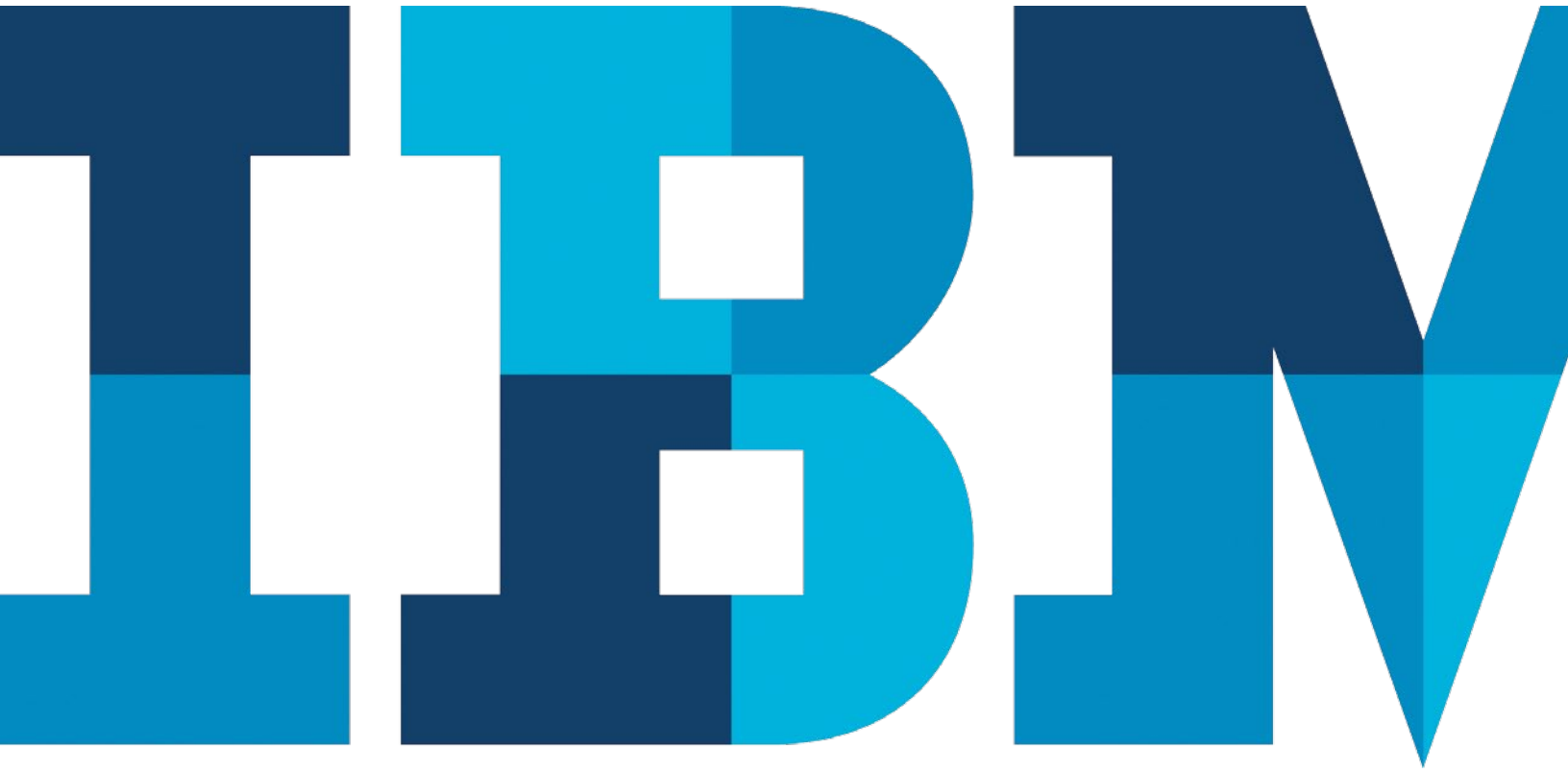
White Paper

Straight talk about document imaging and capture

Why the paper you can't see still has your business tied in knots—and how you can loosen its hold



Everyone knows that paper costs money. For decades, businesses have spent billions of dollars every year acquiring it, storing it, copying it and moving it around—and now they're spending millions trying to get rid of it. Document imaging is the order of the day, and electronic documents are expanding quickly into traditionally paper-driven industries: healthcare, insurance, banking and federal, state and local government.

But even as direct paper costs drop, a not-so-funny trend has surfaced: the paper has disappeared, but its effects haven't. Sure, your desk may be clean, but your email inbox is overloaded. Facilities may have packed up the file cabinets, but the documents just moved to bloated network servers. Worst of all, most folks continue to act as if the paper was still there, spending hours copying, sending and filing electronic documents—all by hand.

So while the vision of a desperate desk jockey buried in paper has become as obsolete as a rotary-dial telephone, it has a new form: the desperate knowledge worker drowning in electronic documents.

Cutting out paper is an important first step, and you'll reap benefits just by reducing paper dependencies, but you can't realize all of the potential unless you take a critical look at—and possibly reconfigure—previously paper-driven processes as well. Otherwise your workers are still just (electronic) paper pushers.

It's time to put paper documents in the circular file.

The IBM approach to document imaging is designed to not just eliminate paper from your organization, but to move your business beyond paper-based processes. In this white paper, we'll explore critical points in the document lifecycle and show how you can eliminate both paper and the processes it leaves behind.

Act on documents instead of handling them

To get a quick sense of how tight a grip paper-based processes have on your business, ask one simple question: "Do we spend more time acting on documents or handling them?"

If you're making a decision or taking action that advances the business, you're acting. If you're moving a document (such as, forwarding or filing, or even worse, printing), you're handling it. Acting adds value; handling just adds motion.

Understanding this distinction is critical, because it may be obscured by the short-term gains realized by moving from paper to electronic documents. Going paperless can deliver huge savings in storage and archiving costs, and it will almost certainly speed up your processes.

But if all you do is eliminate the paper, you're leaving money on the table. Going paperless gives you the chance to spend less time handling documents, and get to the important work of acting on them.

- Capture a deep, rich set of information from the document
- Use the contents of the document to determine workflow and routing
- Make it easy to add or change rules about how documents are routed and properly used
- Integrate annotations and redactions into the document workflow

Extract rich information with an advanced capture system

Moving beyond paper-based processes starts the moment a document hits your mailroom or branch office and is converted from paper to electronic form.

Intelligent document conversion is much more than simple scanning. For a document to be stored as more than just a static image, the capture software must identify what the document is (for example, claim form, letter, resume) and extract the data from it. To complicate the matter further, business information increasingly arrives by fax, or as large digital files created by print output from other systems, or as email attachments. So you need a capture system that can convert paper locally or remotely from branch offices as well as input fax images, previously scanned images, and email messages and attachments.

Once you have a single capture portal for all incoming documents, it's time to identify the documents and extract field data with as much automation as possible. Human intervention in this process may seem harmless, but it increases the amount of manual handling in the capture, adds work, expands the opportunity to introduce errors and slows down routing. IBM document imaging helps reduce or eliminate manual classification by putting each document through a series of ID techniques, including keyword searches, pattern matching, smart separator sheets and "fingerprint" matching.

Whether paper or electronic, no two documents are identical. When a document is scanned, the data capture system begins with advanced pattern-matching rules to determine if the document's layout (also known as a fingerprint) is similar to any previously received documents. If a match exists, the capture system can then automatically run preset rules for locating and validating data. If no match is made, then the fingerprint is provisionally added to the document imaging solution's library for later review. With this approach, you can easily and quickly train the system on the fly to automatically apply rule sets to specific documents without spending hours mapping out edge cases or imagining every possible document combination.

After you identify the document and extract the key fields, it's time to assure data accuracy. If a data field is incorrect or missing, efficient retrieval can be difficult—and you don't want to send "bad data" to line-of-business systems, where expensive knowledge workers are required to track down and fix problems. With IBM document imaging and capture solutions, you can check for accuracy and appropriateness of data at the capture stage and automate the data validation process with database lookups (check a zip code against the zip code database, for example), math calculations, check sums and cross-field validations (if this field is X, then that field should be Y).

Finally, the document imaging processes flags blank fields, incorrect characters or business rule violations, giving verifying operators a chance to fill in the missing information, correct characters or reroute the document for completion.

Case in point: Global publishing

A global publishing company used IBM® Document Imaging and Capture software to automate subscription form processing, capturing more than 8,000 subscription orders and marketing cards arriving daily. The company can easily shape and modify data recognition rules, increasing process flexibility. It also reduced subscription turnaround time from 48 hours to less than one day, and freed up five employees to take on new responsibilities.

Route documents based on content

If your employees spend a lot of time handling documents, it's time to examine your routing processes and make sure they are as human-free as possible. Otherwise, you're missing an opportunity to realize more ROI—or even worse, you're inviting inefficiency into the process.

For example, the document imaging system at a financial institution might automatically route loan applications to the lending department. But if the applications are then manually evaluated and redistributed within the department—perhaps to balance workload or to match specialists with particular loan characteristics—that adds time to the process. Time that could be avoided by using the right document imaging and capture solution—one that includes business process management.

IBM document imaging solutions can dramatically improve the flow of information by automatically routing documents to the right people based on the context and content contained within the document. Routing rules and workflows can be created based not just on categories of documents but also on the specific data contained within those documents, down to specific words or entries in fields.

Discrepancies and exceptions can be given their own rules; a lender could specify that any application that might ordinarily be rejected due to an insufficient loan-to-value ratio, but is very close to the approval threshold (for example, within one percent of the required value), should be routed to a specialist for additional review.

This is *content-centric routing*, where the contents of a document determine its workflow. Effectively, content seeks out the user that needs it, rather than the other way around. IBM document imaging systems can examine a document for details that dictate its next step and take that action without human handling. The system might look for the part number in incoming invoices, and use that information to route certain invoices to one person or department, with invoices for other part numbers being routed to another person or department.

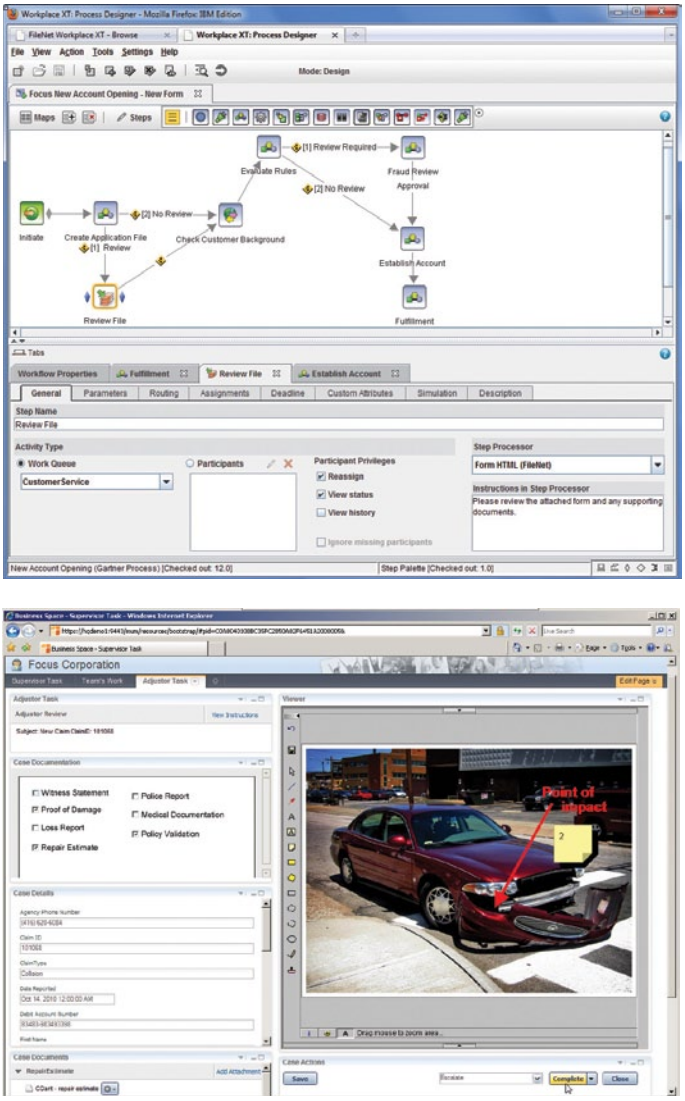


Figure 1: The web-based IBM process design tool includes capabilities to develop, simulate, track and analyze business processes that incorporate document images (top). Once the process is set, team members can work on their tasks as the workflow progresses, such as adding accident information to an insurance claim form (bottom).

Change routing rules as needed

It's also important to be able to adjust workflows and document routing quickly and easily as your needs change. If document routing rules and processes are inflexible and difficult to manage, workflows don't get updated and documents don't end up in the right place, forcing people to move them manually.

Imagine an insurance agency that has just started doing business in California and is growing rapidly. It might start with a single underwriting office covering the entire state, but very soon need to divide that into two departments—north and south—which then subdivide as the number of customers grow. If the company's document routing rules can't be easily changed, a claim document might have to be forwarded by hand two or three times to get to its final destination: from the main California office to the Southern California department to the desk of the underwriter responsible for Los Angeles.

Easy business process design and implementation are built into the heart of IBM document imaging solutions. A web-based process design tool with reusable and extensible templates gets your team up and designing quickly (see Figure 1). Once you've sketched out a process, you can run it through a dedicated simulator using scenarios based either on real data or on assumptions that you provide. After you implement the new workflow, the IBM document imaging platform monitors your processes and gives you tools to analyze and track performance. When your business needs change, you can use the design tool again to quickly update your document workflow to reflect the new reality.

IBM document imaging eliminates paper-based processing

Even the simplest, most common processes—such as receiving and paying invoices—can stretch out for weeks. One IBM customer found that its invoice receipt-to-pay cycle was taking four to eight weeks from start (invoice receipt) to finish (filing the paper invoice). Not only did this take far too long, but it involved multiple workers, included several manual handoffs of paper invoices and forms, and required storage space for the archived documents. As shown in Figure 2A, the entire process encompassed 15 steps.

Accounts payable: before IBM Production Imaging Edition

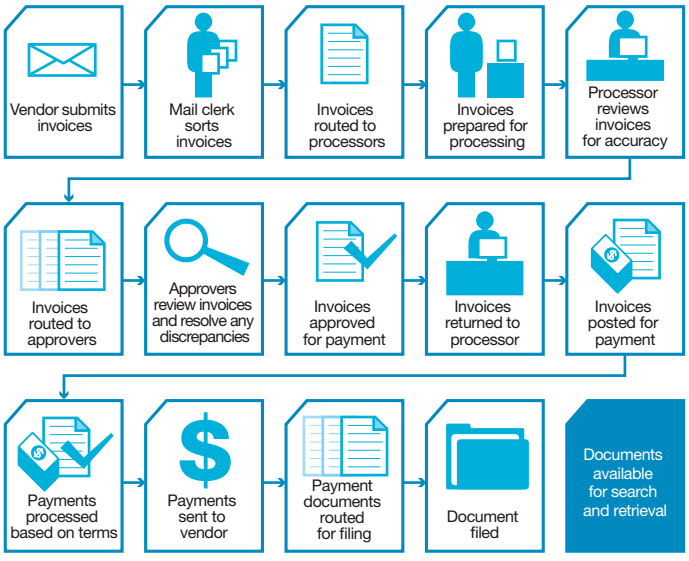


Figure 2A: Average invoice receipt-to-pay cycle: four to eight weeks.

The organization used IBM Production Imaging Edition to streamline the invoice payment process, cutting its cycle time from weeks to days. Part of the gains came from simply getting rid of paper: with IBM Production Imaging Edition, incoming paper invoices are scanned and the image and associated metadata are stored online. This saves the company time by eliminating the need to transfer and file physical documents, and reduces costs associated with storing archived files and shredding expiring documents.

The business was able to further increase its savings by automating a number of stages in the process. Automatically routing invoice images for review and authorization cut out several manual document-transfer steps; discrepancies can be immediately flagged and returned to the appropriate contact for attention. Also, vendors now have access to an online portal for questions, saving the company's employees from having to stop their everyday work and manually check archived files each time a vendor has an inquiry.

Figure 2B shows the results: by implementing IBM Production Imaging Edition, the company removed five steps from its invoice pay cycle. The streamlined process now takes just one to four days.

Accounts payable: after IBM Production Imaging Edition

Figure 2B: Average invoice receipt-to-pay cycle: one to four days.

View, annotate and integrate

A critical part of creating a document imaging strategy that moves beyond paper-based processes is asking the following question: how do users interact with documents, and what happens when they do?

IBM believes that a document imaging and capture solution should respond as documents change. The IBM document imaging platform makes it possible to create active content, meaning that specific words, data or logos within content—or their context—can trigger predefined actions and automation. For example, a hiring manager named Jill receives resumes for candidates that aren't right for a given position. However, on reviewing a particular resume, Jill may have a sense that the candidate might be a fit for a colleague's organization. With IBM document imaging solutions in place, Jill could make an annotation to the document: "Not for me, maybe Suresh is interested." Because Suresh also has open positions on his team, his name is on a constantly updated list of actively hiring managers.

When the document annotation is saved back to the repository, the workflow system analyzes the annotation, sees that Suresh is hiring and routes the resume to him. This type of rule could be further automated by using the resume's content to look up open job requisitions, hiring managers and more.

All Jill has to do is note that Suresh might be interested, and the rest happens automatically. The resume's movement is tracked, so there's no doubt about who may have seen it. Also, if Jill has remembered incorrectly and Suresh is not hiring, the resume is not forwarded, saving Suresh from having to process another resume.

Store and manage: Build the foundation

Eliminating paper-based processes from your organization requires a strong content management foundation that can easily handle large volumes of documents. It's also important to recognize that you probably have document repositories already in place—from folders on servers to applications with built-in document sharing capabilities like SAP or Microsoft® SharePoint®.

Replacing those repositories is rarely cost-effective or practical; the IBM approach is to use a federation strategy, managing the multiple sources of content wherever they are located and in their original format. IBM FileNet® Content Manager is the core content management component of IBM Production Imaging Edition—it can support billions of objects and combines powerful document management with ready-to-use workflow and process capabilities. With IBM FileNet Content Federation Services, you can manage content in place, gradually migrating it into IBM FileNet Content Manager as appropriate.

IBM also supports the Content Management Interoperability Services (CMIS) standard, which makes it easier to integrate existing installations of SharePoint, SAP and applications from other participating vendors. No matter where the content is, IBM ECM gives you the capabilities that you need—document versioning, content security and lifecycle management—to help your organization move beyond paper.

IBM Production Imaging Edition 5.0

IBM Production Imaging Edition 5.0 brings together all of the document imaging pieces that you need to not only eliminate paper from your organization, but also eliminate the paper-based processes that may remain behind. IBM Production Imaging Edition combines advanced document capture software (IBM Datacap Taskmaster Capture), a core content management server (IBM FileNet Content Manager), imaging-centric process management and image viewing/annotation/redaction software (IBM FileNet Workplace XT and Daeja ViewONE Pro).

With IBM Production Imaging Edition, you can quickly and easily convert paper documents to electronic versions, create and automate document workflows, and use the information extracted from the documents to inform, shape and modify the processes that you create (see Figure 3).

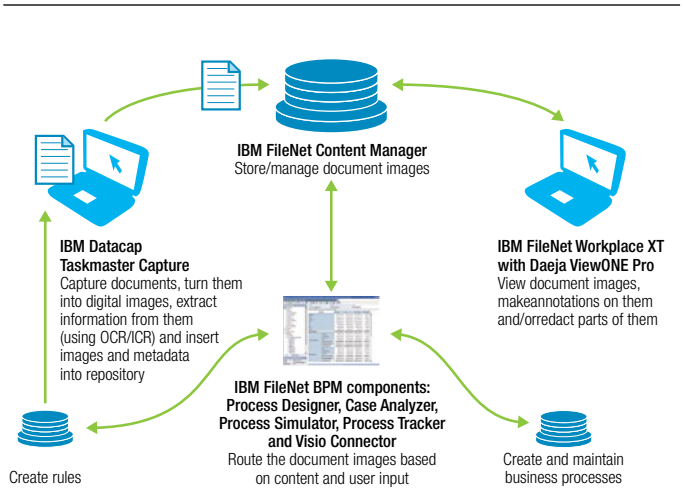


Figure 3: IBM Production Imaging Edition provides tools to manage the complete lifecycle of your document images.

IBM Production Imaging Edition 5.0 components

- IBM Datacap Taskmaster Capture
- IBM FileNet Content Manager 5.0
- IBM FileNet imaging-centric workflow components
  - IBM FileNet Business Process Engine
  - IBM FileNet Business Process Designer
  - IBM FileNet Case Analyzer
  - IBM FileNet Business Process Simulator
  - IBM FileNet Business Process Tracker
  - IBM FileNet Connector for Microsoft Visio®
- Daeja ViewONE Pro Edition

Recycle old thinking about paper

IBM has more than three decades of hands-on experience in eliminating both paper and paper-based processes. Many of its earliest products are still in use at hundreds of sites, and IBM continues to help customers refine their document imaging strategies as well as understand the hidden effects that paper has on their business. By integrating document imaging into its larger enterprise content management platform and strategy, IBM has helped thousands of organizations in a wide variety of industries across the world use document imaging to increase productivity, reduce costs and become more efficient.

Winning the fight against paper isn't easy, but the rewards are well worth it. Eliminating paper from your organization is a great start, but it doesn't mean that you can sit back and claim victory. Look closely at the processes that used to involve paper. Are you acting on documents or handling them?

That's a critical question to ask and answer. We're living in an increasingly information-based world: more organizations are adding more systems and more sensors, which means that everyone is generating greater volumes of data and documents. Unless your business has a document imaging and capture strategy in place, you could end up with a serious dent in your bottom line.

It's also worth nothing that what's good for the CFO is also good for the environment. Reducing your paper footprint helps your organization go green in many different ways: eliminating rooms and buildings (that need to be powered, heated and lit) full of stored paper, cutting transportation costs and reducing carbon emissions, just to name a few.

The good news is that what you need to make electronic document distribution more efficient and active already exists in the documents themselves; IBM document imaging strategies and IBM Production Imaging Edition give you the tools to identify, extract and accurately act upon that information. Routing gets smarter, documents end up in the right place every time—not to mention faster—and workers spend less time handling information they don't need and don't want and more time focusing on the documents pertinent to their roles.

Even better, IBM Production Imaging Edition can be used with IBM Content Analytics solutions to illuminate your processes and your business. More than just looking in the rearview mirror to analyze what happened, IBM helps give you the insight you need to look forward, see what's coming next and make changes that anticipate future needs. The end result: more efficient operations.

Welcome to your new—and truly paperless—office.

About IBM Enterprise Content Management

IBM Enterprise Content Management software enables the world's top companies to make better decisions, faster. By gaining control of unstructured information, companies can access, collaborate and influence business decisions in new ways, making content a first-class source of insight. With industry-specific IBM ECM solutions, companies can capture, manage and share content throughout its lifecycle to help ensure compliance, reduce costs and maximize productivity. The IBM ECM portfolio includes a wide array of capabilities that integrate with existing systems to help organizations maximize the value of information including: document capture and imaging; social content management; advanced case management; information lifecycle governance and content analytics. More than 13,000 global companies, organizations and government organizations rely on IBM ECM to improve performance and remain competitive through innovation.

For more information

To learn more about IBM document imaging strategies and IBM Production Imaging Edition, please contact your IBM marketing representative or IBM Business Partner, or visit the following web site: **ibm.com**/software/data/content-management/production-imaging

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IBM Software Group
Route 100
Somers, NY 10589
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