>> **White paper**

Easing the document processing bottleneck

July 2011

Automating document processing has far-reaching implications for overall business efficiency

computing

Contents

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Executive summary

Most organisations already employ digitisation systems for the purpose of processing and storing information in multiple electronic file formats which are then accessible by a wide range of software applications. But few have yet implemented formal procedures and technologies for controlling the process, with systems to centralise document scanning, capture, data classification and distribution, remaining the exception rather than the norm.

Based on a *Computing* survey of almost 200 ICT and finance managers this white paper provides a detailed snapshot of how businesses capture and manage both paper-based and electronic information coming into their organisation, and identifies whether certain types of data and document formats are easier to process than others.

It also looks at the problems that inefficient document management systems can create for employees and business partners by causing data processing delays or obscuring mission-critical information, and examines the drivers behind any appetite for document management system upgrades or implementation within individual companies.

The document mountain: as broad as it is high

The range of documents that finance departments deal with is broad, with invoices, purchase orders and expenses forms being regularly processed in the majority of cases, followed by cheques, tax forms, contracts and other types of non-specified remittances (Fig. 1). Others included SAP reports, timesheets, BACS/Swift payments, credit card reports and wage slips.

Fig. 1: "What type of documents are you dealing with most of the time?"
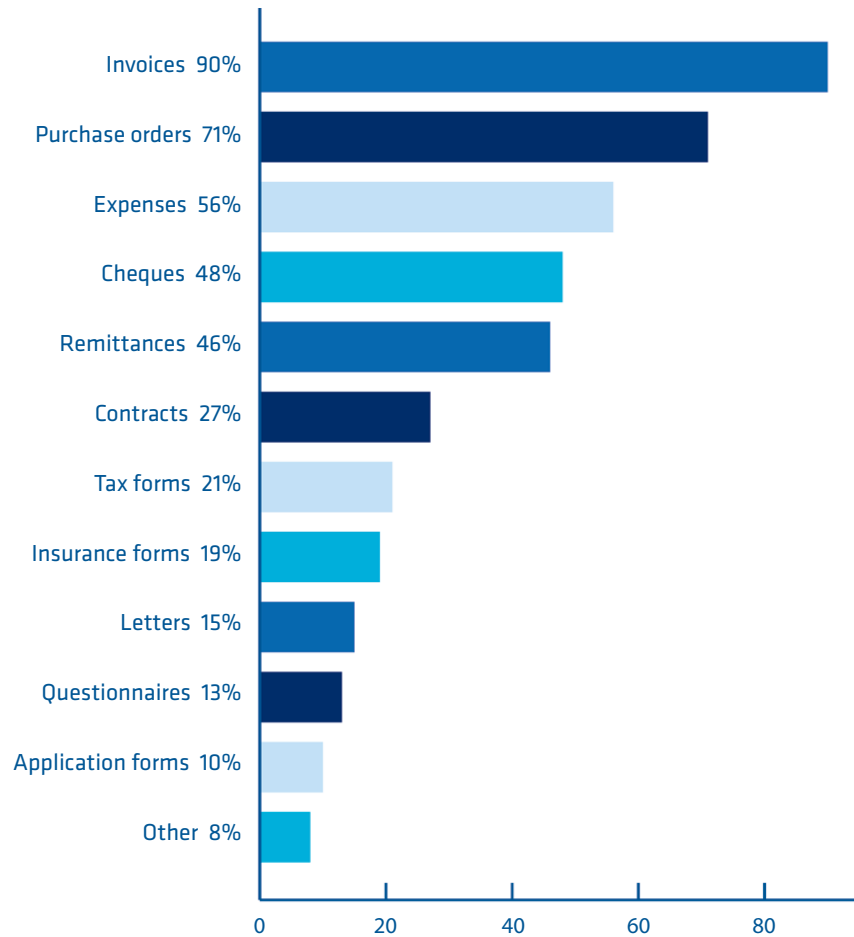
*Respondents could select more than one answer

In most cases, these documents are received in paper rather than electronic format: over 70 percent for over half of the survey base (Fig. 2). The volume of both paper and electronic documents processed is also considerable, with 59 percent of finance departments dealing with between 1,000 and 5,000 pieces a month, and 23 percent between 5,000 and 10,000.

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Fig. 2 : "What is the approximate proportion of documents received in paper format?"


30 percent or less (15%)

40 percent (13%)

50 percent (10%)

60 percent (11%)

70 percent or more (51%)
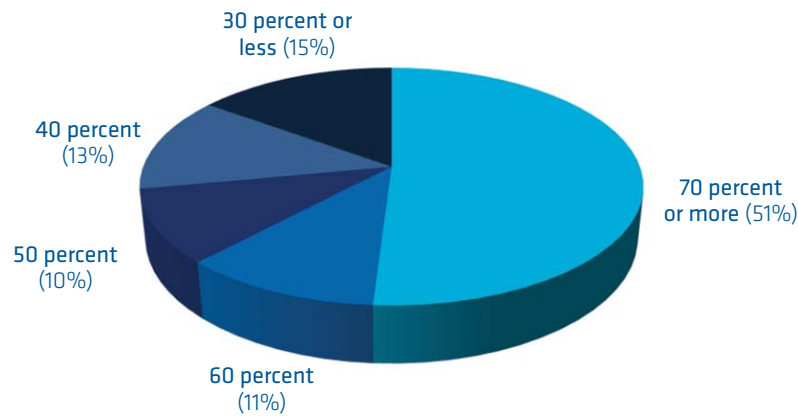
Software is available that can help to digitise paper documents and get them into a document management system, speeding up processing and increasing access throughout the organisation. However, of the ICT managers polled by *Computing*, 40 percent said their organisation had no formal policy in place for converting paper documents into digital form for either archiving, storage or further processing, although they did 'generally' digitise documents, by scanning or manual inputting for example. Fifteen percent said they did not generally digitise paper documents coming into the organisation at all.

ICT managers reported that they were under pressure from business management to process purchase orders particularly quickly, on the same day for 32 percent and the same week for 39 percent. Invoices also required a same-day turnaround in 27 percent of cases, with application forms at 20 percent. Other types of document requiring a speedy turn around included letters, contracts and insurance forms (Fig. 3).

Fig. 3 : "In which timeframe does business management expect these documents to be addressed?"
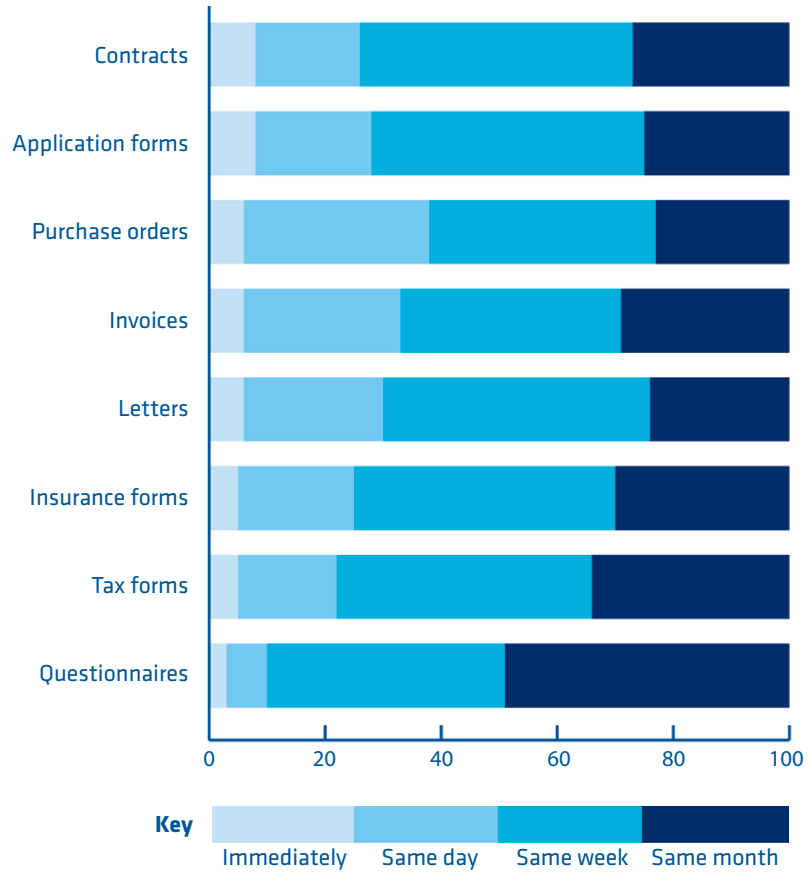
All organisations are under pressure to store growing volumes of data, not least because of the need to comply with legislation and industry rules – Sarbanes-Oxley, IFRS standards, the UK Data Protection Act (DPA) and the Payment Card Industry Data Security Standard (PCI DSS) are just a few examples – and to make sure that the information can be quickly retrieved and searched upon (e-discovery) should legal or corporate governance demands require it (Fig. 4).

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Fig. 4 : "Why does your organisation need to store documents?"

To speed up information/document access for our employees	**66%**
To meet compliance/e-discovery requirements	**65%**
To improve data retention and management policies	**62%**
To make document processing more efficient	**54%**
Other	**3%**
N/A - we don't need to store documents	**2%**

*Respondents could select more than one answer

Irrespective of regulatory impetus, IT and finance departments are looking to implement and manage efficient document/file storage systems which will improve their own employees' productivity and therefore the organisation's business efficiency by enabling workers to find and access the information they require on a daily basis.

Failing to properly extract, standardise and archive information in a central repository is a recipe for a disjointed business in which key data lies hidden away in disparate electronic files, or even on paper, making it very difficult for management to obtain an overall picture of performance. And it is not just the board that needs this information. Decisions made by department heads and customer-facing staff that are based on a partial view of the truth are likely to be flawed, effort is likely to be duplicated and customers adversely affected by errors and delays. However, this is the situation in too many organisations.

That employees currently spend time performing some form of manual document processing activity is highlighted by the 56 percent of respondents who said documents are scanned in by individuals, with three percent saying data is entered manually by typing it into a computer. Only 27 percent currently route those documents to a centralised department or an external organisation for the same.

Structured vs unstructured data

Information in documents can be categorised in three different areas: structured data as in application forms or questionnaires, semi-structured data such as invoices or purchase orders and unstructured data as found in individual customer requests or communications.

Structured data is organised in a framework so that it is easily identifiable. For example, a spreadsheet might have individual columns headed FirstName, LastName, PostCode, etc. If we want to find all customer postcodes in our records, we can do so quickly and easily by selecting and sorting one column of data. That said, fixed or structured forms, such as applications, can take significant amounts of time to process, and automation of the process can reap significant dividends. To take the example of a financial institution, the quicker it can process applications for mortgages, insurance policies and bank accounts, the sooner it can start bringing in new revenue.

However, the vast majority of information in business documents is unstructured, meaning that the time and effort expended in manually classifying, processing and storing it are considerable. Worse, such manual processes often result in errors and inconsistencies.

Many of the most important communications between a business and its suppliers and customers and within the business itself take place via emails and letters and other unstructured formats. These communications cannot simply be disregarded because it they are difficult to process. On the contrary, managing this unstructured information is crucial for any business, as much of it is vital in decision-making processes. Automating the classification of content on individual customer requests, for example, helps the firm to better understand customer requirements and speeds up delivery of the information to the department that can assist the client.

The types of file commonly processed by finance – Microsoft Word documents, PDFs and paper documents – contain data that is typically unstructured. Data embedded in electronic forms and spreadsheets may also be disorganised and difficult to process without further work.

It is clear that some types of documents are trickier for finance departments to handle than others, with questionnaires, application forms, contracts and letters being most likely to be processed late in many cases (Fig. 5). Although this may also reflect the priorities of the business rather than the difficulty of processing, these are all documents that are likely to be heavy on unstructured text.

Fig. 5 : "What percentage of these documents is processed on time by the finance department?"

Key
100%   75-100%   50-75%   <50%
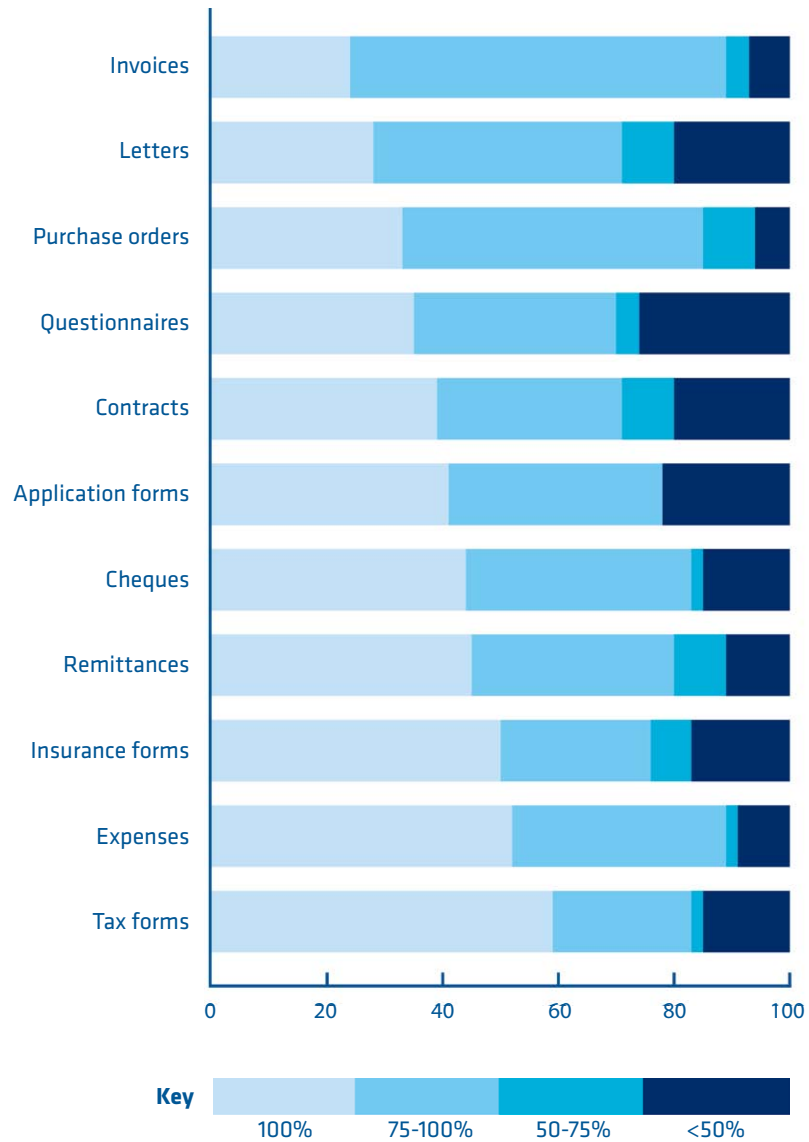
These results were mirrored by ICT managers asked to identify which type of document their organisation typically scans and stores in electronic file format, with invoices, contracts and letters topping the list, followed by purchase orders and application forms.

Although they did not indicate whether these were classed as unstructured data or not, the diversity of information being scanned, which also included questionnaires, insurance forms, tax forms, expense claims, health records, examination board reports, legal documents, receipts, technical reports and policing documents is further evidence of the complexities involved in making sure the correct data is accurately digitised in an easily accessible electronic format which current document management systems, databases and other software applications do not necessarily recognise automatically.

Processing unstructured data can be an arduous and lengthy process, and 21 percent of ICT managers stated that the time taken was very problematic for their organisation. Making a decision about what unstructured data to archive and what to delete also presented issues for large numbers of respondents, as did the cost in terms of man hours and IT resources in doing so (Fig 6).

Fig. 6 : "What scale of problems does processing unstructured data cause your organisation?"

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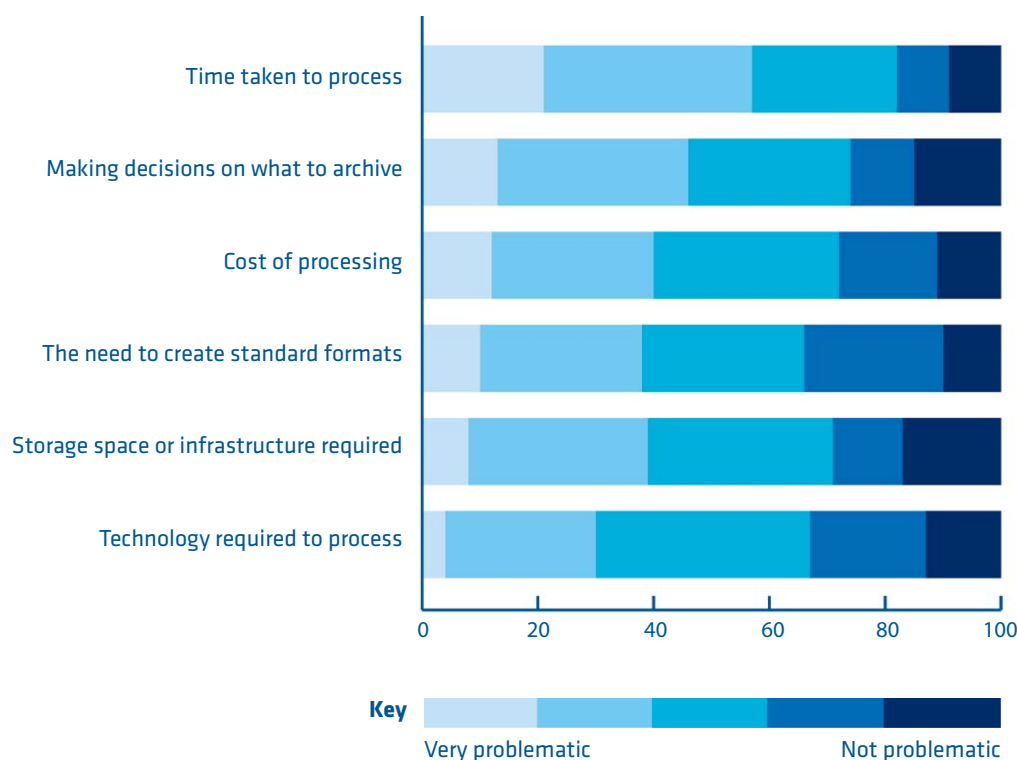
The fate of the information contained in those paper documents and forms once it has been extracted and digitised varies, with a majority of organisations storing electronic files in some form of document management system (64%), followed by accounting software (31%), customer resource management systems (CRM – 24%), database management systems (DBMS – 24%) and enterprise content management systems (ECM – 23%). Other specified repositories included networked file and folder shares, test management, policy management, expense and archiving systems.

The effects of slow document transfer on the business

Forty-two percent of those questioned said they interacted with external offices every day, with 20 percent doing so every week, highlighting the problems with transferring information in paper format. This onus on document transfer is further demonstrated with 67 percent of the survey saying they re-route invoices and other financial documents to an alternative centralised location for processing rather than ingesting them in-house at the point of first entry into the system, with 67 percent again saying they use couriers and postal services to facilitate that transfer, with all the associated costs that incurs. For these firms, having a data and document capture solution in place that can link regional offices could significantly reduce the time to process key documents.

Time is a crucial factor here, with slow manual document processing and data entry cited as a problem by 60 percent of finance departments, and with 31 percent saying that documents are not retrieved quickly and easily, and that delayed approvals as a result can upset suppliers. Early payment dates may also be missed. As we saw above (Fig. 6), invoices are not always processed on time in 76 percent of cases, which is clearly a major issue. For the largest organisations the resulting losses could be very substantial indeed. Other common problems with existing accounting systems include lost documents (27%) and a lack of visibility into the process and associated audit trail which in some cases can lead to poor financial judgement and inaccurate budgeting because not enough is known about the organisation's current cash obligations.

Nor do finance managers believe it is just supplier confidence which is dented by inefficient document processing: 34 percent also highlighted the risk of non-compliance caused by the lack of effective control in the management process (Fig. 7).

Fig. 7 : Inefficient document processing has knock on effects on the rest of the business

Supplier confidence diminishes and goods are not delivered, affecting day-to-day business activities	34%
Non-compliance and lack of control carries a significant business risk	34%
CFOs have little visibility into an organisations cash obligations causing poor financial judgement / budgeting	25%
Accounts payable becomes a cost centre (lost early payment discounts / late payment penalties)	23%
Other	5%
No effect	36%

*Respondents could select more than one answer

A desire for improvement

The vast majority of finance department respondents said they have plans to improve their financial processes, primarily in order to trim their operational costs (50%) and increase business efficiency (75%).

Twenty-two percent plan to implement a new document management system in the next 18 months, with 35 percent of these predicting they would spend over £100,000 on a new system, 19 percent between £20,000 and £100,000 and 12 percent between £10,000 and £20,000.

These figures are significant, but in many cases such a major overhaul will not be necessary, especially as 64 percent of ICT managers already report storing electronic files and scanned paper documents in a document management system of some sort. For these organisations a data and document capture solution may be more appropriate. Data capture and document processing software provides a single entry point to extract, transform and classify information – both structured and unstructured - from a variety of different sources into business-ready data.

At a time when many businesses are under financial and staffing pressures, they need to weigh up the benefits of automating the myriad repetitive and time-consuming manual tasks involved in collating and processing all the information that passes through the organisation against the costs of the solution.

As well as freeing up employees to focus on higher-value tasks, automating these processes should lead to marked improvement in content-driven business processes. Put another way, failing to supply business-critical applications with timely and accurate information will impede or delay the entire process. For example, inefficient invoice processing leads to bad cash management; manual processing of customer facing data leads to poor service with repercussions on customer retention and acquisition.

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As the benefits of data management and capture solutions will be felt across the business as a whole, it is important that buy-in is achieved from all departments and not just from IT.

Conclusion

These days it is critical to correctly classify, identify and route documents to the right employees, departments and business processes. Fortunately software solutions are available that can help with what formerly was a manual process.

The research shows that IT and finance departments are handling a broad range of non-standardised document and electronic file formats, with a majority continuing to receive large volumes of information in paper documents, rather than electronic files, much of which must be captured, fed into business applications and stored, often to meet compliance and data retention requirements.

Few organisations have formal systems and policies in place to manage this operation, and many continue to rely on manual data entry or scanning processes. Delays to data access and information management processes are sometimes apparent, a problem that affects both internal employee productivity and efficiency and external business partners that rely on the fast turnaround of crucial documents such as invoices and purchase orders.

In a clear recognition of this problem, some companies are willing to spend upwards of £100,000 to implement a new document management solution. However, most firms simply require a system to extract and organise data automatically so that it can be fed into existing business systems – Accounting and financial software, CRM, ERP, BI and the rest - for processing. In adopting such a system they will eliminate the errors associated with manual inputting and processing and remove the bottlenecks that prevent the organisation from operating to its full potential.

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ABBYY's recognition technologies and products help people manage the increasing amount of information delivering powerful instruments which enable them to: unlock information from paper and e-documents, automatically acquire data, and process and store valuable information. Using recognition and data capture products, people save money and effort typically spent on data entry, and benefit from the ability to access information in new, more efficient ways. Paper-intensive organisations from all over the world use ABBYY software to automate time- and labour-consuming tasks and to streamline business processes.

ABBYY helps organisations streamline content-driven business processes through the use of Intelligent Document Recognition (IDR) technologies. Our highly sophisticated enterprise capture platform helps remove manual steps in multiple business process scenarios.

The core building blocks of classification, data extraction and data validation, combine to support powerful solutions in a multitude of horizontal and vertical business process environments. Common solutions include Accounts Payable Automation, Sales Order Processing, Digital Mailrooms, and Forms Processing.

Today, ABBYY is an international company with over 900 employees worldwide. ABBYY products are being sold in more than 130 countries around the world through an extensive network of regional and international partners. ABBYY's product portfolio includes the ABBYY FineReader line of optical character recognition (OCR) applications, ABBYY FlexiCapture line of data capture solutions, ABBYY Lingvo dictionary software, and development tools.

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