Unleashing BPM: Eliminate process bottlenecks created by paper

Streamline workflows and increase productivity by performing document imaging at the front-end of business processes

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In today's challenging economic climate, the ability to automate business processes becomes essential for improving productivity and managing costs.

Executive summary

To achieve process automation, organizations are turning to Business Process Management (BPM) — the practice of designing, implementing, executing, monitoring, and administering business processes that incorporate human and system interactions.

Organizations can generate immediate returns from process improvement initiatives by scanning documents at the beginning of paper document-intensive processes. By integrating document imaging with the systems underlying BPM, and performing document scanning at the front-end of business processes, organizations can develop a bridge between the paper world and the electronic world that improves productivity and enables continuous improvement of business processes.

Managing the intersection of paper and electronic processes

BPM resides at the convergence of workflow management and enterprise application integration (EAI) and allows organizations to:

- Increase process efficiency and productivity
- Benefit from continuous process improvement
- Improve process quality, consistency, and compliance
- Enhance organizational agility and flexibility

To achieve these objectives, BPM relies on the ability to move content through a multi-step process. Process steps are identified and tracked as content moves through a workflow, with either specified people or applications processing the information. The process flow is determined by process logic, and the goal is to streamline business processes to enhance productivity, ensure quality, and automate workflows to drive operational efficiency.

The core benefit of managing a process is the ability to enable continuous improvement of that process. However, the slowest moving part of a process slows the efficiencies of a given process. Therefore, physically routing paper-based documents constrains the efficiency of any business process.

Furthermore, paper-based processes are difficult to efficiently secure, monitor, and measure — three components for successful business process improvement. Organizations striving for the efficiencies of BPM must therefore pay careful attention to managing the intersection of paper-based and electronic processes.

Improving paper-based processes

BPM is traditionally focused on process modeling and automation, and on optimizing workflows for maximum productivity. Some processes can be automated, allowing the organization to remove paper

> *"The top benefits of scanning are making information more accessible, reducing cost, and reducing time."*
>
> *DC*
> *Document-intensive Business Processes and Scanning, September 2008*

from a workflow entirely. But many business necessities — such as contracts, accounts payable, expense reports, etc. — will continue to rely to some extent on paper documents. For those document workflows that contain paper, implementing document imaging early in the process will transform paper into electronic content early in the workflow, or at the most optimal point.

The first step in implementing document imaging in conjunction with BPM is identifying the paper-based processes that can be improved, including the bottlenecks that inevitably occur as a result of shuffling paper throughout the enterprise.

To identify opportunities for reducing paper-based processes across vertical industries and business processes, ask the questions in the table that follows. By asking these questions, organizations can discover business processes that can be dramatically improved.

Business requirement	Challenges of paper-based processes	Discovery questions to identify the impact of paper within business processes
Increase efficiency/ productivity	Businesses only operate as efficiently as they process information and paper — a physical object — takes longer to move from one department/person to another (for signatures, review, editing, etc.). Manual processes are more time-consuming, error-prone, and costly than electronic processes.	How many times is paper handled during a business process/workflow? Where (physically) does a paper document need to move within a process, and how is it moved? Where is paper stored and who needs access? How can we reduce our storage costs? How is information on paper searched for and retrieved? Where do paper and electronic processes intersect? What is the cycle time of paper-based steps? What is the cost of performing paper-based steps?
Ensure compliance, security, and disaster preparedness	Paper is difficult to secure, and paper-based processes are difficult to enforce and measure (paper gets copied and distributed without any tracking, is often left out in the open for anyone to see, etc.).	Is paper left in unlocked file cabinets or loose on desks? What kind of information is contained in paper form (is it proprietary, regulated, etc.)? How do you handle loss of paper in an unforeseen disaster? How costly is it to control access and enforce procedural controls of paper information?
Increase ROI of IT investments	Businesses are not fully benefiting from IT investments because important information/data exists in paper form and isn't being processed as quickly or securely as electronic information.	Is paper-based information available in business software applications? How long does it take for paper-based information to be added to the system? Is it manually re-entered? Can it be searched and retrieved in the same way as electronically originated information?

Once these processes are identified, document imaging technology can be applied at the most appropriate point in a business process to help improve the process, helping organizations accelerate cycle time and drive productivity. Incorporating scanning as part of the business process — as opposed to a method for archiving paper at the end of a process — also enables process automation.

For example, in the invoice processing workflow below, invoices are scanned before they are processed. The document imaging platform interfaces with the ERP and the document management systems, enabling an office worker to simultaneously: 1) kick off the invoice workflow; 2) file the invoice; and 3) associate the document to the transaction record in the ERP system.

By automating the metadata retrieval and performing that step during the scanning process, manual steps — including opening the invoice at a PC, opening the ERP application record, validating information between applications, and saving the document with the appropriate metadata in the document management systems — were removed. Both time and clerical errors were reduced and employees were far more satisfied with the process.
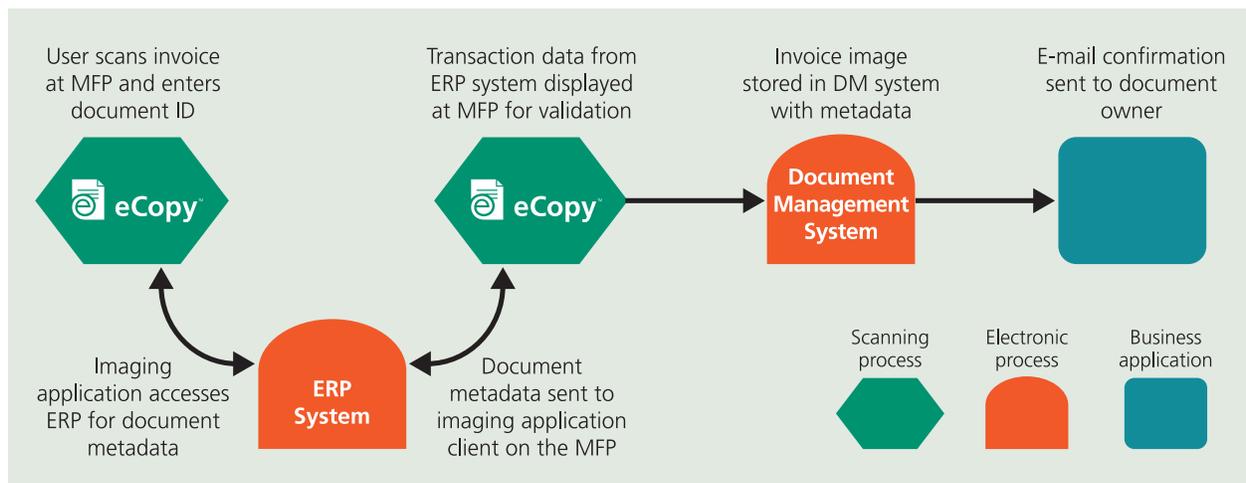
Approaches to document imaging

Document imaging should not be viewed as simply a method for converting paper documents to electronic format for archiving/storage/records management. Instead, it is a process step for capturing information that is on paper and converting that information to an electronic format that can be shared, distributed, and archived. Selecting the right document imaging approach for the organization is dependent upon specific business need, and organizations should consider questions such as:

• Are our needs primarily for high or low-volume scanning?
• Do we need to OCR the content of the document so it can populate information systems or be shared throughout the enterprise?
• Do we have multiple processes with differing scanning requirements or just one process?
• How many employees need access to scanning?
• What business systems are used within the process and do those systems need to be integrated?
• How homogeneous are the documents?
• How much of the process can be automated and will human intelligence be required to perform the process?

Once these questions have been answered, there are three basic approaches for loading content that exists on paper-based documents into software applications. First, users can manually scan the documents at their desktop, then open, name, process, and distribute or store the document.

Second, users can scan documents at shared office scanners and multifunction peripherals (MFPs) already located throughout the organization. Any scanning devices attached to the network should be available to those workers who today work with paper-based business processes so they can easily scan documents into electronic workflows.

By conveniently combining the power and ease-of-use of the ubiquitous MFP with the instantaneous distribution capabilities of e-mail, network fax, collaborative software, and document management applications, open platform document imaging solutions allow office workers to use the same scanning procedures at any of an organization's networked MFPs or scanners.

Third, centralized imaging facilities can be leveraged if in place within a company. These facilities are good for high-volume, repeatable imaging tasks. However, many paper documents do arrive centrally and therefore must be physically moved, not presenting an opportunity for process improvement.

"BPM is not simply a vendor product category or technology stack option. Although it is often tempting to view BPM as a technology purchase to be made, this kind of view is problematic. Keep technology in its place, as an enabler of BPM, but wholly distinct from BPM's primary focus — running your business more effectively and driving operational performance to new heights."

Gartner
Hype Cycle for Business Process
Management, July 2008

Every organization has multiple processes, so it is unlikely that any company can rely on a single methodology for scanning paper documents. Factoring in the questions presented earlier in this section, the correct approach may be identified based on scope and scale. Can you gain efficiencies of scope by leveraging existing investments in scanners and MFPs for additional duties such as imaging? Or are there efficiencies of scale that can be captured by handling repeatable, homogenous, high-volume tasks in a centralized imaging approach?

The business reality is that it takes a combination of approaches to apply imaging at the optimal point(s) within business processes to efficiently convert paper-based information into electronic form.

Integration into business processes

While integrating paper-based documents into business applications is critical to fully capture the benefits of process improvement initiatives, it is important to note that BPM technologies do not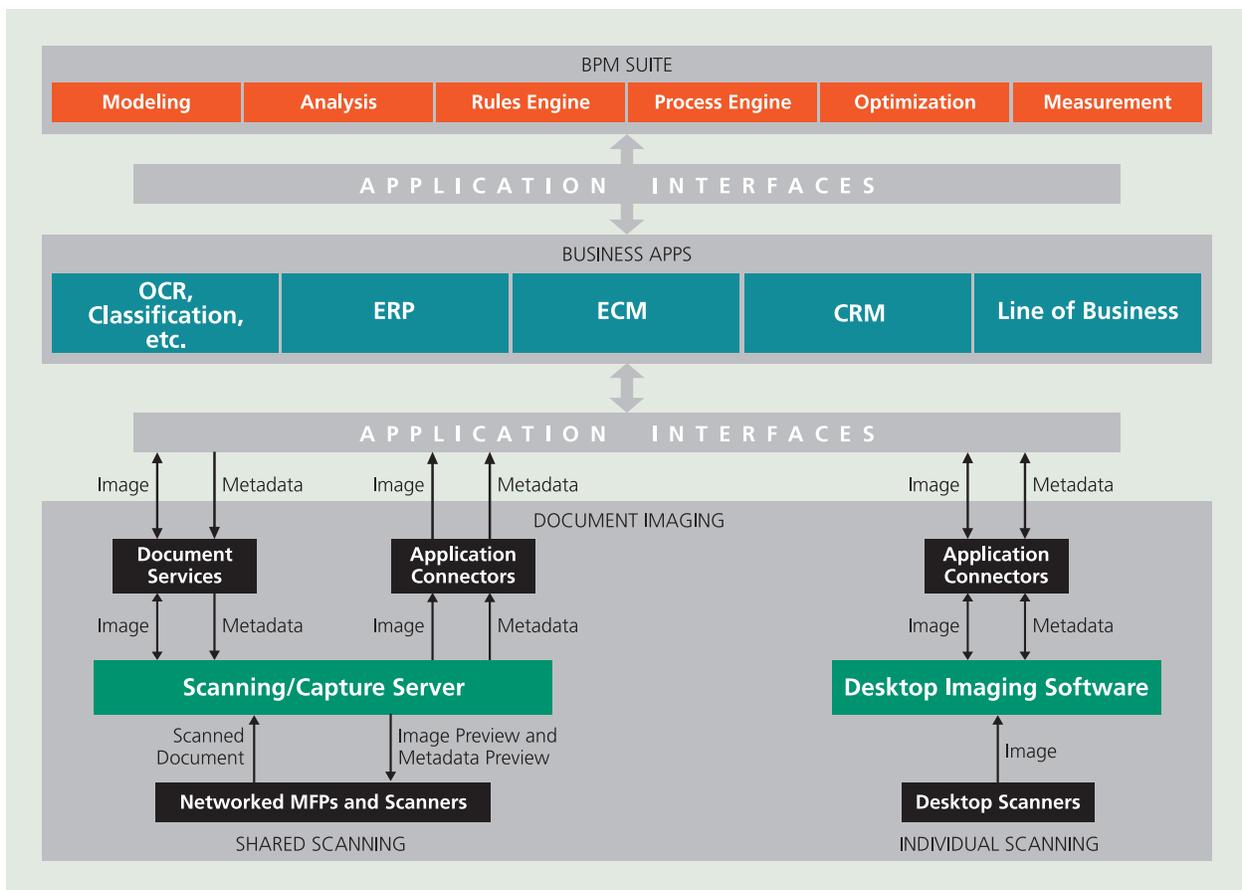 yet support a need to scan directly to BPM suites. That said, serious consideration should be given to integrating document imaging with business systems to help ensure BPM success. This exposes scanned images at the application level, allowing for management of those images by BPM technologies.

Enterprise software applications that drive document-centric workflows — such as enterprise content management (ECM) applications, enterprise resource planning (ERP), manufacturing, and human resources

applications — are all strong candidates for most organizations seeking to automate BPM and reduce enterprise dependency on paper-based processes. While BPM tools model, monitor, analyze, and drive business processes, it is the business applications that both execute the steps within the processes, and that contain and manage the content and data. Data that resides on paper must be included in those electronic processes, and therefore must be added to the appropriate business application, to capture the full benefits promised by BPM.

A cross-platform document imaging solution can support this by tying any input source (MFPs, scanners, desktop clients) to any business application. Converting paper-based documents to electronic content significantly reduces or completely eliminates the human element of handling those documents starting at the point of capture.

Optical character recognition (OCR) and document classification systems can also play key roles by further automating steps within the business processes. Scanning paper-based documents and capturing the text via OCR makes content that was previously available only on paper searchable and actionable. This content can be analyzed and classified, in turn automatically triggering processes, e.g., routing to business applications, eliminating the need for time-consuming and error-prone re-keying of information, and accelerating business processes throughout the enterprise.

BPM SUITE

| Modeling | Analysis | Rules Engine | Process Engine | Optimization | Measurement |

APPLICATION INTERFACES

BUSINESS APPS

| OCR, Classification, etc. | ERP | ECM | CRM | Line of Business |

APPLICATION INTERFACES

Image | Metadata | Image | Metadata | Image | Metadata

DOCUMENT IMAGING

Document Services | Application Connectors | Application Connectors

Image | Metadata | Image | Metadata | Image | Metadata

Scanning/Capture Server | Desktop Imaging Software

Scanned Document | Image Preview and Metadata Preview | Image

Networked MFPs and Scanners | Desktop Scanners

SHARED SCANNING | INDIVIDUAL SCANNING

Cross-platform document imaging solutions provide the necessary integration points to include paper-based information into the electronic workflows managed by BPM suites.

Conclusion

Many companies are aggressively implementing BPM and have developed efficient systems for managing electronic information processes — but still achieve suboptimal productivity results because many business processes still depend on paper documents. By scanning paper documents at the front-end of a workflow, the enterprise can process the information on those documents electronically and efficiently integrate that information into existing enterprise applications. Scanning needs to be readily available to workers throughout the enterprise so that paper-based processes can be streamlined by document imaging at the beginning of a workflow.

Companies either implementing or considering implementing BPM initiatives should identify the areas of their business processes and workflows that currently rely on paper-based documents. They should evaluate whether paper documents are integral to business processes, whether they impact efficiencies, and whether the documents could be scanned at the front-end of a business process.

By identifying inefficient reliance on paper-based documents and implementing a robust document imaging solution, to reduce that reliance, management can realize the immediate impact that BPM can have in improving processes across the enterprise. And by implementing document imaging at the beginning of established workflows via scanning at the front-end of a business process, organizations can minimize the impact of paper-based processes to streamline workflows and dramatically increase productivity and efficiency.

The experience speaks for itself™

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