Intelligent Imaging for Improved Banking Performance and Profitability

A Secret Weapon in a Real Time World

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Banking is undergoing a massive shift that began with the automated teller machine, continued with online banking, and is now accelerating with the advent of mobile computing. It wasn't that long ago that banking customers were limited to the branch on Main Street. Teller services were confined to the 10 a.m. to 3 p.m. "banker's hours" of the 1800's and loan approvals proceeded at a stately, unhurried pace. But today, customers are free to do their banking from anywhere and at anytime. Indeed, the very idea of visiting a branch is becoming an antiquated notion – most of us opt for the drive-up ATM instead. Driven by smart phones, iPads and 24/7 connection to the Internet, bank performance these days is less about a physical branch experience and more about the real time experience customers have when interacting with the firm.

Intelligent Imaging

In response to the twenty-first century demands for real time service and performance, most financial institutions are investing heavily to upgrade their Web and mobile infrastructures. As a result, they have discovered a new value for a proven technology that they already use: Document Imaging. Indeed, a new generation of "Intelligent Imaging" solutions has emerged that is helping banks remove the burden of paper in legacy processes, like loan origination and new account openings, while extending the power of document and data capture to achieve new levels of case management and business intelligence.

Simply put, there's no time for old paper-bound methods when today's banking customers expect real time service and the very profitability of the firm hinges on efficiency, cost containment and customer responsiveness. Intelligent imaging is the combination and synergy of several evolved technologies starting with scanning and multichannel input, and progressing with content analytics and other linguistic enhancements that acquire, understand and enable all the transactional content flowing through the banks' systems:

- Multi-channel capture and input
- Multi-language data extraction
- Text analytics-based document classification
- Integration with case management and business process management
- Document and data storage, archive and retrieval

Originally developed several decades ago as a solution to the "paper problem," today's intelligent imaging systems have a new role as an infrastructure to connect content across all channels. With a combination of capture, imaging repository, case management, and powerful analytics, no other solution can effectively integrate the external conduits that feed documents and data into an organization (scan, email, fax, mobile, MFP, Web, social) and to the internal systems that use data and documents to deliver customer satisfaction (ERP, CRM, LOB systems and mainframe applications).

Loan Origination is still bound by Paper

Despite the increasing digitization of business today, many key banking functions continue to rely on paper. One primary example is the loan origination process – a process traditionally burdened with a host of paper-based inefficiencies and expense. As other areas of business and commerce have become more and more paperless, the loan origination process for most banks has remained mired in paper copies and manual workflow. Banks pay the price in unnecessary shipping expense, printing costs, and administration overhead, while profitability and performance often suffer from the inherent delays and complexities of a paper-bound process.

Intelligent imaging provides the answer by giving banks a way to remove the burden of paper from the loan origination process. Scanning devices and automated systems drive the digital "capture" of the necessary documents in each branch. Mobile capture technologies using smart phones and tablets extend the approach even further by bringing the service and technology directly into the field, to customer's homes or their workplaces. All the while, advanced document classification capabilities streamline the centralized back-office management of each loan.

Moving from a paper-driven process to an intelligent imaging approach is a solution that many banks have successfully deployed and the growing trend in the industry is toward further automation. Indeed, intelligent imaging systems have evolved from tools for the simple scanning of paper into a more a broadly strategic and intelligent approach to business process workflow. Banks and lenders are seeing the real world benefits and loan origination automation using intelligent imaging could be your secret weapon to greater profitability and performance.

Meeting the Challenges

Banks are under increasing pressure to contain costs and improve service, but that is difficult to do when the loan origination process is dependent on antiquated, paper-based workflow. Intelligent imaging systems enable a number of important improvements and capabilities that are simply not possible using a traditional paper-based process. Here are some important examples:

Connecting Branches with Distributed Capture

The burden of paper in the loan origination process is taking an unnecessary toll on bank profitability, especially in branches. In the wake of the recent financial meltdown at least 15% of current branch networks have crossed over into unprofitability.[1] As a result, nearly one in five banks say that they are likely to reduce the number of branches they maintain.[2] One reason is the popularity of online banking, but when customers need a loan they typically go to a branch for that service. Automating the loan origination process is one way to improve the experience customers have when visiting a branch, therefore boosting the value and profitability of branch operations.

The burden of paper for banks

- Shipping Costs
- "Shadow Copies"
- Manual Data Entry
- Quality Control
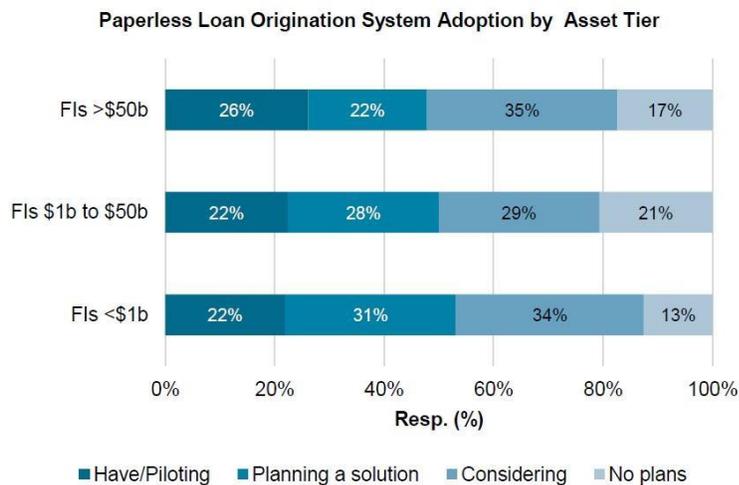- Storage and Retrieval
- Document Classification

Documentation for a typical mortgage loan can grow to include hundreds of pages; all subject to redundant copies, shipping and handling, and the inherent inefficiencies of a manual process. Indeed, despite advancements in digital office technology, the fact is that many key people involved in the loan origination process are still working with paper. Loan officers, underwriters and fulfillment personnel all ship stacks of paper back and forth and often make their own "shadow" copies to get the job done. Even documents

that originate in a digital form, like email or spreadsheets, are typically printed simply to be sent to a centralized facility to be scanned. These days, printing documents that were electronic to begin with doesn't make sense.

Intelligent imaging using automated capture systems saves money and improves branch performance by digitizing documents at the point of origin and directly connecting branch activity to centralized bank operations. Instead of making photocopies and shipping the paper, loan officers scan and capture documents at the point of service -- often working directly with a customer and using a desktop scanner or standard multifunction printer/copier. Most solutions are easily integrated to all leading brands and devices. Capture systems further streamline and connect the process by providing automated prompts to guide loan officers in collecting the right pieces of information. The automation is tied directly to centralized management systems depending on the type of loan type and each individual customer account.

The growing trend in the industry is toward intelligent imaging

Fewer Institutions Have Automated Lending, But Many Plan to Do So

Paperless Loan Origination System Adoption by Asset Tier

Asset Tier	Have/Piloting	Planning a solution	Considering	No plans
FIs >$50b	26%	22%	35%	17%
FIs $1b to $50b	22%	28%	29%	21%
FIs <$1b	22%	31%	34%	13%

Resp. (%)

■ Have/Piloting ■ Planning a solution ■ Considering ■ No plans

Source: Celent financial institution survey, July 2012, n=132

Research suggests that nearly 80% of banks plan to automate loan origination.

Streamlining Scanning and Classification

Most banks have large, dedicated scanning operations where loan origination documents are sent for processing. Teams of operators scan every page and hundreds of thousands of images are uploaded to centralized databases for processing. While a number of common barcode and character recognition techniques provide important efficiencies, the truth is that correctly identifying the many different documents involved can be quite complex and demanding. Ensuring the accuracy, quality and completeness of the information collected often requires a great deal of human intervention.

Manual capture processes consistently average around a 10% error rate for classification and indexing.[3] At 90% classification accuracy, a new breed of intelligent imaging and capture solutions can reduce the overall error rate to less than 1% with 70-80% less labor.

Accuracy rates provide the "tipping point" that spurs viability of intelligent imaging.
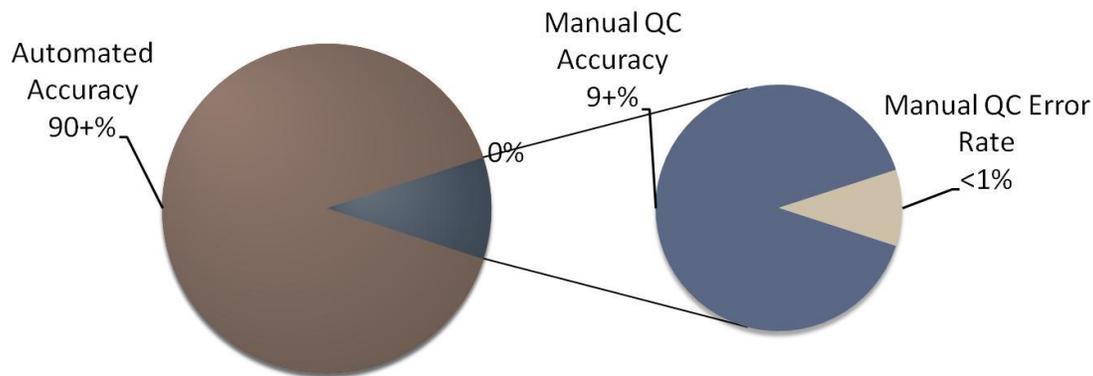
Typical manual classification results in a 10% error rate. With automated classification having reached tipping point, now banks can reduce cost with 90% automated throughput; leaving 10% for manual methods, netting a total 1% error rate with only a fraction of the headcount .

Intelligent imaging provides an important advantage for banks looking to reduce staffing requirements and achieve a higher level of performance through continued automation. In the past, the best most scanning operations could hope for was an accuracy rate between 60% - 70%. Specialized and additional staffing for quality control was must. But a new generation of capture solutions has set a new benchmark with accuracy rates in excess of 90%. And for many banks false positives have been all but eliminated.

Advanced image and text analytics literally "read" each page, understand the nature of the document in context with the content, and automatically index and classify the information in the system. New automation tools make it easier to classify hard-to-manage documents and unstructured information that often are an important part of the loan approval process. Loan-specific data extraction and document management workflow capabilities help automate redundant tasks - like checking for signatures or validating data – that take workers away from other higher value activities. The result is reduced overhead, improved quality, and a big boost for productivity overall.

Improving Workflow and Performance

In today's challenging economic climate, banks must be more agile and competitive than ever before. Paper-based and manual processes are simply no longer adequate to meet twenty-first century demands for improved workflow and performance. Once the burden of paper has been eliminated from the loan origination and approval process, banks are in position to engage new levels of case management and workflow automation that further streamline operations.

The average financial institution takes between 30 and 45 days to process a typical mortgage loan. This is due to the traditionally paper-intensive and manual handling required. Banks using automated capture systems can do it in ten by integrating case management tools that unify the information, workflow and people involved. Increased visibility and agility in the process, combined with thoughtful system-connected prompts and automation, encourage new ways of working that close cases more efficiently and improves performance overall.

Advanced capture and storage systems provide an intelligent imaging platform for banks to improve workflow and performance. Workers store and retrieve documents using a common repository and integrated case management tools automatically keep track of the tasks, activities and approvals that are required. In addition, many banks link data analytic capabilities and business intelligence tools to support a wide range of activities including regulatory compliance, discovery and litigation, and a host of advanced, data-driven marketing initiatives.

More and more branches are adopting capture technology and techniques
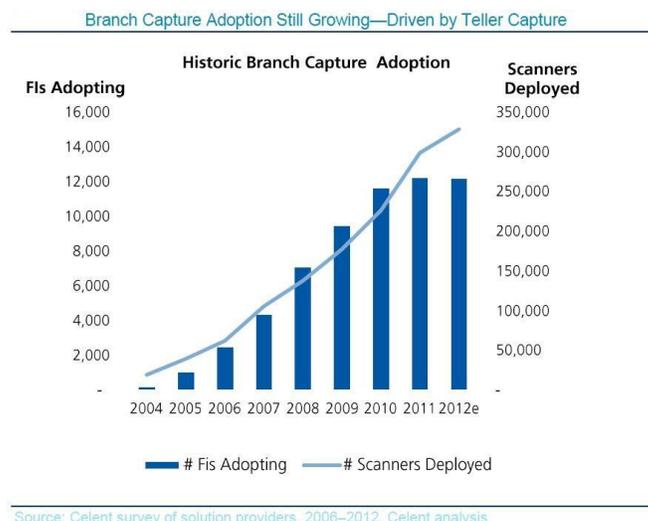
Banks are doing more with less with intelligent imaging. While the number of scanners deployed in branches seems to have leveled out, the number of bank branches adopting capture solutions is still on the rise.

Use Cases

Moving from a paper-driven process to an intelligent imaging approach is a solution that many banks have successfully deployed. Here are some important use cases.

Major Pan-European Bank Improves Customer Experience with Transactional Capture

This major Pan-European Bank is a leading corporate and investment bank with a network of 540 branches in 17 markets. The Bank was looking to improve the quality of customer service, accelerate loan processing approval time, and eliminate extensive fees for courier service to transport documents to their scanning centers. Once documents arrived for centralized processing much of the loan paperwork was being manually keyed. The result was an expensive and error-prone process. The bank adopted IBM and Datacap to automate the capture process

and streamline operations. They now have the ability, through a simple browser-based scanning solution, to capture any variety of loan documents the point of service at hundreds of branches. Datacap's built-in document classification, data extraction and validation features reduced manual processing and accelerated loan approval cycle time. The solution eliminated courier costs and enabled a dramatic reduction in data entry errors.

North American Mortgage Processing Specialist Automates Mortgage Workflow

This North American mortgage processing specialist is one of the nation's leading mortgage servicers. The organization has grown rapidly since its inception through the acquisition of large portfolios that now comprise a total servicing base of more than one million loans. The firm faced a significant challenge, however, since the majority of this acquired loan base was received in the form of paper files that needed to be scanned, classified, indexed, and migrated into the firm's FileNet repository. In 2011, Imagine Solutions introduced a transactional capture solution that involved a number of components including Encapture, Datacap and IBM Content Classification as the core technology. Since that time this major mortgage provider has built a library of rules and document models through which Datacap can automatically recognize and classify the 60 most common mortgage document types. The results of the effort have dramatically improved processing efficiencies and labor savings have been significant.

Traditional Mortgage

Large Canadian Bank Pioneers Mobile Mortgage

This large Canadian bank implemented a capture solution using Datacap and Encapture with the aim to bring a new level of automation to the bank's mortgage loan origination process. The objective was to create a streamlined transactional capture process by sending loan officers out into the community to scan needed documentation working with customers directly in their home. Portable scanners using mobile technology directly connect to and integrate with the bank's SAP mortgage origination system. Automated requests prompt officers to gather the specific documentation needed. With everything in hand, the officer scans the documents on the spot, and receives verification from the system. The integration with SAP and the remote capture functions are provided by Encapture. Documents are then processed through Datacap for additional verification and classification prior to being committed into storage.

Automated Mortgage

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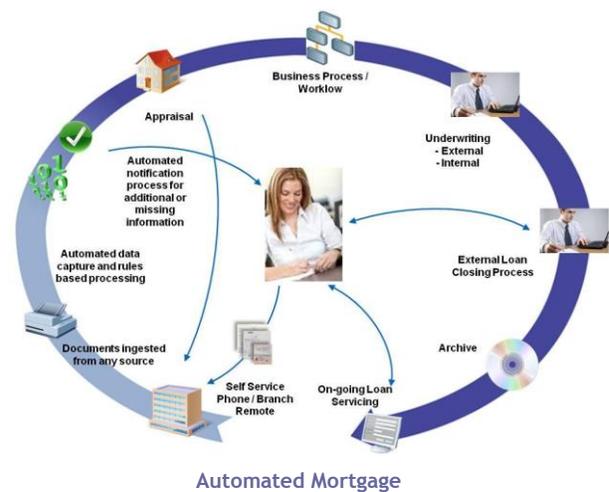
Moving Forward

A quiet revolution is taking place as banks and other financial institutions make changes to long-standing paper-bound functions, especially as the need to control costs and improve performance becomes more pressing. Loan origination is one important area of opportunity for banks looking eliminate the inefficiencies of paper and improve service and performance.

Intelligent imaging and loan automation using document capture could be your secret weapon to greater profitability and performance. But achieving the benefits of streamlining and automating the loan origination processes will require a collection of technologies - including a scan and capture solution, business process management capabilities and a content management repository. Here are some recommended tools:

IBM Datacap Production Imaging Edition
http://www-01.ibm.com/software/data/content-management/production-imaging/

Production Imaging Edition is a comprehensive product for managing the entire document lifecycle. It collects a number of the world's best products and capabilities in one solution including IBM Datacap Taskmaster for advanced document capture, IBM FileNet Content Manager for content management, and IBM FileNet Business Process Manager components for business process management. The combined suite of capabilities helps banks and lenders quickly and easily capture and extract key information from documents and convert it to images that are stored electronically. The approach leverages a trusted and proven IBM technology to improve manageability and flexibility, and incorporate industry-standard BPM components to increase process performance and productivity.

Encapture
http://www.imaginesolutions.com/software/encapture

Encapture is an innovative capture platform that helps banks process unstructured content – paper or electronic – and store that information in data repositories and image-based workflows. As a valuable front-end component to IBM Datacap, Encapture extends capture to multi-channel input via multi-function and mobile devices. Some of the world's top financial institutions use Encapture to speed business processes, improve customer service, and reduce document shipping costs. The solution supports a broad range of scanning devices and provides comprehensive central administration. Encapture by Imaging Solutions can be tightly integrated into the processes, applications, and repositories that drive bank profitability and performance.

About the Author

Kevin Craine is the author of the book "*Designing a Document Strategy*" and the host of the Document Strategy Podcast. Document-Strategy.com. His books have sold in over 30 countries. He holds an MBA in the Management of Science and Technology and a BA in Communications. Kevin is the managing director of Craine Communications Group; a writing and consulting firm. CraineGroup.com.
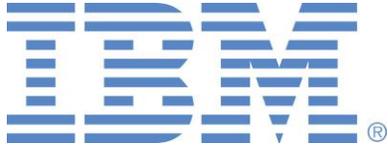
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Checklist

What are the next steps moving forward? It is important to benchmark your current process and evaluate the right tools and technologies. The checklist below is designed to help you identify areas where intelligent imaging would be beneficial to your organization. The more "Yes" answers you record, the higher the return on investment.

Branch Operations

	Yes	No
Does a typical loan request require hard copy documents to be submitted?	☐	☐
Does a new account require hard copy documents to be submitted?	☐	☐
For documents submitted via fax or email, do bank employees print them to process?	☐	☐
Does it typically take more than a week to collect the necessary document and put them in good order before the loan process approval process can begin?	☐	☐
Does your bank have a policy not to copy and print documentation?	☐	☐
Whether your bank has a policy against copying and printing or not, do loan officers or branch officers print their own copies "just to have a back-up?"	☐	☐
Does the branch store any paper documents on site?	☐	☐

Are documents shipped to a central storage / processing center by internal courier service? ☐ ☐

Are documents shipped to a central storage / processing center by commercial courier service? ☐ ☐

Do the branches use a desktop scanner or multi-function device to scan incoming documents? ☐ ☐

Would you find benefit in a scanning solution that prompts your branch personnel as to what documents are required to complete a loan or new account application? ☐ ☐

Would you find value in a solution that enabled your loan officers to scan documents using a mobile device while in the field? ☐ ☐

Centralized Scanning

	Yes	No
Is your organization currently scanning all loan and new customer documentation?	☐	☐
Is your organization manually separating and classifying all the documents in a mortgage?	☐	☐
Is your organization using separator sheets while scanning to help separate and classify all the documents in a mortgage?	☐	☐
Is your organization using separator sheets while scanning *plus* doing manual classification for documents in a mortgage?	☐	☐
Is your document classification accuracy rate below 90%?	☐	☐
Do you have a problem with "false positive" document ID?	☐	☐
Do you have a full time staff dedicated to quality control after scanning and document ID have been performed?	☐	☐
Are your loan processors printing a copy of mortgage documents "just to have a back-up?"	☐	☐
Would you find benefit in software that helps loan processors assemble documents and identify mortgages that are NIGO?	☐	☐

Notes:

1. The Economist 2012
2. Celent 2012 Survey
3. Per UK Government study from 2005 to 2007