

A 15-Minute Guide to

Intelligent Capture



Foreword

As a business professional, time is a precious commodity. You spend much of your day distilling concepts, evaluating options, and managing complex transactions. When you need information, you need it in a form that can be assimilated quickly—forget the mind-numbing detail and get to the point.

With that in mind, we've developed our series of 15-minute guides to essential topics in information management. This guide to intelligent capture focuses on the tools and technology that enable businesses to capture and manage large volumes of information from disparate sources.

In about 15 minutes, we'll define intelligent capture and explain why it's important, suggest a conceptual framework, touch on vertical applications of intelligent capture, and discuss the benefits and deployment options. We think you'll agree that it will be 15 minutes well spent.

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Introduction

For most organizations, information has a split personality. It can be the foundation for competitive differentiation—from faster processing time and reduced operating costs to quicker access to information and ensured compliance. Or by sheer volume and complexity alone, it can thwart productivity, waste time and resources, and strain the IT infrastructure that supports it.

The key to utilizing information successfully—rather than being overwhelmed by it—is the ability to efficiently capture and manage large volumes of information from disparate sources. Business critical information arrives in many forms: paper, fax, and a variety of electronic data formats. All of it must be transformed into intelligent content that can feed enterprise applications such as enterprise content management, enterprise resource planning, customer relationship management, and other information systems.

Often a business faced with these challenges will apply a point solution where it feels the greatest need. Soon there are many point solutions. Then coordinating and integrating them simply compound the original information management problem.

The answer to this dilemma is intelligent capture. Intelligent capture enables organizations to cope with enormous volumes and varieties of documents, accelerate information time to value, and reduce the IT burden of supporting multiple point solutions.

Intelligent capture—transforming paper into business-ready digital content

Intelligent capture defined

Intelligent capture offers a comprehensive and flexible approach to document and data capture. It seamlessly accommodates single or multiple entry points for capturing information, including the use of scanners or multi-function peripheral (MFP) devices, or pulling documents from e-mail or network folders. Intelligent capture includes tools for automatic classification of all document types, extraction and perfection of data for use by enterprise systems, and tracking that enables audit and control as documents are captured and processed.

Intelligent capture reduces costs, improves information accuracy, and streamlines business processes.

The importance of intelligent capture

Consider this example of the need for intelligent capture. Property and casualty claims processing is a document-intensive operation. Representatives in the field need to provide underwriters with claims and supplemental documents. For insurers that rely on manual, paper-based processes or centralized document capture, this can be a cumbersome and inefficient endeavor. It often entails shipping costs and delays that erode customer satisfaction. Additionally, bottlenecks can develop in the claims management system that are difficult to identify. Furthermore, there is very little visibility into the status of a claim for anyone involved—customer, management, or examiner.

An intelligent capture solution, on the other hand, meets all of an organization's document capture needs—from centralized, high volume batch capture to branch office capture. Field reps can capture and submit scanned document images, pictures, or electronic files via a simple Internet connection. Or in a case of centrally processed documents, intelligent capture can handle high volume batch scanning, including the ability to automatically identify documents and perform data extraction.

A new look at capture—no longer a silo solution

Document capture can no longer be thought of as a technology running in a silo location; rather, it is an integral part of a business process that can be leveraged at any place during a business process. Today, intelligent capture has moved beyond its status as a stand alone application to become a service that can be leveraged by many business areas in an organization.

Intelligent capture goes beyond traditional centralized batch capture and supports both centralized and distributed branch office scanning, enabling organizations to leverage the benefits that come with moving capture out to the point of entry for most documents. Advanced document identification and standard development tools are provided as part of an intelligent capture solution, enabling you to quickly develop and integrate capture with critical business systems and processes.

The five capabilities of an intelligent capture platform

Capture

Although capture has become synonymous with document scanning and imaging, in the intelligent capture ecosystem the term has a much broader meaning. Its basic function includes the conversion of hardcopy documents into digital form through scanning, since many critical business processes continue to rely on paper documents.

But capture also encompasses the collection and conversion of any structured, unstructured, and semi-structured document into electronic data, regardless of source—scanner, fax, file system, e-mail, or electronic file.

Classify

In today's enterprise, documents of all types are captured across the organization. Automated classification technology distinguishes between multiple document types—such as invoices, order forms, claims, and loan applications—without manual separation, separator sheets, or barcodes to identify documents. It employs a combination of text-based and image-based analysis to identify document types.

Text-based analysis recognizes documents using keywords, phrases, and word combinations, while image-based analysis identifies documents by format—the fastest way to classify recurring documents. More advanced solutions can also differentiate between similar documents using a logo or comparable graphic indicator, and even recognize handwritten documents from machine typed documents.

Auto classification enables intelligent routing of documents as part of business process workflows and significantly reduces the manual preparation that organizations have traditionally employed large staff to handle. Automatic classification also enables the assembly of complex documents such as loan origination packages, minimizing user intervention.

Capture is more than just scanning. It is the collection and conversion of any structured, unstructured, and semi-structured document into electronic information, regardless of source—scanner, fax machine, file system, e-mail, or electronic file.

Extract

Once documents are electronically captured and classified, their data is extracted using optical character recognition (OCR) engines for machine, handprint, and optical mark recognition (OMR) such as checkboxes, bubble fill-ins, and others. Data extraction can follow business rules and reference libraries of keywords, word associations, and syntax structure. Various recognition engines can be utilized allowing engines to be leveraged based on their strengths with various types of data. The technology can also automatically detect tables in documents and extract data from rows and columns—analyzing line, column, and page breaks to manage items appearing on consecutive pages. Further refinements of extraction include purchase order and general ledger account matching, and support for complex forms like CMS and UB-04 healthcare insurance claim forms. When necessary, data can be extracted manually. For example, in a key-from-image operation, an operator inputs the data from an image if image quality makes automated extraction difficult.

Validate

Data validation ensures data was extracted correctly. There are two types of validation: automated and manual. Automated validation involves integration with another data source, usually a database or enterprise application such as CRM or ERP. The extracted data, such as a list of account numbers, is compared to a known set of data to ensure accuracy. The same process could be performed with multiple data fields, such as information on a healthcare claim form. Manual validation includes character correction, which allows operators to review and correct data that has been extracted with low confidence.

Intelligent capture solutions vary in their ability to simplify the validation process. For example, automated validation can be accelerated by performing database lookups or through other field or document level business rules. Operators are notified when a rule has been breached and data requires manual validation. Additionally, read-only fields in the extracted data can guide operators to minimize rework during manual validation skipping over fields that do not require review. Moreover, keyboard entry can be eased with hotkeys that are customized and tuned to specific data sets.

Deliver

Data and document exports are the way intelligent capture makes information available to other enterprise systems. On the simplest level, data can be exported to a file system in a variety of data and document formats, including XML, delimited, and others. Scanned images can be stored as PDF, JPEG, TIF, and other formats. Another export alternative is to leverage ODBC, which makes data compatible with any ODBC-compliant system—Microsoft SQL Server, Oracle, IBM DB2, and others.

A third option, enterprise system exports, delivers the greatest range of flexibility, connecting capture to business systems, content management systems, and processes. These exporters enable an intelligent capture system to become an extension of other enterprise applications—transferring data as well as images, triggering workflows, and participating directly in business processes. An intelligent capture system without this level of integration is not suitable for most large organizations, which often rely on several mission-critical information systems.

Lahey Clinic scans and digitizes paper, cutting processing time in clinical and non-clinical areas by up to 90 percent

The Challenge

For healthcare providers, replacing paper with electronic records is not a matter of if, but when. Lahey Clinic foresaw the power of technology to improve efficiency and compliance a number of years ago and proactively took action. “Our goal is to get all pertinent information into the hands of the people who need it—clinicians, administrators, and eventually patients—to provide the best possible patient care and overall patient experience,” says Nelson Gagnon, chief information officer at Lahey Clinic.

The Solution

Using EMC Captiva InputAccel® to scan paper documents into the EMC Documentum® repository and automatically index them for easy search and retrieval has dramatically reduced the time required for both clinical and non-clinical business processes. Information captured by EMC Captiva InputAccel is accessed by approximately 500 physicians, administrators, and others through Documentum to improve and speed processes in nursing, admissions, medical records, patient financial services, legal, and quality and safety.

The Results

By utilizing the EMC Captiva intelligent capture solution, Lahey Clinic has improved their processes in several areas. For instance:

- Scanning patient records into the system and enabling the printing of these records with bar codes saves nursing unit coordinators two hours each day—a total of thousands of hours annually—producing documents for the patient care process.
- Scanning patients’ insurance cards and drivers’ licenses in admissions is significantly reducing time spent researching claims and making sure that the right insurance company is being billed—not to mention enabling faster handling of insurance denials and faster receipt of payments.
- Scanning explanation of benefits (EOB) statements has reduced the average time required for patient financial services to retrieve an EOB by almost 90 percent.

Intelligent capture across industries

Financial services

Financial services organizations that need to accelerate transaction processing, decrease operating costs, and increase customer service have eagerly embraced an intelligent capture strategy. They must routinely process large volumes of documents quickly and accurately while adhering to Sarbanes-Oxley, Check 21, and other compliance measures.

For example, a global mortgage servicing company employed an intelligent capture approach for capturing and processing 75,000 mortgage applications per month—more than 600,000 pages per day. The company’s intelligent capture solution resolved process bottlenecks, increased capacity, and reduced outsourcing costs by \$500,000 annually.

Government

Government agencies are under pressure to improve efficiency and make their services more accessible to constituents. They need to capture critical information from government documents such as tax returns, license applications, and legal filings and convert the information into business-ready, digital content.

A case in point is the Minnesota Department of Revenue (MDOR), which provides tax information, filing, and payment services to state residents. Deploying an intelligent capture solution, the department re-engineered its individual income tax management system. The effort paid off with dramatic results, including:

- A reduction in paper return processing from 30-40 days to less than ten
- A decrease in electronic return processing from ten days to three

The department also processed 95 percent of returns within five days while improving compliance.

Healthcare

Increased regulation, rising costs, and growing service expectations make offering high-quality healthcare services a complex business. Service providers need to reduce claims processing costs, improve the accuracy and timeliness of payments, and comply with HIPAA requirements.

One state university physicians group submitted more than 21,000 claims per month, a task that required enormous paperwork. Unfortunately, nearly 20 percent of claims required resubmission—resulting in almost a million dollars in delayed payments. By installing an intelligent capture solution, the group reduced claim re-submissions from 20 percent to seven, slashed reimbursement time, and improved regulatory compliance.

Deploying an intelligent capture solution

Whether you need an intelligent capture solution to meet general information capture needs or require a solution that is proven to handle high volumes of critical documents like loan documents, insurance claims, and new account applications, make sure the solution is complete in its offering and addresses all key aspects—distributed processing, intelligent document recognition, and process integration. Design and deployment should follow a best-practices methodology that includes measurable goals and objectives, and quality assurance testing.

EMC® is the leading global provider of intelligent capture solutions. EMC Captiva® intelligent capture solutions automate the processing of billions of documents annually, reducing costs, improving information accuracy, and streamlining business processes. These solutions can be leveraged with your existing investment or utilized with a complete end-to-end EMC solution for managing the lifecycle of transactional content.

EMC intelligent capture solutions are part of a complete EMC solutions framework called transactional content management (TCM). The framework includes intelligent capture, business process management (BPM), and enterprise content management—delivering an end-to-end solution for managing high-volume, transactional processes.

Take the next step

To learn more about EMC intelligent capture solutions, visit www.EMC.com or call **800.607.9546** (outside the U.S.: +1.925.600.5802).



About EMC

EMC Corporation (NYSE: EMC) is the world's leading developer and provider of information infrastructure technology and solutions that enable organizations of all sizes to transform the way they compete and create value from their information. Information about EMC's products and services can be found at www.EMC.com.

EMC Corporation

176 South Street
Hopkinton, MA 01748
1-508-435-1000
In North America 1-866-464-7381
www.EMC.com

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