

Intelligent Information

Improving the customer experience

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As the non-profit association dedicated to nurturing, growing and supporting the user and supplier communities of ECM (Enterprise Content Management) and Social Business Systems, AIIM is proud to provide this research at no charge. In this way the entire community can take full advantage of the education thought-leadership and direction provided by our work. Our objective is to present the “wisdom of the crowds” based on our 80,000-strong community.

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Process used and survey demographics

The survey results quoted in this report are taken from a survey carried out between 07 June 2013 and 04 July 2013, with 293 responses from individual members of the AIIM community surveyed using a Web-based tool. Invitations to take the survey were sent via email to a selection of AIIM’s 80,000 registered individuals. 77% of the respondents are from North America and 13% from Europe. They cover a representative spread of industry and government sectors. Results from organizations of less than 10 employees have not been included, bringing the total respondents to 266.

About AIIM

AIIM has been an advocate and supporter of information professionals for 70 years. The association mission is to ensure that information professionals understand the current and future challenges of managing information assets in an era of social, mobile, cloud and big data. AIIM builds on a strong heritage of research and member service. Today, AIIM is a global, non-profit organization that provides independent research, education and certification programs to information professionals. AIIM represents the entire information management community: practitioners, technology suppliers, integrators and consultants. AIIM runs a series of training programs, including the ECM Master course: www.aiim.org/training/ECM-Enterprise-Content-Management-Course

About the author

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Introduction

A recent consumer magazine survey showed that over 25% of the general public has had cause for complaint about their interactions with a product or service provider in the last year, and 64% would be put off switching their business to a company that had a poor reputation for customer service. “How satisfied are you with the service you received?” is no longer the key question for customer satisfaction measures. “How easy was the company to deal with?” and “How well did they understand your needs?” provide much better indicators. Knowing your customer and interacting with them smoothly, consistently and promptly is the best recipe for acquiring, and most of all, retaining your customer in today’s world.

Of course, this requires an integrated approach between front-office and back office processes, and no organization has an unlimited staffing budget in either of these areas. The first productivity revolution in back-office processes has been the concept of “straight-through” transactional processing, establishing an electronic workflow starting with digitalization and data capture. However, knowledge workers increasingly spend their time dealing with exceptions that don’t have a fixed workflow, or a defined outcome, or require more specific interaction with the customer. Plenty of business processes do not even have a basic set of rules that can be automated. To achieve the next level of productivity we need a more intelligent application of automation, using the technology to learn as much as possible about the customer and the nature of their interactions with the business. We can then automate things like multi-source capture, transaction matching, exception analysis, portfolio assessment, and sentiment analysis. In this way, when the knowledge worker does become involved, whether they are front-desk, back-office, case-management, or sales staff, they can much more quickly assess priorities and set actions.

With our modern technology, we are able to know our customers much better, individually as well as collectively. However, in order to do so we must have the ability to gather together all of the information that we have that relates to the customer, all of their letters and correspondence with us, all of their emails or faxes, text messages and voice calls - and even what they may have been saying about us on social networks. We may need details from our other systems about delivery issues or the customer’s spend trends, and we may also need local information relating to the customer’s new address or changes in their business.

The challenge for our information management systems is to pull together this information, without needing multiple sign-ons, or complicated searches, or manual ad-hoc processing, and to respond to the customer request quickly and accurately - whether that process involves the service center, or the back office, or both.

Key Findings

Business Drivers:

- **As a factor for future business success, improving customer experience is considered more important than transactional refinements.** Accurate, consistent and compliant communication is highlighted as the most important factor.
- **Meeting increased customer expectations for faster responses across multiple channels of unstructured input is a major business pain point.** And all this has to be achieved whilst cutting costs.
- **The biggest disruptions to smooth flowing processes are incomplete documentation from the customer and exceptions to the standard workflow.** Customers are also prone to use different communications channels for the same case, and/or send repeated communications on the same topic.

Inbound Channels:

- **Most organizations receive inbound communications over at least 4 channels (plus telephone) with multiple content types per channel.** Emails, PDFs and scanned documents are now more prevalent than paper documents. Web forms are significant for 52% and faxes are still relevant for 46%. Social media is growing as a key input source.
- **Inbound channels are mostly not integrated between paper and electronic content, nor between different departments.** In 26% of organizations, inbound content is likely to be fed to entirely manual processes. Only 23% handle structured forms automatically.
- **The majority feel their speed of response to customers could generally be improved overall, and 30% feel their speed of response on paper documents, forms and faxes is “too slow” or “much too slow” (12%).** Handwritten correspondence is the most challenging. Response to emails and web forms is generally better, although could be improved, as could Facebook and Twitter response.

- A third of respondents have a big challenge when it comes to coordinating a consistent response across multiple channels for the same inquiry thread, and for a further third it involves a considerable amount of manual information swapping. Only 7% consider that their customer-facing staff have ready access to all customer communications.
- SMS texts, social messages and handwritten correspondence are often dealt with in a chaotic or ad hoc manner (55%) although 33% admit that even documents and forms are not handled in a pre-determined way. Web forms are the most likely to be handled through an automated process (55%).

Automated Processes:

- 50% of respondents have no integration between their systems. CRM and ERP are the likely first candidates for integration, especially in larger organizations, but only 11% have customer, transactional and content systems fully connected.
- Just under half of respondents (44%) are not using any recognition for routing, processing or archiving. 37% are using it for routing and processing, with fairly broad take up across invoices, forms, PDFs and electronic documents.
- Two thirds are not attempting any form of auto-classification for routing or indexing. Of those that are, most are using barcodes or basic rules-based classification. The adoption of advanced classification techniques is still in its infancy.
- Citizen-related government processes are the least likely to be automated, followed by insurance claims and health records. HR and finance processes are the most likely.

Intelligent Processes:

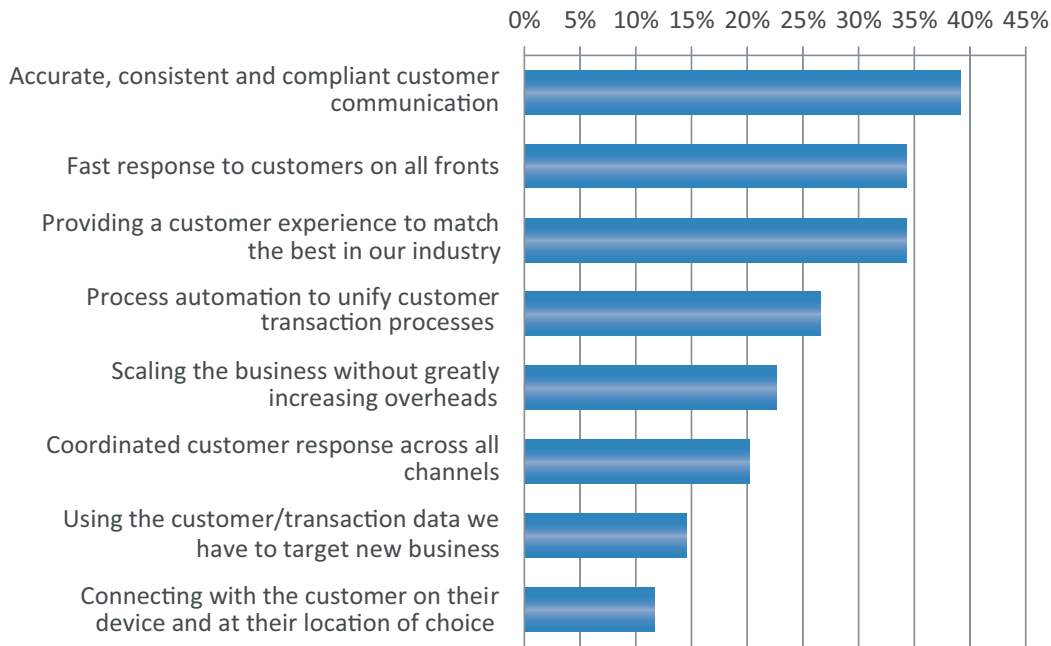
- 55% of our respondents felt that it would be very useful to dynamically update standard workflows based on experience, or to leverage past case characteristics and exception outcomes. Only 12% feel they already have this kind of knowledge-assisted system.
- User concern revolves around processes that are considered “too variable” (28%) or even a perception that it might damage their reputation for personalized customer interaction (15%), but for 11%, existing systems are simply too old or too basic.

Business Drivers

The customer has always been king, but on-line reviews and social media exchanges have produced a situation where few businesses can afford to ignore customer opinion, and customer experience management has come to be recognized as one of the major elements for business success. No matter if the customer interface is a huge dedicated service-center, or a single salesperson answering the phone, the customer will take away a view of the business that is based on how well that person dealt with their call – and that is likely to reflect the accuracy and completeness of the IT data available to them. Add to this a likely overlay of web forms, emails, web chat, and so on, and we can see why accurate, consistent and compliant response to customer communication is a major challenge for most businesses.

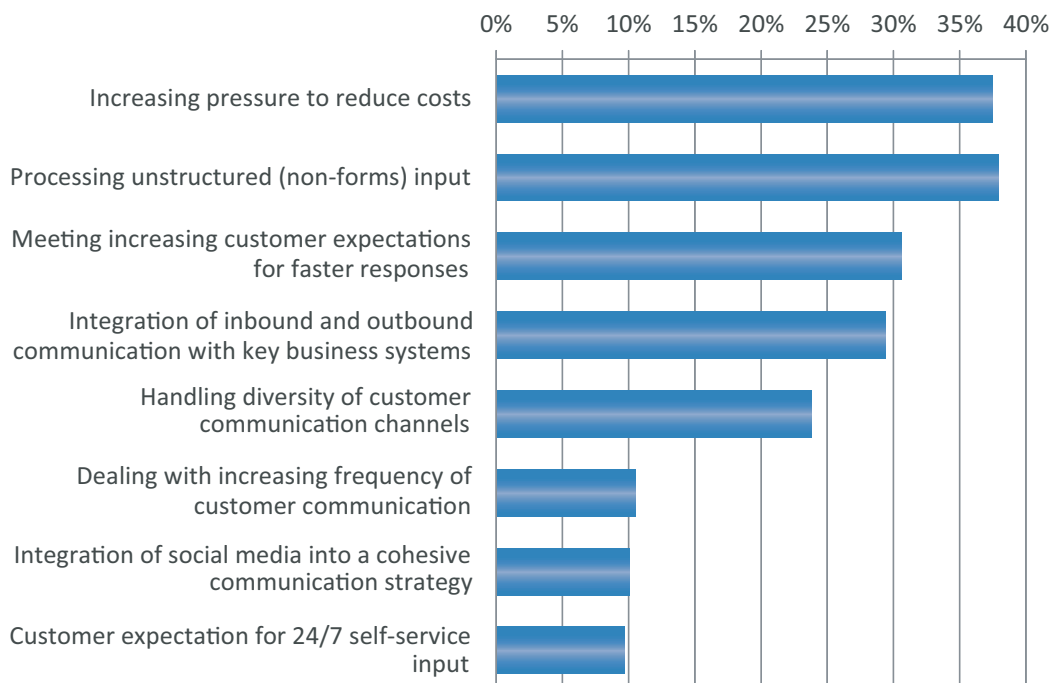
Transactional improvements such as better process automation to speed up processes and reduce costs are also considered important, but a coordinated and consistent customer experience is seen as a major competitive factor.

Figure 1: Which of two of the following would you consider to be the most important factors for the future success of your business? (N=248)



Looking from the other direction (Figure 2), the pain points facing the organizations in our survey can best be summed up by: “meeting increasing customer expectations for fast response across multi-channel communications, which frequently involve unstructured input, whilst facing increased pressure to reduce costs.”

Figure 2: Which of the following do you feel are the biggest pain points to your business? (Max TWO) (N=248)



When it comes to disruptions to the smooth flow of business processes, a picture emerges of what appear to be relatively minor issues that can de-rail many conventional process workflows. Incomplete documentation from the customer, different communications channels for the same case and repetitive communications on the same topic increase the complexity of the workflow and have to be manually handled, increasing costs, creating potential discontinuities, and risking customer dissatisfaction.

Figure 3 also lists other issues such as constant changes in regulations, handling peaks, and the extended consultation loops that are characteristic of many case-based situations. It is also likely in some overloaded processes, especially between government and citizen, that dealing with inquiries about the progress of a claim or approval actually becomes the process, rather than clearing the backlog.

Figure 3: What are the three biggest disruptions to the smooth flowing of your processes? (N=246)



Input Channels and Types

The days when your personal workload arrived in the mail tray are gone, and the same is largely true of organizations as a whole. Only 60% would rate documents or forms on paper as a significant communications channel for their customers. Basic emails, and attachments in PDF, office document or scanned formats are more prevalent – although not necessarily greater in number. Then we have web forms, faxes, text messages and social media, not forgetting hand written correspondence that is still significant for 35% of organizations – and as we will see later, creates more than its fair share of difficulties.

Figure 4: Which of the following channels do your customers use to communicate with you? (Check all that are significant) (N=263)

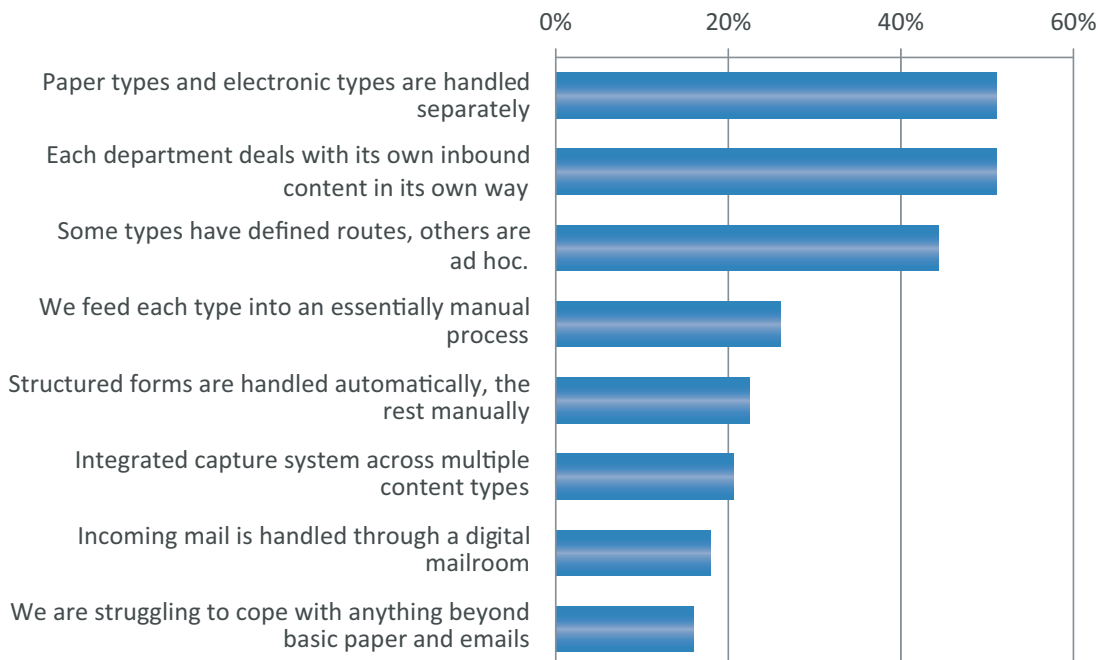


When it comes to the handling of these inbound content types, we begin to see the result of “bolting-on” extensions to standard handling procedures in order to cope with new electronic communications channels and different media types.

In half of organizations, paper and electronic types are handled separately, and further fragmentation arises as each department is likely to deal with inbound communications in its own way, rather than integrating through mechanisms like digital mailrooms and automated routing.

Even within departments, some inbound types are handled in an ad hoc way, and there will be a mix of automated and manual handling. 26% feed all types into essentially manual processes, and 16% admit that they are struggling to cope with anything beyond basic paper and emails.

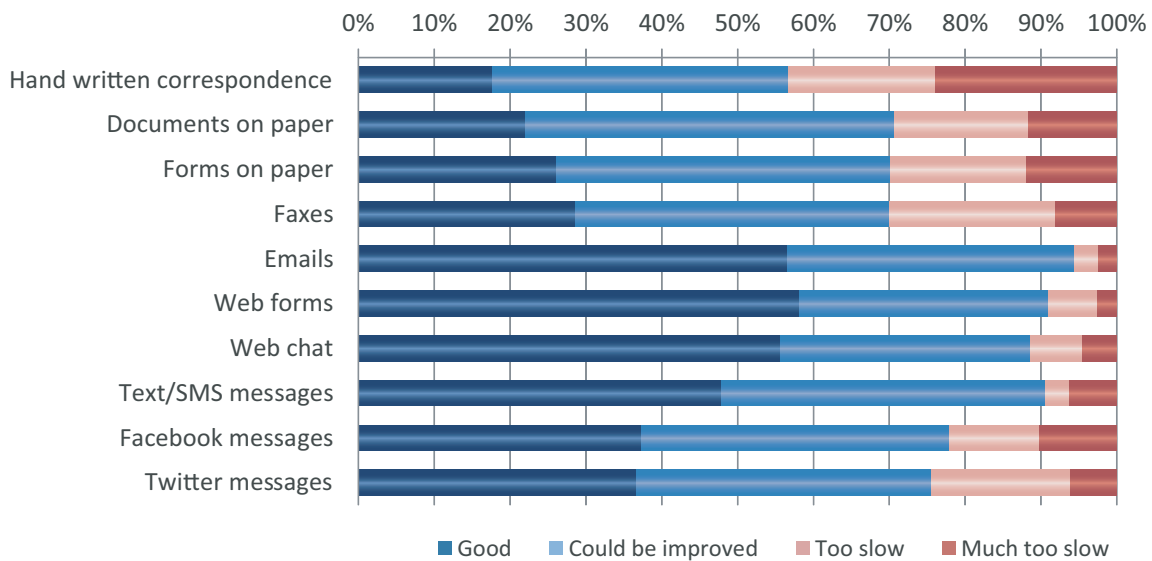
Figure 5: In general, how do you deal with these inbound content types? (Check all that apply)? (N=263)



One effect of these non-integrated, manual and ad hoc processes is that response time to the customer slows down. In particular, paper-based processes that rely on physical distribution are prone to delays (and also document losses). In a recent AIIM survey¹ scanning and capturing paper documents as early in the process as possible was deemed to provide an average of over 4-times improvement in speed of response to customers.

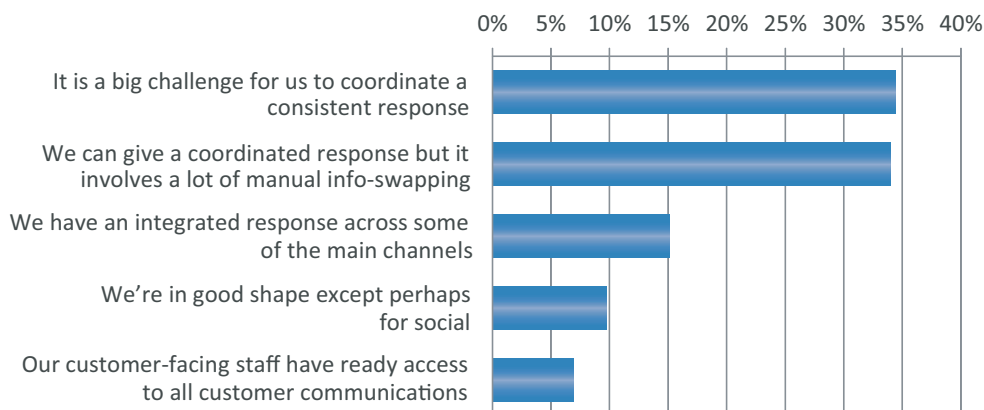
It comes as no surprise, therefore, that most respondents feel there is room for improvement across their handling of paper documents, forms and faxes, with 30% feeling it is “too slow” or “much too slow” (12%). Handwritten correspondence takes the longest to be dealt with – 44% “too slow” or “much too slow”. Response to emails and web forms seems to be much better, but this falls off again for social messages (for those where it is relevant).

Figure 6: How would you rate the speed of response from your organization when customers use the following channels? (N=260)



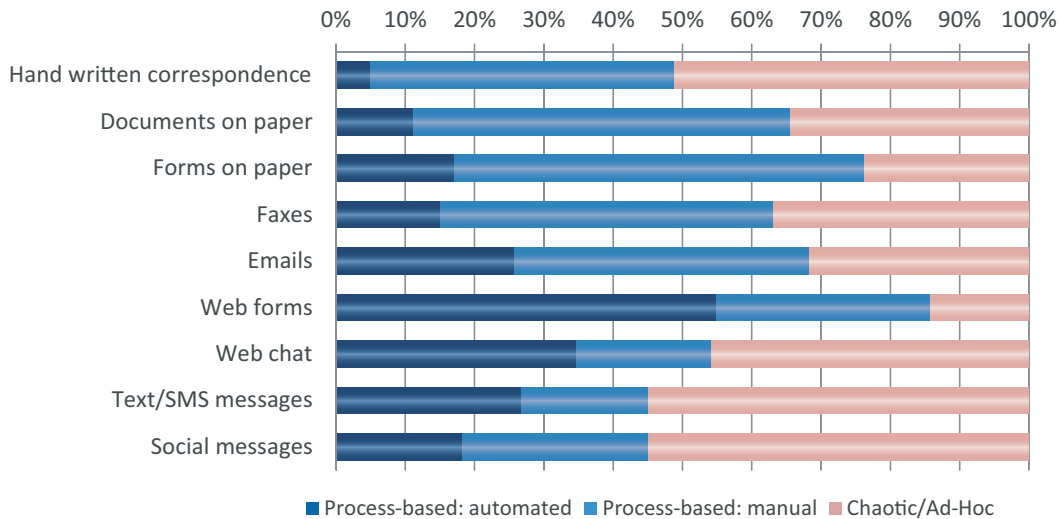
We highlighted an issue earlier where customers start an inquiry thread on one channel, and then continue on another, perhaps leaving voice messages or sending emails to follow up a document sent in the mail. Providing customer-facing staff with a complete and up-to-date report of all customer communications can be difficult, and coordinating a consistent response even more so. In all, a third of our respondents feel that such a response is a challenge, and a further third feel they can give a coordinated response but it involves a considerable amount of manual information swapping – a time consuming and error-prone practice.

Figure 7: How well aligned is your response when customers utilize multiple input channels as part of the same enquiry thread? (N=259)



Looking beyond this to how well managed incoming communications channels are as a whole, we can see in Figure 8 that web forms, and to a lesser extent emails, are likely to have automated processes, whereas paper documents and faxes are mostly manual or ad hoc. Social, text and web chat present the biggest challenges and are mostly considered ad hoc or even chaotic, with no set process in place for about half of respondents. Hand written correspondence also seems to be handled manually, and in a somewhat ad hoc way. We can accept that it may be the least able to be automated, but it is surprising that in 50% of organizations, there is no defined process in place.

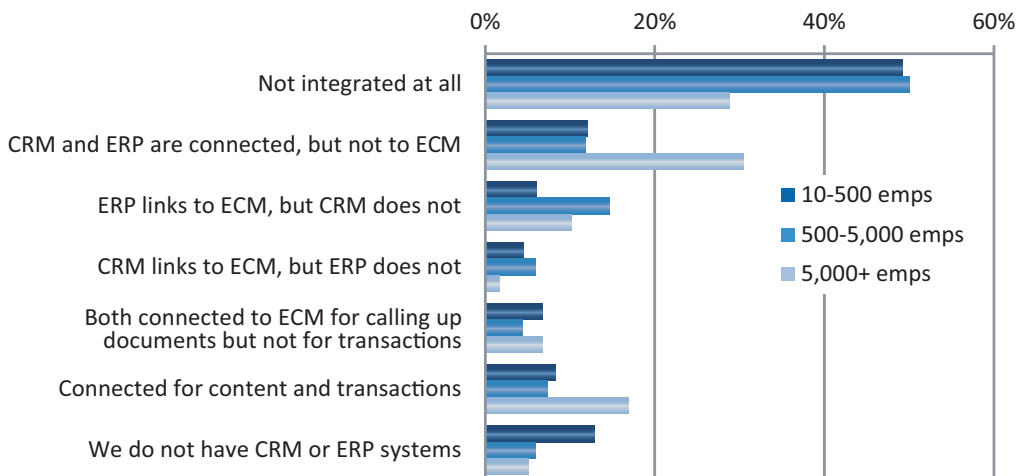
Figure 8: Looking across your incoming customer communications channels, how well would you say each one is managed? (N=255, normalized for "N/A")



Automated Processes

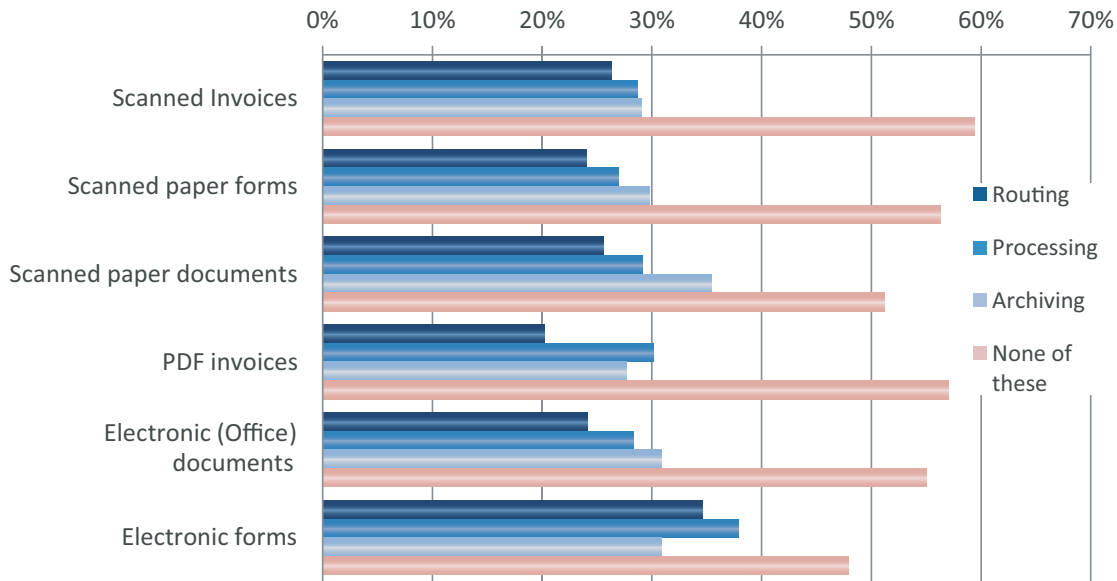
To provide a single, seamless view of the customer, key systems such as CRM (or customer support desk), ERP (or line-of-business) and ECM (or document management) systems need to be integrated, and linked. 49% of our respondents have no integration between any of these systems, although this drops to 29% for large organizations – probably reflecting Oracle or SAP integrations of CRM and ERP. By also connecting to ECM, customer-related documents can be called up from within the transactional system, and if the integration is two-way, transactions, customer service interactions and related documents can be viewed on a single screen.

Figure 9: How well integrated are your CRM (Customer Support Desk), ERP (Line-of-Business) and ECM (document management) systems? (N=235)



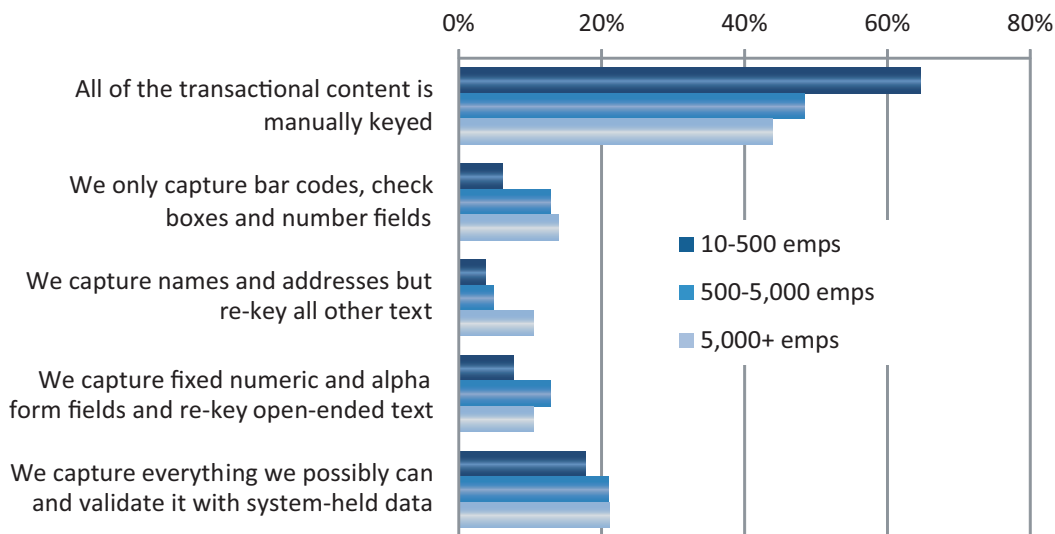
The first step in automating processes for document input, whether electronic or paper, is to capture data using recognition – although this can range from simple bar codes through to full text. The data collected can then be used for routing, processing, or simply for archive indexing. 56% of the survey respondents are using data recognition at some point in their processes. The priorities vary, with data most likely to be captured from forms and PDF invoices for use in the process, whereas scanned documents are more likely to be automatically indexed for archive.

Figure 10: Do you use data recognition for routing, processing and archiving of the following? (N=260)



In many cases, scanned or PDF versions of forms and invoices are circulated as part of an electronic workflow, but most of the content of the form or document is manually keyed into the transactional system. In our survey, 56% are manually keying all transactional content – rising to 65% of the smallest organizations. Over and above bar codes, check boxes and number fields, 6% capture names and addresses, 10% capture fixed numeric and alpha form fields, and 19% capture everything they possibly can, including open-ended text. An essential part of the capture process is wherever possible to validate the data with data from the transactional system. This highlights the importance of system integration mentioned earlier, although offline batch files can be used for validation, especially in outsourced processing.

Figure 11: How would you describe the amount of data-keying carried out for incoming forms, etc.? (N=249)

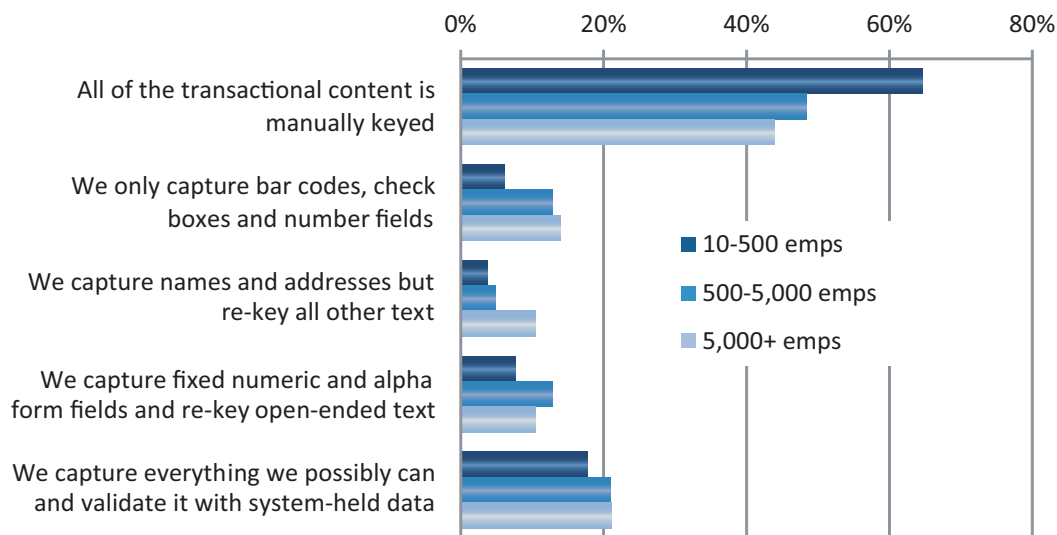


Auto-Classification

A first level of intelligent application is to use information from within the document, and/or from its associated metadata, to route the document to the appropriate process, or to index it into the archiving system. Obviously, automated routing is only valid for electronic processes, so the 26% of organizations still restricted to paper records will be unable to make any use of this. A further 31% use manual classification feeding into a mix of content stores and process systems, and 19% have defined ECM or BPM systems, but still rely on manual classification. We could add to this a further 10% who are simply using barcodes or readily identifiable customer IDs for classification purposes.

So, only 14% are using any level of sophistication to recognize textual content, and using the results to decide how to index and/or route an incoming document, with just 3% using learning-based or adaptive techniques. Larger organizations are no more likely to be using rules-based or adaptive techniques than mid-sized or smaller ones.

Figure 12: Do you use automated classification on incoming content for routing and indexing? (N=242)



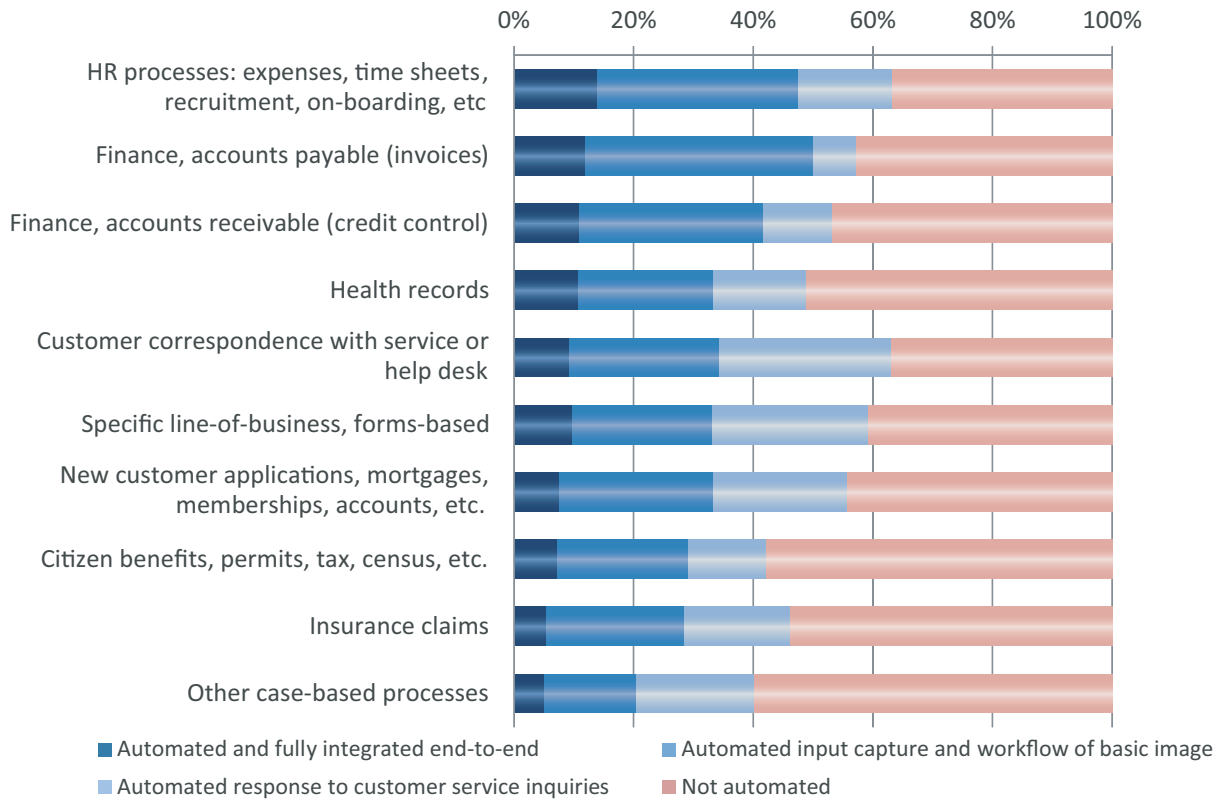
Process Automation

When it comes to automating the process itself, various HR processes such as expenses and time-sheets are the most likely to be fully automated. Although even then, this is only true for 12% of organizations, with a further 30% using automated capture and workflow of the basic image file. Next comes the popular accounts payable process, but again, most (34%) are merely circulating image files, compared to the 11% who are actually recognizing invoice content and matching it against transactional data.

When it comes to the more customer-facing processes, an additional potential for automation is that of an automated response to indicate that an inquiry or document has been received and is in process. This can still be followed up with further recognition and textual analysis, but the number doing this kind of fully integrated end-to-end processing falls below 10% (of those for which it is applicable).

The least likely processes to be automated in any way are government processes related to citizens, and, surprisingly, insurance claims - despite this kind of case-based process being a poster-child for case management and in particular, adaptive case management systems.

Figure 13: What level of automation have you achieved across the following processes?
(N=238, normalized for "N/A")

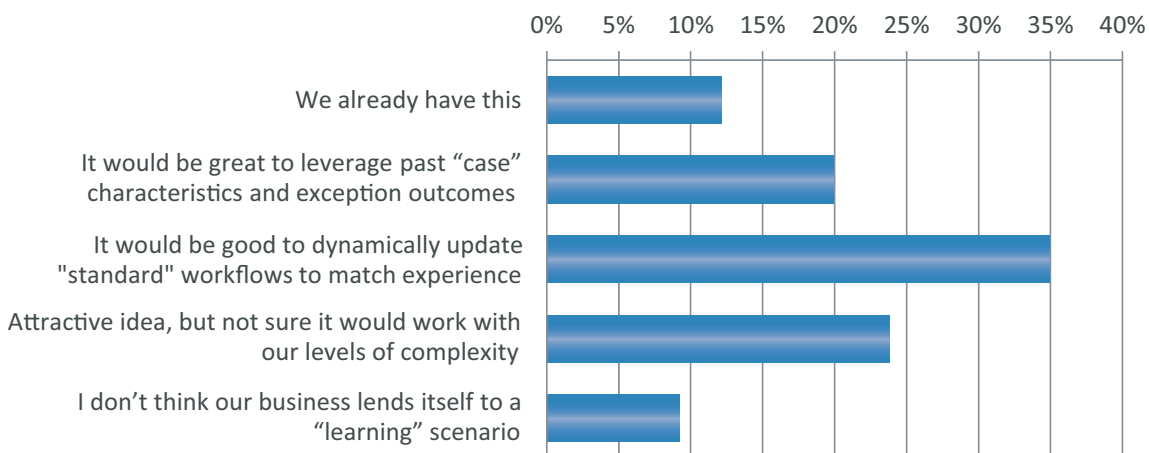


Intelligent/Analytic Processes

We outlined in the introduction that applying the full capability of modern multi-core computers and the latest techniques in knowledge-based content analytics across inbound customer communications and existing customer history could greatly enhance our knowledge of the customer. Inquiries could be automatically routed and the process pre-populated in advance of any involvement of the customer agent, process worker or case worker. Once in process, adaptive or learning-based techniques would dynamically update workflows based on past experience and specific characteristics of the customer.

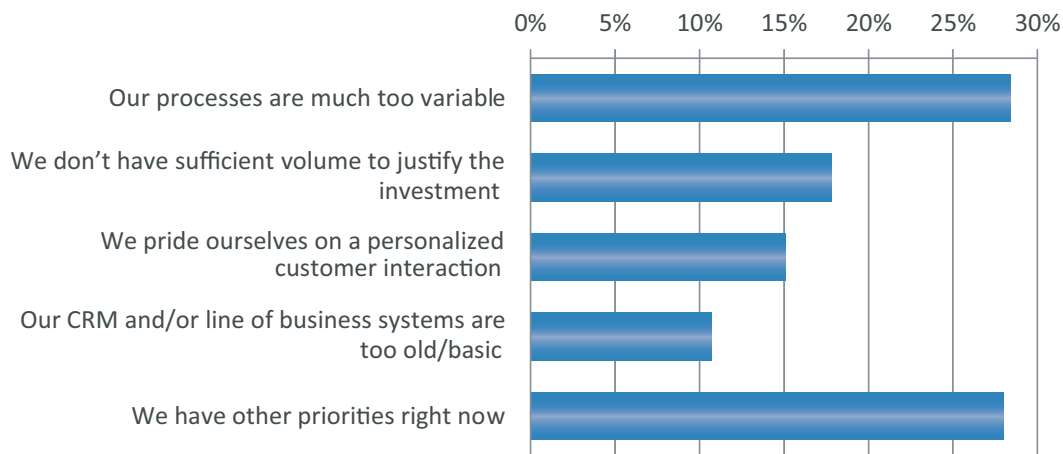
When we asked respondents how useful they felt such capabilities would be, over half (55%) felt that they could make good use of them. 12% felt that they already had these kinds of capability within their existing case-handling or customer-desk processes – although they may be referring to the simple application of a set of conditional or branching questions used by many support desks.

Figure 14: How useful would self-learning or knowledge-assisted workflows be in your enquiry handling processes? (N=237)



The remaining 33% felt that the levels of complexity in their business did not match the idea of a self-learning process, or at the other end of the spectrum, the very repetitive nature of their processes meant there was little point in doing so. When we delved a little further across all respondents as to what difficulties they might find in applying these techniques, too much variability of process was the biggest reason – and some respondents felt that it could impersonalize the level of customer interaction. Beyond that, having sufficient volume to justify the investment is a concern. For 11% of respondents, their current systems are too old or too basic to allow such techniques to be overlaid.

Figure 15: Is there a particular aspect of your business that you feel would make knowledge-assisted workflows difficult? (N=237)



Conclusion and Recommendations

We have seen that improving the customer experience is critical to the business success and competitive status of most organizations, and that they have little choice but to accommodate the multitude of channels and content types that the modern customer might choose to use for communications. We have seen that particular difficulties arise when customers “hop channels” during the same exchange, or raise the same enquiry on different channels at the same time. Dealing with these situations in a coordinated and efficient manner presents a major challenge for most organizations surveyed. Utilizing the same process paths for different inbound mechanisms seems to be a problem for most, and in particular, ensuring that all customer-facing staff have complete and up-to-date details of the latest customer interactions - a fundamental element of the customer experience.

When it comes to process automation, there is a very broad spectrum of adoption. Around half have taken at least the first step which is to remove paper from the process, but most then merely use the image of the paper document as an attachment to the workflow, rather than using text recognition to drive routing and indexing, and even more importantly, to populate the process with data from the document or form. To achieve this level of automation requires a degree of integration between transactional systems (systems of record) and content systems (systems of engagement) to provide validation and coordinated workflow.

Once electronic workflows are established, constant exceptions and disruptions are a big issue. The majority of those surveyed can see the potential benefit of applying intelligent analytics to inbound communications. We can then determine what any given piece of communication is about, what characteristics we already know about the customer, what we have learnt from previous experiences, and, therefore, how to best present or adapt the workflow for the case-worker or customer agent dealing with the inquiry or process. Once all communications channels are integrated, and transactional, customer and content systems are interconnected, it is quite feasible to apply these techniques to enhance productivity, but more importantly to improve customer experience.

Recommendations

- If customer documents reside on paper they will not be quickly accessible, and if processes are still paper-driven, progress cannot easily be reported back to the customer, nor monitored for hold-ups and delays. Convert all items to electronic as early as possible in the process.
- Evaluate your inbound communications channels from customers or citizens. Are there some electronic, web or social channels that you should be opening up to match customer expectations?
- If you are already using these channels, how coordinated is your approach? Do you have an integrated capture process that integrates all communications channels? Do you apply the same processes irrespective of the channel or content type?
- Do you monitor procedures and response times across all of these channels? Are any out of step? Could all be improved?
- Do all of your customer-facing staff have full and up-to-date access to all of a customer's communications, and their recent transactions? Customer frustration quickly arises if they feel you are not up-to-date with all of their correspondence.
- Investigate how modern data-extraction technology could be saving you re-keying costs and reducing errors. Try out the latest solutions using your own documents and forms.
- Consider how intelligent or rules-based data extraction could pre-populate metadata, driving routing and auto-indexing content.
- Look further to see where linking transactional customer data and text analytics could pre-condition responses and workflows.
- Evaluate your case-management processes and support systems to ensure that they are flexible and adaptive.
- Above all, take a view on how difficult your organization is for customers to interact with. How much effort do you expect from them? How many process discontinuities do you expect them to forgive? What do they say about you on social media? What is the customer experience?

References

1. AIIM Industry Watch "Winning the Paper Wars - capture the content and mobilize the process troops," July 2013, www.aiim.org/research

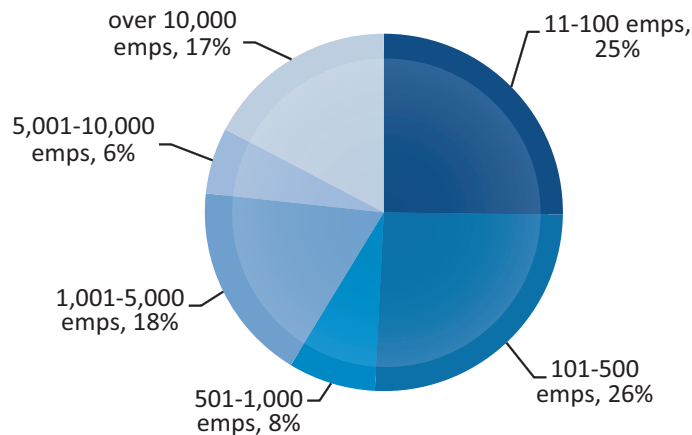
Appendix 1: Survey Demographics

Survey Background

The survey was taken by 293 individual members of the AIIM community between 07 June and 04 July 2013, using a web-based tool. Invitations to take the survey were sent via email to a selection of the 80,000 AIIM community members

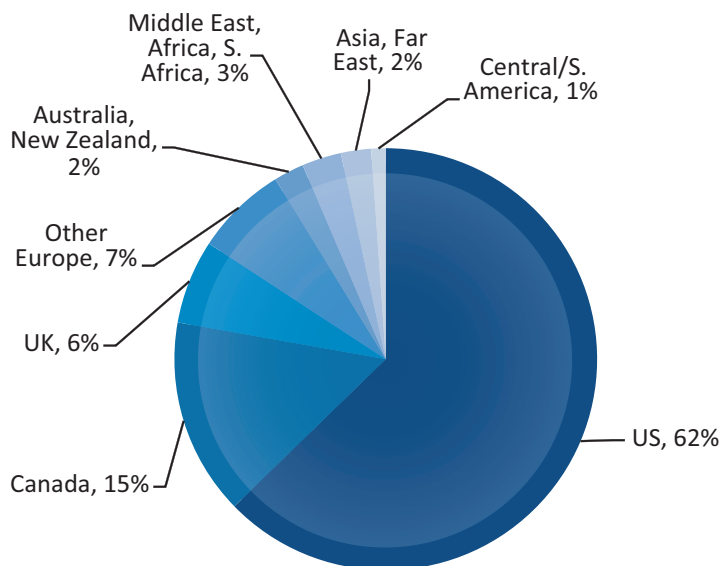
Organizational Size

Organizations with less than 11 employees are excluded from all of the results in this report. On this basis, larger organizations (over 5,000 employees) represent 23%, with mid-sized organizations (500 to 5,000 employees) at 26%. Small-to-mid sized organizations (10 to 500 employees) are 51%.



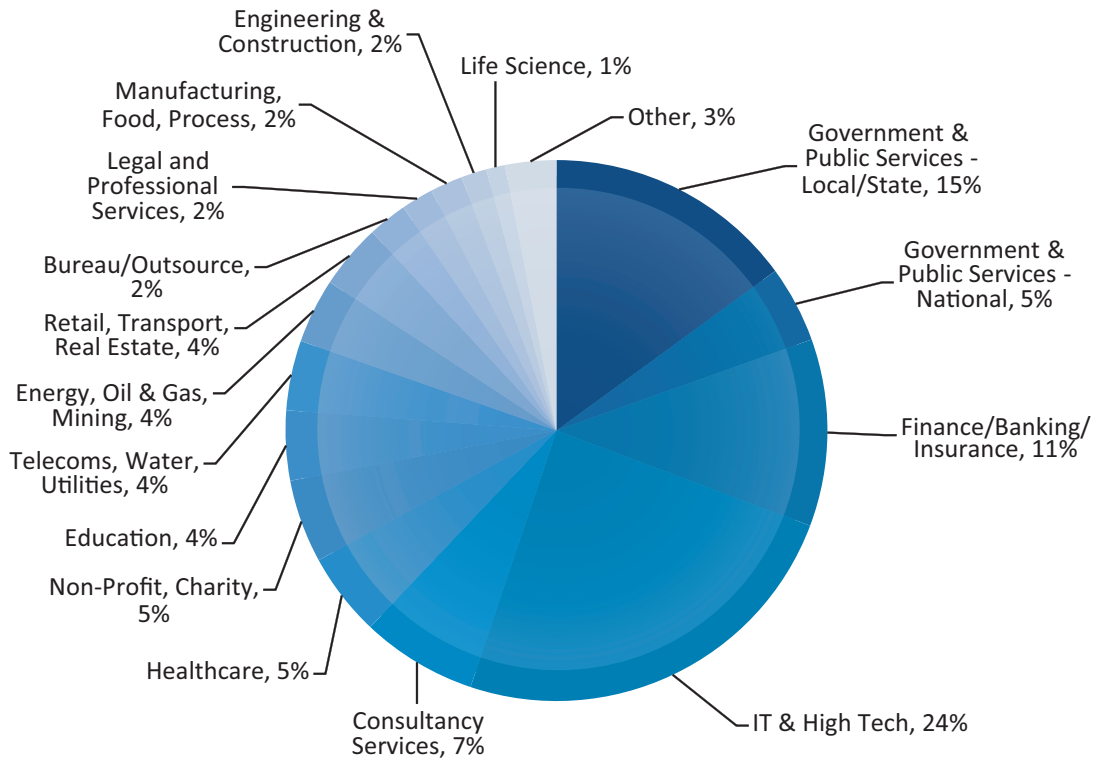
Geography

The survey was international, with US and Canada making up 79% of respondents, and 13% from Europe. We found only minor differences between US and European responses.



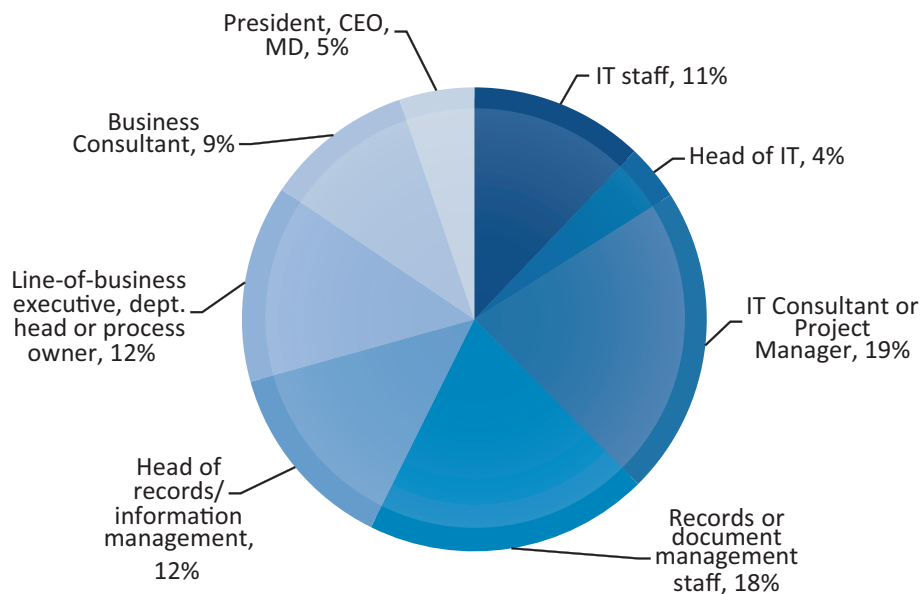
Industry Sector

Local government and public services represent 15% and national government 5%. Finance, banking and insurance represent 11%, IT and High Tech. The remaining sectors are evenly split.



Job Roles

34% of respondents are from IT, 30% have a records management or information management role and 26% are Line-of-Business managers.



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Kodak Alaris Document Imaging Solutions enable customers to capture and consolidate data from digital and paper sources, automatically understand and extract valuable insight from the contents, and deliver the right information to the right people at the right time.

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About AIIM

AIIM (www.aiim.org) is the global community of information professionals. We provide the education, research and certification that information professionals need to manage and share information assets in an era of mobile, social, cloud and big data

Founded in 1943, AIIM builds on a strong heritage of research and member service. Today, AIIM is a global, non-profit organization that provides independent research, education and certification programs to information professionals. AIIM represents the entire information management community, with programs and content for practitioners, technology suppliers, integrators and consultants.

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