a text field to an index that specifies the location of every word on every document. Well-designed document management software can make this a fast and easy procedure, providing rapid access to any word in any document.
Q. What is the difference between template field searches and full-text searches?

A. Template field searches enable you to retrieve pre-established categories of documents, whereas full-text searches turn up every occurrence of designated words in the repository. When the repository contains a large number of documents, the difference between sorting documents by topic and listing every occurrence of a word in the repository—including passing references—is significant in terms of the time required to analyze the search results and locate the desired document(s).

Q. How accurate is OCR?

A. Accuracy on a freshly laser-printed page is typically better than 99.6%. Accuracy on faxed, dirty or degraded documents will be lower, so it essential that an imaging system have image clean-up technology to improve OCR accuracy.

Q. Do I have to go through text to correct OCR mistakes manually?

A. Well-designed systems allow users to correct OCR errors from within the system. However, when hundreds or thousands of pages are scanned every day, it is usually not practical to clean up the text. Because the OCR process does not have perfect accuracy, it is important that the document management system support fuzzy logic searches. Fuzzy logic searches allow for misspelling and will find words even if the OCR engine makes occasional mistakes.

Q. How fast is the OCR process?

A. The performance of the OCR and indexing processes is entirely dependent on factors such as the speed and configuration of the host system, as well as the contents of the image.

Q. What is ICR (Intelligent Character Recognition)?

A. ICR is pattern-based character recognition and is also known as Hand-Print recognition. Handwritten text is more difficult for computers to recognize and results in higher error rates than printed text. ICR engines usually do best at recognizing constrained printing, which means block printed letters with one letter in each box. Accurate recognition of unconstrained handwriting, especially cursive handwriting, typically requires that the ICR engine be trained to recognize each user’s style of writing.

Q. What is OMR (Optical Mark Recognition)?

A. OMR, also called Mark-Sense Recognition, is the recognition of marks commonly used on forms, such as check marks, circled choices and filled-in bubbles. OMR can be an important part of a document management system for organizations that process many standard forms. Exam forms and customer survey cards are perhaps the best-known examples of OMR.

Q. Can OCR-processed text be exported and reused in a word processor?

A. Yes, you can usually cut and paste text between the document management system and another Windows application, or you can export complete text files (all text pages in a document) to a directory and open it with your preferred word processing program.
Viewing, printing and exporting

Q. Can I open and display more than one document at a time?
A. Some document management systems will allow you to display multiple documents, with the number of documents you can have open simultaneously limited only by the amount of memory available.

Q. How can I resequence pages of a document before printing or exporting?
A. If the pages are out of order and need to be sequenced, a well-designed document management system will allow you to drag thumbnail views of pages to the required position. In the same way, individual pages can be selected and deleted, subject to appropriate security access control and privileges.

What is the advantage of a large monitor?
For people who use an imaging system frequently, screen size can be a critical factor. If users want to flip through digital pages with the ease of real paper, they must be able to view the whole page at once in a way that allows the text to be readable. If 8 1/2 inch x 11 inch pages are the dominant paper size, then a 21-inch monitor capable of displaying a resolution of 1600 x 1200 is optimal. Using a 15-inch VGA monitor will require scrolling and panning if the image is viewed at normal size.

Q. What other display considerations are important?
A. Screen resolution and the refresh rate of the monitor are also important. Generally, the larger a monitor is and the higher resolution it has, the harder it is to get the high refresh rate that is required for sustained viewing without screen flicker. The optimum threshold for minimum flicker is generally considered to be a horizontal refresh rate of 72 MHz on a 21-inch monitor. The maximum refresh rate is a function of the monitor and the graphics controller.

Q. Will I need a specialized printer for images or OCR-processed text?
A. Generally, no. Most imaging systems support a wide variety of Windows-compatible printers, but an optimal configuration includes a laser printer with at least 4MB of RAM. If you are using a networked system and are printing high volumes of pages to a network printer, you might consider installing a separate laser printer either locally or on its own network segment to minimize network traffic.

Q. In which formats can I export documents?
A. It depends on the document management system. Common graphical formats include TIFF Group III, TIFF Group IV, TIFF Raw, BMP, PCX, PNG and JPEG.

Q. What happens when a user without redaction viewing rights prints a document that has been redacted?
A. A document management system should protect the integrity of the document by printing with the redactions intact.
Records management

Q. Are all documents records?
A. No. Records management deals with information serving as evidence of an organization’s business activities. In particular, it is a set of recognized practices related to the life cycle of that information. Often, records refer to documents, but they can include other forms of information, such as photographs, blueprints or even books.

Q. How is records management different from document management?
A. Briefly, records management includes document management, but not all forms of document management qualify as records management. Records management is a specialized branch of document management with a set of recognized practices related to the life cycle of that information, such as identifying, classifying, archiving, preserving and destroying records. Records management also includes archival issues—both assuring that permanent records are accessible and readable 100+ years in the future and protecting often fragile historical archives.

Q. What does records management software do?
A. Records management software supports the application of systematic controls to the creation, maintenance and destruction of an organization’s records.

Q. Does DoD 5015.2 certification guarantee compliance with other regulations like HIPAA?
A. No. It is important to distinguish between regulatory compliance and the DoD 5015.2 standard. The DoD standard represents baseline functionality for records management applications (RMAs) used within the Department of Defense. It serves as the de facto standard for records management applications across government and industry. However, it is a records management standard and not a broad regulatory compliance standard. DoD 5015.2 certification facilitates compliance by supporting the application of systematic records policies; it cannot guarantee compliance. Compliance depends on the proper application of records policies.

Q. How do records management applications help enforce proper policies?
A. Records management applications can support the application of consistent policies and procedures through a series of mechanisms including mandatory metadata acquisitions and automated extraction of e-mail metadata; support for time, event and time-event dispositions; automated notification for review of vital records; freezing of records and comprehensive audit trail reporting.
Specifically for Financial Services

Q. What are the specific compliance requirements I need to know about when I consider implementing digital document technology?

A. It is important to consider regulations that impact your specific business—for broker-dealers, FINRA regulations; for Registered Investment Advisors, SEC regulations; for insurance companies, HIPAA and other regulations; for accountants, Sarbanes-Oxley regulations; and for banks and credit unions, Gramm-Leach-Bliley and USA PATRIOT Act requirements. For a brief rundown of pertinent regulations, please refer to Appendix One. For an analysis of your individual situation and regulatory requirements in your state, please consult an attorney.

Q. Which documents do I need to keep in hard copy?

A. There are certain documents which must be kept in hard copy, even if you are storing them electronically on approved media. You should consult your firm’s compliance officer to determine what documents must be kept in hard copy.

Q. Is any digital document management system certified by FINRA or the SEC?

A. No. Neither FINRA nor the SEC certify any digital document management system.

Q. What should I expect to spend for a full-featured enterprise document management system?

A. Pricing for a quality digital document management solution varies, depending on the options you choose. Some organizations decide to deal with immediate needs, such as scanning documents, first and then deal with less pressing concerns, such as workflow or Web access, later, which will affect pricing. Your vendor should work with you to determine the ideal solution for your organization and then develop a price package that includes modules to meet all your needs.

Q. What other technology products can a digital document management system be integrated with?

A. A quality digital document management system with open architecture can be easily integrated with any non-proprietary software. Integrating your document management solution with your customer relationship management (CRM), portfolio management or other practice management software can make your business much easier and increase efficiency for both you and your staff. Examples of image-enabling integration possibilities for financial services firms are with ACT, GoldMine, Advisors Assistant, Laser App, Quik!, Advent and other applications.

Q. What specific areas in my business will be impacted by implementing digital document management technology?

A. Digital document management technology will help your business save time, increase profitability, increase productivity, improve communication and collaboration, and enable automation. With digital document management technology, you can increase efficiency by supporting profit-building activities and providing a balance between security and accessibility.
Q. **How much money and time can I save?**

A. According to research* commissioned by Laserfiche, the return on investment of digital document technology is impressive. Users save significant amounts of both time and money. Results indicate that with an investment in digital document management technology, RIAs can save anywhere from $40,000-$300,000 annually, depending on firm size. This increase in profitability results in increased business valuation from $200,000-$3,000,000. Time savings can range from 1,000—6,000 hours, or from 0.4 of an employee to 2.4 full-time employees.

*For a copy of the research, visit www.laserfiche.com/roi.

Q. **Is a document management system easy to learn and use?**

A. A quality digital document management solution should be intuitive enough that users do not require extensive training. You and your staff should be able to work comfortably with tools you are already accustomed to using. Essential usability engages existing PC skills and encourages rapid staff acceptance. When you are reviewing systems, be sure to consider how easy they are to use and how much training will be required.

Q. **Do I have to train everyone in my office on how to use my digital document management software?**

A. When you implement an enterprise-wide digital document management solution, you must devote appropriate time to training for the system to be successful. In most cases, training should be provided onsite using the actual software. You should also schedule follow-up training sessions to address questions that come up after initial system use.

Q. **How can digital document management technology help me with my workflow?**

A. Digital document management technology can help speed your workflow by enabling automation. Workflow technology reduces costly paper handling with intelligent document routing, saving your organization time and money by reducing photocopying, hand delivering, mailing and repetitive dragging and dropping. With a workflow module, you create a virtual work process model and design rules-based routing systems to streamline your most labor-intensive document handling procedures. You can automatically notify staff and supervisors when certain events take place, copy and move documents, and monitor user activity to guarantee efficiency and project completion.
Appendix Three: Glossary of Terms

Access Rights
A security mechanism that lets the system administrator determine which objects (folders, documents, etc.) users can open. It should be possible to set access rights for both individuals and groups.

ADF
Automatic Document Feeder. This is the way pages are automatically fed into the scanner.

Annotations
The changes or additions made to a document using sticky notes, a highlighter or other electronic tools. Document images or text can be highlighted in different colors, redacted (blackened-out or whited-out) or stamped (e.g., FAXED or CONFIDENTIAL), or have electronic sticky notes attached. Annotations should be overlaid and not alter the original document.

ASCII
American Standard Code for Information Interchange. Used to define computer text that was built on a set of 255 alphanumeric and control characters. ASCII has been a standard, non-proprietary text format since 1963.

ASP
Active Server Pages. A technology that simplifies customization and integration of Web applications. ASPs reside on a Web server and contain a mixture of HTML code and server-side scripts. An example of ASP usage includes having a server accept a request from a client, perform a query on a database and then return the results of the query in HTML format for viewing in a Web browser.

Audit Trail
An electronic means of tracking all access to a system, document or record, including the modification, deletion and addition of documents and records.

Bar Code
A small pattern of lines read by a laser or an optical scanner that corresponds to a record in a database. An add-on component to document management software, bar-code recognition is designed to increase the speed with which documents can be stored or archived.

Batch Processing
The name of the technique used to input a large amount of information in a single step, as opposed to individual processes.

Bitmap/Bitmapped
See Raster/Rasterized.

BMP
The abbreviation for a native Windows file format that stores images called bitmaps.

Boolean Logic
The use of the terms AND, OR and NOT in conducting searches. Used to widen or narrow the scope of a search.

Briefcase
A method to simplify the transport of a group of documents from one computer to another.

Burn (CDs or DVDs)
To record or write data on a CD or DVD.

Caching (of images)
The temporary storage of image files on a hard disk for later migration to permanent storage, like an optical or CD jukebox.

CD or DVD Publishing
An alternative to photocopying large volumes of paper documents. This method involves coupling image and text documents with viewer software on CDs or DVDs. It is essential that search software be included on the CDs or DVDs to provide immediate retrieval abilities.
CD-R
CD-Recordable. A CD that can be written (or burned) only once. It can be copied as a means to distribute a large amount of data. CD-Rs can be read on any CD-ROM drive whether on a standalone computer or network system. This makes interchange between systems easier.

CD-ROM
Compact Disc-Read Only Memory. Written on a large scale and not on a standard computer CD burner (CD writer). An optical disc storage medium popular for storing computer files as well as digitally recorded music.

Client-Server Architecture vs. File-Sharing Architecture
Two common application software architectures found on computer networks. With file-sharing applications, all searches occur on the workstation while the document repository resides on the server. With client-server architecture, CPU-intensive processing (such as searching and indexing) is completed on the server, while image viewing occurs on the client. File-sharing applications are easier to develop, but they tend to generate tremendous network data traffic in document management applications. They also expose the repository to corruption through workstation interruptions. Client-server applications are more difficult to develop, but dramatically reduce network data traffic and insulate the repository from workstation interruptions. See also n-Tier Architecture.

COLD
Computer Output to Laser Disc. A process that outputs electronic records and printed reports to laser disc instead of a printer. Can be used to replace COM (Computer Output to Microfilm) or printed reports such as greenbar.

COM
Computer Output to Microfilm. A process that outputs electronic records and computer generated reports to microfilm.

Compression Ratio
The ratio of the file sizes of a compressed file to an uncompressed file. With a 20-to-1 compression ratio, an uncompressed file of 1MB is compressed to 50KB.

Deshading
Removing shaded area to render images more easily recognizable by OCR.

Deskewing
The process of straightening skewed (off-center) images. Documents can become skewed when they are scanned or faxed. Deskewing is one of the image enhancements that can improve OCR accuracy.

Despeckling
Removing isolated speckles from an image file. Speckles can develop when a document is scanned or faxed.

Disposition
Actions taken regarding records after they are no longer required to conduct current business. Possible actions include transfer, archiving and destruction.

Dithering
The process of converting grays to different densities of black dots, usually for the purposes of printing or storing color or grayscale images as black and white images.

Document Management
Software used to store, manage, retrieve and distribute digital and electronic documents, as well as scanned paper documents.

DoD 5015.2-STD
The Department of Defense (DoD) 5015.2 standard. Represents the standard for evaluating electronic records management applications (RMAs) used within the DoD. The standard has been endorsed by the National Archives and Records Administration (NARA).
**Duplex Scanners vs. Double-Sided Scanning**

Duplex scanners automatically scan both sides of a double-sided page, producing two images at once. Doubled-sided scanning uses a single-sided scanner to scan both pages, scanning one collated stack of paper, then flipping it over and scanning the other side.

**DVD**

Digital Video Disc or Digital Versatile Disc. A disc similar to a CD, on which data can be written and read. DVDs are faster, hold more information and support more data formats than CDs.

**Feature Rights**

A security mechanism that allows system administrators to determine the actions that users can perform on the objects to which they have access.

**Flatbed Scanner**

A flat-surface scanner that allows users to capture pages of bound books and other non-standard-format documents.

**Folder Browser**

A system of on-screen folders (usually represented as hierarchical, or stacked) used to organize documents. For example, the Windows Explorer program in Microsoft Windows is a type of folder browser that displays the directories on your hard drive.

**Forms Processing**

A specialized document management application designed for handling preprinted forms. Forms processing systems often use multiple OCR engines and elaborate data validation routines to extract hand-written or poor-quality print from forms to go into a database. With this type of application, it is essential to have good quality assurance mechanisms in place, since many of the forms that are commonly scanned were never designed for imaging or OCR.

**Full-Text Indexing and Search**

Enables the retrieval of documents by either word or phrase content. Every word in the document is indexed into a master word list with pointers to the documents and pages where each occurrence of the word appears.

**Fuzzy Logic**

A full-text search procedure that looks for exact matches as well as similarities to the search criteria, in order to compensate for spelling or OCR errors.

**GIF**


**Gigabyte (GB)**

$2^{30}$ (approximately one billion) bytes, or 1024 megabytes. In terms of image-storage capacity, one gigabyte equals approximately 17,000 8 1/2 inch x 11 inch pages scanned at 300 DPI, stored as TIFF Group IV images.

**Grayscale**

An option to display black-and-white image files in an enhanced mode, making it easier to view. A grayscale display uses gray shading to fill in gaps or jumps (known as aliasing) that occur when displaying an image file on a computer screen.

**ICR**

Intelligent Character Recognition. A software process that recognizes handwritten and printed text as alphanumeric characters.

**Image Enabling**

Allows for fast, straightforward manipulation of an imaging application through third-party software. For example, image enabling allows for launching the imaging client interface, displaying search results in the client and bringing up the scan dialogue box, all from within a third-party application.
Image Processing Card (IPC)
A board mounted in the computer, scanner or printer that facilitates the acquisition and display of images. The primary function of most IPCs is the rapid compression and decompression of image files.

Internet Publishing
Specialized document management software that allows large volumes of paper documents to be published on the Internet or intranet. These files can be made available to other departments, off-site colleagues or the public for searching, viewing and printing.

ISIS and TWAIN Scanner Drivers
Specialized applications used for communication between scanners and computers.

ISO 9660 CD Format
The International Standards Organization format for creating CD-ROMs that can be read worldwide.

JPEG/JPG
Joint Photographic Experts Group. An image-compression format used for storing color photographs and images.

Key Field
Database fields used for document searches and retrieval. Synonymous with Index Field.

MFP
Multifunction Printer or Multifunctional Peripheral. A device that performs any combination of scanning, printing, faxing or copying.

Multipage TIFF
See TIFF.

Near-Line
Documents stored on optical discs or compact discs that are housed in the jukebox or CD changer and can be retrieved without human intervention.

n-Tier Architecture
When applied to the physical or logical architecture of computing, refers to a method of distributed computing in which the processing of a specific application occurs over $n$ number of machines across a network. Typical tiers include a data tier, business logic tier and a presentation tier, where a given machine will perform the individualized tasks of a tier. Scalability is among the advantages of n-tier architecture.

OCR
Optical Character Recognition. A software process that recognizes printed text as alphanumeric characters. OCR enables full-text searches of documents and records.

Off-Line
Archival documents stored on optical discs or compact discs that are not connected or installed in the computer, but instead require human intervention to be accessed.

Open Architecture
This term is applied to hardware or software whose design allows for a system to be easily integrated with third-party devices and applications.

Optical Discs
Computer media similar to a compact disc that cannot be rewritten. An optical drive uses a laser to read the stored data.

Pixel
Picture Element. A single dot in an image. It can be black and white, grayscale or color.

Portable Volumes
A feature that facilitates the transfer of large numbers of documents without the need to copy multiple files. Portable volumes enable individual CDs to be easily regrouped, detached and reattached to different databases for broader information exchange.
**Raster/Rasterized**
Raster or Bitmap Drawing. A method of representing an image with a grid (or map) of dots or pixels. Typical raster file formats are GIF, JPEG, TIFF, PCX and BMP.

**Record**
Information, regardless of medium, that constitutes evidence of an organization’s business transactions.

**Record Series**
A record series is a group of records subject to the same set of life cycle instructions.

**Redaction**
A type of document annotation that provides additional security by concealing specific portions of sensitive documents, such as particular words or phrases, from view. Like all annotations in a document management system, redactions should be image overlays that protect information but do not alter original document images.

**Region (of an image)**
An area of an image file that is selected for specialized processing. Also called a zone.

**Retention Period**
The length of time that a record must be kept before it can be destroyed. Records not authorized for destruction are designated for permanent retention.

**Scale-to-Gray**
See Grayscale.

**Scalability**
The capacity of a system to scale up, or expand, in terms of a document capacity or number of users without requiring major reconfiguration of re-entry of data. For a document management system to be scalable, it must be easy to configure multiple servers or add storage.

**Scanner**
An input device commonly used to convert paper documents into computer images. Scanner devices are also available to scan microfilm and microfiche.

**Security Markings or Tags**
Within records management applications, a security-based metadata field intended to define and restrict access, as well as facilitate classification and retrieval.

**SCSI Scanner Interface**
The device used to connect a scanner with a computer.

**Single-Page TIFF**
See TIFF.

**SQL**
Structured Query Language. The popular standard for running database searches (queries) and reports.

**Template Fields**
Database fields used to categorize and organize documents. Often user-defined, these fields can be used for searches.

**Template**
A user-defined set of fields that enables you to record information about a document.

**Thumbnails**
Small versions of an image used for quick overviews that give a general idea of what an image looks like.

**TIFF**
Tagged Image File Format. A non-proprietary raster image format, in wide use since 1981, which allows for several different types of compression. TIFFs may be either single or multipage files. A single-page TIFF is a single image of one page of a document. A multipage
TIFF is a large, single file consisting of multiple document pages. Document management systems that store documents as single-page TIFFs offer significant benefits in network performance over multipage TIFF systems.

**TIFF Group III (compression)**
A one-dimensional compression format for storing black-and-white images utilized by most fax machines.

**TIFF Group IV (compression)**
A two-dimensional compression format for storing black-and-white images. Typically compresses at a 20-to-1 ratio for standard business documents.

**Versioning**
In document or records management applications, the ability to track new versions of documents after changes have been made.

**Workflow, Ad Hoc**
A simple manual process by which documents can be moved around a multi-user document management system on an as-needed basis.

**Workflow, Rules-Based**
A programmed series of automated steps that routes documents to various users on a multi-user document management system.

**WORM**
Write Once Read Many. A popular archival storage medium during the 1980s, WORM discs are acknowledged as the first optical discs. They are primarily used to store archives of data that cannot be altered. WORM discs are created by standalone PCs and cannot be used on the network, unlike CD-Rs. In some industries, such as financial services, the definition of WORM has broadened to include other media, such as CD-ROMs and DVDs, which provide accessible but unalterable document storage.

**Zone OCR**
An add-on feature of document management software that populates document templates by reading certain regions or zones of a document and then placing information into a document index field.
The Laserfiche Institute teaches staff, resellers, and current and prospective clients how to use Document and Records Management software most effectively. As part of this mission, the Institute conducts more than 500 Webinars each year, covering a variety of topics. The Institute also hosts an annual conference where members of the Laserfiche community attend presentations and network with each other to share ideas and learn best practices. Additionally, the Institute conducts a number of regional training sessions and provides resellers with content for over 100 user conferences each year.

The Institute also develops and distributes educational material through the Laserfiche Support Site. On this Website, clients can access training videos, participate in online forums and download technical papers and presentations that help them become even savvier EDMS users.

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