

Payback Time: Invoice Processing & Automation

Primary research and analysis by Byline Research
Sponsored by Captiva Software Corporation

November 2002

About the research

This report is about one aspect of the finance function: invoice processing. It is the synthesis of original research among large UK organisations from the utilities, retail and manufacturing sectors. Most of the participants have annual revenue in the £100 million to £500 million range. Fifty organisations completed a detailed telephone questionnaire.

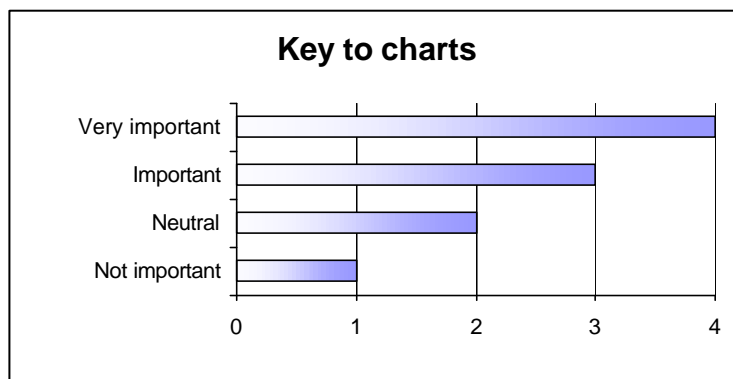
Respondents were financial controllers and other professionals with management responsibility for or a direct interest in the Accounts Payable function and invoice processing.

Captiva Software Corporation, a supplier of input management software, sponsored the research.

Byline Research takes sole responsibility for the survey methodology, analysis of the results and conclusions.

Reading the charts

The illustrations used in the report should be self-explanatory. Responses to some questions use a ranking system designed to measure the importance of a factor from 0 (unimportant) to 4 (critically important). A score of 2 or thereabouts indicates a neutral position.



Copyright conditions

Reproduction of extracts from this report including charts and tables is permitted, provided attribution is as follows:

Source: Byline Research / Captiva Software Corporation

EXECUTIVE SUMMARY

Access to timely, accurate financial information, cost savings and good relations with suppliers are the top priorities for finance managers. But few large organisations have adopted automation strategies consistent with these goals. Consequently they run highly inefficient accounts payable operations, settle their bills late, and cannot marshal the resources they need to manage the supply chain effectively.

Among other findings are:

- The best run A/P departments are six times more efficient than the average
- 96% of invoice processing involves keying data from paper
- EDI and other forms of electronic document automation account for just 4% of invoices
- 44% of invoices are processed in between one and five days
- The average time taken to process an invoice is 12 days
- One in five invoices (19%) contains anomalies that delay processing and increase administration costs
- The incidence of anomalies is 40% in several cases and as high as 55% in one case
- 25% of all invoices are paid late
- The best payers claim to settle 100% of invoices on time
- The worst payers admit to settling as many as 95% of transactions late

Between them, the organisations in the survey receive more than 11 million invoices each year and employ up to 50 staff per organisation to process bills for payment.

The best performers have done a remarkable job of efficiency, despite an almost total lack of automation in capturing invoice data. But what do they do for an encore? Where do they look for further savings, additional process improvement and bargaining tools for negotiating better terms with suppliers?

As for those organisations turning in average or below-average performance, the evidence suggests significant opportunities for savings, process efficiencies and improved supplier relations. This group could expect to make savings of at least 50% of the running costs of the A/P department (including salaries) plus considerable additional savings in the costs of business functions connected with A/P.

Tempting as it may be to concentrate on efficiency in the current climate, organisations taking a longer term view will not realise potential savings but translate them into initiatives designed to promote greater effectiveness of the finance function. Instead of cutting headcount they may choose to re-deploy existing staff in more satisfying and profitable roles to work with suppliers on process change or to turn invoicing data into intelligence on the efficacy or otherwise of existing contracts.

There are other, more pragmatic reasons for cautioning against cutting staffing to the bone. Settlement periods are getting shorter, so UK organisations working to terms of 30 days or more – and staffed accordingly – may be exposed if business practice or government regulation impose more stringent terms. In the US and elsewhere in Europe, 15 days is already the norm, and there can be little doubt that UK organisations will be obliged to move towards that standard. With an average of 12 days to process an invoice, there is little margin for error.

The survey found widespread recognition among participants that invoice processing needs to be better integrated with other financial processes. For instance, only about half (54%) of the organisations in the survey currently have the ability to automatically match an invoice to the purchase order that generated it.

For every invoice received, there may be up to a dozen other bits of paper that relate to the transaction floating around the organisation. Each one of these has bearing on the invoice, such as the delivery note that reveals that only nine of the 10 items ordered actually arrived. Wouldn't it be useful to be able to compare these documents before committing the invoice details to the finance system? And wouldn't it be even more useful if this could be accomplished without having to wait for all these bits of paper to be assembled at the same location?

Electronic data interchange (EDI) services have been in development for more than two decades, but despite some obvious cost advantages there is no clear evidence that they produce more accurate or infallible transactions. The GIGO principle of information processing applies (garbage in, garbage out): an electronically exchanged error is still an error.

Participants in the survey were ambivalent on the question of whether paper or electronically exchanged documents are more reliable.

52% of respondents to the survey believe data integrity would be higher if this information were available electronically, but 96% rely on keying information from paper and only 4% currently use EDI or other methods of automating data entry. A realistic conclusion might be that data integrity depends on the message, not the medium and that automation is only as good as the process to which it is applied.

There are many reasons why the medium of choice is still paper and why after more than a quarter of a century's work on technical standards, and despite the existence of a universal, low cost distribution network (the internet), most organisations are still not ready for wholesale automation of business-to-business documents.

Development of XML and web services standards will eventually overcome these objections. Meanwhile, paper is still the problem.

Significant benefits accrue from the electronic capture of paper-based financial information at its point of entry. Once collected it can be verified and validated against data already present in the finance system, and delivered in one pass to the ERP system, enterprise content management and other business-critical systems. These benefits start with the automation of individual processes and multiply when the same principles are applied to entire process cycles or functions.

The research shows that only one in five organisations has built a direct feed to the ERP system for invoice data and that fewer still are delivering that data to other IT systems.

This means they are missing out on a list of benefits that includes:

- Increased productivity of A/P staff
- Earlier trapping of errors and speedier resolution of anomalies
- Reduced overall cost of administration
- Faster turnaround time for transactions
- Closer financial management based on more reliable information

Increased efficiency of the process is the key not only to cost saving but to less tangible but probably more important goals. Improved access to information about dealings with individual suppliers is the key to building a strong supply network, whether that means fine-tuning relationships with major suppliers or gaining control of the substantial business conducted with minor suppliers.

Finance staff who previously spent their time tracking down missing information will be free to concentrate on managing supplier relationships, identifying and repairing weaknesses in the supply chain, and developing strategies for further business process improvement.

The research suggests that large organisations are wasting millions of pounds every year as a result of inefficient financial processes. It also reveals an unhealthy level of scepticism about the possibility of automation. Organisations are right to challenge the myth that throwing technology at the problem automatically results in better business processes, but wrong to conclude that it can't help.

BACKGROUND

Concentrated efficiency

In a period of economic gloom and uncertainty, it is not surprising to find businesses concentrating on cost saving and efficiency. And that's exactly what we find in this survey.

We also discover that while automation of certain financial processes is considered important, there is little appetite for addressing wider questions. Businesses can see the point of using technology to unite financial processes but are failing to do so for several reasons. Budgets have been frozen or cut as economic recovery continues to be the subject of wishful thinking rather than reliable forecasting. Technology led projects are blighted by negative associations. The internet boom is still being blamed for the general economic bust and while no one would seriously make the case that the failure of a few dotcoms crashed the economy there is a lingering suspicion that technology had something to do with it. Scepticism or downright cynicism has replaced the short-lived cash and burn optimism of the New Economy.

Squeaky clean and squeezey

In the last quarter of 2002, fancy ebusiness initiatives are far from fashionable. The internet has joined last year's games console in the attic, speculation is a four-letter word. Only projects that save money or keep existing customers in the fold have a realistic chance of funding; and of those, only projects shown to deliver instant return on investment will actually get off the ground.

The recession is not the only factor behind the conservative tendency. In the wake of the corporate accounting scandals probity has become as urgent as the pursuit of profit for big corporations. Financial processes must be closely managed, visible and, in all the right places, transparent.

Squeaky cleanliness has become an equal partner with the desire to squeeze every last penny of profit and every last ounce of fat out of the organisation.

A/P, the movie

Against this backdrop, the survey examines one aspect of the finance function – how businesses pay their bills. The Accounts Payable department has the thankless task of processing invoices received by suppliers and deciding who gets paid and when. A/P (which appropriated the forward slash long before the internet was invented) has all the fun jobs: querying invoices with missing or wrong purchase order numbers or those for which a PO was never raised in the first place; resolving differences between the sum billed and the figure on the PO; ensuring that the goods being paid for were received; obtaining management authorisation for payments that exceed the purchaser's authority; explaining to irate suppliers that the cheque is in the post – or why it isn't.

Accounts Payable is unlikely to be the subject of a federal government investigation, an Enron-style scandal or a blockbuster movie starring Michael Douglas or Harrison Ford, but it's a serious business all the same.

Payback time

Every organisation needs to be concerned with what gets paid to whom and when. For any individual inside or outside tempted to defraud the organisation, A/P would be a good place to start. In large organisations, small bills tend to go unchecked. There are countless examples of minor fraud perpetrated on a large scale and of systematic scams involving goods and services of low value that were never supplied. Many of these cases remain hidden to spare the embarrassment of the victims. Many more don't come to light simply because they are never discovered.

Most big companies have procedures in place to avoid invoicing errors deliberate or not that cost them money. But the procedures themselves cost money. How much should a company spend on a purchasing-to-payments system designed to prevent the odd invoice going through that was never properly authorised? It's not an unanswerable question but most companies can't answer it because they can't justify the cost of investigating the problem, still less the cost of solving it.

Small-time villains

Fraud is the issue most likely to make headlines and the one business is least keen to talk about. A much bigger cause of invoicing anomalies is the casual or unintentional error, failure to follow the prescribed procedure, the off-contract order, the same invoice submitted twice, a mistyped PO number, a missing delivery note...

The villains behind big accounting scandals usually get caught. Meanwhile, even in organisations where business ethics, probity and professionalism are beyond reproach, an insidious minor villain is invariably still at large. This villain is more difficult to spot; it has been doing the same job for years and has never failed to turn in a less than satisfactory performance. Dependable, honest, even a little dull, with flaws not so much hidden as forgiven in recognition of long service. It is to be found nowhere on the payroll; it is the business process itself.

The invoice police

The A/P department has a hard job. There is a huge caseload of minor offences to be investigated, a mountain of paperwork to be sifted, and very little chance of recognition or promotion at the end of it. If Finance is the corporate equivalent of central government, A/P is the provincial police force – overstretched and under-valued. But as this survey shows, performance from business to business varies enormously. It depends on well-designed processes and on how well the same processes are automated and knitted together. The difference between the best and worst performers in terms of efficiency, profitability and overall financial control is conspicuous.

Financial processes are complex and heavily dependent on the exchange of paper documents – true. Perhaps there is a limit on the improvement of these processes – true. Perhaps we have already reached it – not true.

Bonds and bondage

Most businesses take their relationships with suppliers seriously. Profitable relationships are not those founded on buying power alone, but on co-operation, mutual respect and a shared commitment to quality. From the supplier's point of view this means delivering goods and services of a high standard

at the right price in a timely and consistent manner. The *quid pro quo* from the buying organisation is to negotiate reasonable terms with the supplier and to deliver on its end of the contract by paying its bills on time.

There may still be businesses that use market muscle to stretch contracted payment terms to and beyond their limits but they are in a dwindling minority. If your positive cash-flow position depends on your ability to transform 30 days into 90, your future is bleak. Competitive pressure and increasingly tight regulation threaten to shorten the purchase to pay cycle still further. Prudent businesses are already preparing for this eventuality.

For most large organisations, good relations with suppliers are as important as good relations with customers. It's a simple equation: everyone is somebody's supplier and everyone is somebody's customer. This concept of mutuality is based not on altruism but on enlightened self-interest. The terminology of relationships based on force – such as “leverage” – has been abandoned. Power has acceded to empowerment. Once there were suppliers, then partners. Now we no longer talk about the supply chain but the supply community.

These semantic changes signal real changes in behaviour even if the underlying motive, profit, remains unchanged. Good practice promotes good relations. Good relations translate as good terms, high performance, sustained product quality, high standards of service, competitive prices; profitability.

The relationship depends in some part on the interaction of business processes. The better this is the lower the cost of doing businesses for all concerned. Customers that pay on time or grant “preferred” status to suppliers can expect to enjoy tangible and intangible benefit. An example of the former is early payment discounts. The latter might be expressed in terms of the willingness to work towards harmonised business processes and co-operation in the development of technical standards for business process automation.

Sure enough, the survey supports that view that cost saving and good relations with suppliers are the highest priorities placed on the finance function. Invoice processing touches both priorities. Its efficiency or otherwise has a direct bearing both on the cost of administration and on the relationship of the organisation with the organisations with which it does business.

Paper, pragmatism and idealism

Twenty years ago, the European Commission sponsored a piece of research on office automation that concluded that by the year 2000 at least 50% of all business documents would be delivered electronically. The research was conducted several years before email became a serious force and more than a decade before the invention of the worldwide web. In some respects it was prescient: the memo is dead; email has replaced paper for casual and semi-formal communication that previously relied on a typed or printed document or a telephone call. In other respects, the predictions of the past were way off. Paper remains far and away the main medium for the exchange of financial documents. Ninety-one per cent of the invoices processed by companies in this survey are delivered on paper.

The reason is not immediately apparent. An invoice is, after all, a fairly simple document containing a limited set of data – the supplier's name, address and financial particulars (bank account or BACS reference, VAT number, etc.), PO number identifying the particular transaction, descriptions of the item or items purchased, and the sums involved.

Two factors complicate this apparently simple problem. First, the number of parties involved. A large organisation might deal with several thousand suppliers, which in turn are dealing with several thousand customers. Each party might prefer a different layout or specify more or less detailed information. Secondly, the invoice is just one of several documents including requisitions, purchase orders, shipping and delivery notes, bills of lading, customs certificates and dozens of other pieces of paper detailing every stage and every bureaucratic or regulatory hurdle that has to be cleared before the transaction is complete. What's the point of exchanging invoices electronically if every other document in the loop remains stubbornly paperbound?

Electronic data interchange (EDI) networks have been moderately successful in some industries where they are used to exchange invoicing and purchase order data. But lack of standards and cost of participation have hindered wider uptake, particularly by smaller organisations.

A much more open and inclusive system is likely to result from the development of web services standards. The interchange of business documents via the internet promises to be simple and cost-effective. The main pieces are in place – a universal network and a language for describing business documents (extensible mark-up language or XML) – but the devil is in the detail, and thousands of industry and process-specific variants of XML need to be defined and implemented before paperless business and commerce can become a reality.

If the ideal is still some way off, something more pragmatic is required in the meantime.

If paperwork is the problem, finding better ways of dealing with paper is a realistic solution. This report suggests that some organisations have tackled the problem significantly better than others and that very few are doing as well as they might.

FINDINGS

Typical and untypical organisations

Participants in the survey are large organisations that deal regularly with a high number of suppliers and have to cope with a high volume of invoices. The 50 organisations in the survey are UK based utilities, manufacturers and retailers.

Between them, the respondents receive nearly 1 million invoices each month and more than 11 million each year (TABLE 1). The range spans organisations receiving 250 items a month to those dealing with more than 200,000. Most of the respondents are closer to the median than to these extremes and receive anything from a few thousand to tens of thousands of invoices per month. The average across the sample is 18,867.

TABLE 1	Total invoices received	
	<i>per month</i>	<i>per year</i>
50 respondents	943,350	11,320,200
Lowest volume	250	3,000
Highest volume	200,000	2,400,000
Mean	18,867	226,404

Processing the hundreds of invoices received each day is the job of the Accounts Payable (A/P) department. Details of each invoice must be entered into the ERP or finance system for accounting purposes. A/P clerks may also need to consult other systems to check that the sums on the invoice, the supplier details and other information such as purchase order number match the information on documents used to originate the order. Any mismatch between the two sets of data usually means the invoice has to be pulled from the system until the A/P clerk can do whatever is necessary to resolve the problem. Such anomalies can result from errors made internally or at the supplier's end of the process. Wherever they occur the result is the same: increased cost of administration for the customer and frustration for the supplier who may have to wait for payment.

The efficiency of invoice processing varies widely from organisation to organisation. The best measure of efficiency is the productivity of A/P staff. The survey suggests there is no correlation between size of department and productivity levels. The smallest A/P department of the organisations in the sample employs a staff of one, the largest 50. The average number of A/P staff per organisation is 10.5.

Productivity of these staff varies enormously – from 200 invoices per head per month at the low end to 8,333/head/month at the top of the scale.

TABLE 2	A/P staff levels
	<i>department size</i>
Most	50
Least	1
Mean	10.5

Different factors influence productivity including the complexity of the invoice in terms of the number of items billed and the sums involved, which might determine whether the invoice goes to a manager for approval before payment. But even after we discount the small number of organisations dealing with relatively low volumes, there is still a significant difference between average performers and the most efficient. In terms of number of invoices processed per head, the best performer is nearly six times more efficient than the average.

TABLE 3	Invoices per head of AP staff		
	<i>per day</i>	<i>per month</i>	<i>per year</i>
Worst performer	10	200	2,400
Best performer	397	8,333	99,996
Mean average	70	1,466	17,592
Ratio of best to average performers = 5.7:1			

What factors might explain this big gap in performance? Among the possibilities are:

- Some organisations are regularly dealing with a higher number of suppliers, increasing the complexity of the process (more suppliers means increased difficulty of imposing standards on the way invoices are presented, e.g. by producing templates for suppliers to use)
- The proportion of documents containing anomalies varies from organisation to organisation
- Some organisations have done a better job of automating parts of the process than others
- Invoice processing is a more or less rigorous discipline, depending on the rules laid down by management (e.g. invoices below a certain value undergo fewer checks)

The productivity gap between A/P departments from different organisations may be closed by improvements in working practices, process design or automation. Inherent differences may always exist depending on the number and complexity of invoices, sums invoiced and nature of the organisation – whether, for instance, it operates a centralised or distributed accounting function. Automation cannot change these factors but it can change their impact – by allowing a distributed accounts department to be managed as closely as a centralised function, for example.

Between them, the respondents in the survey are responsible for a universe of more than 157,000 suppliers (TABLE 4). The organisation with the smallest supply base in numeric terms has 50 suppliers. At the other end of the scale is a national retailer with 13,000 suppliers. A majority of respondents have somewhere between 2,500 and 5,000 suppliers. The mean is 3,420.

TABLE 4	Supply universe
	<i>suppliers used by participants</i>
46 respondents*	157,320
Most	13,000
Least	50
Mean	3,420
<i>*4 participants were unable to answer this question</i>	

A widely accepted principle of supply management is to identify a top tier of core suppliers – typically those with which the organisation conducts most of its business – and work with those suppliers on improvement of the processes in the supply chain. Hand in hand with this idea goes the notion of rationalisation: in identifying the suppliers on whom you depend most heavily you identify by default those you can do without. Several benefits are supposed to flow from this scaled down supplier community: lower administration costs on both sides, a bigger share of the customer's business for the supplier and improved bargaining power for the customer. The assumption behind this concept is the 80:20 rule, which determines that 80% of business is conducted with just 20% of suppliers.

It's a nice rule but one that participants in this survey appear happy to break. The picture that emerges of core suppliers as a proportion of the whole, and of volumes of business defined as "core" is much less neat and tidy than the management consultancy ideal. One respondent said core suppliers represented 2% of the base and accounted for 10% of business. At the other extreme, another respondent identified 90% of the organisation's suppliers as core. Other responses varied widely (TABLE 5). Defined as loosely as this, the notion of core suppliers is pretty meaningless.

TABLE 5	Core suppliers' share
<i>core suppliers as % of all</i>	<i>proportion of business</i>
2%	10%
3%	70%
4%	75%
5%	40%
6%	60%
15%	70%
17%	40%
20%	50%
25%	50%
27%	45%
33%	30%
37%	50%
50%	50%
70%	70%
90%	90%

Only 64% of the participants were able to answer this question at all, suggesting that in some cases organisations have made no effort to differentiate core suppliers and that in others there is no effective means to track business done with this group.

Left with the evidence from those able to answer both parts of the question, we find that on average 895 suppliers (26%) are regarded as core and that this group accounts for 10,000 invoices per month (53%). So while the 80:20 rule may apply at some macro level, the ratio of business done with core suppliers by the sample is a rather less memorable 53:26 (TABLE 6).

If only about half of overall business is done with about a quarter of suppliers, the case for taking a strategic view of core suppliers is considerably weakened. Unless this group is relatively small and clearly identifiable, there is no obvious opportunity to make an easy kill in improving the invoice processing system. The typical organisation has no choice but to address the problem in its entirety.

TABLE 6	Typical organisation	
Invoices/month	18,867	
Suppliers	3,420 of which...	
▪ Core suppliers	895	26%
▪ Invoices	10,000	53%
A quarter of suppliers account for half business		

TABLE 7	Incidence of anomalies
	<i>% of invoices affected</i>
Highest	55%
Lowest	1%
Mean	16%

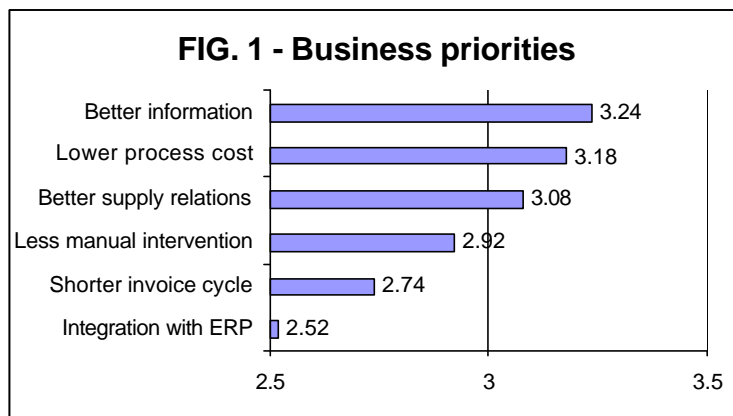
Business priorities for the invoicing process

Participants in the survey identified several goals for the invoicing process (FIGURE 1). The top three factors, all regarded as somewhere between very and critically important are:

- Better information
- Lower process cost
- Supplier relations

Information

Better information is critical to the operational efficiency of the finance function and to the development of strategic aspects of finance such as supply management. Up to date payables data is important for accurate accounting but also for fine-tuning relationships with suppliers. Who presents bills on time? How accurate are they? How closely do they conform to internal accounting standards? How does the performance of the supplier measure up in other respects (product/service standards, customer service record)?



Also considered important is increased visibility of the finance process (score: 2.84 out of a possible 4), the belief that reliable summary information about the financial performance of the organisation should be available not only to finance professionals but other interested parties: senior management and major shareholders, for example.

Speed and accuracy

The fundamental concern of finance managers is with the accurate and timely acquisition of invoice data. The reporting capabilities of ERP and finance systems are generally regarded as adequate or good, but these systems are only as reliable and up to date as the input process that feeds them. With most invoice data still keyed from paper, and with an acknowledged high rate of errors and missing information in the original invoice, the reliability of the output is suspect. Without better automation, the business must either commit greater numbers of staff to checking and validation of incoming data or

spend more time on the process. Neither the “spend more” nor the “take longer” option is conducive to increased efficiency or good business.

Good information depends on “clean” data. Most participants believe they need to do a better job of error trapping (this factor scored 3.08), but also want to reduce manual intervention in the interest of efficiency and lower process costs. They can't have it both ways simply by tweaking existing processes.

Cost saving concerns

The desire for lower process costs, the second highest priority for businesses in this survey, is a permanent feature of corporate business planning that gets more emphasis than ever during periods of economic weakness.

Increased efficiency can be achieved by driving up productivity (working harder) or by deploying more and better automation (working smarter). History teaches that computers scale more cost-effectively than human beings – and the trend is set to continue.

The organisations in the survey do about half of their business with a quarter of their supply base. In crude terms, what this means is that of the 19,000 invoices received each month, half at most will be covered by negotiated contracts. The rest are one-off purchases or routine purchases that rely on standard terms and conditions (or not, as the case may be). The organisation may well have no strategic interest in these 9,500 invoices, but from an operational point of view they matter a great deal.

It costs more to process low value invoices than high value invoices, even though the latter may be more complex. For example, an invoice for £100,000 might take 2 man/days to process. Assuming an A/P cost of £70 per day (excluding overheads), the cost of paying the bill is £140 or 0.14% of the invoice value.

Now assume an invoice arrives to the value of £10. It gets paid without question as one of the 70 invoices processed every day by an A/P clerk in a typical company. Processing cost: £1. Small beer, perhaps, but the cost of paying the bill has risen to 10% of the invoice value. Multiply that by 9,500 invoices and the cost is more significant – £9,500 a month, or very nearly half the annual salary of an A/P clerk.

Now imagine that the £10 invoice fails to clear the process on the first pass. Say it throws up a problem that takes an hour to resolve. The cost in salary alone will be at least £8.75 or very nearly the value of the invoice. Add the usual overheads and the item has cost more to buy than it is worth.

Finally, factor in the cost of procurement, the process at the front-end of the buying cycle long before an invoice is ever presented for payment. Research has shown that the average cost of buying an item – excluding the value of the item itself – is £50. That's a lot to pay for a few ballpoint pens or a box of paperclips.

The obvious places to look for cost reduction in invoice processing are staffing levels, productivity and business process improvement, but in the absence of automation opportunities for reducing headcount are limited by two factors.

Firstly, the evidence suggests that most organisations already operate fairly efficient A/P departments, staffed if not meagrely then leanly. Years of process improvement have probably taken headcount as low as it can go. Although one organisation in the survey operates an A/P department of 50, the average across the sample is 10.5 staff.

Secondly, any further cuts in staff numbers would be at the expense of other organisational objectives: better quality of and access to information, lower error rates, shorter invoice cycle times and improved relationships with suppliers.

Businesses are left with a trade-off: cost versus quality. There is another option. This is to capture invoice data electronically using scanners equipped with intelligent character recognition and/or forms processing software, validate the data against information already held in the ERP system, automatically cleanse data with resolvable problems (e.g. wrong order number), and deliver the perfected data to the finance system and an image-copy of the original document to the enterprise content management system for archival.

Flushing out anomalies

Incidence of anomalies varies and tends to rise in proportion with the number of suppliers used by the organisation. ("Anomaly" is defined as any irregularity that prevents or delays processing of the invoice – amounts at odds with those on the purchase order, missing PO number, supplier not known, and so on.)

Asked what percentage of invoices contain anomalies, the lowest reported by respondents was an optimistic sounding 1% and the highest a staggering 55% (TABLE 7). On average, however, the incidence of anomalies is 16%.

If this figure is accurate, with the exception of problem invoices and those requiring pre-payment approval, the majority could be processed automatically. Not only would they need no intervention on the part of A/P staff, A/P would never need to see them. They could be passed for payment – or paid – instantaneously.

Of the remainder, it is safe to assume that many anomalies could be resolved automatically or with minimal human intervention, while persistently problematic documents could be routed to A/P specialists. By sending the scanned image, rather than waiting for the original to make its way through the internal post, A/P could be tackling problem cases within seconds.

The impact of this approach could be dramatic: "clean" invoices could be processed within seconds of being scanned. Whether or not the invoice was paid immediately, the organisation would no longer be at the mercy of its own inefficient processes when it came to negotiating settlement periods. If new terms were struck with a supplier or a change in regulation or practice dictated a shorter settlement period, the business would be ready to meet the challenge.

The early settlers

Organisations that prepare for this kind of change will keep up; those that anticipate it will creep ahead. One alternative is to wait for regulatory or peer pressure before taking action. Another is to see what effect volunteering to pay early might have on negotiated terms. In straitened circumstances,

when cash flow is at a premium, quick payment might be enough to win the organisation a further two or three percentage points in discounts from suppliers. These marginal concessions could be critical. Most organisations spend 80% or more of what they earn. A business with revenues of £1 billion that buys £800 million of goods and services each year, may already get a net discount of say 10% from its suppliers, amounting to £80 million. Squeezing a further 1% out of the supply chain would mean another £8 million straight to the bottom line.

Supplier relations have a critical bearing on costs/profitability, but the desire to foster good relations with suppliers is about more than discounts and other easily quantified benefits. Buying organisations are interested in forming relationships with suppliers providing goods and services of consistent quality, and those that are adaptable and flexible in their dealings with customers. Forging these relationships is the job of procurement professionals, but the A/P department plays a significant part in their maintenance. Relationships built on good faith and the best intentions will founder if the customer fails to keep his side of the bargain just as surely as if the supplier fails to fulfil the other side of the contract. Late payment or the inability to provide information to suppliers calling to query the progress of an invoice could imperil the relationship.

False economies

Large organisations are not concerned about efficiency or financial control or supplier relations. All three are important. And the different factors are not easily separated into neat categories. Is a shorter invoice processing cycle an issue of efficiency or is it about keeping suppliers happy? It's about both. But not all questions resolve themselves as harmoniously. When does cost saving become counter-productive and at what point do efficiencies start to damage the ability of finance to function effectively? Where does increased productivity begin to work against financial control? If headcount is reduced, what is the cost in undetected errors and unresolved anomalies? If it's greater than what we've saved, we're in trouble; but how do we know, when there is no effective way to collect the information and no efficient way to share it?

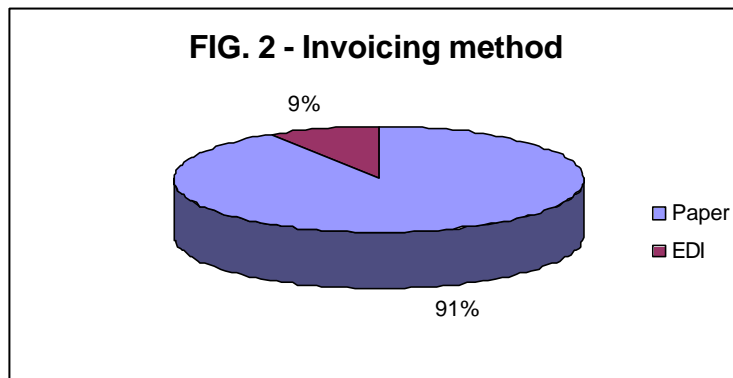
For most of the history of information technology, the purpose of automation has been to replace human labour with machines, which are cheaper to buy and run, far more efficient, much less error-prone and a lot more co-operative than carbon-based life-forms. For applications involving repetitive tasks, massive data processing or precision, automation is usually the answer. Where would the manufacturing industry be without it?

But service industries are different. The technologisation of banks and other financial service industries in the decades leading up to and including the short-lived internet revolution has been a heavily qualified success. It's easy to process transactions, settle bills or provide account balances online, but much harder to provide advice, reassurance or large sums of hard currency at short notice. For this sort of application carbon is streets ahead of silicon.

Some aspects of the finance function are amenable to automation, others are not. The routine, repetitive bits; the number crunching, the transaction processing, the basic error-checking and validation – all these are more than suited to computerisation. Other bits, such as the intelligent analysis of financial data, discrimination, the ability to negotiate terms or maintain a delicate relationship – these are all the domain of the error prone, logically challenged human.

Of the three priorities identified by this survey, cost saving based on headcount reduction is the least important. Even something as dramatic as a 50% cut in staff would still only amount to a couple of hundred thousand pounds, whereas a 1% improvement in discount from the supply base could easily reach a couple of million. This is not to say a couple of hundred thousand pounds isn't worth saving but that it needs to be viewed in the light of other, potentially greater advantages, which may or may not be purely financial.

This is not an argument against automation, but a proposal to look at the question in a different way: automation strategies should be predicated on the improvement of the quality of the process rather than on reducing quantities (of staff, suppliers, and so on). It's the difference between a good diet with healthy exercise and liposuction supplemented with slimming pills.



The persistence of paper

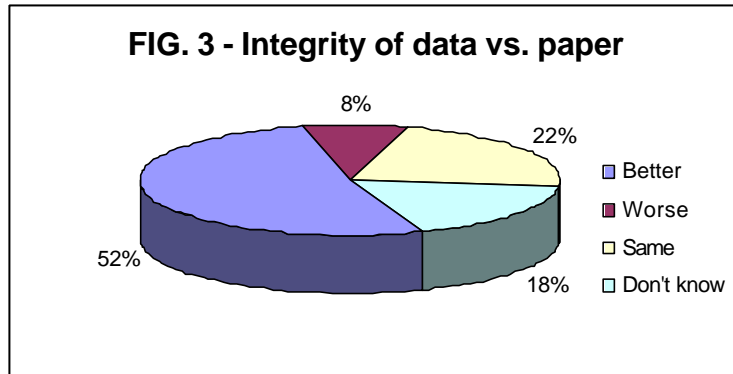
Of the 19,000 invoices received each month by participants in the survey, 91% arrive on paper and only 9% are delivered electronically (FIGURE 2). The reasons why paper remains such a persistent medium for this type of financial transaction when it has been dramatically reduced in others (credit card payments, for instance) have already been discussed. There may be cultural and emotional reasons for preferring paper but they are barely significant. They are far outweighed by the practical advantages of electronic exchange of invoice information.

Asked which medium they trusted more, 52% of respondents thought electronic data was likely to be more reliable while only 8% voted for paper documents (FIGURE 3). The cause of this disparity is not the quality of the source data, which is the same in either case, but a judgement about the relative ease of processing of the data, which is media dependent. A paper invoice might be keyed several times. Once at the point of origin, once on arrival at the customer into the A/P system and at least once more into the customer's ERP system. Each time the document is re-keyed there is an opportunity to introduce error – and if errors were present in the original, even the most accurate typist is only compounding the problem.

The other drawbacks of paper are well known. Environmental damage, materials, postage, duplication, storage and handling all have to be factored into the overall cost.

Data that is originated and distributed electronically on the other hand has a relatively low chance of corruption. If the system that generates the invoice is connected to the procurement system that delivered the purchase order, and can talk to the accounting and management information systems at

both ends of the transaction, there is no reason why a single clean set of data shouldn't satisfy all the requirements of the transaction. Nothing would have to be printed out. Scarcely anything would need to be scrutinised.



This ideal is complicated by the need to modify the data along the way. Is the supplier able to fulfil the order? Can the distribution sub-contractor deliver the goods on time and in a satisfactory condition? What happens if a credit note needs to be issued or a price changes unexpectedly? Behind all of these eventualities are systems that need to exchange information – the inventory system, logistics, goods inward, manufacturing. Connecting all of these together is a matter of enormous technical complexity, but it will have to be done if reliable data is to reach the corporate accounting system.

The transaction amounts to a number of interconnected processes each of which generates one or more documents to record either what was supposed to happen or what actually happened. Attempts to automate the transaction cycle – or even parts of it – have largely failed partly for technical reasons and partly for organisational ones.

The other dimension to the problem, which has already been discussed, is the difficulty of aligning processes and integrating systems between the many different organisations involved.

Nothing comes of nothing

Paper may be part of the problem but it is not the sole villain of the piece. Exchanging paper for binary data has some advantages but does little to mitigate complexity, which is in the nature of the process not the medium used to conduct it. Focusing on solutions designed to remove paper from transactions between organisations has rarely proved to be a winning strategy. The truth of this statement is borne out by the failure of EDI and internet based B2B trading initiatives to realise their potential.

It may be more useful to concentrate instead on what happens within the organisation. The integrity of financial information and the efficiency of the process could be improved if more attention were paid to collecting and checking data at its point of entry. Instead of worrying about data in transit we should be worrying about what happens to it after it arrives. The ultimate goal is end-to-end automation. While that remains elusive, it would be foolish to ignore the benefits of solving point-to-point problems.

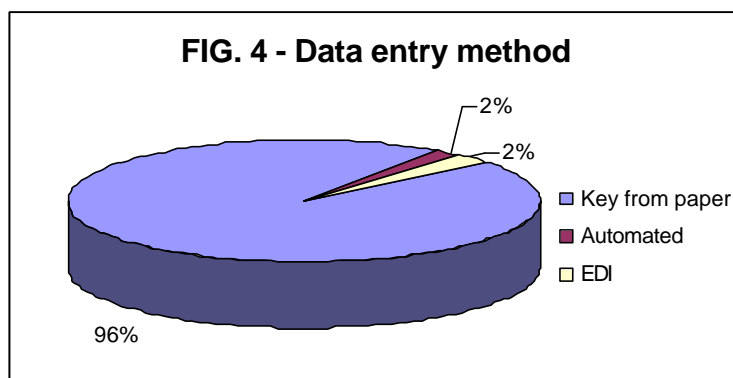
Practical automation strategies in the near term will be built on two certainties. Paper will continue to account for the bulk of financial document traffic between organisations. Related or interconnected

financial processes may not be automated and fully integrated for some time. Neither of these should prevent automation or improvement of individual functions or parts of processes. While paper remains the bulk fuel of data input, system design needs to take account of the fact that a growing proportion of transactions will be electronic. How far this change will go or how fast it will occur is impossible to say. System design needs to find ways to cope with these variables.

In the face of uncertainty, doing nothing is often the preferred option. The consequences of this non-approach will be manifestly disastrous, resulting in an organisation unable to take advantage of technology-driven business improvement in the short-term and unable to face the challenges of the future.

Information input the hard way

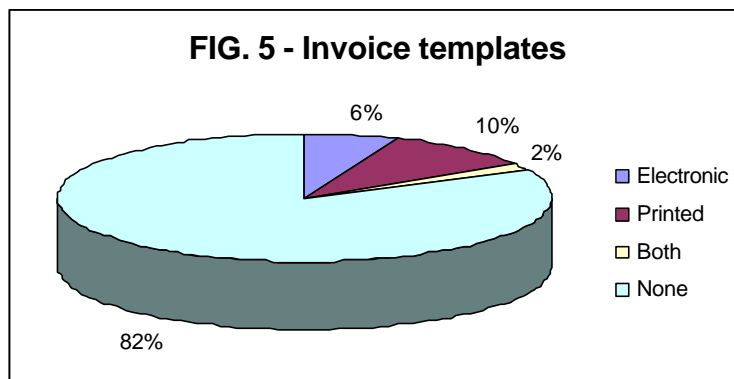
In today's large organisations, the process of capturing invoice data and transferring it to the finance system is shockingly archaic. No less than 96% of this data is keyed from paper, while EDI and other forms of automatic capture account for just 4% of documents (FIGURE 4). Compare this figure with the chart illustrating delivery media (FIGURE 1) and it appears that there is even some re-keying of invoice data that enters the organisation in an electronic format.



If the majority of invoices arrive on paper, a largely manual data entry process should come as no surprise. What is surprising is that so few organisations appear to have challenged the assumption that capturing this data is necessarily a labour-intensive activity.

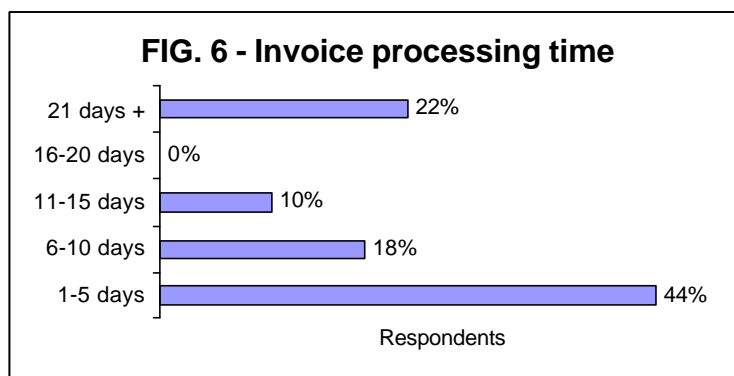
Participants in the survey were also asked whether they provided invoicing templates (printed or electronic) to their suppliers to assist in aligning processes on both sides and to simplify the job of data entry (FIGURE 5).

Again the results are surprising. A sizeable majority (82%) does not provide templates of any kind. Of the rest, 10% provide a printed template, 6% an electronic version and only 2% take the trouble to provide both.



A matter of time

Participants were asked how long it took on average to process an invoice for payment. The question was phrased carefully to avoid confusion with contractual settlement periods. The idea was to find out not when they paid but when they were in a position to pay. Almost half the respondents (44%) convert an invoice to a payable within a working week (FIGURE 6). A further 18% have a turnaround time of two working weeks, and 10% do the job within three.



If settlement periods are the mark most organisations are aiming to hit, there is not much to compel them to work faster. But the 56% of organisations that take longer than a week to process routine data (and particularly the 22% that take more than four weeks) have three possible causes for concern:

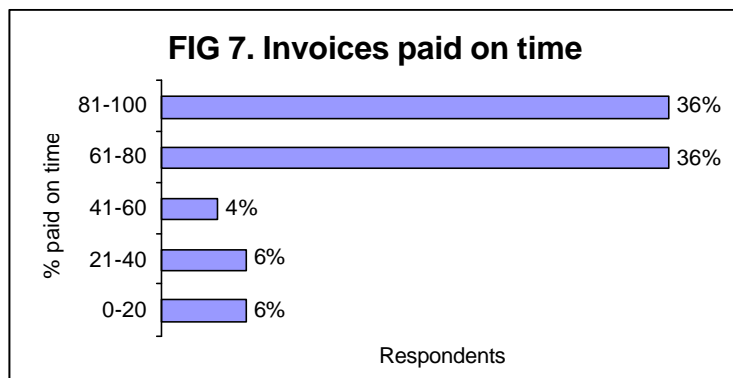
1. The efficiency of existing processes and the productivity of staff.
2. The effect on the business of a change in settlement periods resulting either from external pressure or from internally driven initiatives to negotiate new terms with suppliers.
3. The accuracy of real-time accounting information.

The first two of these factors have been discussed. The third is vitally important and never more so than in weak markets. The procurement process should provide information about committed spending, but it is not until the invoice is received and processed that budgets can be adjusted to reflect the true state of the organisation's finances. Money costs money and for large organisations the management of working capital is a key discipline. Where large sums are concerned, the ability to

produce data that reflects the organisation's expenditure to within a 24-hour period allows for much closer management of financial resources and greatly improved financial reporting.

It's in the post

The time taken to process invoices may or may not have bearing on whether suppliers are paid on time. An efficient organisation that chooses to deal swiftly with incoming documents but delay payment to suppliers for cash-flow reasons is an entirely plausible animal. Nevertheless, it's tempting to look for a correlation between the processing capability and settlement record. Most organisations pay most of their bills on time (FIGURE 7). More than a third (36%) pay between 81% and 100% of invoices within agreed settlement periods. Closer analysis of the figures reveals that 26% of organisations pay 90% to 99% on time, and 6% claim never to miss a beat with 100% payment records. Averaged across the sample, 25% of invoices are paid late. Is this a result of deliberate choice or accidental inefficiency? Neither conclusion is very flattering for the organisations concerned.



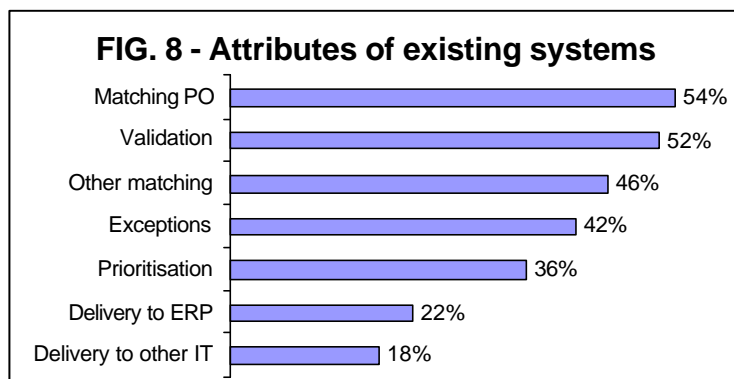
Late payments have financial implications. The organisations in this survey spend several billion pounds each year. Lost goodwill measured in discounts and other concessions could easily amount to millions of pounds per business. Organisations taking a more positive approach to management of their financial affairs could win back millions more.

Existing management systems are at best reasonably effective (FIGURE 8). Only about half make any attempt to match POs with invoice numbers or perform any other kind of validation of invoice data. Fewer still boast automated matching of invoices with other documents. Because shipping and proof of delivery documents will often arrive at remote locations, they will need to be delivered to headquarters via courier or post before matching can occur, which means further delay.

Only a third of organisations (36%) have any automated means of prioritising invoices for payment. Without this facility relationships with key suppliers may be put at risk, opportunities for discounts missed and penalties incurred for late payment.

Only 42% have a systematic approach to exception handling (detection and resolution of anomalies). Problematic invoices join the same queue as everything else, the likely result of which is that routine payments are delayed.

Just over a fifth of organisations (22%) are in a position to deliver invoicing data directly to ERP and other information systems. Very few recognise the need to use scanning techniques to capture these documents, yet most will go on to scan the documents into enterprise content management and systems after they have been processed, incurring further costs. An alternative and much more elegant approach is to scan the document first, validate the data automatically and export it simultaneously to all the systems that need to use it (data only to ERP, image only to ECM, either or both to CRM). The advantages include savings in time and cost, and gains in A/P productivity, accuracy and the overall visibility of the financial process.



Failure to automate these aspects of the finance function does not necessarily mean failure of the process, but it means expensive human resources that could be more usefully deployed elsewhere are being used in place of cheap and readily available processing power.

If not, why not?

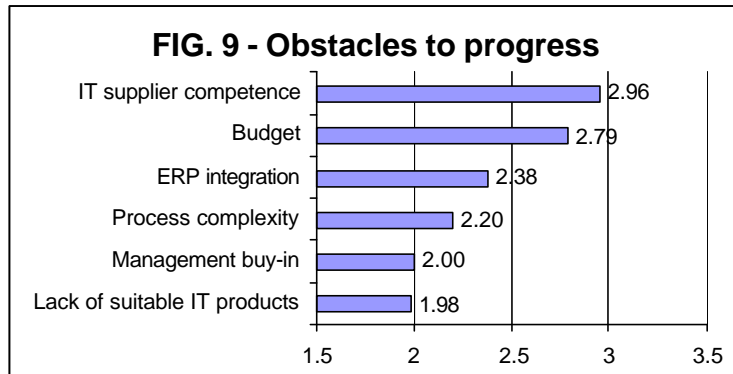
Asked to identify the main obstacles to the improvement of invoice processing, participants named the usual suspects (FIGURE 9).

It is no surprise to see “budget” near the top of the list. IT budgets grew only marginally if at all between 2001 and 2002. Even where the will exists to embark on new IT-related projects, resources have not been available. Despite the ebusiness rhetoric of the late nineties about technology as the key to increased revenue and enhanced customer service, the downturn has caused the conservative tendency to kick in with a vengeance. Most organisations are only considering projects for which immediate, measurable and sustainable benefits could be forecast with certainty. The reality is that for most of 2002, very little has passed the sub-second ROI test.

This caution is understandable but not entirely justified. Analysis of the results of this survey suggests that most large organisations could make a rapid return on a modest investment in input management technology.

The onus is on technology providers to make the case for this investment, but the survey suggests that their credibility is at a low ebb. Lack of faith in the competence of IT vendors is the single most significant obstacle identified by participants. As the chart illustrates, this is not a failure of technology – “lack of suitable products” is the lowest scoring item on the list – but a failure of vendors to convince

customers that they can deliver. And while customers profess to be satisfied with most aspects of their ERP systems, no one would challenge the observation that ERP is one of several areas of IT in which benefits have been consistently oversold and promises have frequently been broken.



One area of supplier competence that often comes in for criticism is integration, the third item on the list, which is regarded as a bigger bar to progress than the complexity of the business process itself. Whether the document arrives on paper and is scanned using an input management system or is delivered electronically, it has to be rendered in a format suitable for ERP, ECM and any other target system. The more targets there are the more complex the problem becomes and the greater the development effort involved in keeping the technology aligned. Customers have legitimate concerns about building non-standard connections from one proprietary system to another. For instance, what happens when one of these systems needs to be upgraded or replaced?

Input management, database and ERP vendors are aware of these issues even though the desire to solve integration problems is sometimes at odds with vested interests. Vendors continue to co-operate in the development and implementation of technical standards, and fill any remaining gaps with proprietary APIs (application programming interfaces) and purpose-built connectors.

The most common complaint is not about technical competency but the failure of vendors to understand the problems their customers are trying to solve. As suppliers and customers themselves, they have few excuses for failing to understand the invoice processing function.

From the steam engine to internal combustion

IT has been responsible for remarkable change. The computerisation of accounting systems made day-to-day financial management possible. Modern accounting systems have refined management to a minute by minute discipline.

Proponents of ERP took a wider view of the organisation and attempted to co-ordinate not just accounting data but information about all the resources used by the organisation – people, time, and space as well as money.

The scale of the ERP vision was never realised in the sweeping terms described by evangelising vendors, but ERP systems still became the nexus for information gathering and dissemination. The great strength of these systems is reporting, the output of the charts and critical data that allow the

health and wellbeing of the organisation to be kept under constant scrutiny. The great weakness of these systems is information capture. If automation is supposed to be about saving labour it's tempting to ask why ERP created so many jobs for data entry clerks.

ERP has created but failed to satisfy massively increased demand for data. Just as the steam engine started a revolution in transport, ERP has started a revolution in the movement of business-critical information. But it still relies on someone shovelling coal into the boiler. Input management technology promises to move the revolution forward. What we need is something capable of pumping its own fuel: an internal combustion engine for the finance department.

Byline Research

Byline Research specialises in e-business with particular emphasis on the financial services sector. As well as reports produced in its own right it has worked with third parties including Deloitte & Touche Consulting in the UK and Meridien Research in the US.

Contact: Daniel Twigg
+44 (0) 20 7553 3411
info@bylinegroup.com
www.bylinegroup.com

Captiva Software Corporation

Captiva Software Corporation is a publicly quoted US company specialising in input management. Captiva combines expertise in forms processing with information capture technology acquired in 2002 as a result of a merger with fellow US company ActionPoint Inc.

Contact: Tanya Williams
+44 (0) 1483 460 564
twilliams@captivasoftware.com
www.captivasoftware.com

