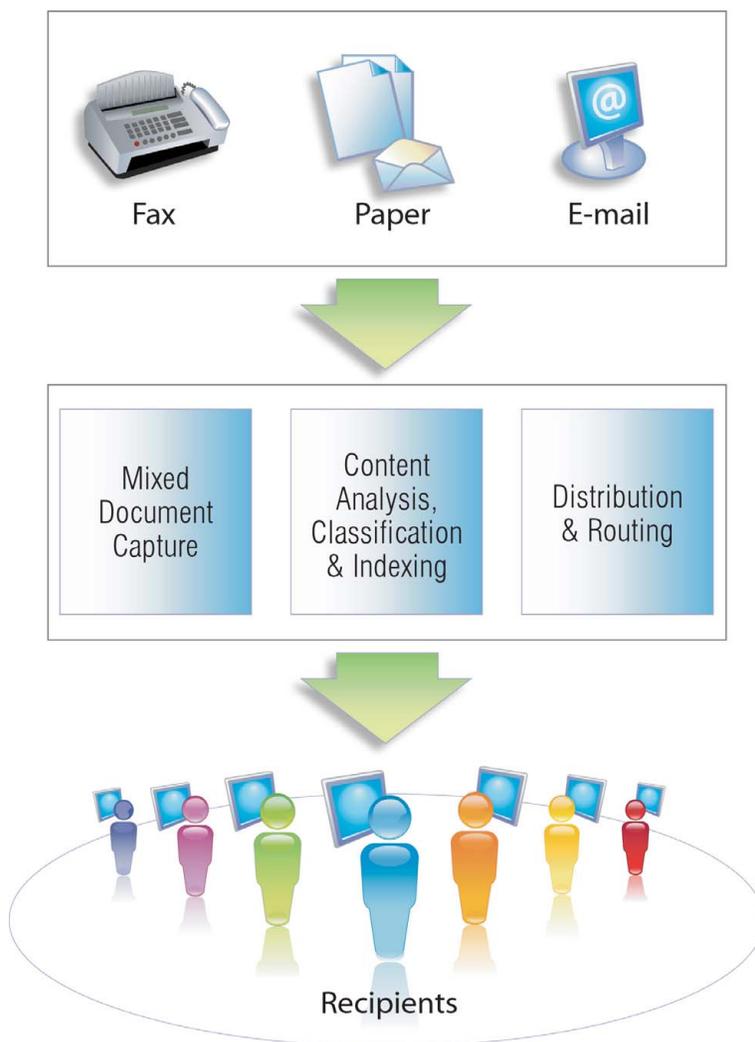


# Digital Mailroom: indicators for success



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## Introduction

The concept of a digital mailroom is readily understood - all incoming mail is scanned on entry, and delivered electronically to the appropriate department or process. In reality, only mail of business value is likely to be processed. This will predominantly be documents with structure such as forms, orders, invoices, delivery dockets and vouchers. In many situations, particularly in consumer or citizen-facing businesses, it will also include hand-written letters, application forms, change of details, supporting certificates, etc. Circulars, brochures, magazines and junk-mail will not be scanned. Although scan-to-archive may be part of the operational sequence, capture-to-process is the core technology, recognising and extracting useful data from the document or form, validating it against a customer name or transactional data within the enterprise back-office systems, routing it to the appropriate department, and triggering a workflow to start the process.

AIIM research<sup>1</sup> consistently shows that users are achieving impressive return on investment (ROI) from scanning and capture systems, but what are the key factors in selecting a capture solution for incoming mail and successfully implementing it? In this report we consider the variability of input documents, requirements of downstream processes, successful recognition rates and the potential impact of exception handling on productivity.

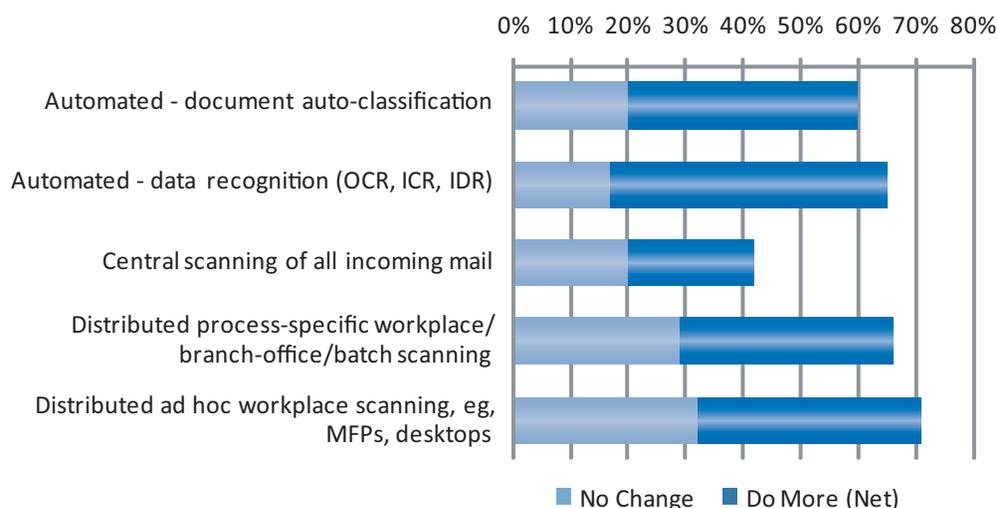
## Adoption

The performance of scanning hardware and the capability of recognition and capture systems have both increased dramatically in the last few years as the power and scalability of multi-core computers has soared, and the sophistication of the recognition algorithms and business-rule engines has been further refined. Traditionally supplied by outsourcers or bureaus, scanning and capture systems have moved back in-house. Lower up-front investment cost, self-learning systems requiring less in-house skills, and the need for close coupling between the capture operation and the business processes themselves have all contributed to the attraction of in-house operations. The deployment of a standard capture platform produces a unified support environment for multiple scanning devices, including production mail scanners, branch-office MFPs and desk-top scanners. Also supported will be re-usable connectors to the main enterprise systems, extending the applicability to multiple processes. This uniform platform can also be extended to include capture of information from all-electronic files such as faxes, emails, PDF documents, web-forms and EDI.

We can see from Figure 1 that users are planning to invest more in automated document classification and automated text recognition, and are increasingly interested in scanning all incoming mail.

Figure 1: How would you characterise your scanning and capture strategy?

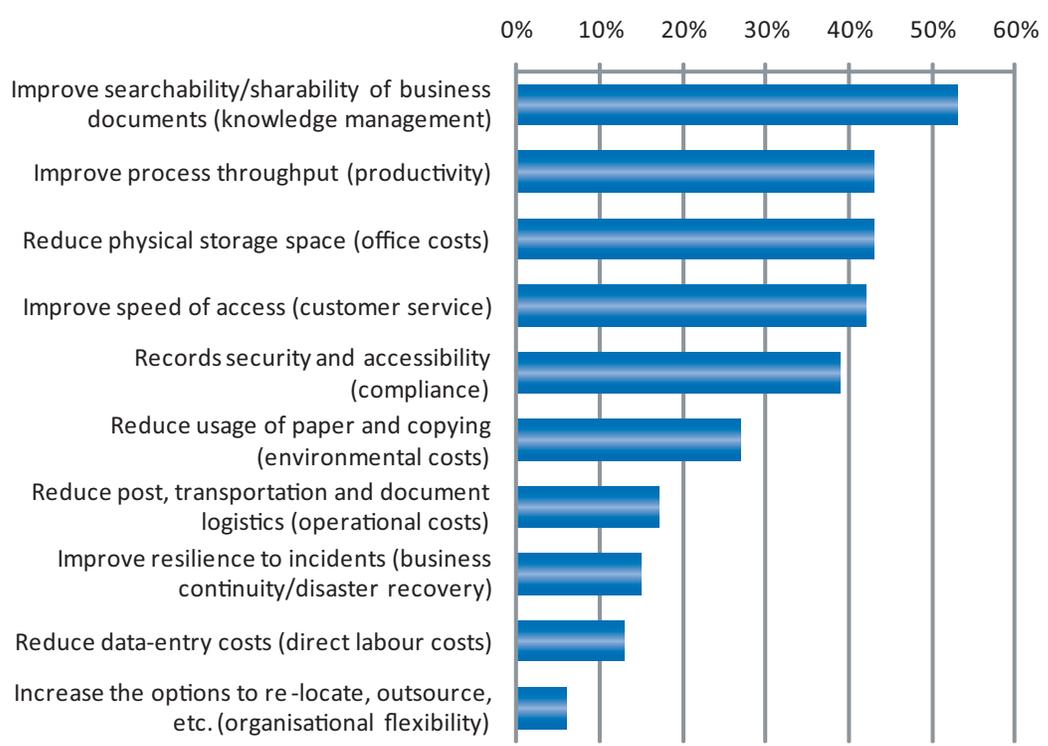
(AIIM Industry Watch Dec 2010. N=380. "Do More (Net)" is "Do More" minus "Do Less". Shorter lines reflect "We don't do this")



## Motivation and ROI

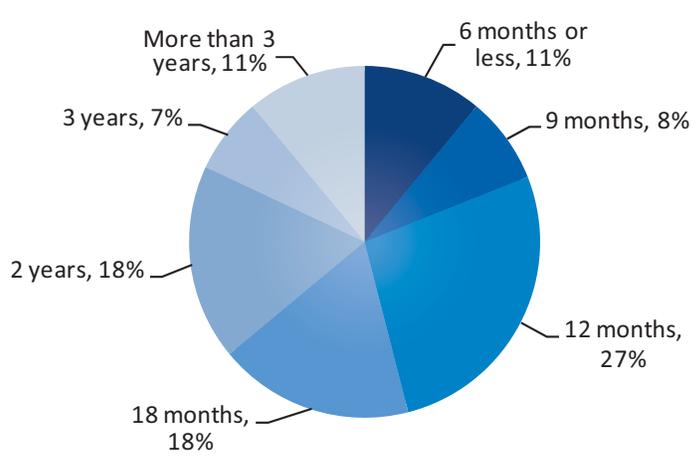
There are some obvious tangible benefits from replacing physical mail handling with electronic distribution - reduced document storage space, fewer file cabinets, less photocopying, etc. However, it is a consistent finding in AIIM surveys on this topic that the strongest reported benefits after deployment turn out to be improved searchability and shareability of business documents, easier auditability and compliance, and the enablement of remote working and hot-desking. Another strong factor which is particularly relevant to the digital mailroom application is improved customer service due to the immediate accessibility of incoming correspondence. This is particularly important in government, financial services, utility and legal sectors. The faster initiation and better tracking of downstream processes such as customer enquiries, new applications, claims, account opening, citizen returns, etc. helps meet response targets, improves quality, and raises process productivity.

Figure 2: What are the three strongest drivers for scanning and capture in your organisation? (AIIM Industry Watch Dec 2010, N=418, 10+emps, non-trade)



Another very consistent AIIM survey finding is that the payback period from these systems is likely to be 12 months or less for 46% of organisations and 18 months or less for 64%. Users also report that these projects produce better returns than most IT investments, with only a small proportion indicating that their projects failed to meet expectations.

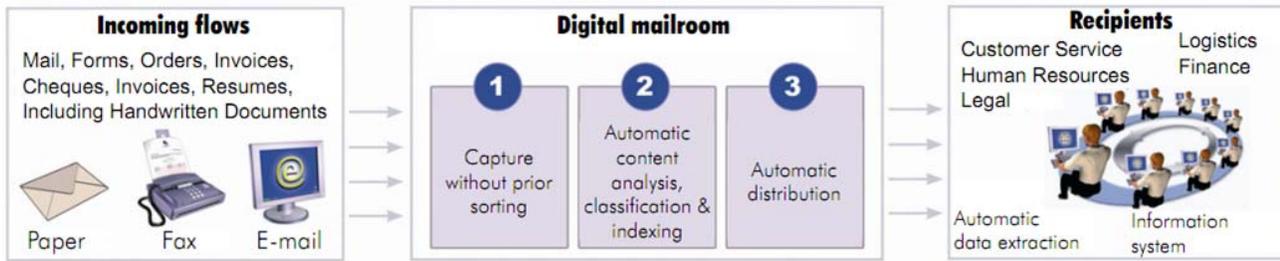
Figure 3: What payback period would you say you have achieved, or are on track to achieve, from your scanning and capture investments? (AIIM Industry Watch Nov 2009, N=618, 10+emps, non-trade)



## Inbound Mail-Stream Processing

One feature of a modern capture system is the ability to recognise and process a mail-stream that contains a variety of different document types, and a variety of form layouts within those document types. This not only increases the usefulness of the system, but in conjunction with today's high-bandwidth networking, allows the digital mailroom to consolidate incoming mail processing, ideally to just one or two entry points to the organisation. Automatic recognition of document types, and a set of business rules based on business value, can automatically route the document image to the appropriate repository, and connect it to the related business process. Local knowledge of the business process by post-room operators is not needed as they are not expected to sort and classify each mail item. This is taken care of by the

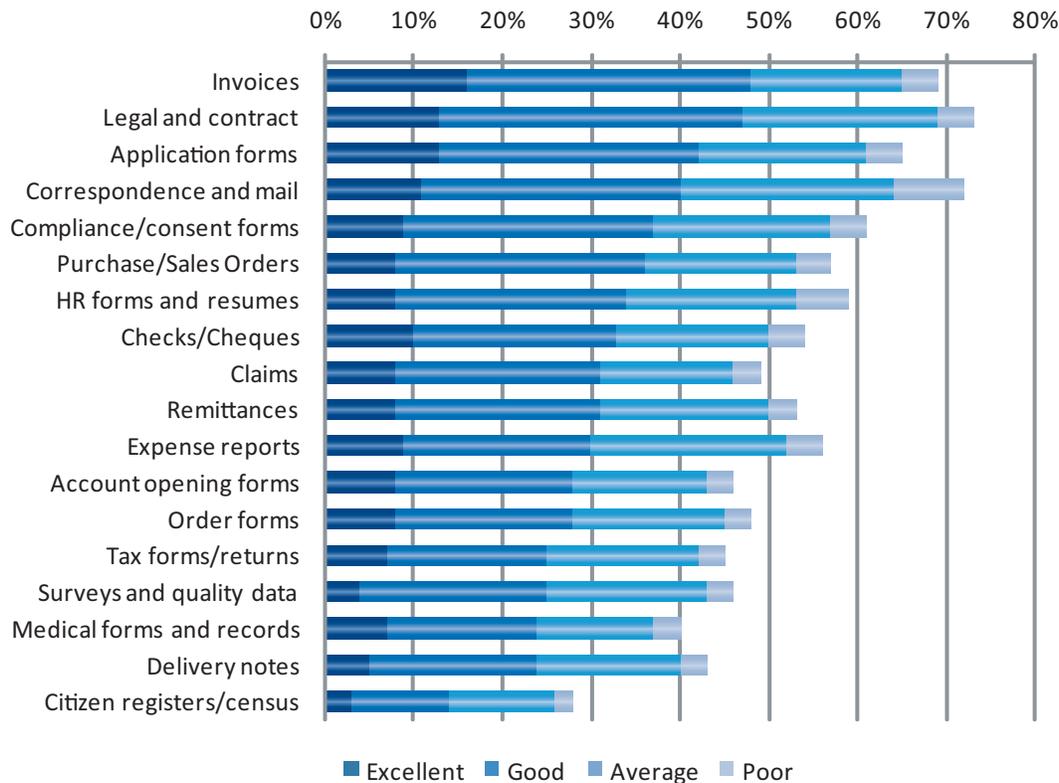
automated classification system and the associated business rules. As a result, it is much easier to reach the break-even point for the incoming volume of suitable mail types, with 300 to 400 physical mail items a day being a typical minimum. Assuming the capture platform is capable, we can add to this the all electronic customer correspondence such as faxes, emails, PDF documents, web forms and even SMS text messages.



## Downstream Processes

Based on the success of scanning invoices and capture-enabling the accounts payable process, many early-adopter organisations are expanding the scope of their capture operations to include a much wider distribution of incoming mail and a greater range of processes - as we can see from Figure 4. However, the popular accounts payable application does present a useful example of how such systems operate, and the differentiating factors that can arise. Not all systems function to the same high level here. Invoices come in many shapes and layouts, and systems vary in their ability to recognise a new layout on-the-fly, identify the key fields, and “learn” the text recognition (which may include other languages and character systems). Data validation of order details and line items from the back-office finance or ERP system are crucial to accurate matching. Flexibility is the key here. Some organisations are very sensitive to API connections to SAP or Oracle, and prefer to utilise a batch output for validation. Others are looking for a certified connector, and a workflow trigger to the invoice-matching screens, along with qualified support expertise to accommodate any industry-specific order processes. Once the invoice is matched, the all-electronic workflow of the invoice sign-off procedure will greatly reduce end-to-end process time and provide improved traceability.

Figure 4: How would you rate the success (ROI, service improvement, etc.) of the following processes/document types? (AIIM Industry Watch Nov 2009, N=702. Line length indicates process popularity)



Beyond accounts payable is a whole realm of other processes that can be capture-enabled, and it is here that the benefit of up-front investment in a very capable capture platform pays off. In the general area of forms capture, the ability to reliably capture hand-writing becomes an immediate differentiator, as does un-templated processing of multiple form layouts, for example from different couriers or shipping agents, or from different channel re-sellers. Keyword capture from handwritten correspondence can also be required in order to route the scanned image to the appropriate department, or add it to the correct case file. Flexibility of business rules for workflow programming and exception handling is important for any process, particularly those involving a degree of case-based processing. Also important is the integration flexibility to other back office systems, such as CRM, case management, claims processing, HR, etc.

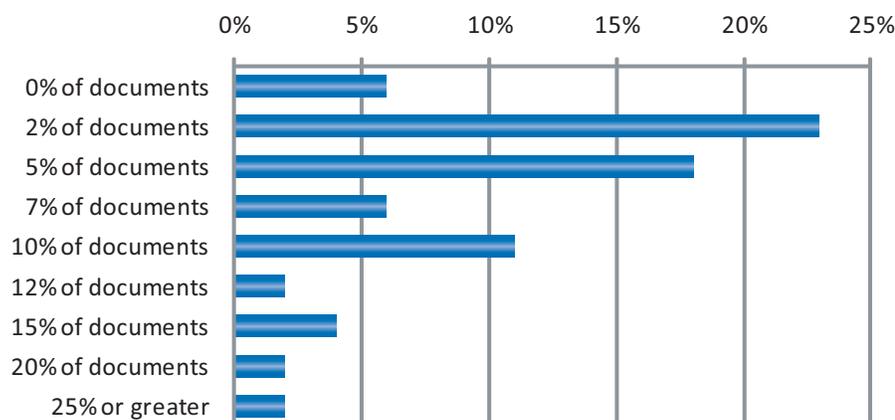
## Recognition Rates and Throughput

As with so many things in life, the quality of the recognition output generally relates to the compute time spent on the processing. Efficient and effective processing algorithms are therefore required if the rated speed of the mail scanner is to be matched. Part of this effectiveness relates to the recognition of the document as a whole, and the decisions to be made as to the document type, its value to the organisation, and the appropriate manner of dealing with it. Following that is the actual field recognition and data extraction. Further partitioning within multi-page documents can allow the recognition process to be by-passed for non-data carrying pages. Application forms for financial services, for example, may contain only 10% unique data, while the rest is standard 'boilerplate' information - contract terms and conditions, or even customer account information which is already held elsewhere in the application system.

Page handling rates as such are not the complete story. The two most costly aspects of a scanning and capture operation are document preparation and exception handling. High demands on the preparation process due to low quality scanners and poor post-scanner image-processing will slow throughput and cause bottlenecks. Similarly, a good automatic classification system will obviate the need for traditional up-front sorting techniques such as bar-coded labels and document separator sheets.

Poor recognition performance will increase the number of exceptions requiring human-assisted validation or re-keying. In all situations, there will be a requirement to handle some exceptions, where the system has insufficient confidence in the recognition, or the data fails to validate, and these needs must be planned for, staffed and monitored. However, the difference in exception rate between a well-performing recognition and a poorly performing one on the same material can easily be a factor of two. This is not only crucial to the ongoing operational costs, but also to downstream process quality and process-owner acceptance. In particular, if the system is to be relied upon to automatically generate metadata for future searching within the long-term records repository, a high level of trust in the recognition accuracy is required.

*Figure 5: In general, what proportion of your scanned documents are rejected at QA or require intervention?  
(AIIM Industry Watch, Nov 2009, N=488. 162 have no QA process as such)*



Independent reference tests such as the Pentadoc report <sup>2</sup> provide in-depth comparison between capture systems, but you should also benchmark solutions for yourself using a sample of your own forms and materials. Pay attention not only to the success rate, but also the ease of the workflow process for dealing with exceptions.

## User Experiences

Thirty-seven percent of AIIM survey respondents are already scanning more than half of their important incoming mail. Comments include: "It is exciting to see the ROI realised quickly and the light bulbs coming on in other areas of the organisation when they see what we've done" and, "Our experience has been positive so far. I would like to see us do more and spread the process into other functional areas." The biggest implementation issue (reported by 32%) was integration with other systems, emphasising the need for support expertise in this area. Next comes the classic BPM issue, "Underestimated the time required to map and agree the process," followed by, "Dealing with QA/manual re-processing," again emphasising the need to invest as much as you can in built-in recognition quality, rather than having to fix it as a post-process.

A quote from the Pentadoc report referenced above is very relevant here. "The cost of searching for documents within companies is colossal. In any company, the response time, productivity and service quality of every department depends on the reliability and distribution of mail, especially in customer-oriented services. The automation rate for identifying document types (referred to as classification or sorting) and extracting the indexes that characterise a given document (referred to as reading or indexing) are in fact critical criterion for optimising digital mailrooms"

## Conclusion and Recommendations

A digital mailroom implementation should be managed as a business change project not just a mailroom replacement. The project team should include facilities management, line-of-business owners, records managers, and the IT department. Then build a business case based on the likely improvement to process productivity and the savings in physical storage space, but then add the less tangible benefit of shared enterprise-wide access to electronically stored documents, and customer service improvements from timely availability of inbound correspondence. Consider whether rationalisation of your mail delivery locations would increase the volume through the digital mailroom. This will improve amortisation, although it may also put additional demands on turnaround time for daily mail deliveries.

When comparing solutions, be sure to carry out a careful evaluation of core recognition performance as this will affect throughput, process quality and extended application flexibility. Benchmark solutions for yourself on your own typical materials and relate these to 3<sup>rd</sup>-party comparator reports. Be particularly careful if handwriting recognition is important to you. Reference other users with regard to integration with your specific brand of ERP, CRM and Finance system. Do not under-specify your system to save money - AIIM surveys show that most users achieve ROI from new system implementations within 18 months. The broader the applicability of your system, the more processes you will be able to capture-enable, and the greater your returns will be.

## References:

1. AIIM Industry Watch, Capture and BPM, 2009 and 2010 reports, [www.aiim.org/research](http://www.aiim.org/research)
2. PENTADOC Radar 2010 comparative test, in [German](#). ITESOFT summary in [English](#).

This report is underwritten by:



## ITESOFT

Founded in 1984, ITESOFT is a European software company specialising in Digital Mailrooms and other automated document processing solutions.

Numerous organisations have placed their trust in ITESOFT for their Digital Mailroom, leveraging the company's software solutions to capture, sort, index, read and automatically distribute their mail.

With unique know-how in character and shape recognition technologies, ITESOFT solutions are used by over 650 customers globally in a wide range of business sectors, including: Financial Services, Banking, Insurance, Local and Central Government, Healthcare, Pharmaceuticals, Retail, Utilities, Logistics and Distribution, Manufacturing, Construction, Services, and more.

These solutions handle more than a billion documents per year, optimising internal business processes and reducing costs, whilst increasing document handling speed, and improving data reliability and visibility. These solutions offer advanced, seamless integration with the market's leading ERP, CRM and Finance systems including SAP, Oracle, Coda, Infor (Anael, Baan, Smartstream, Sun Systems, etc.), JDEdwards, Microsoft Dynamics, PeopleSoft, Sage, etc.

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## About AIIM

AIIM ([www.aiim.org](http://www.aiim.org)) is the community that provides education, research, and best practices to help organisations find, control and optimise their information. For more than 60 years, AIIM has been the leading non-profit organisation focused on helping users to understand the challenges associated with managing documents, content, records and business processes. Today, AIIM is international in scope, independent and implementation-focused, acting as the intermediary between ECM users, vendors, and the channel.

## About AIIM research

AIIM survey results are based on responses from individual members of the AIIM community surveyed using a Web-based tool. Invitations to take the survey are sent via email to a selection of AIIM's 70,000 registered individuals. Respondents are predominantly from North America and Europe and cover a representative spread of industry and government sectors, and business sizes greater than 10 employees.

## About the author

Doug Miles is Director of the AIIM Market Intelligence Division. An early pioneer of document management systems, Doug has been involved in their evolution from technical solution to enterprise infrastructure platform. Doug has produced a series of AIIM survey reports and white papers on user issues and drivers for ECM, Records Management, Capture, SharePoint and Enterprise 2.0.

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