BT Convergence Report
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1. Introduction

Bill Murphy
Managing Director
BT Business

Convergence transforms the most fundamental competencies any business has: it is the ability to communicate and collaborate in order to get the job done. It is a driving force shaping the digital networked economy in which we all live and work, and a powerful catalyst for business change.

To businesses of all sizes convergence can deliver real benefits, from the advantages of speed and service of accessing information from any device (your PC, mobile, PDA) from anywhere, to lowering the cost of your IT by installing and managing a single network that supports your voice, mobile and data networks.

2005 has been the year of convergence, with converged voice and data networks becoming a mainstream technology in the UK. Yet, as with most new technologies, it is the larger organisations that have led the way. With small and medium size enterprises (SMEs) able to benefit from converged communications solutions as well, BT commissioned the BT Convergence Report to help SMEs understand how businesses in their own sector are using the technology and to help provide an indication of what they should now be doing and why.

The BT Convergence Report surveyed a range of companies, with between 20 and 500 employees, from each of the UK’s main industry sectors – finance, manufacturing, retail, support services and leisure.

Significantly, as you will discover from the report, when it came to the benefits derived from adopting a converged network, organisations of all sizes had achieved significant advantages – clearly convergence technologies and converged networks are not just for large corporates.

Indeed, the rapid adoption of broadband for small and medium sized business provides the backbone upon which to realise the benefits of convergence.

While it is clear that cost control remains a major focus for UK businesses it is also encouraging that most of those respondents who were actually using an IP network had achieved much more than just cost reduction, with productivity increases and organisational agility also figuring prominently as major benefits.

All in all it seems the signs are there that converged networks have moved beyond the hype and are now ready for mainstream adoption. Here’s to a future where more business can get done across the UK or around the world.

Bill Murphy
MD BT Business
Over the past two years, small and medium sized enterprises (SMEs) have become increasingly interested in the benefits they can achieve by converging their voice and data on one network. With the market having moved beyond the hype that seems to accompany any new technology, UK organisations can now see there are clear advantages in making the shift to IP-based networking.

Where has all this interest in convergence come from? The real driver behind the market has been the proliferation of affordable and reliable broadband access, without which it would be impossible to deploy these new communication and collaboration technologies.

So what can we learn from the example of broadband adoption, and how does it apply to the growth of converged IP networks?

In just a few years, high-speed Internet access has become practically indispensable to the way we do business in the UK. A recent International Benchmarking Study shows that UK businesses are now amongst the most sophisticated technology users in the world, with 69 per cent of UK businesses having adopted broadband¹.

An Institute of Directors survey conducted last year² found that 84 per cent of IoD members had seen improvements in productivity since installing broadband and 61 per cent had experienced cost savings. In all, 64 per cent reported a direct link between broadband and increased profits. Along a similar line, it is interesting to note in the Convergence Report that 56 per cent of companies that had adopted a converged network had reduced infrastructure costs.

The reason that broadband Internet has become such an important business tool in a relatively short space of time is that companies have been able to take a phased approach in adopting and integrating it into their business processes, and that each phase delivers its own benefits.

Below are the three stages of value creation common to most businesses in their adoption of technology:

1. **Adopt.** The first phase of technology adoption, where businesses look for quick returns through simple cost savings.
2. **Adapt.** Once the technology has been implemented, the business starts looking at ways to modify business processes in order to drive greater efficiency and productivity.
3. **Absorb.** Building new business models and processes to exploit the full potential of a technology, creating new revenue sources, increasing productivity and gaining greater cost efficiencies.

¹ 'International Benchmarking Study (IBS) 2004', carried out for the DTI by Booz Allen Hamilton
² 'Broadband: Its impact on British business', IoD Policy Paper, 2004
Many UK businesses, having adopted and integrated broadband into their business processes, are now at the second or third stage in this process. They are now looking at IP convergence as a significant opportunity for value creation.

As the term suggests, the major benefit of IP convergence is that businesses can consolidate practically all of their information technology and communications systems onto the one common platform, bringing about significant cost and resource efficiencies, increases in productivity and greater collaborative capabilities.

Perhaps understandably, some SMEs still have reservations about migrating to an IP network, fearing they are ‘putting all their eggs into the one basket’ and that their business will be more at risk than if they maintain separate voice and data networks. The task for the IT industry is to convince businesses that converged networks truly are reliable, and that they will not be at any greater risk if they choose to migrate.

Hand in hand with the issue of reliability is that of security, and this is something that SMEs absolutely need to come to grips with when considering the move to a converged network. It is fundamentally important that businesses take a holistic approach to securing their network, ensuring they put in place the right firewalls, virus protection, data protection and business continuity controls to safeguard their operations.

When considering IP convergence, one question that many SMEs are now asking themselves is if they want to manage their network themselves, or if they want to engage a supplier to provide services in an application service provider (ASP) model. Five years ago there was little interest or support for the ASP model, mostly due to a belief that they did not live up to their promises.

Now, businesses have much more confidence in the reliability of the underlying technologies, and are increasingly fed up with managing their networks themselves. We are finding there is significant interest in a utility-style approach to network services, but businesses are adamant that the price must be right.

The key benefit of adopting a managed services model for IP networks is that it levels the playing field between large and small companies. It provides SMEs with access to applications and functionality that allow them to compete with any sized organisations, that they might not otherwise have been able to afford.

The most important thing to remember when discussing IP convergence is that SMEs don’t really care about technology. They care about how they can use technology to drive real business benefits, such as being able to access customers more directly, collaborate up and down the supply chain more effectively, and identify new markets and value for products. It is when businesses can see that technology will help them address a real and pressing need that it becomes truly valuable.
3. Executive Summary

The BT Convergence Report is based on research undertaken by leading business-to-business market research company Coleman Parkes Research in August 2005. The survey of 500 UK businesses with between 20 and 500 employees provides a snapshot of which markets and regions in the UK are adopting IP-based networks, the primary drivers and barriers to adoption, and the benefits that organisations that have migrated have achieved.

The research showed that there are still substantial gaps in knowledge in relation to convergence. Over one third (32 per cent) of all SMEs surveyed admitted to having limited or no knowledge of what a converged network actually is.

More than one third of all respondents (37 per cent) have already migrated to a fully converged voice and data network, while almost one quarter (24%) of respondents who have not yet converged intend to do so in the next two years.

Cost management remains a key factor driving IP adoption. When asked the reasons behind their decision to migrate to a converged IP network, 57 per cent of respondents cited reduced communications costs as the main reason. Other important drivers selected were increased flexibility (40 per cent), and the ability to allow voice and data to be sent on the same network (40 per cent).

These drivers were reflected in the actual benefits organisations had derived from having a converged network. Over 56 per cent of respondents with a converged network achieved a reduction in infrastructure costs and 52 per cent experienced a rise in productivity.

Despite the emphasis placed on cost savings associated with converged communications, the two main barriers to adoption were, uncertainty about cost benefits (28 per cent) and lack of budget (18 per cent).

Drilling down into the research, below are the key findings for each of the vertical industries surveyed in the report:

**Finance:**
The introduction of regulations such as Basel II and Sarbanes-Oxley has forced the finance industry to overhaul its compliance procedures over the past couple of years, while a surge in online banking has made it critical for financial organisations to have secure, effective networks and systems that are easy to use for the customer. As with most industries surveyed, the primary drivers for businesses in finance to move to a converged network were reducing communications costs and to allow voice and data to be sent on the same network.
Manufacturing:
The past eight years have proved difficult for the UK manufacturing industry, which has been labelled old-fashioned, lagging behind the times and unable to compete on a global level. With global rivals being able to manufacture goods at record low prices, some UK manufacturers have seen the opportunity to excel in supply chain management and have made sure they have the technology in place to allow them to do so. On top of improvements in supply chain and 68 per cent of firms surveyed reporting reduced infrastructure costs, some manufacturers have used the technology to their advantage when it came to enhancing productivity.

Retail:
The retail sector in the UK is experiencing a period of change and consolidation, with reduced consumer spending and fierce competition among retailers leading to tightened budgets and a focus on cost reduction and efficiencies. With the move towards online retailing (more than half of the retail respondents now allow customers to buy over the Internet) technology is increasingly becoming a differentiator for businesses.

Business Services:
Architects, legal practices and management consultants were among those companies interviewed in the business services industry. These types of knowledge-based industries rely on people as their core asset, so it is important that they provide their people with the right foundation and infrastructure to work from. A huge increase in mobile working has meant that employees need to be able to communicate from wherever they are. Converged networks have proved to be a successful way of allowing employees to deliver.

Leisure:
The leisure industry is one of the fastest growing industries in the UK, accounting for more than ten per cent of total employment and over 25 per cent of total consumer expenditure. Despite this success, there is still great potential within the industry. Leisure companies are continually exploring different ways to reach existing and potential new customers.
BT Analysis
2005 has been the year for convergence, with converged voice and data networks becoming a mainstream technology in the UK. The Convergence Report survey found that 82% of companies have at least some understanding of what a fully converged network is, and over a third of those companies (37%) have already made the transition themselves.

While a majority of the IT and telecommunications managers interviewed in the survey had some understanding of converged networks, the fact that nearly one fifth of these specialists had no knowledge at all means the communications industry still has some work to do in educating the market.

It is clear that cost control remains a major focus for UK businesses, with 57 per cent of respondents indicating that this is a primary motivation for adopting convergence. A notable finding of the Report is that respondents who were actually using an IP network had achieved much more than just cost reduction, with productivity increases and organisational agility also figuring prominently as major benefits.

The fact that respondents’ uncertainty about cost benefits and lack of budget were the major barriers to adoption, rather than concerns over security, reliability or interoperability, again suggests that converged networks have moved past the hype cycle and are now ready for mainstream adoption.

Understanding of Converged Networks
When asked about their knowledge of converged networks, 18 per cent of all respondents said that they had no understanding at all, while 14 per cent claimed limited knowledge. 24 per cent of respondents believe they have an average understanding of what a converged network is, 20 per cent think their knowledge needs some brushing up and only 24 per cent consider themselves fully up to date.

Adoption of Converged Networks
Convergence seems to be gaining traction within UK organisations, with 37 per cent of all respondents having already adopted a fully converged voice and data network. When asked about other convergence activities:

- 34 per cent send IP voice traffic over a wide area data network
- 43 per cent send IP voice traffic over a local area data network
- 30 per cent use soft phones (PC phones)
- 27 per cent use other types of converged technology

Of the organisations that had not yet adopted a fully converged voice and data network, 12 per cent have plans to implement one in the coming 12 months, while a further 12 per cent plan to adopt a fully converged network in the next two years. 42 per cent of respondents are unsure of when they will migrate to an IP-based network, while 20 per cent plan never to do so.

Of the organisations that have adopted a converged IP network, 34 per cent implemented their system within the past six months. A further 25 per cent of networks were implemented between six and 12 months previously, and 23 per cent were installed between one and two years previously. 18 per cent of networks were more than two years old.
Drivers and Benefits of Convergence
When asked the reasons behind their decision to migrate to a converged IP network, the major drivers for respondents were to reduce communications costs (57 per cent), generate more flexibility and allow voice and data to be sent on the one network (both 40 per cent). Less important motivations included improving the speed of data transfer (38 per cent), meeting ongoing IT strategy goals (36 per cent) and the desire to remain competitive (30 per cent).

These drivers were reflected in the benefits these organisations had derived from having a converged IP network, with 56 per cent of respondents achieving a reduction in infrastructure costs and 52 per cent seeing a rise in productivity. In addition:

- 39 per cent of organisations found that a converged network has increased their organisational agility
- 35 per cent have enhanced their voice functionality
- 33 per cent have found the deployment of integrated applications easier
- 27 per cent have derived greater competitive advantage, and
- 17 per cent have increased customer loyalty

Barriers to Adoption
Despite the emphasis placed by organisations that had adopted converged networks on the cost benefits, the two main barriers to adoption are uncertainty about cost benefits (28 per cent) and lack of budget (18 per cent). Other barriers to adoption include lack of internal IT capabilities (14 per cent) and uncertainty about interoperability of technology (13 per cent). The factors that were of least concern to respondents are security (11 per cent) and reliability (11 per cent).

IT Strategy
Only 38 per cent of respondents have a fully documented IT strategy that is fully adhered to. 16 per cent of respondents have a fully documented IT strategy that is not always adhered to and 23 per cent have an informal yet documented policy. 10 per cent only have a set of guidelines regarding IT, while 12 per cent have no policy or guidelines at all.

When asked about their primary motivations when making IT decisions, 34 per cent of respondents cited satisfying internal needs, while just two per cent list the desire to achieve a competitive edge. 64 per cent of respondents state that most IT decisions are influenced by a combination of both factors.

When asked how they use technology to support their customer relationships, 69 per cent of all respondents interact with customers online and 42 per cent allow customers to buy over the Internet. 37 per cent of respondents have a dedicated customer contact centre, and 66 per cent interact with suppliers online.
4. Converged Network Market in the UK

4.2 Vertical Market

4.2.1 Finance

BT Analysis
The introduction of regulations such as Basel II and Sarbanes-Oxley has forced the finance industry to overhaul its compliance procedures over the past couple of years. Non-compliance with these regulations can lead to crippling charges, so the need for companies to get it right has led to a focus on IT systems and infrastructure in this industry. A surge in online banking has also made it increasingly important for financial organisations to have secure, effective networks and systems that are easy to use for the customer. Online identity theft, phishing, is rife and it is of paramount importance for firms in this industry to make sure they protect both themselves and their customers from such risks.

Finance industry companies surveyed showed the best understanding of converged networks, with 28 per cent of respondents fully up-to-date on their knowledge of what a converged network is. Interestingly, of those finance organisations surveyed that already have a converged network, a huge 86 per cent implemented it in just the last two years. This could suggest that compliance may have been a real driver for this industry.

Understanding of what a converged network is

<table>
<thead>
<tr>
<th></th>
<th>No understanding</th>
<th>Limited understanding</th>
<th>Average understanding</th>
<th>Need to brush up</th>
<th>Fully up to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large (251-500)</td>
<td>10%</td>
<td>14%</td>
<td>9%</td>
<td>46%</td>
<td>51%</td>
</tr>
<tr>
<td>Medium (101-250)</td>
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<td>19%</td>
<td>32%</td>
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<tr>
<td>Small (20-100)</td>
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<td>6%</td>
<td>2%</td>
<td>40%</td>
<td>34%</td>
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<tr>
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<td>16%</td>
<td>6%</td>
<td>7%</td>
<td>45%</td>
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<tr>
<td>Business Services</td>
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<td>15%</td>
<td>5%</td>
<td>41%</td>
<td>36%</td>
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<tr>
<td>Retail</td>
<td>11%</td>
<td>13%</td>
<td>7%</td>
<td>41%</td>
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<tr>
<td>Manufacturing</td>
<td>10%</td>
<td>23%</td>
<td>8%</td>
<td>46%</td>
<td>10%</td>
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<tr>
<td>Finance</td>
<td>17%</td>
<td>7%</td>
<td>18%</td>
<td>37%</td>
<td>22%</td>
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<tr>
<td>All respondents</td>
<td>12%</td>
<td>12%</td>
<td>9%</td>
<td>42%</td>
<td>20%</td>
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Understanding of Converged Networks
Finance sector respondents had the greatest understanding of converged networks of all vertical markets surveyed, with 28 per cent considering themselves fully up to date. Only 13 per cent admitted to having no understanding of a converged network, while 14 per cent said that they had limited knowledge. 28 per cent of respondents claimed an average understanding, and 16 per cent believed that they had a good grasp but needed some brushing up.

Plans to migrate to a converged network

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<thead>
<tr>
<th></th>
<th>Large (251-500)</th>
<th>Medium (101-250)</th>
<th>Small (20-100)</th>
<th>Leisure</th>
<th>Business Services</th>
<th>Retail</th>
<th>Manufacturing</th>
<th>Finance</th>
<th>All respondents</th>
</tr>
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<tbody>
<tr>
<td>never</td>
<td>12%</td>
<td>19%</td>
<td>32%</td>
<td>12%</td>
<td>15%</td>
<td>11%</td>
<td>10%</td>
<td>17%</td>
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<td>more than 5 years</td>
<td>14%</td>
<td>16%</td>
<td>20%</td>
<td>23%</td>
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<td>21%</td>
<td>18%</td>
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<td>unsure</td>
<td>9%</td>
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<td>14%</td>
<td>17%</td>
<td>21%</td>
<td>18%</td>
<td>23%</td>
<td>14%</td>
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<tr>
<td>in next 12 months</td>
<td>1%</td>
<td>5%</td>
<td>20%</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>2%</td>
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<td>5%</td>
<td>20%</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>in next 3-5 years</td>
<td>9%</td>
<td>5%</td>
<td>20%</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
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Adoption of Converged Networks
The finance sector is the third most progressive market in adopting convergence, according to the survey, with 39 per cent of respondents having already migrated to a fully converged IP network. In addition:
- 37 per cent send IP voice traffic over a wide area data network
- 46 per cent send IP voice traffic over a local area data network
- 26 per cent use soft phones (PC phones)
- 30 per cent use other types of converged technology
Of the finance companies surveyed that have not yet adopted a fully converged voice and data network, 17 per cent plan to do so in the coming 12 months and a further seven per cent plan to in the next two years. 18 per cent have plans to implement an IP network in between three and five years, and 37 per cent plan to but do not know when. 22 per cent have no plans currently to adopt a fully converged network.

Of the finance companies surveyed that have adopted a converged IP network, 58 per cent deployed the system in the past year, a further 28 per cent in the past two years, and 14 per cent more than two years previously.

Drivers and Benefits of Convergence
As with most industries surveyed, the primary driver for finance organisations that have moved to a converged network was reducing communications costs (59 per cent) and to allow voice and data to be sent on the same network (44 per cent). Other motivations of similar importance were to generate more flexibility (40 per cent), improve the speed of data transfer (39 per cent), remain competitive (38 per cent) and meet ongoing IT strategy goals (37 per cent).

As might be expected, when asked about the benefits they have achieved from adopting a converged network, 57 per cent of finance companies surveyed have reduced infrastructure costs and 49 per cent have improved productivity. In addition:
- 45 per cent have enhanced their voice functionality
- 44 per cent have maximised their organisational agility
- 31 per cent have found the deployment of integrated applications easier
- 29 per cent have derived greater competitive advantage, and
- 23 per cent have increased customer loyalty

Barriers to Adoption
Cost concerns were top of mind for finance company respondents who had no immediate plans to migrate to a converged network, with 24 per cent citing lack of budget and 20 per cent uncertainty about the cost benefits as the main barriers. Lack of internal IT capabilities, uncertainty about interoperability and security were all barriers for ten per cent of respondents, while only seven per cent cited reliability as a concern.

IT Strategy
Finance companies are by far the most rigorous the survey in applying strategy to IT decisions, with 43 per cent having a fully documented and strictly followed IT strategy. 17 per cent have a fully document IT strategy that is not always adhered to, while 23 per cent have an informal but documented strategy. Only five per cent have a set of guidelines only regarding IT and 11 per cent have no policy at all.

When asked about their primary motivations when making IT decisions, 26 per cent of finance companies surveyed identified internal needs and only one per cent cited the desire to gain a competitive edge. A majority 73 per cent indicated that both factors played an equal role influencing IT decisions.

When asked how they use technology to support their customer relationships, 66 per cent of finance companies surveyed interact with customers online and 57 per cent interact with suppliers online, yet interestingly only 29 per cent allow customers to buy products or services over the Internet. 36 per cent of finance companies have a dedicated contact centre operation.
4. Converged Network Market in the UK

4.2 Vertical Market

4.2.2 Manufacturing

BT Analysis
The past eight years have proved extremely difficult for the UK manufacturing industry, which has been labelled old-fashioned, lagging behind the times and unable to compete on a global level. When it came to the topic of converged networks, however, the research found that none of these aspersions rang true. With global rivals being able to manufacture goods at record low prices, some UK manufacturers have seen the opportunity to excel in supply chain management, and have made sure they have the technology in place to allow them to do so. At the same time, manufacturers reported that installing a converged network has allowed them to reduce communications costs, thus killing two birds with one stone.

The research showed that 40 per cent of manufacturers interviewed currently use a fully converged voice and data network and an extremely impressive 74 per cent of companies interact with their suppliers online. On top of improvements in supply chain and 68 per cent of firms reporting reduced infrastructure costs, the manufacturers also used the technology to their advantage when it came to improving productivity. 50 per cent of companies who have installed a converged voice and data network reported increased productivity levels, indicating that the UK manufacturing industry has not accepted the fate cynics had assigned to it; it has made the best use of technology to help sharpen its competitiveness.

Understanding of Converged Networks
Manufacturing companies surveyed had a similar level of understanding about converged networks to many of the other vertical sectors included in this report, with 22 per cent considering their knowledge fully up to date and 20 per cent needing only some brushing up. 30 per cent considered that they had average knowledge of converged networks, 13 per cent limited knowledge, and 16 per cent admitted no knowledge whatsoever.

Adoption of Converged Networks
Manufacturing is the second most advanced vertical market surveyed, with 40 per cent of respondents having already adopted a fully converged network. In addition:

- 45 per cent send IP voice traffic over a local area data network
- 33 per cent send IP voice traffic over a wide area data network
- 33 per cent use soft phones (PC phones)
- 32 per cent use other types of converged technology

1 ‘International Benchmarking Study (IBS) 2004’, carried out for the DTI by Booz Allen Hamilton
Of the manufacturing companies surveyed that have not yet adopted a fully converged voice and data network, 90 per cent believe they will do so at some point. Ten per cent plan to migrate in the next twelve months, a further eight per cent plan to do so in the next five years, three per cent in more than five years, while 46 per cent are not sure when they will transition.

Of the manufacturing companies surveyed that have adopted a converged IP network, 33 per cent of systems were installed in the past six months, and a further 20 per cent were deployed in the past year. 25 per cent were installed between one and two years ago, and 22 per cent were deployed more than two years previously.

Drivers and Benefits of Convergence
By far the primary motivation for manufacturers surveyed in deploying a converged network was to reduce communications costs (60 per cent). Next, of equal significance was the drive to remain competitive and generate more flexibility (both 38 per cent). 35 per cent of respondents had deployed convergence to meet their ongoing IT strategy and to allow voice and data to be sent on the same network, and 20 per cent wanted to improve the speed of data transfer.

More than two thirds (68 per cent) of manufacturers surveyed have reduced their infrastructure costs as a result of deploying a converged network. In addition:
• 50 per cent have improved productivity
• 35 per cent have found the deployment of integrated applications easier
• 28 per cent have enhanced their voice functionality
• 28 per cent have maximised their organisational agility
• 25 per cent have derived greater competitive advantage, and
• Eight per cent have increased customer loyalty

Barriers to Adoption
Interestingly, while uncertainty about cost benefits was again the number one barrier to adoption for surveyed manufacturers (50 per cent), the second biggest barrier was actually security concerns (28 per cent) – much more than any other vertical market. Lack of budget was the third biggest barrier (22 per cent), equal to concerns over reliability. Lack of internal IT capabilities and uncertainty over interoperability (both 17 per cent) were of least concern to manufacturers.

IT Strategy
When asked about their approach taken to IT strategy, 40 per cent of surveyed manufacturers have a fully documented policy that is strictly adhered to, while 16 per cent have a documented strategy that is not rigorously followed. 26 per cent have an informal, documented policy, 11 per cent have a set of guidelines only, and only eight per cent have no policy at all.

When asked about their primary motivations when making IT decisions, 32 per cent of surveyed manufacturers identified internal needs, while four per cent cited the desire to gain a competitive edge. 64 per cent indicated that both factors played an equal role influencing IT decisions.

When asked how they use technology to support their business relationships, nearly three quarters of manufacturers (74 per cent) that responded interact with suppliers online. 67 per cent interact with customers online, but only 31 per cent allow customers to buy products or services over the Internet. Only 26 per cent of surveyed manufacturers have a dedicated contact centre operation.
4.2.3 Retail

BT Analysis
The retail sector in the UK is experiencing a period of change and consolidation, with reduced consumer spending and fierce competition amongst retailers leading to tightened budgets and a focus on cost reduction and efficiencies. According to the CBI, high street retailers just experienced their worst summer in nearly two decades, with one in five believing business conditions will continue to deteriorate\(^3\).

With such a tight market and continued focus on cost control, it is perhaps unsurprising that retailers were the slowest to adopt convergence, with only 30 per cent of those surveyed having migrated to a converged network. Cost factors also figured prominently in convergence adoption, with 70 per cent of retailers citing reduced communications costs as a prime motivation.

But in an increasingly global, fragmented retail industry, does this focus on cost control mask a need for greater investment and innovation in technology? Of the retailers surveyed that had deployed a converged network, the biggest benefit they had achieved was increased productivity. With the move toward online retailing – more than half of the retail respondents now allow customers to purchase over the Internet – technology is increasingly becoming a competitive differentiator.

Understanding of Converged Networks
There was a fairly large differential in the level of understanding that retailers have about converged networks. 23 per cent of respondents consider themselves fully up to date, while 30 per cent have a solid understanding that needs some brushing up. 20 per cent consider they have average knowledge of converged networks, 17 per cent have only limited knowledge, and 13 per cent have no knowledge whatsoever.

Benefits derived from convergence

Drivers behind adoption of converged networks

\(^3\) CBI (29 August 2005), Distributive Trades Survey

Converged Network Market in the United Kingdom | Vertical Market | Retail
Adoption of Converged Networks

Of all vertical markets surveyed, the retail sector is the least advanced in embracing convergence. Only 30 per cent of all retailers surveyed have adopted a fully converged voice and data network. Of other convergence activities:

- 38 per cent send IP voice traffic over a local area data network
- 27 per cent send IP voice traffic over a wide area data network
- 27 per cent use soft phones (PC phones)
- 23 per cent use other types of converged technology

Of the retailers surveyed that have not yet adopted a fully converged voice and data network, 80 per cent plan to do so at some point. 11 per cent plan to migrate in the next twelve months, 13 per cent in the next two years, seven per cent in between three and five years, seven per cent in more than five years, while 41 per cent are not sure when they will transition.

90 per cent of surveyed retailers that have adopted a converged IP network deployed the systems in the last two years. 37 per cent of networks were installed in the past six months, and a further 30 per cent were deployed in the past year. 23 per cent were installed between one and two years ago, and only 10 per cent were deployed more than two years previously.

Drivers and Benefits of Convergence

Of all the vertical markets, reducing communications costs was the most important driver for surveyed retailers (70 per cent). After this, the next most important drivers were generating more flexibility and improving the speed of data transfer (43 per cent) and allowing voice and data to be sent (33 per cent). The least important motivators were meeting ongoing IT strategy goals (30 per cent) and remaining competitive (13 per cent).

Interestingly, despite having reduced infrastructure costs as their main motivation for deploying a converged network, the number one benefit for 60 per cent of surveyed retailers has been improving productivity, just ahead of reduced infrastructure costs at 57 per cent. In addition:

- 43 per cent have maximised their organisational agility
- 27 per cent have derived greater competitive advantage
- 23 per cent have increased customer loyalty
- 23 per cent have found the deployment of integrated applications easier, and
- 20 per cent have enhanced their voice functionality

Barriers to Adoption

As with many respondents, the number one barrier for 28 per cent of surveyed retailers in adopting convergence is uncertainty about the cost benefits. Lack of internal IT capabilities is the next major barrier for 17 per cent of retailers, while lack of budget and security concerns are a problem for 11 per cent. Uncertainty over interoperability and reliability issues are of least concern, with only eight per cent nominating these as reasons to not move to a converged network.

IT Strategy

Retailers came out as the most lax when it came to IT strategy, with 17 per cent of respondents having no policy at all when it comes to IT. 12 per cent have a set of guidelines only, while 21 per cent have an informal documented approach. 34 per cent of surveyed retailers have a fully documented IT strategy that they adhere to strictly, while 16 per cent have a fully documented policy that they do not rigorously follow.

When asked about their primary motivations when making IT decisions, 33 per cent of surveyed retailers identified internal needs, while only two per cent cited the desire to gain a competitive edge. 65 per cent indicated that both factors played an equal role influencing IT decisions.

When asked how they use technology to support their business relationships, 65 per cent of surveyed retailers interact with suppliers online, 71 per cent interact with customers online and 54 per cent allow customers to buy products or services over the Internet. 39 per cent of retailers surveyed have a dedicated contact centre operation.
4. Converged Network Market in the UK

4.2 Vertical Market

4.2.4 Business Services

BT Analysis

Architects, legal practices and management consultants were among those companies interviewed in the business services industry. These types of knowledge-based industries rely on people as their core asset, so it is important that they provide their people with the right foundation and infrastructure to work from. A huge pick up in mobile working has meant that employees need to be able to communicate from wherever they are, and converged networks have proved to be a successful way of allowing employees to deliver.

As firms in the business services industry have begun to realise the benefits of convergence on their bottom line, there has been a speedy pick up in the adoption of converged networks. 51 per cent of business services firms surveyed implemented converged networks in the last six months. Interestingly, business services companies surveyed cite an improvement in the speed of data transfer as the key benefit realised by implementing a converged voice and data network. And despite 44 per cent of respondents experiencing reduced infrastructure costs as a result of using converged network, uncertainty over cost benefits still remains a barrier to adoption, with as much as 21 per cent of business services companies surveyed giving this reason.

Understanding of Converged Networks

Respondents from the business services sector have an average understanding of converged networks compared to the other vertical markets surveyed, with only 23 per cent considering themselves fully up to date. At the other end of the scale, 18 per cent of respondents have no understanding of a converged network, while 17 per cent have limited knowledge. 21 per cent have an average understanding, and 21 per cent think they have a good grasp but need some brushing up.

Adoption of Converged Networks

The business services sector is the most progressive market in adopting convergence, with 41 per cent of respondents having already migrated to a fully converged IP network. In addition:

- 33 per cent send IP voice traffic over a wide area data network
- 43 per cent send IP voice traffic over a local area data network
- 30 per cent use soft phones (PC phones)
- 29 per cent use other types of converged technology

Of the surveyed business services companies that have not yet adopted a fully converged voice and data network, only 13 per cent plan to do so in the next two years, 11 per cent behind the vertical average. 5 per cent have plans to implement an IP network in between three and five years, and 41 per cent plan to but do not know when. Most striking however, was that a significant 36 per cent of business services respondents plan never to adopt a fully converged voice and data network.

Of the surveyed business services companies that already have adopted a converged IP network, 75 per cent deployed the system in the past year. A further 15 per cent have plans to implement an IP network in between three and five years, and 41 per cent plan to but do not know when. Most striking however, was that a significant 36 per cent of business services respondents plan never to adopt a fully converged voice and data network.
Drivers and Benefits of Convergence

Unlike most other industries surveyed, the primary driver for business services organisations in moving to a converged network was to improve the speed of data transfer (44 per cent). This was closely followed by reduced costs (41 per cent) – the main driving factor for all the other industries. The ability to allow voice and data to be sent on the same network was another major benefit for the business service sector (41 per cent). Other motivations were to generate more flexibility (39 per cent), remain competitive (29 per cent) and meet ongoing IT strategy goals (34 per cent).

When asked about the benefits they have achieved from adopting a converged network, 44 per cent of business services respondents have reduced infrastructure costs and 44 per cent have improved productivity. In addition:
• 32 per cent have enhanced their voice functionality
• 29 per cent have maximised their organisational agility
• 27 per cent have found the deployment of integrated applications easier
• 20 per cent have derived greater competitive advantage, and
• 17 per cent have increased customer loyalty

Barriers to Adoption

Cost issues were the main barriers for surveyed business services companies who have no immediate plans to migrate to a converged network – 21 per cent said that lack of budget is a major concern, while another 21 per cent are uncertain about cost benefits. Lack of internal IT capabilities (15 per cent) and uncertainty about interoperability (15 per cent) are also major concerns. A further 9 per cent of respondents say that reliability is of concern while 6 per cent feel that security concerns are a barrier.

IT Strategy

Business services companies came second in the survey behind the financial services sector for being the most rigorous in applying strategy to IT decisions, with 41 per cent having a fully documented IT strategy which is strictly followed. 14 per cent have a fully document IT strategy that is not always adhered to, while 23 per cent have an informal but documented strategy. Ten per cent have a set of guidelines regarding IT and 12 per cent have no policy at all.

When asked about their primary motivations when making IT decisions, 39 per cent of business services respondents identified internal needs as being the major driver – the highest number to choose this option out of all the sectors. Only two per cent cited the desire to gain a competitive edge, while a majority 59 per cent indicated that both factors played an equal role in influencing IT decisions.

When asked how they use technology to support their customer relationships, 68 per cent of surveyed business services companies interact with customers online and 64 per cent interact with suppliers online. 35 per cent allow customers to buy products or services over the Internet and 33 per cent of surveyed business service companies have a dedicated contact centre operation.
4. Converged Network Market in the UK

4.2 Vertical Market

4.2.5 Leisure

BT Analysis
The leisure industry is one of the fastest growing industries in the UK, accounting for over ten per cent of total employment and over 25 per cent of total consumer expenditure. Despite this success, there is still great potential within the industry. Leisure companies are continually exploring different ways to reach existing and potential new customers.

In recent years, the Internet has become an important revenue channel for the leisure industry, driven by greater convenience and cost savings for consumers and increased profit margin for providers. This trend was reflected in the survey, where 76 per cent of leisure companies interact with their customers online – more than any other vertical.

Despite the ever-increasing importance of technology as a fundamental business enabler in the leisure industry, only 33 per cent of companies surveyed in this market have a fully documented IT strategy that is strictly adhered to – the lowest of all the verticals. Similarly, leisure companies were second to last in the survey in their adoption of converged networks.

What this indicates is that while there are significant opportunities for leisure companies to use technology to gain competitive advantage, the industry as a whole still has a way to go in reaching the levels of knowledge and proficiency that other market sectors have achieved.

Understanding of Converged Networks
The leisure sector respondents have the lowest understanding of converged networks of all the vertical markets surveyed, with only 21 per cent considering themselves fully up to date. 24 per cent feel that their knowledge is good but needs brushing up, 20 per cent feel their understanding is average and 10 per cent have limited knowledge. A high 24 per cent have no knowledge of converged networks at all.

Adoption of Converged Networks
34 per cent of the respondents in the leisure sector have a fully converged voice and data network, the second lowest take-up amongst the sectors surveyed.

Conversely, leisure companies have the highest percentage of any sector surveyed for sending IP voice traffic over a wide area data network (38 per cent), while 36 per cent use soft phones (PC phones). In addition:

- 42 per cent send IP voice traffic over a local area data network, and
- 21 per cent use other types of converged technology

Of those companies surveyed within the leisure sector that do not have a fully converged voice and data network, 12 per cent plan to migrate within the next 12 months and a further 16 per cent have plans to within the following two years. Six per cent believe it would take three to five years to adopt an IP network, and another seven per cent more than five years. 45 per cent plan to move to a converged network in the future, although are unsure when, and 13 per cent said they do not intend to adopt a converged network.

Of the leisure companies surveyed that have already adopted a converged IP network, 55 per cent migrated to the system within the past year, and 25 per cent between one or two years previously. The remaining 20 per cent had upgraded more than two years ago.

Drivers and Benefits of Convergence
56 per cent of respondents in the leisure sector cited a reduction in communications costs as being the primary reason behind adopting a converged network. 47 per cent were motivated by the ability to send voice and data and meet ongoing technology strategy goals respectively. 44 per cent wanted to improve the speed of data transfer, and 41 per cent wanted to increase flexibility, while only 29 per cent migrated to a converged network to maintain a competitive edge.

4 Sheffield Hallam University, Leisure Industry Research Centre
With regards to benefits they had achieved from migrating to a converged IP network, 59 per cent of surveyed leisure companies have improved productivity and 56 per cent have reduced infrastructure costs and maximised organisational agility respectively. In addition:

- 50 per cent have enhanced their voice functionality
- 47 per cent have found the deployment of integrated applications easier
- 35 per cent have derived greater competitive advantage, and
- 17 per cent have increased customer loyalty

**Barriers to Adoption**

Financial concerns are the biggest deterrent to surveyed leisure companies hesitant about moving to a converged network, with 31 per cent unsure about cost benefits and 19 per cent citing lack of budget. Uncertainty about interoperability (16 per cent), lack of internal IT capabilities (13 per cent), reliability concerns (13 per cent) and security concerns (6 per cent) are the other reasons cited by respondents with no short or medium term plans for converged activity.

**Approach taken towards IT strategy**

<table>
<thead>
<tr>
<th>Category</th>
<th>Large (251-500)</th>
<th>Medium (101-250)</th>
<th>Small (20-100)</th>
<th>Leisure</th>
<th>Business Services</th>
<th>Retail</th>
<th>Manufacturing</th>
<th>Finance</th>
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</tr>
</thead>
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<td>Need to brush up</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
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<td>5%</td>
<td>11%</td>
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<tr>
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<td>8%</td>
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<td>11%</td>
<td>12%</td>
</tr>
</tbody>
</table>

**IT Strategy**

With regards to the implementation of a formal IT strategy, 15 per cent of the leisure industry respondents have no guidelines or policy at all. 12 per cent have a set of guidelines only and 23 per cent have an informal, but documented policy. Only 33 per cent have a fully documented IT policy that is strictly adhered to – the lowest of any vertical segment surveyed – and 18 per cent have a fully documented policy that is not always followed.

IT decisions within surveyed leisure companies are based primarily on a combination of internal needs (20 per cent) and the desire to achieve a competitive edge (3 per cent).

**Other uses of technology**

Leisure industry respondents came out on top when asked how they used technology to support their customer relationships. 76 per cent of companies surveyed interact with their customers over the Internet, and 69 per cent interact with their suppliers in this way. 62 per cent sell products or services to customers online, and 51 per cent employ a contact centre to deal with customer enquiries. These were the highest figures of all the vertical sectors surveyed.
4. Converged Network Market in the UK

4.3 Analysis by Organisation Size

**BT Analysis**

The BT Convergence Report surveyed UK organisations that are traditionally described as small to medium enterprises (SMEs). For the purpose of analysis, these organisations have been broken down into three distinct categories based on size. Organisations with between 20 and 100 employees have been classified as ‘small’, those with between 101 and 250 have been classified as ‘medium’, and those between 251 and 500 network users have been classified as ‘larger’, although obviously these organisations are not of a size to be described as a large enterprise.

Analysing the survey results using these categories throws up some very clear trends about IT proficiency and adoption. Without question, the larger organisations surveyed demonstrated leadership in almost every category, leading their smaller counterparts in their understanding and adoption of convergence, the way they use technology to support customer relationships, and in the sophistication of their IT strategies.

Similarly, while cost reduction was again the primary motivation for larger organisations surveyed, other drivers such as generating more flexibility and meeting ongoing IT strategy goals played a greater role than it did for their medium and small organisations.

What is important to note is that when it came to the benefits derived from adopting a converged network, surveyed organisations of all sizes had achieved significant advantages.

Clearly convergence technologies and converged networks are not just for large corporates.
4. Converged Network Market in the UK

4.3 Analysis by Organisation Size

4.3.1 Smaller Organisations (20-100)

Understanding of Converged Networks

As might have been expected, the smaller companies surveyed for the report have a much more limited understanding of converged communications than their larger counterparts. In fact, 34 per cent of small companies surveyed have no idea whatsoever of what a converged network is, and 17 per cent have limited knowledge. Only 14 per cent consider themselves fully up to date, while 15 per cent need some brushing up and 23 per cent have an average understanding of converged networks.

Adoption of Converged Networks

Similarly, the smaller organisations surveyed were the least advanced in their adoption of converged networks, with 32 per cent having migrated to a fully converged IP network. Smaller organisations also trailed in other converged activities:

- 21 per cent send IP voice traffic over a wide area network
- 34 per cent send IP voice traffic over a local area data network
- 29 per cent use soft phones (PC phones)
- 15 per cent use other types of converged technology

Understanding of what a converged network is

<table>
<thead>
<tr>
<th>Organisation Size</th>
<th>No understanding</th>
<th>Limited understanding</th>
<th>Average understanding</th>
<th>Need to brush up</th>
<th>Fully up to date</th>
</tr>
</thead>
<tbody>
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<td>12%</td>
<td>20%</td>
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<td>34%</td>
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<td>24%</td>
<td>21%</td>
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<tr>
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<td>17%</td>
<td>21%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Retail</td>
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<td>19%</td>
<td>23%</td>
<td>18%</td>
<td>23%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>16%</td>
<td>13%</td>
<td>30%</td>
<td>20%</td>
<td>22%</td>
</tr>
<tr>
<td>Finance</td>
<td>13%</td>
<td>14%</td>
<td>28%</td>
<td>16%</td>
<td>28%</td>
</tr>
<tr>
<td>All respondents</td>
<td>18%</td>
<td>14%</td>
<td>24%</td>
<td>20%</td>
<td>24%</td>
</tr>
</tbody>
</table>

The smaller organisations surveyed that have not yet adopted a converged network are less certain of their migration strategy. 14 per cent of those that have not migrated to a converged network plan to in the next 12 months, and six per cent in the next two years. A further five per cent plan to in three years or more, while 40 per cent are unsure of when they will migrate. More than one third (34 per cent) have no plans to adopt a converged network.

Adoption of convergence

Of the smaller organisations surveyed that have already adopted a converged network, 37 per cent had deployed their systems in the past six months and a further 21 per cent were installed in the past year. 25 per cent were installed between one and two years ago and 17 per cent more than two years previously.
Drivers and Benefits of Convergence

Smaller organisations in the survey followed the same pattern as other organisations, with 50 per cent nominating reduced infrastructure costs as a primary motivator in embracing convergence. The other factors influencing smaller organisations were improving the speed of data transfer (41 per cent), allowing voice and data traffic to be sent on the one network (38 per cent) and generating more flexibility (36 per cent). Less important considerations were meeting ongoing IT strategy goals (32 per cent) and remaining competitive (25 per cent).

When asked what benefits they have actually experienced from deploying a converged network, 48 per cent of respondents from smaller organisations reported reduced infrastructure costs and 41 per cent improved productivity. In addition:
- 36 per cent maximised their organisational agility
- 27 per cent enhanced their voice functionality
- 20 per cent found the deployment of integrated applications easier
- 18 per cent derived greater competitive advantage, and
- Seven per cent increased customer loyalty

Barriers to Adoption

As might be expected from companies that have less budget and personnel, smaller organisations that responded to the survey were most concerned with cost and resources when considering migrating to an IP network. 21 per cent of respondents consider cost benefits a barrier to adoption, and lack of budget is an issue for 16 per cent. 13 per cent believe they lacked the internal IT capabilities to support a converged network, while 12 per cent are concerned about interoperability. 7 per cent of smaller organisations are respectively concerned about security and reliability.

IT Strategy

Smaller organisations in the survey generally took a much less disciplined approach to IT strategy, with nearly one quarter (23 per cent) of respondents having no policy or guidelines at all. 11 per cent have a set of guidelines only, while 25 per cent have an informal documented policy. Only 28 per cent of respondents have a fully documented IT strategy that is strictly adhered to, while 13 per cent had a fully documented strategy that is not rigorously policed.

When asked about their primary motivations when making IT decisions, 39 per cent of smaller companies surveyed identified internal needs and only one per cent cited the desire to gain a competitive edge. A majority 60 per cent indicated that both factors played an equal role influencing IT decisions.

When asked how they use technology to support their customer relationships, 66 per cent of smaller companies interact with customers online and 34 per cent allow customers to buy products or services over the Internet. 22 per cent of respondents from smaller companies have a dedicated contact centre operation and 60 per cent interact with suppliers online.
4. Converged Network Market in the UK

4.3 Analysis by Organisation Size

4.3.2 Medium Sized Organisations (101-250)

Understanding of Converged Networks
Mid-sized organisations surveyed for the report followed the trend of leading smaller companies and trailing larger organisations when it came to levels of knowledge about converged networks. 23 per cent of respondents consider themselves fully up to date on the topic, while 20 per cent think they only need some brushing up. 31 per cent have average knowledge, and 14 per cent have limited knowledge. 12 per cent of respondents have no knowledge whatsoever of converged networks.

Adoption of Converged Networks
Interestingly, medium-sized organisations in the survey came a very close second to larger organisations in actually adopting converged networks, with 39 per cent of respondents operating on a fully converged voice and data network. In addition:
- 35 per cent send IP voice traffic over a wide area network
- 47 per cent send IP voice traffic over a local area data network
- 28 per cent use soft phones (PC phones)
- 32 per cent use other types of converged technology

When those that have not yet adopted an IP network were asked about their intentions, 12 per cent of medium-sized organisations in the survey intend to migrate in the next twelve months and a further 19 per cent intend to do so in the next two years. 12 per cent intend to do so in between three and five years and five per cent in more than five years. 40 per cent are unsure of when they will adopt a converged network and 11 per cent believe they never will.

Of the surveyed medium-sized organisations that have adopted a converged network, 65 per cent of systems were installed in the past year. 23 per cent of networks were installed between one and two years ago and 12 per cent were deployed more than two years previously.

Drivers and Benefits of Convergence
The survey found that the major driver for mid-sized organisations in moving to a converged network was to reduce communications costs (64 per cent), followed by the ability to send voice and data over the one network (43 per cent). The other primary motivations for mid-sized company respondents included generating more flexibility (41 per cent), improving the speed of data transfer (39 per cent), meeting ongoing IT strategy goals (33 per cent) and remaining competitive (29 per cent).

Cost reduction and improved productivity are by far the biggest motivations for surveyed mid-sized companies in adopting a converged network (both 62 per cent). Other benefits include:
- 44 per cent have maximised their organisational agility
- 39 per cent have found the deployment of integrated applications easier
- 36 per cent have enhanced their voice functionality
- 30 per cent have derived greater competitive advantage, and
- 20 per cent have increased customer loyalty

Barriers to Adoption
More than any other group, surveyed medium-sized organisations are most concerned about the cost benefits of migrating to a converged network, with 47 per cent of respondents indicating this is a major barrier. 24 per cent of respondents highlighted lack of budget and 21 per cent indicated that lack of internal IT capabilities are reasons for not migrating to a converged network. Uncertainties about interoperability, security and reliability are of equal concern to 16 per cent of mid-sized organisations.
**IT Strategy**

In their approach to IT strategy, mid-sized organisations again followed the trend of trailing larger companies and leading smaller companies. 41 per cent of mid-sized company respondents have a fully documented IT strategy that they adhere to strictly, and a further 16 per cent have a fully documented strategy that is not rigorously followed. 22 per cent have an informal but documented strategy, 12 per cent have a set of guidelines only regarding IT and eight per cent have no policy at all.

When asked about their primary motivations when making IT decisions, 36 per cent of mid-sized companies surveyed identified internal needs and only four per cent cited the desire to gain a competitive edge. A majority 60 per cent indicated that both factors played an equal role influencing IT decisions.

When asked how they use technology to support their customer relationships, 70 per cent of mid-sized companies surveyed interact with customers online and 40 per cent allow customers to buy products or services over the Internet. 37 per cent of respondents companies have a dedicated contact centre operation and 67 per cent interact with suppliers online.
4. Converged Network Market in the UK

4.3 Analysis by Organisation Size

4.3.3 Larger Organisations (251-500)

Understanding of Converged Networks
The larger organisations surveyed in the BT Convergence Report had by far the best understanding of converged networks. More than one third of respondents (34 per cent) of this size are totally up to date on converged networks, while one quarter (25 per cent) only needs some brushing up. 20 per cent have average knowledge, and 12 per cent have limited knowledge. Only nine per cent have no knowledge at all of what a converged network is.

Adoption of Converged Networks
The understanding of convergence by respondents from larger organisations in the survey is mirrored by their adoption of the technology, with 40 per cent having already migrated to an IP network. Larger organisations also lead the way in every other converged activity:
- 46 per cent send IP voice traffic over a wide area network
- 48 per cent send IP voice traffic over a local area data network
- 34 per cent use soft phones (PC phones)
- 34 per cent use other types of converged technology

Of the larger organisations surveyed that have not yet adopted a fully converged IP network, only 11 per cent plan never to migrate. Ten per cent plan to adopt a converged network in the next twelve months and a further 14 per cent plan to in the next two years. Ten per cent have plans within the next three to five years, and nine per cent in more than five years. 46 per cent are unsure when they will adopt an IP network.

Of the larger organisations surveyed that have adopted a converged network, 39 per cent of systems had been installed in the last six months and a further 19 per cent in the past year. 27 per cent of networks were installed between one and two years ago and 15 per cent were deployed more than two years previously.

Drivers and Benefits of Convergence
While the primary driver for larger organisations in the survey was again to reduce communications costs (61 per cent), other drivers were actually more significant for this group than for smaller and mid-sized organisations. Nearly half (46 per cent) of larger SMEs in the survey deployed a converged network to generate more flexibility, and 43 per cent did so to meet ongoing IT strategy goals. Other motivations were to allow voice and data to be sent on the one network (40 per cent), remain competitive (36 per cent) and improve the speed of data transfer (33 per cent).

When asked what benefits they have actually experienced from deploying a converged network, 57 per cent of respondents from larger SMEs have reduced infrastructure costs and 51 per cent have improved productivity. In addition:
- 40 per cent have enhanced their voice functionality
- 37 per cent have maximised their organisational agility
- 37 per cent have found the deployment of integrated applications easier
- 31 per cent have derived greater competitive advantage, and
- 24 per cent have increased customer loyalty

Barriers to Adoption
In comparison with the mid-size and smaller organisations surveyed, larger SMEs are generally less concerned when it came to barriers to adoption. 22 per cent of respondents from larger SMEs are uncertain about the cost benefits of converged communications and 18 per cent cite lack of budget. 11 per cent have concerns over interoperability, security and reliability respectively and 9 per cent cite lack of internal IT capability as a barrier to adoption.
**IT Strategy**

Respondents from larger SMEs generally have a much more disciplined approach to technology, with 46 per cent of respondents having a fully documented IT strategy that is strictly adhered to. A further 19 per cent have a fully documented IT strategy that is not always adhered to, while 22 per cent have an informal but documented strategy. Only 7 per cent have just a set of guidelines regarding IT and 6 per cent have no policy whatsoever.

When asked about their primary motivations when making IT decisions, 25 per cent of larger SMEs surveyed identified internal needs and only three per cent cited the desire to gain a competitive edge. A majority 72 per cent indicated that both factors played an equal role influencing IT decisions.

When asked how they use technology to support their customer relationships, 73 per cent of larger SMEs in the survey interact with customers online and 53 per cent allow customers to buy products or services over the Internet. 52 per cent of respondents from larger SMEs have a dedicated contact centre operation and 70 per cent interact with suppliers online.
At the TIA* we recognise that the decision of when to migrate to a converged infrastructure will depend entirely on individual business circumstances. As organisations choose to implement converged solutions, however, those that don’t may be left at a competitive disadvantage.

Converging voice and data systems over a single infrastructure provides businesses with the opportunity to make cost savings on a day-to-day basis. In addition, the seamless end-user services and single point of management can help businesses to substantially increase communication performance and flexibility. Cost reduction and improved communication options are just two potential reasons why many businesses have already opted for converged solutions.

If an investment must be made, for example when opening a Greenfield site, cost and communication benefits often provide the impetus to choose a converged network. For businesses that already have existing communication networks in place, however, other benefits may need to be considered before taking the convergence plunge. This is also true for small to medium businesses (SMEs).

Despite a potentially strong business case to support the introduction of convergence, many SMEs might still be skeptical of migrating to a converged network for a number of reasons - financial, practical and perceptual.

The typical cost-conscious SME works to a tight capital expenditure budget. Long-term policy aims to squeeze optimum return from existing assets while demanding ‘simple payback’ inside a short period for any new investment. This initial skepticism could be supported by misconceptions about the technology itself. Many, for example, believe that the new solutions are designed for, and targeted primarily at, large corporations.

Some SMEs might also suspect a lack of reliability with converged solutions, however, in reality, levels of robustness and resilience have improved as the technology evolves.

Finally, but perhaps most importantly, some SMEs (many of which often lack a senior, IT/Telecoms manager) may be understandably confused by issues such as performance and security management. As a result of all the above, SMEs could be put off from exploring the option of migrating to a converged network.

Despite this reticence, however, many SMEs are considering the option of migrating to a converged network.

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* The TIA Convergence Forum is an unique initiative in the UK that works to identify, discuss and resolve the common problems faced by, initially, the integration of voice and data communications and, subsequently, the convergence of communications and business applications software. The TIA Convergence Forum was formed in December 2001 and participating companies range from network operators, manufacturers and distributors through to resellers/channel partners/solutions providers and consultants.
Things for a SME to consider when planning a new converged network implementation include:

1. **Engage a trusted partner early on in the thought process.** Customers should work with a partner who has the capability to manage the whole communications network. For example the partner should have proven expertise in voice, data and wide area networking. The ability to take a dispassionate, but expert view of different vendor technologies is an advantage. It is crucial to perform a level of consultancy to identify the business drivers for convergence applications, prior to creating a Solution Design, which will need to take account of the end game whilst also providing a practical migration strategy.

2. **Audit the existing network.** Customers should review their existing infrastructure as this will influence the strategy and timescales for convergence. For example: is the existing Local Area Network (LAN) voice capable, is any Wide Area Network (WAN) enabled to allow prioritisation of voice across it and can the existing PBX (private branch exchange) infrastructure be upgraded to IPT? In addition, what will be the requirements of a new network — will flexible/mobile working be required, Unified Messaging, video conferencing, collaboration etc? The shape of the existing infrastructure can dramatically alter a solution design as it will potentially be the weakest point within the new Architecture. Legacy protocols which are crucial to a business may not be fully supported in all converged systems so the level of ‘acceptable’ compromise for certain features or functions needs to be established before a definitive design can be agreed upon.

3. **Build the Convergence Roadmap (the strategy for convergence based on business requirements and timescales).**

   Some customers may wish to “sweat their existing assets”. This may mean upgrading existing PBX infrastructure to IPT or phasing a roll out across different sites to coincide with the writing off of existing assets. It is essential to work with a partner that can give you advice based upon experience.

4. **Implementation.** Organise implementation to minimise disruption to business. Many customers may prefer major changes to take place outside of normal working hours. In addition, it is usually possible for most installation work to be completed before the changeover so that any downtime is minimised. Implementing convergence solutions is not the same as deploying legacy systems and should not be approached in the way one might have in the past. There are significant risks to project success and assessing and agreeing ownership of such risks is a key element to achieving success. Possibly, the most significant risk is the choice of partner to design and deploy the solutions.

5. **Post implementation.** Customers should work with a partner who can help them to obtain the very best from their new network in terms of availability, utilisation and new enhancements on an ongoing basis.

   It cannot be stressed enough that convergence technology, whilst simple to administer for the end user, is a complex implementation. The customer should use a single expert partner who can integrate the different elements of the converged network rather than separate LAN, WAN, PBX suppliers.
Q. What is your definition of convergence?
A. Convergence is the combination of communications networks, mobility and applications. It is the technical foundation of the digital networked economy. Convergence transforms the methods by which individuals and organisations communicate, from customer relationship to intra-company or even person-to-machine communications. Convergence offers businesses the potential to reduce costs and enhance flexibility, as well as creating a platform on which to base new products and services.

As such, BT’s vision of convergence in the digital networked economy is characterised by three interlinking circles:

6. Frequently Asked Questions

Q. How many companies did you interview?
A. 502 in total

Q. What size were the companies you interviewed?
A. The companies had between 20 – 500 employees.

Q. What research company did you use?
A. Coleman Parkes Research

Q. When was the research conducted?
A. In August 2005

Q. Who did you interview within those companies?
A. In every case we made sure we were speaking to the person in charge of the telecommunications and IT infrastructure

Q. Which sectors did you focus on?
A. Finance, Retail, Manufacturing, Leisure and Business Services

Q. How many companies did you interview in each sector?
A. We interviewed 100 people in each sector

Q. How many companies did you interview in each region?
A. South East – 177
South West – 55
Midlands – 95
North – 107
Scotland – 47
Northern Ireland – 4
Wales - 17
Q. Did you interview your own customers? If not, why?
A. Businesses interviewed for the report were selected at random by Coleman-Parkes. They may or may not have been customers of BT. We wanted to help ensure that the sample would be representative of all UK SMEs.

Q. Why did you just interview SMEs for this report? Isn’t BT concerned about the enterprise market?
A. BT has customers of all sizes in the UK – from small businesses right through to the largest enterprises – however a good deal of research has already been conducted into understanding and adoption of convergence by large companies. As small and medium sized organisations make up a significant proportion of the UK business landscape, BT made the decision to focus on providing greater insight into the state of converged activities by organisations of this size.

Q. Does this report look at fixed-mobile convergence?
A. Convergence is at the heart of BT’s strategy as we continue our transformation from a traditional telco into a networked IT services company.

This report looks specifically at the convergence of voice and data, which for many SMEs is the natural first step in their network evolution. The launch of BT Fusion in June 2005 has given BT the world’s first seamless combined fixed and mobile phone service.

Q. Did you just look into converged voice and data networks, or did you look into other types of convergence?
A. Specifically, we asked companies whether they:
   - Have a fully converged voice and data network
   - Send IP voice traffic over a wide area data network
   - Send IP voice data over a local area data network
   - Use soft phones/PC phones?
   - Use any other converged application (such as desktop video conferencing) or remote collaboration tools that combine voice and data or voice, video and data

Q. Why does this not look at mobile convergence, seeing as BT has just launched Fusion?
A. This report looks specifically at the convergence of voice and data, which for many SMEs is the natural first step in their network evolution. The launch of BT Fusion in June 2005 has given BT the world’s first seamless combined fixed and mobile phone service.

Q. Isn’t this report slightly self-serving?
A. The Convergence Report provides an objective insight into the state of convergence adoption by UK SMEs. While we have looked into the drivers and benefits of convergence, we have equally looked at the barriers that are holding businesses back. The goal of the Report is to provide UK businesses with practical insights to help them decide whether they should adopt convergence now or in the future.
Q. Do you actually think that convergence is the answer for all companies though?
A. Convergence can deliver flexibility, control, productivity improvements and cost savings to SMEs of all sectors and sizes. Investments in convergence become even more attractive when new productivity and remote collaboration tools are used to transform how organisations work, rather than rely on basic infrastructure cost savings to deliver a return.

BT’s five-stage methodology — Assess, Design, Implement, Manage and Return on Investment Modelling — helps companies and other organisations determine the optimal time to migrate to a converged infrastructure, from both a technological and a commercial perspective.

Q. What are the actual benefits of migrating to a voice and data network? Can you quantify them?
A. According to the research, the key benefits that SMEs have already achieved from converging their networks are:

- Reduced infrastructure costs (56%)
- Improved productivity (52%)
- More organisational agility – ie more responsive, flexible, adaptable to change (39%)
- Enhanced voice capabilities (35%)
- Easier deployment of applications (33%)
- Greater competitive advantage (27%)
- Increased customer loyalty (17%)

In terms of quantifying these benefits, while the research did not ask respondents to put an actual value to what they had achieved.

Q. Give example of convergence applications
A. The following diagram shows how the addition of applications on a converged network could improve the Return on Investment an organisation could achieve from migrating to a converged infrastructure.
7. Tables and Appendices

7.1 Regional Breakdown

7.1.1 Midlands

**Understanding of Converged Networks**
- 18 per cent of companies based in the Midlands consider themselves to have a fully up to date understanding of converged networks
- 28 per cent believe they have a good grasp of converged networks but need some brushing up
- 23 per cent believe they have an average knowledge of converged networks
- 15 per cent have a limited knowledge of converged networks
- 16 per cent have no idea about converged networks

**Adoption of Converged Networks**
- 37 per cent of companies based in the Midlands have a fully converged voice and data network
- 34 per cent send IP voice traffic over a wide area data network
- 50 per cent send IP voice data over a local area network
- 26 per cent use soft phones/PC phones
- 22 per cent use any other converged application

**Drivers of Convergence**
- 63 per cent of all of companies based in the Midlands with a converged network cited reduced communications costs as a main driver
- 37 per cent said that the ability to send voice and data over one network was a main driver
- 49 per cent said that increased speed of data transfer was a main driver
- 34 per cent migrated to a converged network in order to meet ongoing technology strategy
- 31 per cent said that to remain competitive was a main driver
- 40 per cent cited increased flexibility

**Benefits of convergence**
- 68 per cent of all of companies based in the Midlands with a converged network cited improved productivity as a main benefit of converged networks
- 63 per cent cited reduced infrastructure costs as a main benefit
- 43 per cent said that easier deployment of integrated applications was a main benefit
- 23 per cent cited increased customer loyalty as a main benefit
- 34 per cent said that greater competitive advantage was a main benefit
- 49 per cent said maximised organisational agility was a main benefit
- 29 per cent cited enhanced voice functionality as a main benefit

**Barriers to Adoption**
- 4 per cent of respondents in the Midlands with no immediate plans for convergence activities cited security concerns as a main reason for not moving to converged communications
- 9 per cent cited reliability concerns as a main barrier
- 39 per cent said that uncertainty about cost benefits as a main barrier
- 22 per cent said that lack of budget was a main barrier
- 13 per cent cited that lack of internal IT capabilities was a main barrier
- 9 per cent said that uncertainty about interoperability was a main barrier
7. Tables and Appendices

7.1 Regional Breakdown

7.1.2 North

Understanding of Converged Networks
- 25 per cent of companies based in the North consider themselves to have a fully up to date understanding of converged networks
- 16 per cent believe they have a good grasp of converged networks but need some brushing up
- 25 per cent believe they have an average knowledge of converged networks
- 14 per cent have a limited knowledge of converged networks
- 20 per cent have no idea about converged networks

Adoption of Converged Networks
- 29 per cent of companies based in the North have a fully converged voice and data network
- 23 per cent send IP voice traffic over a wide area data network
- 32 per cent send IP voice data over a local area network
- 35 per cent use soft phones/PC phones
- 21 per cent use any other converged application

Drivers of Convergence
- 77 per cent of all of companies based in the North with a converged network cited reduced communications costs as a main driver
- 45 per cent said that the ability to send voice and data over one network was a main driver
- 39 per cent said that increased speed of data transfer was a main driver
- 48 per cent migrated to a converged network in order to meet ongoing technology strategy
- 45 per cent said that to remain competitive was a main driver
- 58 per cent cited increased flexibility

Benefits of convergence
- 58 per cent of all of companies based in the North with a converged network cited improved productivity as a main benefit of converged networks
- 68 per cent cited reduced infrastructure costs as a main benefit
- 48 per cent said that easier deployment of integrated applications was a main benefit
- 23 per cent cited increased customer loyalty as a main benefit
- 35 per cent said that greater competitive advantage was a main benefit
- 45 per cent said maximised organisational agility was a main benefit
- 42 per cent cited enhanced voice functionality as a main benefit

Barriers to Adoption
- Ten per cent of respondents in the North with no immediate plans for convergence activities cited security concerns as a main reason for not moving to converged communications
- 8 per cent cited reliability concerns as a main barrier
- 21 per cent said that uncertainty about cost benefits as a main barrier
- 15 per cent said that lack of budget was a main barrier
- 18 per cent cited that lack of internal IT capabilities was a main barrier
- 15 per cent said that uncertainty about interoperability was a main barrier
7. Tables and Appendices

7.1 Regional Breakdown

7.1.3 Scotland

**Understanding of Converged Networks**
- 23 per cent of companies based in Scotland consider themselves to have a fully up to date understanding of converged networks
- 21 per cent believe they have a good grasp of converged networks but need some brushing up
- 26 per cent believe they have an average knowledge of converged networks
- 11 per cent have a limited knowledge of converged networks
- 19 per cent have no idea about converged networks

**Adoption of Converged Networks**
- 49 per cent of companies based in Scotland have a fully converged voice and data network
- 40 per cent send IP voice traffic over a wide area data network
- 45 per cent send IP voice data over a local area network
- 30 per cent use soft phones/PC phones
- 23 per cent use any other converged application

**Drivers of Convergence**
- 65 per cent of all of companies based in Scotland with a converged network cited reduced communications costs as a main driver
- 43 per cent said that the ability to send voice and data over one network was a main driver
- 39 per cent said that increased speed of data transfer was a main driver
- 35 per cent migrated to a converged network in order to meet ongoing technology strategy
- 22 per cent said that to remain competitive was a main driver
- 39 per cent cited increased flexibility

**Benefits of convergence**
- 52 per cent of all of companies based in Scotland with a converged network cited improved productivity as a main benefit
- 52 per cent cited reduced infrastructure costs as a main benefit
- 30 per cent said that easier deployment of integrated applications was a main benefit
- 17 per cent cited increased customer loyalty as a main benefit
- 13 per cent said that greater competitive advantage was a main benefit
- 35 per cent said maximised organisational agility was a main benefit
- 48 per cent cited enhanced voice functionality as a main benefit

**Barriers to Adoption**
- 7 per cent of respondents in Scotland with no immediate plans for convergence activities cited security concerns as a main reason for not moving to converged communications
- 14 per cent cited reliability concerns as a main barrier
- 29 per cent said that uncertainty about cost benefits as a main barrier
- 21 per cent said that lack of budget was a main barrier
- Seven per cent cited that lack of internal IT capabilities was a main barrier
7. Tables and Appendices
7.1 Regional Breakdown

7.1.4 South East

Understanding of Converged Networks
- 25 per cent of companies based in the South East consider themselves to have a fully up to date understanding of converged networks
- 20 per cent believe they have a good grasp of converged networks but need some brushing up
- 23 per cent believe they have an average knowledge of converged networks
- 14 per cent have a limited knowledge of converged networks
- 19 per cent have no idea about converged networks

Adoption of Converged Networks
- 41 per cent of companies based in the South East have a fully converged voice and data network
- 41 per cent send IP voice traffic over a wide area data network
- 49 per cent send IP voice data over a local area network
- 33 per cent use soft phones/PC phones
- 34 per cent use any other converged application

Drivers of Convergence
- 49 per cent of all of companies based in the South East with a converged network cited reduced communications costs as a main driver
- 39 per cent said that the ability to send voice and data over one network was a main driver
- 36 per cent said that increased speed of data transfer was a main driver
- 38 per cent migrated to a converged network in order to meet ongoing technology strategy
- 19 per cent said that to remain competitive was a main driver
- 43 per cent cited increased flexibility

Benefits of convergence
- 44 per cent of all of companies based in the South East with a converged network cited improved productivity as a main benefit of converged networks
- 49 per cent cited reduced infrastructure costs as a main benefit
- 25 per cent said that easier deployment of integrated applications was a main benefit
- 14 per cent cited increased customer loyalty as a main benefit
- 24 per cent said that greater competitive advantage was a main benefit
- 33 per cent said maximised organisational agility was a main benefit
- 32 per cent cited enhanced voice functionality as a main benefit

Barriers to Adoption
- 16 per cent of respondents in the South East with no immediate plans for convergence activities cited security concerns as a main reason for not moving to converged communications
- 16 per cent cited reliability concerns as a main barrier
- 31 per cent said that uncertainty about cost benefits as a main barrier
- 18 per cent said that lack of budget was a main barrier
- 14 per cent cited that lack of internal IT capabilities was a main barrier
- 16 per cent said that uncertainty about interoperability was a main barrier
7. Tables and Appendices

7.1 Regional Breakdown

7.1.5 South West

Understanding of Converged Networks
- 29 per cent of companies based in the South West consider themselves to have a fully up to date understanding of converged networks
- 15 per cent believe they have a good grasp of converged networks but need some brushing up
- 25 per cent believe they have an average knowledge of converged networks
- 15 per cent have a limited knowledge of converged networks
- 16 per cent have no idea about converged networks

Adoption of Converged Networks
- 31 per cent of companies based in the South West have a fully converged voice and data network
- 20 per cent send IP voice traffic over a wide area data network
- 29 per cent send IP voice data over a local area network
- 18 per cent use soft phones/PC phones
- 25 per cent use any other converged application

Drivers of Convergence
- 53 per cent of all of companies based in the South West with a converged network cited reduced communications costs as a main driver
- 41 per cent said that the ability to send voice and data over one network was a main driver
- 18 per cent said that increased speed of data transfer was a main driver
- 35 per cent migrated to a converged network in order to meet ongoing technology strategy
- 6 per cent said that to remain competitive was a main driver
- 18 per cent cited increased flexibility

Benefits of Convergence
- 29 per cent of all of companies based in the South West with a converged network cited improved productivity as a main benefit of converged networks
- 53 per cent cited reduced infrastructure costs as a main benefit
- 18 per cent said that easier deployment of integrated applications was a main benefit
- 12 per cent cited increased customer loyalty as a main benefit
- 24 per cent said that greater competitive advantage was a main benefit
- 35 per cent said maximised organisational agility was a main benefit
- 18 per cent cited enhanced voice functionality as a main benefit

Barriers to Adoption
- 11 per cent of respondents in the South West with no immediate plans for convergence activities cited security concerns as a main reason for not moving to converged communications
- 5 per cent cited reliability concerns as a main barrier
- 26 per cent said that uncertainty about cost benefits as a main barrier
- 26 per cent said that lack of budget was a main barrier
- 16 per cent cited that lack of internal IT capabilities was a main barrier
- 16 per cent said that uncertainty about interoperability was a main barrier