

Abandoned Heroes

ICT Adoption and use in SMEs

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Executive Summary

This report gives details of an investigation into the adoption and use of information and communication technology (ICT) in small and medium sized enterprises (SMEs) in the West London and Thames Valley area. The project was undertaken for WestFocus (a consortium of seven West London Universities; <http://www.westfocus.org.uk>), by researchers from Brunel University, Kingston University and Royal Holloway, University of London in early 2006. Over 400 SMEs in the food, logistics, media and internet services industries were contacted by phone. Over 50 of these also provided follow up face-to-face in-depth interviews. These industries are particularly important to the economy of the region.

The aim of the research was to identify good practice amongst SMEs and to identify any areas of concern. SMEs are vitally important to the UK economy, providing over 33% of GDP and over 50% of employment. They are also the source of future growth and innovation. The advent of the digital economy has made the adoption and use of ICT, including e-business, a vital issue for most SMEs. Yet, many SMEs find themselves in a difficult situation. They may be too small to be able to afford to employ a dedicated ICT expert and lack the money to buy consultancy advice (or the experience to have confidence in its reliability). They often have limited experience in selecting, implementing and evaluating suggested ICT solutions. Thus, the provision of effective ICT support to SMEs is often considered to be an area of market failure. Supporting the SME sector has been a key policy aim of successive UK governments. The pursuit of this aim has, however, been subject to many changes over the years with a succession of different initiatives in evidence.

We found enormous creativity and self-reliance in the small business sector. Use of broadband, email and the internet is pervasive. Most find that their use of ICT has been beneficial. 85% of those surveyed said they had got good value for money from their ICT investments. Interestingly, most of this investment is funded from retained profits. They use ICT to keep up with their competitors, to increase their sales and marketing activity and to reduce costs through operational efficiency and improved quality. ICT enables them to collaborate more closely with their customers, suppliers and other supply chain partners. Many see the use of ICT as an opportunity to operate nationally and internationally and not just regionally. They believe in training their staff in order to upgrade their ICT skills, but are concerned about the costs of so doing. They are not so worried that if they train them they will move on, being confident of their ability to inspire loyalty in those who work with them.

One area of concern was the degree of complacency exhibited about ICT security. Surprisingly, this was worse in the media and internet services sectors, with the food and logistics sectors seemingly more used to operating with the discipline needed for high levels of security. This seems to be connected to the requirements for systematic working in these sectors associated with the pressure of compliance. In particular, operating in the food industry imposes demands for food traceability and in the logistics industry sectors there are requirements for recording drivers' working times.

We found that progress in the deployment of ICT typically depends on a single individual with vision who takes full responsibility for ICT initiatives, as well as continuing with their regular activities. They often have to rely on their own self-taught expertise and feel ill-equipped to carry out the implementation tasks required of them. They make little use of the formal methods of ICT, project management, or evaluation. They feel at the mercy of the external consultants and suppliers on whom they have to rely. They tend to choose these on the basis of personal recommendations, past experience and cost. Nonetheless, they typically bring in ICT projects on time and to budget, despite having to overcome the most challenging aspect of implementation - overcoming resistance to change. These individuals are the "Abandoned Heroes" of this report's title.

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They find it difficult to get good ICT advice. They feel let down by the commercial sector, being concerned by the costs and vested interest associated with suppliers and consultants. However, they also feel neglected by government supported sources of advice and guidance. Less than a quarter of the companies surveyed had had any contact with Business Link. There was scarcely any interaction with any other government organisation, with, for example, only one company (out of over 400 surveyed) having had any interaction with E-skills. Existing provision tends to focus on infrastructural (especially broadband) or strategic solutions.

Evidence from our respondents highlights the need for SMEs to have access to detailed quality technical advice, available in a way and at a price that meets their needs. SMEs have very different needs than large corporates, lacking as they typically do, ICT professionals. One solution might be an "ask the experts" facility, which SMEs can approach for unbiased user-friendly technical advice. Examples of this exist in online peer to peer social networking organisations such as Ecademy.

We call for further research into what kind of service would really work for these abandoned heroes and their companies. This should be a matter of concern for ICT (and Telco) vendors, who are currently failing to meet the needs of the SME market. It should also be a concern for policy makers who are tasked with maintaining a vibrant small business sector. Funding is needed to discover what is required to end their abandonment - to discover how best to provide access to the type of advice and training that they need but currently can not get.

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Introduction

This report details an investigation into the adoption and use of information and communication technology (ICT) in small and medium sized enterprises (SMEs) in the West London and Thames Valley. The project was undertaken for WestFocus (a consortium of West London Universities), by researchers from Royal Holloway University of London, Brunel University and Kingston University in early 2006. The aim was to identify good practice amongst SMEs and highlight areas of concern.

Funding for the research came from round 2 of HEIF funding which is focused on the issue of knowledge transfer. It was made available to the consortium of Universities to encourage joint activity in this area and a number of networks were set up to focus on knowledge transfer in a variety of disciplines. The WestFocus ICT network was responsible for the present study. The researchers who took part in the project were

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In addition support was provided by David Wells, of WestFocus, by Wendy Gerrish and by Dr Alan Rae of Ai Consultants. The material within this report comes from the telephone survey of 400 SMEs carried out in early 2006 and 20 in-depth interviews carried out by Dr Rae to form a generic resource for the project. In addition to this a further 30 in-depth interviews were carried out by the individual academic researchers. The current paper was authored by Dr Rae with statistics and pie charts provided by Dr Romano Dyerson.

We anticipate that further papers will be produced in due course and that a dissemination event will be run to inform ICT vendors and policy makers about how the findings impact the needs of SMEs for inbound knowledge transfer in the area of ICT, particularly as they affect the key sector clusters in West London and the Thames valley.

Background

Small Companies employ more people than the corporate sector and produce 33% of economic activity. Keeping this sector healthy should be a key policy issue, particularly as much innovation occurs in these areas. However providing effective ICT support to SMEs has traditionally been an area of market failure.

SMEs increasingly rely on ICT to both obtain competitive advantage and deal with the increasing burden of regulation. In fact one of the most interesting aspects of the study was the extent to which food traceability and working time directives had not only driven implementation of relatively sophisticated solutions in relatively small companies but had resulted in a growth of intercompany collaboration in the Transport sector. Facilitating these developments should be a key focus for education, ICT vendors and policy makers alike.

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There is enormous creativity and self-reliance in the small business sector as the study illustrates. Use of broadband, email and the internet is pervasive. They use ICT to keep up with their competitors, to increase their sales and marketing activity and to reduce costs through operational efficiency and improved quality. Most find that their use of ICT has been beneficial.

But progress in the deployment of ICT and e-business generally depends on a single individual with vision who carries the can. We found that while the companies and individuals involved were very ready to rise to the challenge, they often found that the process was demanding and actually quite difficult personally. "Just the thought of backing all that data off makes me want to go and hide under the desk."

SMEs however, are notoriously averse to committing to extended formal training. They feel they need to be able to see a quick return and they are keenly aware of the opportunity costs of time spent out of the office. The truth for SMEs is that "Free" is not free, it's the time spent with the eye off the ball that deters the owner manager.

There seems a real gap in where these individuals can turn for support. For many self-reliance is a way of life but for others they could use more support than they get.

Historically they have turned either to the ICT industry itself, to Higher and further Education or to Government funded business advice services. These in general have had mixed results. In the mid 90s, the then Government created Business Link to provide an impartial source of advice to Small Businesses. The original job specification for Business Link Advisers was that they should have personal experience of running businesses but in practice this meant a substantial number of former bank managers operating in an environment that sought to encourage NVQs and Investors in People. While laudable enough in their own way they did not always resonate with the SMEs own view of their needs and they did not, in the first instance provide any ICT advice.

The DTI attempted to redress this in 1996 by the creation of the Information Society. This provided pump priming funding of £100K per Business Link area and was intended to fund a specialist ICT adviser. In 1998 this was expanded into the Ukonline for Business initiative which attempted to offer a core of solid ICT advice. During this period, there was a network of over 100 advisers nationally charged with making sure that ICT advice was given in a business context. To aid with this an accreditation, Technology Means Business, was developed that was mandatory for those giving advice in the Business Link Sector. Various ICT and Telco sponsors such as BT, HP and Cisco flirted with it, but in its original, NVQ based form it proved too cumbersome to be effective and by the time it had been reshaped twice the momentum had been lost.

Ukonline for Business produced many useful documents and almost certainly helped to smooth the path of small companies who wanted to use internet technologies and Broadband to enhance their business. However there was always a tendency to believe that small company owners would not be interested in detail because in the "official" view of the world people charged with business strategy do not get their hands dirty. This did mean that while a lot was achieved, the key issue of helping small companies with their ICT implementations was less effective than it might have been.

Ukonline for Business was a partnership between the DTI and the major ICT and Telco vendors who provided the head of the project by secondment from BT, Oracle and IBM. Most of the direction in practice came from individuals not especially familiar with the realities of life in a small business.

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The Business Link environment has been through 2 major rounds of change. In 2001 there was a major re-organisation which greatly reduced the number of franchises. It was deemed that direct supply of services by advisers should stop and be replaced first by a coaching and mentoring approach and more recently by a brokerage model. The Ukonline 4 Business initiative was abandoned in April 2004 as ICT business support was considered to be "Mainstreamed" and that any competent business adviser should be able to handle ICT issues. This has effectively meant the end of support other than a certain amount of web-site related brokerage. In 2005 responsibility for funding was transferred to the Regional Development Agencies, the staffing of the Business Links cut, and the franchises put out for re-tender and in some cases, e.g. London, re-awarded to different bodies.

Turning to ICT training, the e-skills Sector Skills Council has been working for sometime to define occupational standards but these tend to recognise ICT users and ICT professionals of various kinds. The role which many of the individuals we interviewed adopt – the "ICT Paramedic" – does not seem to feature in the calculation. It is unsurprising therefore that only 1 out of 400 interviewees had interacted with it.

There has been some development in foundation degrees in ICT from Universities such as Kingston which could go some way towards bridging this gap but they are in practice probably more suitable larger SMEs who have an individual with formal rather than an informal responsibility for ICT in the company.

The situation is currently compounded by the switch in the focus of the Learning and Skills Council (LSC) to the 16-19 age-group. This is impacting vocational training for older individuals as funding becomes less available.

The ICT industry is not altogether trusted. There is a structural issue in that there is generally insufficient margin for larger Value Added Resellers to focus much attention on SMEs. It has been observed before and confirmed in this study that great progress can be made if a trusted relationship can be built with an affordable ICT supplier. In addition some progress has been made by the industry in remote support of SME systems from both local VARS and organisations such as PCWorld. However at this point in time professional support is often felt to be too expensive.

In this study we wanted to establish how SMEs felt about ICT; how they managed it and coped with the need to be continually upgrading their systems; and how they actually got advice and help. Generally they believe IT is beneficial and a significant number use it as their strategic differentiator – some businesses have a business model that is completely internet dependent.

If the UK wishes to have a vibrant small business sector capable of creating informal alliances that enable it to continue to play an effective role in an increasingly globalised world it is important that we find effective ways to facilitate small companies to use the tools at their disposal to the full.

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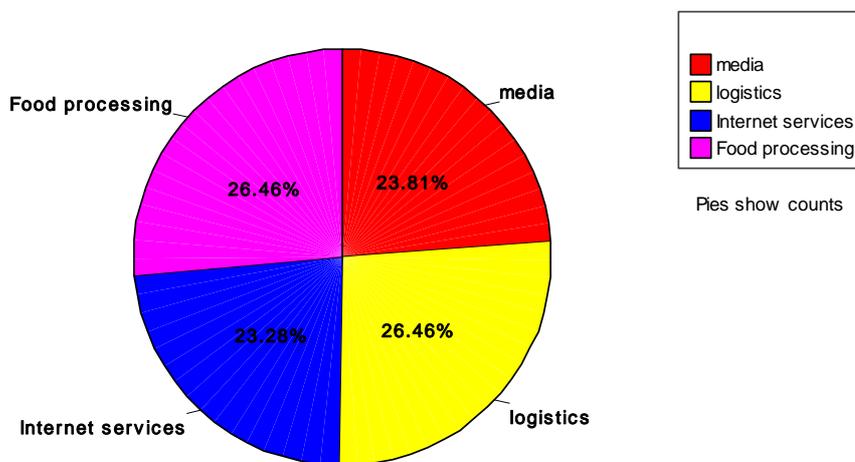
Methodology

The project took part in 2 separate but parallel phases.

400 telephone interviews were carried out using the questionnaire appended in annex 1. These were split evenly between the 4 target sectors.

The sectors chosen were Food Manufacture, Logistics, Media and Internet Services. These are the key business clusters which exist in West London where the members of the WestFocus Consortium are based.

Sector Breakdown



The companies were chosen from the Dunn and Bradstreet list. Initially companies were chosen from West London and the Thames Valley but as the project progressed it was necessary to use some additional lists from further afield. While the questionnaires were proceeding, companies were asked whether they would be prepared to be interviewed in more depth in a face to face interview. These were subsequently visited by the research team. 20 of these were interviewed by the author of the current paper using an unstructured methodology but ensuring that the issues outlined in the protocol appended at annex 2 were covered. In addition in-depth interviews about the topics for their particular research interests were carried out by the academic members of the research team.

In the event the author's interview quota of 5 individuals per industry sector were supplemented by his own contacts. The balance between these, who were chosen because it was believed that they had an interesting or informative story to tell, and the companies who were produced by the

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telephone survey was approximately 50/50. The bulk of the interviews were carried out face to face but 4 were conducted over the phone.

Analysis of the findings from the telephone survey was carried out using SPSS. The summary data are attached in annex 3.

What we expected to find

The author of the current paper has been working for some time on a European project developing a training programme for e-enabling small transport companies in the accession states, in particular Hungary, Slovakia and the Czech Republic.

A significant part of this work had been about taking forward some of the ideas in the Ukonline for Business document, MD's guide to the networked economy. This set out the need for electronically mediated collaboration between small companies who wanted to collaborate with each other to compete for contracts with larger organisations.

We therefore determined to look for evidence as to how far this tendency had taken root within the small business communities we were interviewing.

We expected to find that there would be reasonable evidence of this in the media and internet sectors but not so much in the food and logistics sectors.

In the event we found that there was less evidence of this approach than we had expected in the "new media" sectors but that collaboration was increasingly common in the transport and logistics sectors, driven by the need to comply with restrictions on driving time

This has now apparently become the norm in the palletised goods sector but we have also found evidence of similar collaboration in the freight forwarding industry.

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Findings in the individual sectors – Food

Company Interviewed	Interviewee	Company Details	What the company does
Rosie's Gourmet Foods	Owner	Established 2.5 years Employees 2 Aiming at £50k turnover	Imports Italian products which are kosher, halal, free of sugar and gluten etc.
Personal Chef	Owner	Established 12 Years 2 employees + 10 chefs represented	Gourmet Chefs for Hire
London Cakes Phone Interview	Owner	Established 7 years 6 employees + 4 part time Turnover £400k	Baker – runs coffee shop and sells cakes on the internet.
Image Farms Phone interview	MD	Established 10 years 40 employees Turnover £3million	Frozen food manufacturer.
Wonderfill Phone interview	Owner	Established 11 years 5 employees Turnover £200k	Sandwich Manufacturer

The food sector showed perhaps the greatest degree of variation in ICT sophistication amongst the sectors studied.

2 of the 5 companies interviewed evidenced quite an unrealistic view of ICT and the internet. One had managed to build a good PR presence but was held back by unrealistic ideas about what would be needed to turn it into a successful web-based business. The other who ran a successful filled sandwich business remained on dial up connection which was only used for email. They had no anti-virus protection and took the view that this was the responsibility of his ISP (in this case AOL) to ensure that he was protected. "After all, I expect the water from the tap to be clean – I don't expect to have to pay a lot of money for a filter"

Nevertheless even this company employing no more than 6 people was using a bespoke database software package to cope with the EU ingredient traceability requirements.

The manufacturing companies suffer because the ingredient schedules that they need to follow are not rigid as they would be for a normal, engineering bill of materials. This causes them real problems in accurately costing.

"We are asked to quote for 100 Danish against a price of 45p. We say we can do them for 43p but we have no idea what the basis for this might be. It would take us half a day to work out that it costs us 15.5p".

"Then there's butter cream. We make up a tub every couple of days – if we make a cake and I do it, it will be a scoop, if Pete does it, it will be a scoop and a half - if the wife does it, it will be ¾ of a scoop"

There is a real market failure here as the sector is not big enough to support a properly written "fuzzy bill of material" programme to deal with these issues. Probably the right pragmatic answer would be to use a standard accounting package Bill of Material module designed for manufacturing and factor a 15% inaccuracy into the costings by using an uplift factor to compensate.

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The use of bespoke software was common in this sector – all 3 of those actually involved in manufacturing used it although the largest of the companies studied had used Pegasus Opera which does have a degree of programmability built into it. Even this company was looking to undertake a redevelopment of its Management Information Systems based on a partially funded use of a graduate student from Reading University under the programme.

Companies seemed to be looking to use the internet creatively and this seems connected with an understanding of how to use PR effectively – rare in SMEs in the author's experience. Both Rosie's Gourmet Foods and the Personal Chef operations were very literate in the use of exhibitions, giving interviews and maintaining an online presence. Both businesses' futures depend on creating and maintaining a strong online presence.

In a different way this is true too of London Cakes where the most profitable part of the business is the 20-30 cakes per week they produce at £38 per cake. This internet based business compares favourably with the bread making operation where they are finding it increasingly difficult to compete with Tesco.

The largest organisation in the survey, Image Farm, feels keenly the need to have an improved IT system to enable more sophistication in operational capability and sales analysis. The drive is towards efficiency since the market is becoming more competitive at the same time that the compliance burden is increasing dramatically. This is not just implementing the traceability of ingredients but in the increased burden of information needed to check the status of new employees and the increased complexity of dealing with expenses etc.

Generally speaking public sector initiatives do not achieve much traction in this group – they found them “complex and difficult to use”. They report that most of the staff are adequately skilled for day to day ICT purposes; they have a development team and use external contractors to do customised reports. However they are very aware that the opportunity costs of selecting the wrong solution can be very great and a great deal of thought goes into getting it right.

The smaller companies tend to manage from their own resources. Most of them have some kind of technical – if not ICT background and they have enough logic and persistence in their make-up to get some of the results they need.

There is however a distinct expressed tension between the desire to run the business and the need to deal with the ICT and compliance issues that surround them.

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Findings in the individual sectors – Logistics

Company Interviewed	Interviewee	Company Details	What the company does
DP International	MD	Established 21 Years 13 Employees £5-6 Million	Freight Forwarder
Allday Express	Sales Director	Established 16 Years 18 employees Turnover £3million	Palletised Hauliers
Mercator	General Manager	Established 15 Years 6 Employees £2.5 million Turnover	Freight Forwarder
Coliglia Phone interview	MD	Established 3 Years 13 Employees	Freight and Courier Service
Westhaven Logistics	MD	Established 4 Years 12 employees	Freight Forwarder and Logistics

These companies all demonstrate a high degree of professionalism. Like their colleagues in the food sector they are used to doing process and without exception do their back-ups religiously and take them off site. They tend to use off the shelf industry specific packages more than the other sectors and are tied into the systems of the much larger organisations with whom they collaborate.

This sector does appear to have embraced collaborative working more than the others – to some extent driven by regulatory restrictions on the amount of time that drivers can drive. This has been reinforced by the growth of palletisation. This means that we see lots of local transport companies collecting and delivering locally to a depot which then loads “trunkers “ full of pallets. This delivers reduced cost and greater security. Finally we are seeing the emergence of quite large multinational groupings of Freight Forwarders – Mercator described a new grouping they joined.

Formal links are being made to the hauliers they work with (where links to track and trace and transponder data are becoming more common) or it may be with ports, airports and customs to make the whole process of negotiating freight in and out more seamless. The decision to automate customs clearance or not seems to depend on local relationships. DP International, for instance, are fully integrated into the systems at Heathrow but have retained a manual, paper based system at Felixstowe because they find that the personal contact involved oils the wheels. In any case having to deal with EU quotas on imports from China for example, means that it’s been impossible to do away with paper.

The strategies that companies use to fund their growth vary. DP, Mercator and Coliglia embarked on a process of organic growth. Allday Express allowed themselves to be taken over as part of the palletisation of the industry and so had access to the project management skills of the parent group. “We don’t believe that it’s made any difference to the way we operate, we would have had to do that anyway but it has made it happen further. Westhaven went so far as to obtain the capital necessary to set the business up by becoming the logistics arm of a firm of Builders Merchants.

Generally speaking they’ve been quite forward looking with IT. DP for instance said “We have one of the fastest systems that supports our freight forwarding software. I got talked into spending an extra £1500 on a Gigabyte switch and it was a godsend because we have got a really quick slick system and mobile VPN which allows me to use a Laptop when I’m in China.”

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Allday Express are already using barcode identity in the depot and are working on putting it into the field. Westhaven has an in-house server with at least 5 people connecting in via a VPN link. They see transparency of their operations as a Sales tool. He would like to develop an online quote module and a load planning module to work out how many pallets per trailer.

Growing past the 12 man barrier is a key issue for these companies. "We need to spend about £3-5k on HR support". We need to deal with H&S, we need to deal with our training and as we get the additional people to allow for departmental cover, we need to focus on getting them to operate consistently between individuals – in a way that doesn't matter when you only have 1 person doing each job. Regulation is also a major issue "We have to be FSA registered because we sell marine insurance and we also have to re-write our security procedures manual.

Key issues are those of sales and of managing additional capacity. Availability of capacity is not so bad particularly at the lower end because there are plenty of subcontractors who are available on a jobbing basis. Quality is an issue and language skills are becoming an increasing issue. "More and more of our clients want to know more of our H&S and personnel policies. It's not just a written thing, they want to come down and physically see it"

Sales and Marketing is always a perennial issue "Marketing is always an issue – I do 2 mail shots a year using a local fulfilment house that understands how to talk to the local market. We get far more leads from the phone number on the truck than we ever do from the web-site". Generally speaking the principal does most of the actual selling himself although as the companies build there are more internal order takers to back them up.

With regard to the implementation, they either rely on people they know or they manage it themselves. Where people have a technical background they generally manage well enough – but at the cost of having to go up a learning curve while carrying out their day job. "But it's the memory and the speeds slowly grinding to a halt. They all need a defragging but there's just so much data, even the thought of just transferring it to a new one makes me want to hide under the desk"

They are very aware of the need to plan the network and the software growth to make sure that they don't get boxed into an area from which they can't recover. A major barrier to purchase is fear of getting bogged down with something which eats all the time of the main players in the company with the consequent opportunity cost. On the other hand, once a company is in a relationship with a trusted player there is a tendency to rely on them – almost irrespective of the problem. "It wasn't certain that they were going to get our data back – I could see that it wasn't right but fortunately I had to go and take a meeting with a really important client and by the time I got out from that it was back to 90% stable"

Most of the Principals had clear ideas of where they wanted to go and were in a position to fund it from retained profits. However if the owner's are not the specifiers but the initiative is coming from middle managers it's harder. "Upgrade the exchange server and wireless enable the building. Biggest barrier is cost and my time. Directors are reluctant to part with the £1400 it would cost to sort it out plus the £1000 for the box". Even if it is their own initiative it's sometimes necessary to be creative "Difficulty is getting someone to do the customisation affordably – maybe we can do some kind of joint venture where I can barter my knowledge for a cheaper price.

The need to get a system that is or can be future proofed is seen as part of a prudent business approach. DP International have never yet used the CRM part of their Boxtop Freight forwarding software – but its now come to the top of the list because now is the time to get it sorted out.

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Findings in the individual sectors – Media

Company Interviewed	Interviewee	Company Details	What the company does
The Venturer	General Manager	Established 13 years 8 employees	Local Newspaper publisher
Impress	Director	Established 14 years 6 employees	Technical PR agency
Video Internet Co	Director	Established 3 years 5 employees Turnover £250-500k	Video producer for web-sites
Tympani	Director	Established 5 years 4 employees Turnover £530k	Produce Training Videos for Corporate Sector
Actors Inc	Director	Established 3 years 3 employees	One stop promotional site for actors.

The main impression that comes across from the interviews in this sector is that having the equipment to deliver the competitive edge is uppermost in the minds of these organisations. The transcripts tell stories of great technical change – the Venturer interview in particular gives a detailed account of how the whole process of producing advertising changed dramatically with the advent of the PDF and the massive streamlining of the processes in the printing industry.

They tell stories of how internal IT development is driven by the needs of data storage and how companies who operate from a rural base are still held up by the availability of broadband. 1 company based in a market town had to cope with the experience of their satellite provider closing down with 6 hours notice.

Data storage and back-up is a major pre-occupation of companies in this sector. Both the PR and Video companies spend a lot of energy working on the best and most cost-effective method of achieving this.

There is a predominance of MAC based solutions in this sector. Design means MACS in practice and companies will accommodate their designers even if there is no real commercial case for it.

We see that substantial technical change is driven and managed by individuals who have no formal IT training but who nevertheless manage to sustain an evolving vision over long periods of time. They have to cope with in some cases step changes in technology as in the case of changes in printing technology or with the major issue (to the company involved) of what the growth of sophistication in internet usage is going to mean for the future of the PR industry or for the Video and Training industries.

There is little evidence of formal partnering in this sector – “we don’t work collaboratively in the way that I understand that word – equal partners. We’re usually in a supplier relationship and will contract bits and pieces out to others. We don’t collaborate. It’s not that we’re against it – it’s just in practice we don’t pitch for business we can’t handle ourselves.”

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However they are one of the leading sectors when it comes to provision for remote and flexible working. Once the Broadband issue was fixed, the first project that our Technical PR agency focused on was installing a Virtual Private Network to link in their remote Cambridge site. The Internet Video Company is held together by a VPN using ClaraNet for Broadband to keep in contact with the hard drive back at base for email, sage accounts etc.

One of the key issues for the Internet video company is picking up emails on the move – but in a cost effective and controlled way without having to accommodate the obsessive “last minuteness” which some of these businesses don’t warrant. However getting a practical convergence of data in the office and on the road is an issue which is continually developing.

Sharing data on a project by project basis is also a major issue with the PR company. They make extensive use of a hosted secure extranet solution called BaseCamp so that all files can be uploaded, all messages can be recorded and all the to-do lists and scheduling can be done so that everyone on the project including the client can see it. It’s a temporary solution and can be used to hold the files. At the close of the project all the files can be backed off in XML format.

However the same individual did not accept that the case for full external hosting of his company’s data had been made – he preferred to keep his servers in house, under his control despite a long struggle to get the right set up for managing and backing up the information. He has been experimenting however with a database of their own projects including commercial and invoicing data and has been backing this up to an ftp server every night.

A common theme is that the adoption of a technology is often held back by the ability and desire of the customers to adopt it. Rather like a convoy only being able to proceed at the speed of the slowest ship. This is evidenced both by the adoption of the PDF technology for data transfer by the publisher and by the reluctance of some of the clients to use the extranet. “The one piece of advice I would give is not to try to force any new technology down people’s throats in the organisation but to do some active waiting.....look for a problem for which your technology is a good solution”

A key theme of this sector is the disproportion between the creative and back-office ICT provision. A main focus after project management and back up of the creative archive is the provision of a decent contact management system. Future investment is very much targeted at the operational needs of the business – actually following the tenets of Just Enough Structure. So wanting to put in a server solution to route calls, voice and data to facilitate the growth of a decentralised business is seen as sensible while going to broadcast quality editing if your medium of display is the internet is not.

Pretty much all of the companies in this sector have driven their own IT implementations. The Actor’s Inc web-site was co developed by the founder who describes himself as a “strong user/ IT superuser”. The back office systems as are typical were developed on a just enough structure basis – his accounts are all spreadsheet based and then passed to the accountant. Again this company has been effective in leveraging the resource available. He has built contacts with key clients – made effective use of sponsorship (Edinburgh Fringe) and internet marketing techniques and secured investment from a parallel company in Australia to allow the step change in services needed to effectively acquire the market.

*Prepared by Dr Alan Rae (Ai Consultants)
For WestFocus Project Team*

Findings in the individual sectors – Internet

Company Interviewed	Interviewee	Company Details	What the company does
SellStar	MD	Established 3 Years 6 Employees	Has created a range of easy to use, good looking web-stores
Last Thursday	CEO	Established 12 months 6 employees	On Line networking web-site
I-Shop	IT Manager	Established 9 Years 14 employees Turnover £2million	Produces web stores
e-type media	MD	Established 6 years 5 employees + 7 in St Petersburg	Web-site Designers
Bouncing Fish	MD	Established 6 Years 12 employees	Web site Designers

The findings in this sector included companies that carried out bespoke work as well as the 2 that produced off the shelf web-store solutions. The most interesting finding in this sector was that they were the least good at taking effective back-ups. While the more traditional industries were rigorous at taking back-ups off site – mainly due to the need for a process focus in those industries to operate at all - the comparative informality and knowledge intensity of the sector led to a certain sloppiness.

The companies for the most part had a good level of investment in their own ICT. Last Thursday for instance has invested in a mini server farm with SAN database boxes at 3 locations around the world. Both of the bespoke developers describe a process of having to go through 3 or 4 hosting environments before discovering one that had the necessary scalability and robustness. Both independently have opted for the same hosting organisation and both commented that the cost of service and web space had fallen dramatically over the last few years.

In fact scalability seems to be perhaps the major issue for these companies. In addition to the hosting requirements these companies are currently grappling with the traditional barriers to growth that beset small companies.

One is outgrowing the capabilities of its main IT project manager, 1 has been taken over since the interview was conducted, 1 due to lack of transparency in accounting on behalf of the management is not channelling additional resource into developing the most profitable aspects of the business.

Of the 2 bespoke developers, one has solved the scalability issue by entering into a joint venture with a company based in Russia which acts as an external programming department. They are tied into the main operation by a VPN and make extensive use of SharePoint – the Microsoft intranet package – to tie the company together operationally. The main issue the company then has is the development of the sales activity. The principal carries out the majority of the selling himself and recognises that better sales and marketing is the next hurdle that has to be overcome.

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For WestFocus Project Team*

They've tried using a variety of approaches, Excel, Access, Microsoft CRM but find in practice that conventional marketing activity like mail shots does not work so well – they are better off using an effective sales pipeline approach. They have used sales people in the past but “it takes you 6 months to find out they are no good”

They have some experience of partnering but it has not been a major priority. From a business point of view the big problem is positioning – between a company that does small sites and one that is perceived as able to carry out substantial products. The bottom end of the market has lots of business but enormous price pressure. They currently have about 4-6 large clients and recognise the need to build a structured marketing approach to target these companies.

The other bespoke developer was also dealing with the problems of growth. Their main customer base is the £6k web project but they have some bigger ones. They take the same approach to backing up their data that the media companies use – lots of additional plug in hard drives on the network.

Their biggest problem is the growth of formality in the business. “All the developers have to have their own admin rights because they need to be able to install development software as required”. They recognise that they have got past the point of having the 2 directors act as “lead developers”. They know they need a couple of support staff, and are taking on a 3rd director to focus on the development structures needed to manage the projects effectively. They have invested time and money in becoming trained in PRINCE 2 methodologies and have spent time modularising the building blocks of their development process. “We had a new guy start last week and I'd already documented the process of how to build, how to take an existing site that was already built and turn it into the new version for a new customer with a new design”

Both companies are flirting with the idea of taking some of their existing code and turning it into off the shelf products. One is serious about this – the other in his heart perceives it as a diversion. They perceive that the cost of training courses is prohibitive.

The challenge of turning the business into a “Proper Business” is a key one. Of the companies interviewed 1 was seriously grappling with this issue now. 2 had aspirations but were not planning it immediately, the other 2 did not give the impression of being likely to change their behaviour to get past the current plateau but would take up whatever slack existed in the current business model to grow organically.

Advice to others was generally about cutting costs and building the relationships needed for expansion, particularly about identifying a good bread and butter income stream. One however, recognising that organic growth had taken them into an area that it was hard to get out of by bootstrapping thought that in hindsight they might have been better to secure some proper funding earlier. There did also seem that there was a growing recognition that it was easier to build a product based than a service based business. Even Last Thursday was looking to offer corporate networking platforms in a box as a product.

Interestingly only one of this group of companies carried out their development work off-shore. The rest had their programming carried out in the UK. Whether this represents the need for control and/or limited project management skills is unclear.

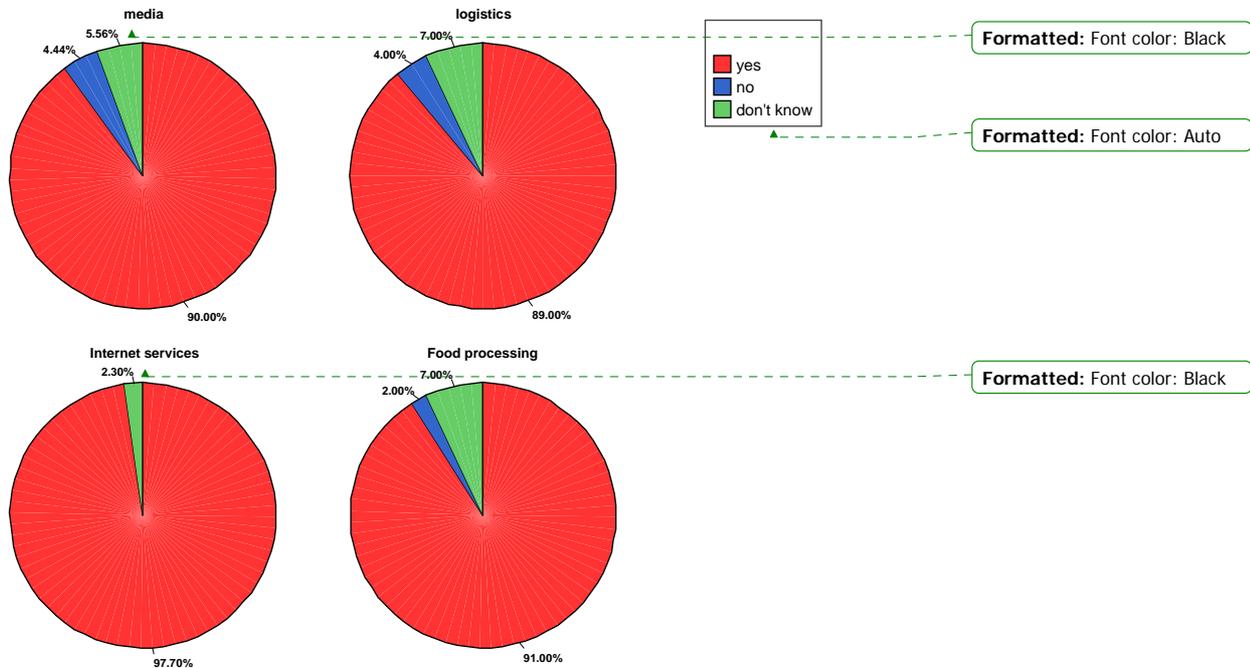
Finally there was a definite recognition of the importance of relationships in what is fundamentally a people business. The key knowledge is how to pick the committed people that you do not have on your own and to be hungry enough and personable enough to make your ideas stick. “I think what a lot of people underestimate is that x factor. You can be so clever, you can have such a good idea, you can be very good at business but if people don't like you, you are never going to make it”.

*Prepared by Dr Alan Rae (Ai Consultants)
For WestFocus Project Team*

How people implement technology

What the telephone survey suggests

Has your IT investment represented good value for money



As the graph shows, SMEs nearly all consider they get value for money from their ICT. Overwhelmingly, funding is carried out from retained profits, in order to increase the operational efficiency of the business and to improve customer service. Except in the internet sector, about 50% of the time it's carried out by external consultants and except for the internet sector there's very little use of formal ICT or project management methods. Overall, between 25% and 30% of ICT installations are carried out using "other methods". We believe that this means they are carrying out the installations themselves. Hence the "Abandoned Heroes" of the title.

The biggest issues that companies face in managing a successful ICT implementation are all aspects of project management – project management itself, overcoming resistance to change and keeping to time and budget. What holds back ICT investment is concern over costs, uncertainty over business benefits and lack of internal ICT skills. They tend to deal with the skills issue by training internal staff (58-70%), but they are put off by cost and by time from going on formal courses but the vast majority (around 80%) believe that their skills are completely or mostly able to

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meet their business needs. Those that do use external suppliers choose them for a variety of reasons but personal recommendation and past experience appear to be the strongest. They turn to consultants, personal contacts and suppliers in that order. Government funded advice has not been used to any great extent.

What the interviewees told us

The key finding is how much small companies manage the process themselves – often personally. As businesses grow larger they do think more in terms of integrated solutions and form strategic relationships with supplier partners. One company, the largest interviewed, has entered a scheme with Reading University to use a graduate to define a complete MIS for the company – but this is unusual. The larger companies had interacted with Business Link but found the results mixed.

Most people interviewed were DIY ers and described themselves as “super-users” – their ICT knowledge was generally self-taught. “Basically it’s me and the manuals” said one stalwart. ICT training was perceived as expensive and not very useful especially by those who required it to maintain accreditations (companies in the ICT sector).

Many of these companies were quite innovative, both in their business models and in their use of technology particularly in the media and ICT internet sectors. All of them recognised that they were on a continued upgrade path but there were major differences in focus between sectors.

Food – traceability compliance and having robust operation systems capable of handling non-precise bills of material

Media – need to keep up-to-date with production technology – need to safely store vast amounts of data

Logistics – need to manage restriction of drivers hours, need to work together to produce financially viable options.

IT Internet – need to manage storage, need to have robust server farms, need to manage formal project management

We found stories of great persistence and ingenuity which had achieved stable and workable systems, sometimes in the face of owners who were reluctant to invest (in at least 3 cases)

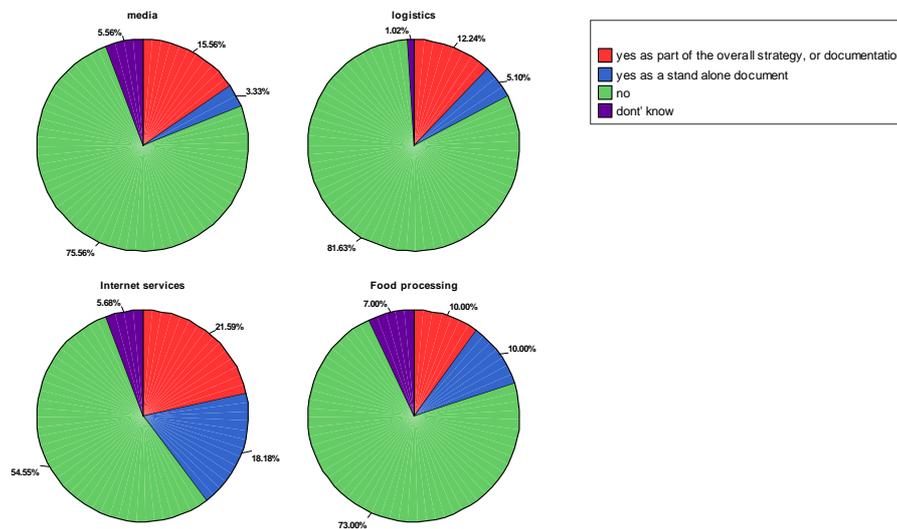
This DIY approach is not supported by the official ICT industry, by the educational and e-skills lobbies or by Business Link all of whom only support a “brokerage to qualified professional” model.

*Prepared by Dr Alan Rae (Ai Consultants)
For WestFocus Project Team*

Security and Compliance Issues

What the telephone survey suggests

Breakdown of firms with a written IT strategy



The lack of formality in this sector is illustrated by responses to the question about whether or not there is a written IT strategy. Most did not seem overly concerned about security issues either. About 15% of the companies surveyed had systems that crashed frequently while about 4% reported that they were concerned with poor security while 6% reported security failures of one sort or another. 7% were concerned about internet fraud. About 13% complained of having out of date technology but this was much more acute (26%) in the media sector.

So in general while there seems to be a certain awareness of security issues there does not seem to be much overall concern. Whether this is due to a lack of awareness of the consequences of data loss is not clear. The interviewees were not asked about their attitude to storage or to their plans for disaster recovery.

What the interviewees told us

The most interesting finding is that the more traditional industries – food manufacture and logistics are punctilious in doing their back-ups and taking them off site. The Internet industry, by contrast seems much more casual about it. We interpret this as a kind of “we know what we’re doing so we’ll

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sort out any problems that occur” mindset vs. the situation in more traditional industries which are used to having to document and enforce process in order to deliver a quality service.

Companies were often quite innovative in backing up their data and showed the kind of DIY, belt and braces approach that’s common in small companies. One individual backed up his email regularly to a flash-stick, another used FTP to back his company database up to his ISP as effectively a sub-directory on the web-site, while it was quite common to use additional drives to mirror large amounts of data particularly in the media and internet area.

The jobbing web designers had been through several iterations to find a reliable ISP and this still seems to be an issue for small businesses. Some companies had flirted with the idea of having their data hosted externally although up to now no-one had bought – citing reasons of cost or concern about data security.

In general we were impressed by the diligence shown by companies in protecting and preserving their data.

There are also indications of more overt security issues driving vehicle traceability. One interviewee mentioned the ever present possibility of criminal hi-jacking of vehicles..

Turning to compliance, this does seem to be a driver for technology in the Food and Logistics sectors. Ingredient traceability is a prime example as is the need for freight companies to collaborate to allow deliveries to take place in the face of restricted driver hours. There were clearly some unintended consequences in place such as the freight forwarder who needed to be Financial Services Authority registered because they sell marine insurance.

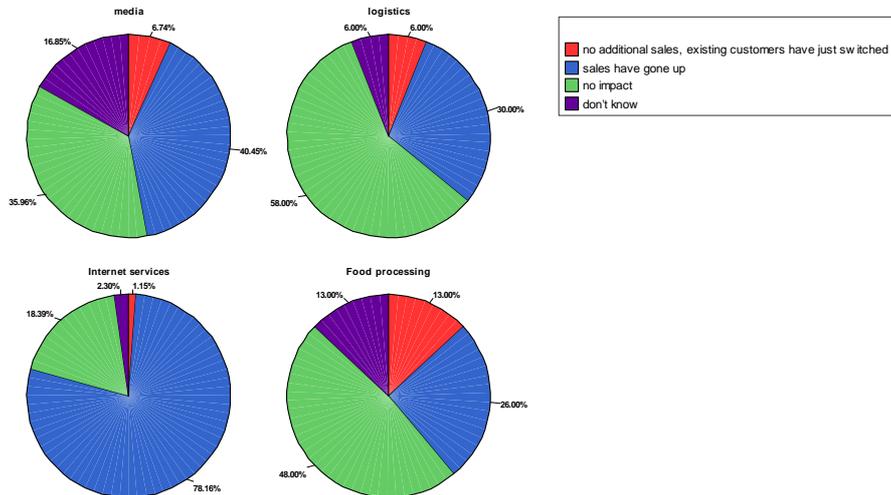
There were several murmurings about increasing duties being put onto small business to police government policies in checking up on unauthorised labour, managing EU import quotas on goods from China and the continued complication by the Treasury of rules for expenses were all mentioned. They also mentioned the continual intrusiveness of H&S considerations entering into the tendering process.

*Prepared by Dr Alan Rae (Ai Consultants)
For WestFocus Project Team*

Use of ICT for promotion

What the telephone survey suggests

The effect of using the internet for business



Most of the companies surveyed set their stall out in terms of the quality and specialised nature of their goods, services and expertise. About 80% of the companies surveyed stated increased sales as part of their current business plan. About 70% of companies interviewed stated that they used IT in Sales or Marketing. However 83% cited document management. Nearly 60% reported increased sales through use of ICT while over 75% stated that they were able to deliver a faster response to customers. The greatest response was in attracting more UK customers.

About 40% of the sample reported that none of their sales came via on-line channels while a further 15% reported less than 5%. Around 12% reported up to 25% of their business coming that way. Apart from Internet Businesses (where nearly ½ the businesses identified sales originating online in excess of 25% of the total) for the vast majority of companies 25% is as good as it gets.

However 40% believed that sales have gone up. This however is patchy in the food and logistics sectors where around 50% believed there had been no impact on sales. Details of the effect of the internet are shown in the chart.

77% of companies interviewed had web sites and about 55% stated that they traded with customers on line. Around 63% stated that they used the internet to share information with customers so this is seen as a prime function of the web site. Around 60% of companies both receive and make on-line payments. We are assuming that this is via BACS – unfortunately the survey is not specific.

*Prepared by Dr Alan Rae (Ai Consultants)
For WestFocus Project Team*

What the interviewees told us

Most organisations seem to be internet aware and to be using it at least to some extent as part of their business model. While there was considerable evidence of innovative methods of promotion in general most companies recognise that there is more they could do.

It is rare for a company of this size to have an integrated CRM/Sales methodology in place. Partly this is because in most of these organisations only the principal or other senior individual is involved in selling directly or they find the offerings on the market too complex or clunky for their needs.

In general, most companies find that a little marketing goes a long way and because the companies are run holistically, it's more important to generate enough enquiries for the sales pipeline than to generate more enquiries that they can not fulfil. The individuals we spoke to – like most owner managers are consciously performing a balancing act with their companies every day of their lives.

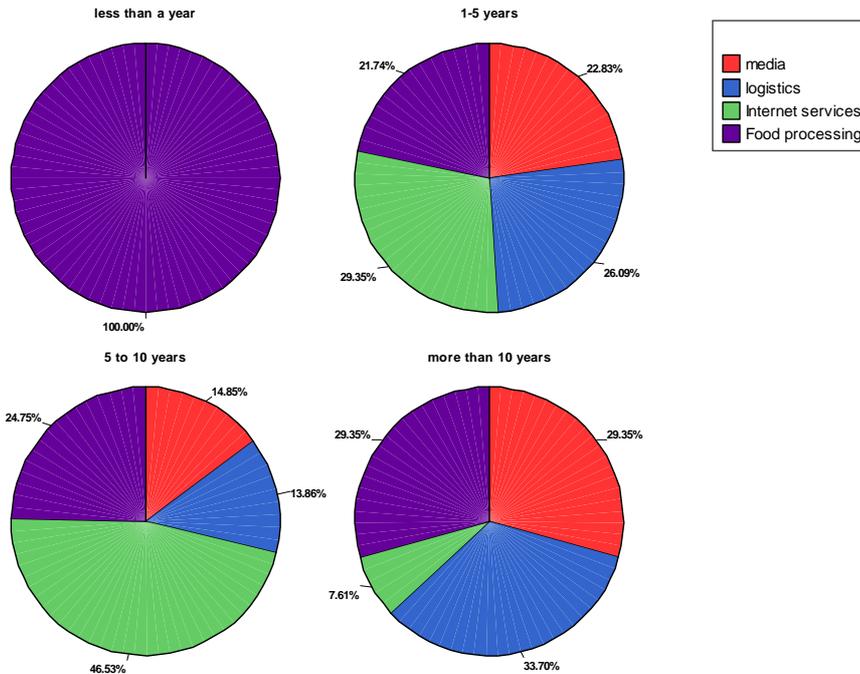
Quite often, particularly in Logistics they rely on traditional marketing techniques on a fairly limited scale – mail shots twice a year, exhibitions every 6 months etc. One respondent said “to be honest we get more enquiries from the phone numbers on the wagons than we ever get through the site”.

In the food industry, 3 of the smaller companies showed great sophistication in using the internet to drive traffic. As did about half of the other companies who were using pay per click, blogging, and conscious link building strategies to drive traffic to the site.

Use of ICT for operations

What the telephone survey suggests

Age of firm



The sample is almost evenly split between companies employing 0-9 and those employing 10-249 and between companies in existence for less than or more than 10 years. Only 100 of the companies surveyed had been in existence for less than 5 years. So what we have is a picture of the position in companies that have been blooded and have achieved a status of maturity in their respective markets. Technology is seen as part of the entry fee to doing business in today's world – the vast majority are now using Broadband. The age profiles by sector for the telephone interviews are shown in the graphs above.

By far the largest reason given for ICT investment is to increase operational efficiency (around 75%) followed by improving customer service and keeping up with competitors.

One interesting finding is that there seems to be real issues with the segmentation of customer response. 20% drive change in their suppliers, 20% resist change and by inference the remainder are change neutral.

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For WestFocus Project Team*

Document Management and Sales and Marketing are the 2 most often cited operational areas that companies use ICT for. Design is important for Media and Internet. While stock control is critical for food processing (77%) Around half of companies surveyed used ICT for production planning and control and a surprising 50% used IT for HR management. Around 25% of companies used ERP systems while 40% used IT for Market Research purposes.

Around 70% reported improved productivity through their use of IT while around 50% reported improved working on joint projects with other firms. Improved quality and faster response to customers were also scored at 70% or better.

What the interviewees told us

Achieving a stable ICT platform that is integrated enough to fulfil their business needs and which they can control themselves seems to be the main goal of all of these businesses.

What this looks like varies enormously from the 1 machine that does everything – accounts, web-site development and costings used by Personal Chef via the comprehensive of the shelf logistics system of DP international through to Image Farms purposely specified MIS system

What they all have in common is an appreciation of the use of ICT to improve the operational efficiency and customer service of their business while needing something that is stable, does not eat cash and time and meets the needs of their customers and the ever increasing compliance load dished out by central government.

As mentioned elsewhere they tend to take control of their own project management. What they find difficult is locating the immediate answer to the precise technical question that will unlock the next stage of development from someone who understands the business needs.

Government initiatives have always focussed on providing strategic overviews and accredited advisers when what companies need is specific help and guidance together with some kind of IT paramedics training programme – which is what most of these people are.

*Prepared by Dr Alan Rae (Ai Consultants)
For WestFocus Project Team*

Use of ICT for collaboration

What the telephone survey suggests

The internet sector as we might expect shows a significantly higher use of some technologies although in things like email, internet, website and LANs the other industries have now caught up. However they are twice as likely (60% vs. 30%) to use an intranet, to use electronic data exchange (44% vs. 25%) video/audio conferencing (49% vs. 20%) and more likely to use wireless and groupware.

The drivers for this are the fact that knowledge products are created collaboratively and require powerful communications. So we would predict that this pattern would hold for knowledge economy businesses but may not be a pattern adopted by the logistics and food sectors

What the interviewees told us

Contrary to our initial thoughts, we did not find much evidence of collaborative working between companies in the media and internet sectors. In fact they were still using a contractor / customer relationship and are very much concerned that if they introduce collaborators to their business they will lose out.

By contrast, the logistics industry appears to have been driven to collaborate by a combination of regulatory pressure as is evident from the stories about the growth of palletisation and by the need to work together to be able to offer better commercial pricing as is seen behind the Marco Polo initiative of 80+ freight forwarders the Mercator have become involved in. One company described the use of collaborative web-sites to locate possible back-haul contracts. Another said if we could track shipments through a European network of forwarders using the same platform, that would be something.

The ability to use electronic means to move documents down an operational chain has already completely transformed the operations of some industries. One of our case studies contains a blow by blow account of how the spread of the PDF standard completely transformed the operations of the printing industry

There seems a considerable interest in flexible and remote working. Several companies report installing or contemplating VPNs while the issues of obtaining email on the move is starting to be seriously addressed by the larger organisations. One company in the media sector stated that they use VPNs to hold the company together.

There is also a growing awareness of the need to provide areas where different organisations can collaborate on specific projects. Both intranet and hosted solutions such as Base Camp were mentioned by interviewees. Base Camp allows creation of space as a repository for project data together with a set of project management tools to manage it. One company in the Internet Sector stated that they relied on a SharePoint intranet to hold together the 2 halves of the company.

Most interesting is the growth of awareness of how to use collaborative, on-line environments for operational as well as marketing purposes. Several of the interviewees were using sites like Ecademy to find collaborators while one of the internet companies interviewed was building a platform precisely to make collaborative tools available to SMEs. The Author has personal experience of using such platforms for locating collaborative partners as well as subjects for interview.

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For WestFocus Project Team*

We conclude this section with a quote from one company from the Food Industry who said

“We could do a lot by sharing our product files with our clients – transparency is a great marketing tool. We expect to be sharing much more stock and logistics information in the next couple of years.

Conclusions

As they go into the 21st Century SMEs show a clear awareness of what IT can do for their companies and make systematic and concentrated efforts to implement effective systems.

They see that IT helps them keep up with the competition by allowing a faster response to customers and delivering improved quality.

They recognised that they were often over dependent on outside contractors - over half used external consultants to implement ICT. However around 30% used “other” methods - from the evidence of the in-depth interviews we interpret this as meaning that they are solving the problems themselves – hence the ABANDONED HEROES title.

About 20% of the companies surveyed were using out of date or unreliable equipment. They recognised that something needed to be done but were holding back. We have come to believe that the main barrier to implementation comes from a complex which includes

- We don't know how much it's going to cost
- We don't entirely trust the ICT firms who are pitching for the business because we don't have the in-house skills to check if what they're saying is right
- We simply can't afford the disruption that will occur if this doesn't go smoothly

Money seems to be less of a barrier than fear of getting into something they can't get out of. So they report that keeping to time and budget is the most challenging aspect of implementation followed by overcoming resistance to change. This means they wait until they find a supplier they can trust based on personal recommendation, past experience and cost – or they do it themselves.

The evidence is that the overwhelming reaction to a skills shortage was to upgrade the skills of existing staff. We believe – especially from the evidence of the in-depth interviews- is that much of this is self-taught. They find the official channels unresponsive to their needs by providing courses that are unsuitable, expensive and time-consuming. Interestingly they seem unconcerned about losing staff once they have trained them. In fact the overwhelming belief is that the current IT skills of the staff “mostly” or “completely” meets current business needs.

We have established that the official channels of support are not reaching the majority of small businesses. We found that less than ¼ of companies surveyed had had any contact with the business link and that there was scarcely any interaction with any other Government organisation. Only 1 organisation out of 400 had had any interaction with e-skills for example.

On the positive side we have unearthed strong case studies of companies using ICT in an integrated way to secure the future of their businesses and many examples of innovative ways of using the internet. The telephone survey found that over 50% of companies used the internet to trade or share information with customers and suppliers.

We have also made some interesting and counter-intuitive findings. First of all the internet sector seems less good at systematically backing up its data compared with industries like food

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manufacture and logistics who are used to putting the processes in place to achieve disciplined behaviour in a diverse workforce.

Our in depth interviews show that the pressure of compliance has in fact driven ICT adoption considerably in the Food and Logistics sectors. The demand for food traceability means that even a 6 man sandwich maker needs bespoke software to handle traceability and other compliance regulations with which they are confronted. In the Logistics sectors the tachograph and working time directives have driven companies to collaborate as the law prevents them from working on their own. In fact these sectors are ahead of the more "sophisticated" sectors in their use of collaboration.

There is in fact a case to be made that compliance drives ICT adoption both from government regulation and from the need to be able to take part in the kind of internet based information sharing systems that large organisations at the head of supply chains increasingly require.

Companies seem well prepared to meet the challenges but what holds them back is access to information, advice and training which needs to be available in forms that suit their busy schedules and reluctance to take people off the job but which allows a major reduction in the uncertainty of implementing new IT solutions. We believe that there is scope for additional research into mechanisms that would facilitate the necessary transfer of knowledge.

Recommendations

If the "Abandoned Heroes" of the title are to be helped, they need various support structures to help them

- Identify what they need to do next
- Reduce the uncertainty and risk attached to what often feels like a leap in the dark
- Acquire, inexpensively and expeditiously, the knowledge that they need to confidently support the implementation that they need to carry out.

They effectively need images of what's possible plus the reassurance that it's possible for them to achieve the same thing with the knowledge and support necessary for such transformations to be carried through safely.

The images could be dealt with by case studies which show what other companies have achieved. These might build on the excellent precursors from the Ukonline4Business project but might contain somewhat more technical detail so as to act as a recipe as well as an inspiration

These might in the first instance be tied to the key areas in a business where people know they need to make progress to get traction – for instance

- Wireless and VPN
- Customer Databases + CRM
- How they use internet tools to appear to be everywhere
- How they use collaborative tools to strengthen their position in the market place
- How they deal with backup, storage and disaster recovery
- Industry specific software and issues

We believe that there is a real need to establish which approaches - be it training, advice or support - would help the rugged individualists who are directing and implementing the IT infrastructure of their companies without currently much in the way of support.

*Prepared by Dr Alan Rae (Ai Consultants)
For WestFocus Project Team*

Our research shows that generally people seek advice from their peers followed by their trusted advisers. So one possible approach to knowledge transfer might be a structured "Ask the Expert" site. A precursor of this approach was successfully used in the list server set up to support Ukonline4 Business advisors. An excellent current example of this in action is the online-networking site Ecademy where people can ask a question of whoever's online. This generally produces 3 or 4 usable suggestions within 15 minutes.

If technical support individuals from key Telco and ICT vendors were available to supplement peer input this could prove to be a valuable resource (and might well lead to additional sales).

Involvement of Universities as "Honest Brokers" as part of their technology transfer role would maintain the image of impartiality which may be necessary to re-assure the small companies

We also believe that short bite sized interactive information modules could be produced with benefit to the clients. They should be 5 minute snippets and would focus on the case study approach – you can do this – here's how – that we outlined above. It needs to contain sufficient technical content to allow a semi-technical responsible individual to pick up the ball and run with it. In small companies the strategist often has to get his/her boots wet.

We believe that allowing a much greater range of small companies to achieve the results shown by the leading case study companies we have found in this project would contribute greatly to the vibrancy, success and stability of the small business sector which plays such an important role in the overall economy of the nation.

What we seek is funding to research what's needed to bring them in from the cold.

- establish how they might best access the advice and training that they need but can't get
- establish best practice in collaborative working and internet based promotion so that this knowledge can be transferred to those that need it.

We would like to discuss with interested parties from the ICT vendors, Government & Education how we may best secure funds to research these areas further and carry out feasibility studies into how a much more cost effective solution to the issues of SME ICT support can be developed.

*Prepared by Dr Alan Rae (Ai Consultants)
For WestFocus Project Team*

Annex 1

Summary of findings from the telephone survey.

. The telephone survey showed

1. 3 biggest business targets were increasing sales, reducing costs and increased collaboration with trading partners. Most businesses saw them as national or international rather than local but the largest source of new business was from within the UK
2. internet and email usage was pervasive especially in Internet Services
3. Strong use of IT is made for document management, marketing, design where appropriate and production control and planning. HR was strongly indicated in industries where regulation and compliance is an issue.
4. 3 biggest perceived benefits of IT usage are keeping up with the competition, faster response to customers and improved quality. In nearly 50% of companies surveyed there was evidence of joint working with other firms.
5. Main problem encountered with existing systems was dependence on outside contractor and the fact that approximately 20% were using out of date or unreliable equipment. Over half used external consultants to implement ICT. However around 30% used "other" methods – we feel these are the ABANDONED HEROES. Keeping to time and budget was the most challenging aspect of implantation followed by overcoming resistance to change. Biggest Barriers are concern over costs and uncertainty over the business benefits – followed by a lack of internal IT expertise. They choose their suppliers based on personal recommendation, past experience and cost.
6. The overwhelming reaction to a skills shortage was to upgrade the skills of the existing staff. We believe – especially from the evidence of the in-depth interviews is that much of this is self-taught – they find the official channels unresponsive to their needs by providing courses that are unsuitable, expensive and time-consuming. Interestingly they seem unconcerned about losing staff once they have trained them. In fact the overwhelming belief is that the current IT skills of the staff "mostly" or "completely" meets current business needs.
7. Less than ¼ of companies surveyed had had any contact with the business link. There was scarcely any interaction with any other govt organisation. Only 1 organisation out of 400 had had any interaction with e-skills for example.
8. This lack of sympathy with "official" ways of doing things is exemplified by the fact that less than 15% used any formal methods in evaluating the success of IT investment.
9. Over 50% of companies used the internet to trade or share information with customers and suppliers. Excluding internet companies where online services are obviously more important the amount of online sales is generally less than 25%. In fact in the Food and Logistics sectors, 50% reckoned that the internet had had no impact on sales.
10. 3 biggest barriers are high costs of developing and maintaining sites, difficulty in getting good technical advice and the fact that their customers resist change.
11. IT investment is overwhelmingly funded from retained profits
12. It's purpose is to increase operational efficiency followed by improving customer service and keeping up with competitors
13. In general internet and media companies show a greater degree of sophistication and familiarity with ICT but there is not much difference between the sectors in their overall business drivers.

*Prepared by Dr Alan Rae (Ai Consultants)
For WestFocus Project Team*

14. There were 205 micro businesses, 140 companies between 10 & 49 employees and 33 companies between 50 and 249. Most of the larger companies were in the food and logistics sectors.
15. 184 of them had been in business for more than 10 years while 99 had survived between 5 and 10 years.
16. 188 had a formal business strategy document – about the same as those who hadn't or didn't know
17. 85% thought they had got good value for money from their ICT investment. It was highest in food and logistics but all answers were within 10 % points of each other.

Colleagues are continuing to work the data looking for cross-tabulations between sectors and between age of the organisation and the various answers to the questionnaire. However, in many ways the data are comparatively sector independent.

Annex 2 – In depth Questionnaire

Introduction

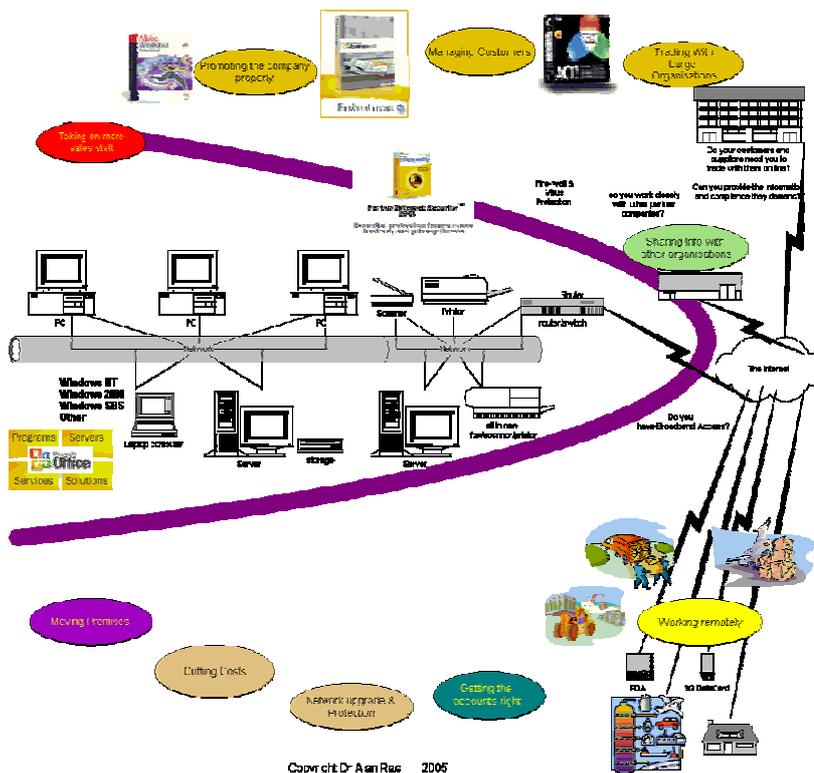
We'd like to talk to you a bit about your business as it is, particularly as it relates to how you use Information and Communication Technologies to support the business. Then we'd like to look in depth at the most recent major ICT investment that you've made and explore some of the issues that you had in making it work effectively for you.

We'd like to do this in the form of a conversation and I'll use the questionnaire sheet just at the end to make sure we've not missed anything out. If it's ok with you we'll record the conversation so that it can be typed up for analysis.

We expect the interview to take just over an hour

We'll let you have a summary of our findings and organise for you to be invited to the workshops we are planning.

- 1) What are the biggest business problems you face? – Prompt with growth map
- 2) How do you see yourself dealing with these? To what extent could technology help you?



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3) What barriers would you have to overcome to make this happen? What barriers do you have in deploying ICT effectively? Cost, skills, culture?

4) How do you get more business?
Pursuing larger businesses
Working collaboratively
What IT changes has this driven

5) Tell us a bit about the last ICT major project you carried out.
What were you trying to achieve for the business
How did you implement and project manage it
What were the biggest challenges you had to overcome?

6) What difference has this made to how the business operates? How has it affected how you work with external organisations (customers, suppliers etc)?

7) What other technological approaches have you considered?
Intranet
Mobile working
Disaster recovery / storage

8) What advice would you give to others going down the same road?