



The Virtual Enterprise

A CMA Leadership Survey

Key findings report

April 2006



Research Study conducted by Recom Research in Communications on behalf of Nortel and the Communications Management Association



www.nortel.com
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A Foreword from CMA

The virtual enterprise is a term that has been in business circles for a number of years and has been referenced favourably many times in analyst reports, business journals and conferences. Yet for many it remains a mystifying term. When asked questions such as 'What is the virtual enterprise?', 'How is it going to change the way that business is done?', we found that there were few definitive answers. Therefore we felt it would benefit CMA members to look into the virtual enterprise more closely, in order for answers to be provided and benefits to be realised. We were delighted to do this in partnership with Nortel.

From the outset, the CMA members and the Nortel customers involved in the survey showed great enthusiasm for the virtual enterprise. Perhaps the most surprising thing was that although many of the respondents may not have been familiar with the term 'the virtual enterprise', they were acutely aware of the benefits of this model. In fact, the vast majority are already well on the road to becoming virtual enterprises, perhaps without actually recognising or labelling it as such.

One clear conclusion to draw from the research is that many enterprises would like to virtualise faster or more effectively, but they are unsure how to proceed or even where to begin. Despite many respondents' feedback that the virtual enterprise is the responsibility of the IT or telecoms department, the fact is that the virtual enterprise is bigger than technology. It is a whole company initiative that requires many different functions to work together.

Virtual enterprise is not an overnight solution – it requires effort and clear focus. In the face of the very real benefits that can be achieved, both the CMA and the members participating in the survey believe that the effort is worth it.

Kind regards

Glenn Powell, Chief Executive, CMA

CMA, Communications Management Association, is the UK's premier business communications association. It represents and engages both professional individuals and corporate users and also provides an interface with the entire value chain. CMA members spend £13 billion per annum in the UK ICT market. They range from major corporations to small to medium sized businesses from across the UK in commerce, industry and the public sector. CMA is a registered charity and a Company Limited by Guarantee.

Details on CMA can be found at www.thecma.com or call +44 1372 361234

Contents

Section		Page
1	Management summary	1
2	Nortel's Viewpoint	3
3	Research Objectives and Methodology	4
4	Definition of the virtual enterprise	6
5	Employees	9
6	Partners / Suppliers	13
7	Perception of the virtual enterprise solutions	16
	Appendix A	17
	Appendix B	19

Section 1

Management summary

The research results support the fact that the move towards the virtual enterprise is happening. According to the findings, the success of the virtual enterprise is dependent on two key factors:

1. how well a dispersed workforce is managed and supported
2. how effectively an organisation integrates its suppliers and partners

A recent article in *BusinessWeek* considers these factors to be so important for organisations that it states “the most innovative new product for many companies may be the structure of the workforce itself”¹ and how well enterprises work together.

The virtualisation of the workforce is already happening: the vast majority (91%) of the organisations represented in the survey provide their employees with secure remote access to the organisation’s internal network as necessary, and a further 5% of the organisations represented stated that they will do so in the near future. In addition, 83% have flexible working capabilities and 77% have hot desking facilities.

The perceived benefits from providing secure remote access, flexible working and hot desking for employees were considered to be a win-win situation for both the employees and the organisation in terms of:

- a) Increased efficiency and productivity for the organisation
- b) Offering a better work environment and greater flexibility to the employees

The virtualisation of suppliers and partners appears to be a slower process compared to that of the workforce. Just over half (58%) of the organisations represented have already integrated suppliers or partners with their IT systems. The main barriers perceived as to why partners and suppliers have not yet been fully integrated with the organisation’s IT system are:

- a) Technological challenges, primarily: security issues, compatibility and cost
- b) Human requirements: ‘change of management style’
- c) Operational requirements: ‘change of organisational structure’

The companies that have already integrated partners and / or suppliers stated that since adopting a virtual enterprise set-up their organisation has become more efficient, responsive and accurate. Only 18% of the respondents stated that they do not see any benefits by integrating their IT system with their suppliers or partners.

The majority of the respondents (80%) agreed that the virtual enterprise is the future. However what is interesting is that no-one is formally responsible for the virtual enterprise within an organisation. The majority of the survey respondents were directly responsible for IT and telecommunications and clearly recognised the technical challenges that the virtual enterprise represents.

¹ BusinessWeek, December 12/19, 2005

However, concerns were raised by respondents who recognised that the virtual enterprise needs more than technical input; it needs a company wide focus. In order to achieve this, organisations need to start considering who is responsible for the virtual enterprise in terms of operations, human resources, new product development, sales and marketing, etc. Some would argue that a virtual enterprise is technically led and the lead to this transition should be the 'technical personnel' (IT/telecoms).

However, it is interesting to note that during the survey period a number of other 'non-technical' respondents were approached (such as senior personnel who work in finance, business development, etc.) They felt unable to contribute to a discussion on the virtual enterprise as they clearly regarded it as being in the domain of the IT/telecoms department. Therefore, although no individual appears to be responsible for the virtual enterprise within an organisation, it is regarded by many as a job for the IT/telecoms department, and certainly these employees take a significant amount of interest in the subject.

On a final note, many of the companies we interviewed recognised that to remain competitive amid rapidly changing market conditions, they needed to embrace and effectively manage the virtual enterprise model. However, the research indicates that the enterprise is not moving towards virtualisation as fast as it could – or should. Our findings suggest that the primary reason behind this is that no one has responsibility for managing the process, and the fact that many companies feel unsure about how to virtualise most effectively is a major contributing factor.

Section 2

Nortel Viewpoint

Analysts and business commentators repeatedly predict that in order to survive in today's increasingly competitive environment, companies must virtualise. By becoming a virtual enterprise, organisations can embrace ever increasing levels of partner integration, joint ventures, outsourced services, e-business affiliates and mobile working practices. This research now adds another piece to the story by providing concrete evidence that the virtual enterprise is not a buzz word or marketing slogan – it is a business reality for many organisations in Europe today.

We found that the research highlighted several issues that we regularly find amongst our own customer base. The four most common are:

The definition of the 'virtual enterprise' is not well understood

Although there is often confusion around the term the 'virtual enterprise,' one thing is certain: there is clear understanding of the potential benefits this model can provide.

The benefits of the virtual enterprise are well understood

Virtualisation has much to offer the enterprise, with the potential for enhanced agility, reduced costs, streamlined processes, more efficient business units, and accelerated product and services diversification. Despite awareness of these benefits, the research shows that organisations typically adopt virtualisation 'piecemeal'. While virtualising any aspect of a business will bring advantages, the benefits can be maximised if the company takes a holistic approach. We believe the only way to address this problem is by having an individual in the business responsible for virtualisation.

No one is responsible for the virtual enterprise

Nortel believes that CIOs have a key role to play in fashioning the shift towards this new model of working. The opportunity for the CIO is to identify the virtual enterprise trend, understand the wider issues and prompt a new business dialogue around the board room table. Virtualisation is not a 'big bang' initiative. It requires a realistic scope and a clear business focus, and the CIO needs to link to other functions in the business to create a virtual enterprise, for example human resources, finance, sales and marketing.

Virtualisation is happening at different stages

Nortel has identified three distinct phases for virtualisation. The first is the virtualisation of data, typified by the adoption of ecommerce and long established in many companies. The second is the virtualisation of the workforce, and the research shows that the majority of companies surveyed (91%) are at this stage. The third phase is the virtualisation of business processes, i.e. changing the mode of operation to include partners and suppliers. Not surprisingly, this stage is a slower process but is gaining momentum as companies recognise the real benefits this can bring.

Nortel believes that in an uncertain business world there is one certainty: virtualisation will continue. We await the results of 'Virtual Enterprise 2007' with great interest.

Nortel knows virtualisation: we have embraced the entire virtual enterprise concept and have utilised our technology, skills and experience to enable our ongoing transformation. We believe that 2006 is set to be the year in which the virtual enterprise becomes a critical success factor for the enterprise. To find out more, please visit our virtual enterprise microsite at: www.nortel.com/promotions/emea/virtualenterprise/index.html

Section 3

Research Objectives and Methodology

Research Objectives

The main objectives of the survey were to establish the following:

- What virtual enterprise means to businesses
- Current and planned activities that would support a virtual enterprise set-up
- Barriers and benefits gained / perceived from introducing the virtual enterprise concept. (Particularly remote access to employees, suppliers and partners)
- Perceptions and views regarding what virtual enterprise solutions might be able to deliver to organisations

Methodology

200 telephone interviews with telecoms decision makers/influencers in member companies of the Communications Management Association (CMA) and in Nortel's customer base, split as follows:

- 130 CMA members
- 70 Nortel customers

The fieldwork took place between late February and early March 2006.

Respondent profile

The majority of the respondents who took part were:

- IT, Network or Telecoms managers (65%)
- From large organisations (58% of the respondents worked in organisations with 1001+ employees) with multiple sites
- And from organisations that do business across the Europe, Middle East and Africa region (63%)

Please see charts 1 and 2 below, for more information about the organisation & respondent's profile.

Chart 1: Organisations' profile ²

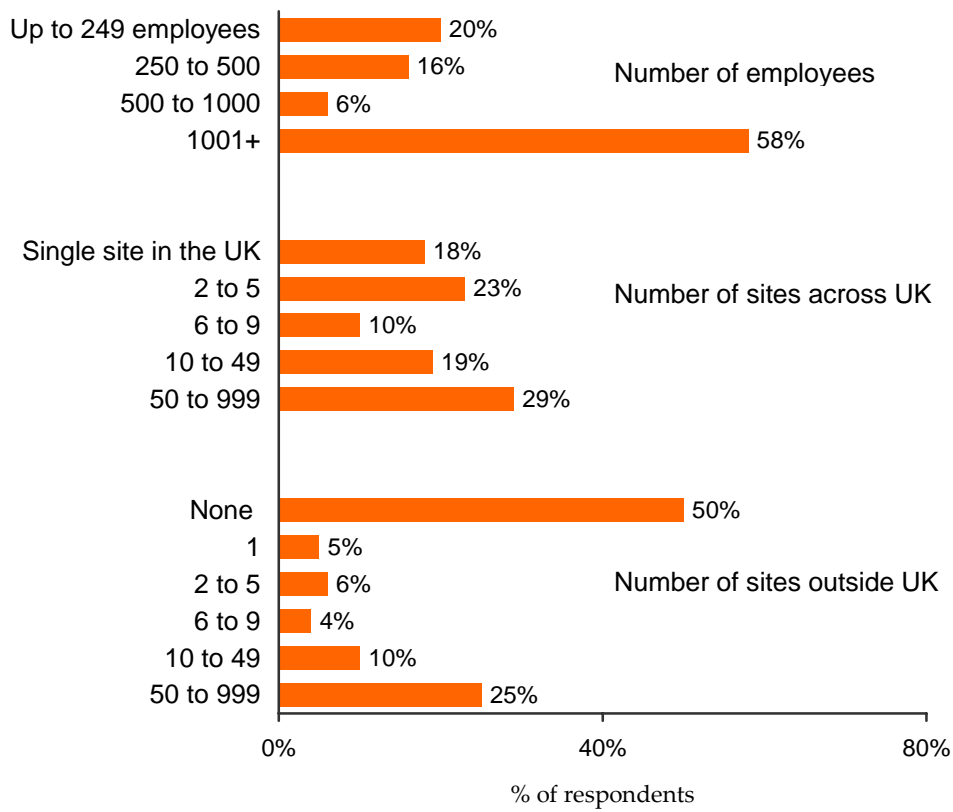
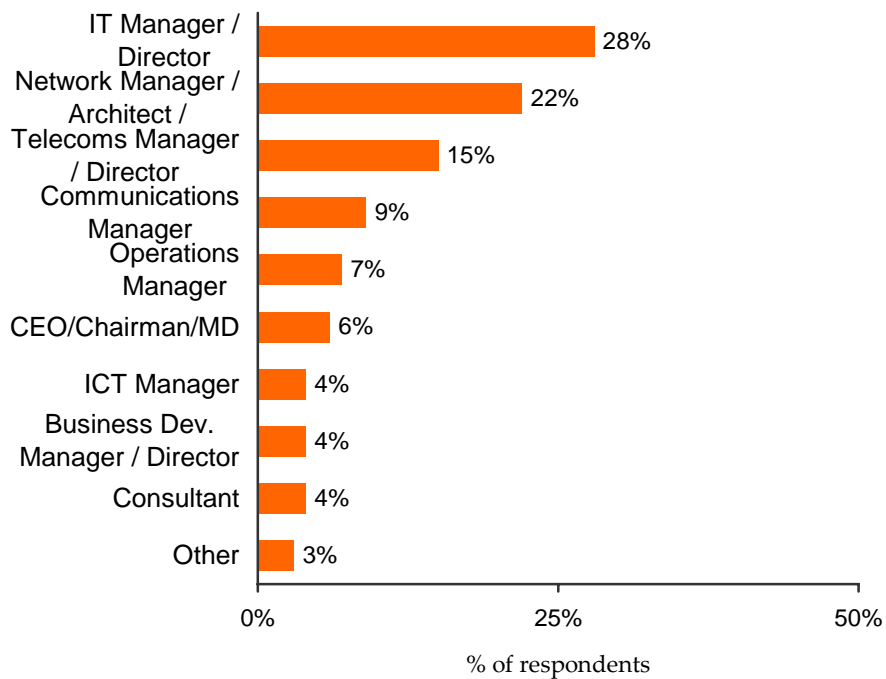


Chart 2: Respondent's job title ³



² Base: all respondents, 200

³ Base: all respondents, 200

Section 4

Definition of the virtual enterprise

When asking the respondents to define, in their own words, the concept of virtual enterprise, the following main themes emerged:

- Idea of flexible working, mobility and no physical boundaries (49%).
- Idea of linking people (employees, partners and / or suppliers) together, sharing / collaborating and seen as one (24%)

"It's an enterprise that does not have to be in a specific time & place, that does not have predetermined boundaries. It's a mobile enterprise"

"It's the ability for a company to have many touch points and for them to be perceived or seen as one."

"Look and feel like same organisation although they are external (to the organisation). Viewed as and operates as though internal division."

"A global tool that allows one to securely and seamlessly interact and do business efficiently with partners, suppliers and customers."

However, the concept of 'virtual enterprise' did confuse a third of the respondents, who could not define what 'virtual enterprise' meant to them.

"I can see that Virtual means something, Enterprise means something too, however the two together does not really mean a great deal to me."

➔ **In order for the concept of Virtual Enterprise to make sense, it must be defined in simple terms and refer to organisations' issues.**

The following definition of the virtual enterprise compiled from the respondents' comments made clear sense:

"A virtual enterprise allows customers, employees, partners and suppliers to have access to information from where ever they are and on what ever device. It breaks down the traditional boundaries of work being restricted to a physical location. A virtual enterprise provides a robust network that allows an organisation to conduct business with suppliers, customers and partners as efficiently as it does with its own employees. All of this with the knowledge that sensitive information is secure and restricted for those with authorisation."

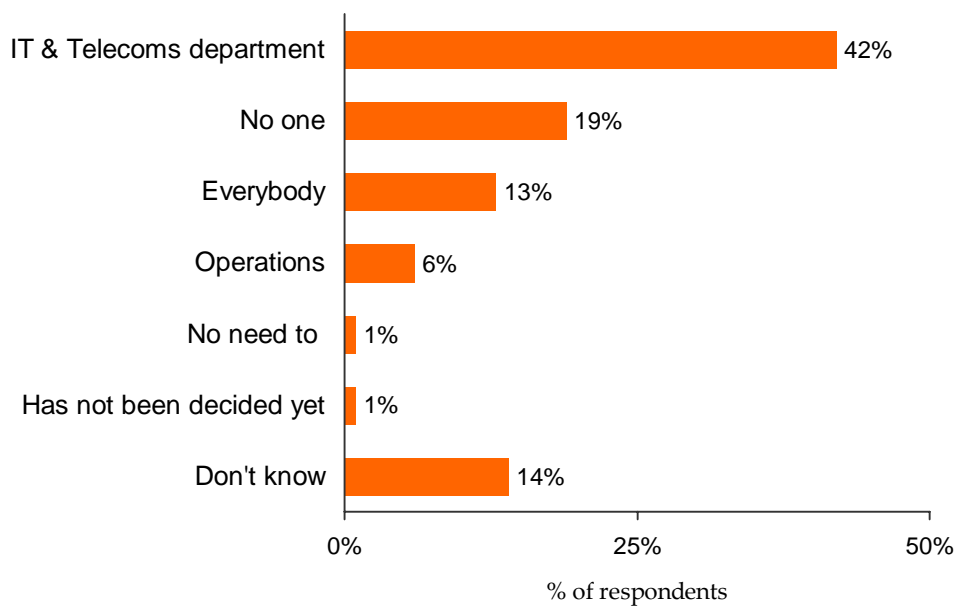
Therefore, in respondents' minds, providing such facilities as home working and secure remote access for employees, suppliers and partners is necessary for their organisation to be effective in today's economic environment. What is interesting is that the majority of the respondents were not aware of the rapid acceleration that this new form of working can have on their organisation and, as shown below, organisations on the whole do not have a person responsible for the 'virtual enterprise.'

Who manages the virtual enterprise?

→ *No individual is responsible for managing the Virtual Enterprise*

On the whole, respondents were rather perplexed by the questions as 'who manages the virtual enterprise' was not an area that was consciously discussed or considered. Thus the answer to 'who normally manages the virtual enterprise' was normally referred to departments rather than individuals. Therefore no one has overall responsibility of the virtual enterprise.

Chart 3: Who is managing the virtual enterprise in your organisation? ⁴



⁴ Base: all respondents, 200

However, what was clear from the survey is that the virtual enterprise needs to be seen on a company wide basis. The majority of the respondents represented in the survey were 'Technical Staff' and clearly recognised the technical challenges for the virtual enterprise, and felt comfortable in providing a technical solution (if being within their control).

“Correctly implemented and managed it can work well. But it has drawbacks currently in the systems available. The security is an issue. 20% of the geographical areas we work in are not suitably developed with broadband and infrastructure. There needs to be investment in set-ups. There is no pan-European solution, no standard to work from.”

“The only problems I can foresee are technical and implementation costs.”

However, concerns were raised as respondents recognised that a virtual enterprise needs more than a technical solution: it needs to have a 'company wide solution'. For example, some of the concerns raised were: 'how the organisation copes with the transition in terms of managing staff remotely', 'leadership' and 'how one gets a bird's eye view of what is going on with the virtual enterprise'.

Interestingly, in order to have a 'company wide solution' organisations need to start considering who is responsible for the virtual enterprise and that includes the 'technical personnel' (IT/Telecoms).

Section 5

Employees

What are organisations doing – for their employees?

Overall, organisations have implemented or are in the process of implementing (within the next 18 months) a virtual enterprise for their employees (please see figure 1 below). Amongst the tiny minority (who tended to be very small organisations) that had no plans to provide such as secure remote access, flexible working and hot desking facilities, the main reason given was that there was no need, as there was 'no direct business benefit.'

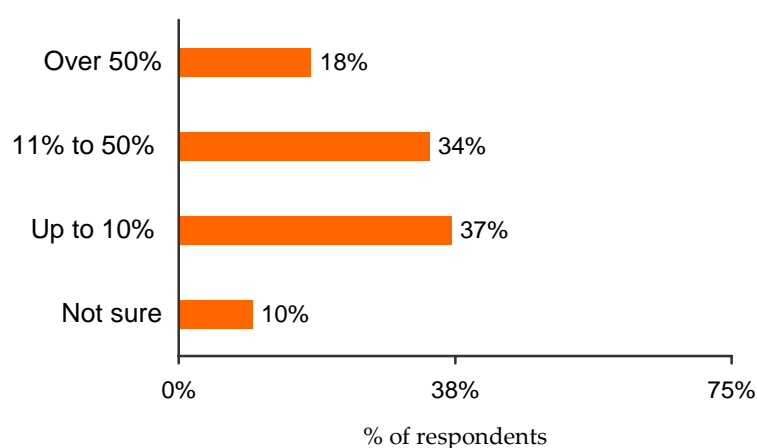
Figure 1: What organisations are doing or planning to do for their employees?⁵

	Percentage of organisations that		
	Currently ...	Plan to...	Have no plans to ...
... Provide secure remote access to their internal network for their employees	91%	5%	4%
... Provide secure remote access to Multimedia sharing applications for their employees	35%	n/a	n/a
... Have flexible working capabilities	83%	6%	10%
... Provide hot desking facilities	74%	7%	18%

⁵ Base: all respondents, 200 (don't know and refusal answers are not shown in the above chart)

Of the organisations that provide secure remote access to their employees, on average 25% of their workforce have secure remote access to the organisation's internal network. (See chart below 4.) There are indications to show that industry sector and size of company have an impact on how many employees within the organisation will be given remote access to the organisation's internal network. For example, communications and finance sectors and companies who are international players will be more likely to provide secure remote access to more than 25% of their workforce.

Chart 4: Percentage of employees that have secure remote access to the organisation's internal network⁶



Benefits of and barriers to providing secure remote access, flexible working and hot desking to employees

The overwhelming perceived benefits of providing secure remote access, flexible working and hot desking for employees were considered to be the same and primarily it boiled down to the following:

- a) Evidence suggests that it has a direct financial benefit to the organisation in terms of increased efficiency and productivity.
- b) Furthermore, employees benefit from a better work environment and greater flexibility.

Therefore providing remote access, flexible working and hot desking is considered to be a win-win situation for both the employees and the organisations.

Furthermore, the rise of the home workers is accelerating; the DTI suggests that currently there are approximately 8.5 million (almost 1/3 of the working population).⁷ However, the rising 'distribution workforce' who work away from the office not only bring economic benefits to the organisations but challenges that were mainly identified by the respondents as,

- 'how does one manage these workers?'
and
- how does one ensure that the organisation's confidentiality is secure?'

⁶ Base: all respondents who offer secure remote access to their employees to access the internal network, 182

⁷ Source: National Statistics – people in employment 28.81 million January 2006

A minority considered that providing employees with secure remote access may lead to an increase in employee stress from *'being unable to switch off.'*

"I think one problem will be not switching off and more and more time spent in the office, which may lead to stress and health issues"

Although concerns were raised regarding having a more 'mobile workforce', the vast majority of the organisations (irrespective whether they are currently providing secure remote access or not) considered the benefits to outweigh the barriers by far.

"Virtual Enterprise offers a great flexibility, in some ways democratising the workplace by allowing disabled or family people to compete. Also it can save money on office overheads."

Figure 2: Summary benefits and barriers – Employees.

	Main Benefits gained or perceived from ...	Main barriers perceived from ...
... Providing secure remote access to internal network for employees	<ul style="list-style-type: none"> • Mobility (staff can work from anywhere) • Increased Flexibility / Efficiency /Productivity • Linking staff together / improving communications • Essential to run the business • Improving work environment 	<ul style="list-style-type: none"> • Requires new management / organisation structure • Security issues • Cost of technology
... Providing secure remote access to Multimedia sharing applications for employees	<ul style="list-style-type: none"> • Reduced Cost • Mobility (staff can work from anywhere) 	<ul style="list-style-type: none"> • Quality of the service • Security issues • Requires new management
... Having flexible working capabilities	<ul style="list-style-type: none"> • Increased Flexibility / Efficiency /Productivity • Improving work environment / staff morale • Linking staff together / improving communications 	<ul style="list-style-type: none"> • Requires new management / organisation structure • Security issues • Cost of technology
... Providing hot desking facilities	<ul style="list-style-type: none"> • Increased Flexibility / Efficiency /Productivity • Savings on space / cost 	<ul style="list-style-type: none"> • Requires new management / organisation structure • Security issues • Cost of technology

For further details, please see appendix A, charts 7 to 10.

"We became more responsive. It saves on costs and travel time."

"The only problem I can see is in Business Adoption as at the moment, although the IT systems are there, the business processes are not always."

"Security and virus are what keep me awake at night."

"(Benefits) It's immeasurable! Allows us to do our business, we could not function without it."

"Not too sure how to manage my staff."

"It's a win- win situation, the organisation benefits but so do our employees."

"How do I motivate my employees and avoid isolation?"

"What happens to the organisation's knowledge base?"

Section 6

Partners / Suppliers

It is not surprising that only key suppliers or partners have been integrated with the IT system of the organisations represented in this report.

However, if the current think-tanks are correct the number of organisations integrating suppliers / partners with their IT system is likely to increase. Evidence shows that the traditional organisational structure (which was more the belief 'the bigger the better' as competitive advantage is gained by economies of scale) is changing towards developing links with suppliers and partners – the idea being that, by connecting with other specialised institutions, we create an opportunity for leverage capability building – 'getting better faster by working with others,' say John Hagel III & John Seely Brown in 'The Only Sustainable Edge.'

The recent studies (City Growth Schemes) carried out by the Massachusetts Institute of Technology (MIT), who argue that organisations get better faster (creating a competitive advantage) and economic growth is accelerated if they (organisations) work closely together. Furthermore, a number of think-tanks opine that working more closely with suppliers and partners will become even more important in the near future.

Secure remote access to Partners / Suppliers

Over half of the organisations interviewed currently integrate suppliers or partners with their IT system. Only 18% of organisations interviewed do not plan to integrate suppliers or partners with their IT system.

Figure 3: What organisations are doing or planning to do for their Partners / Suppliers?⁸

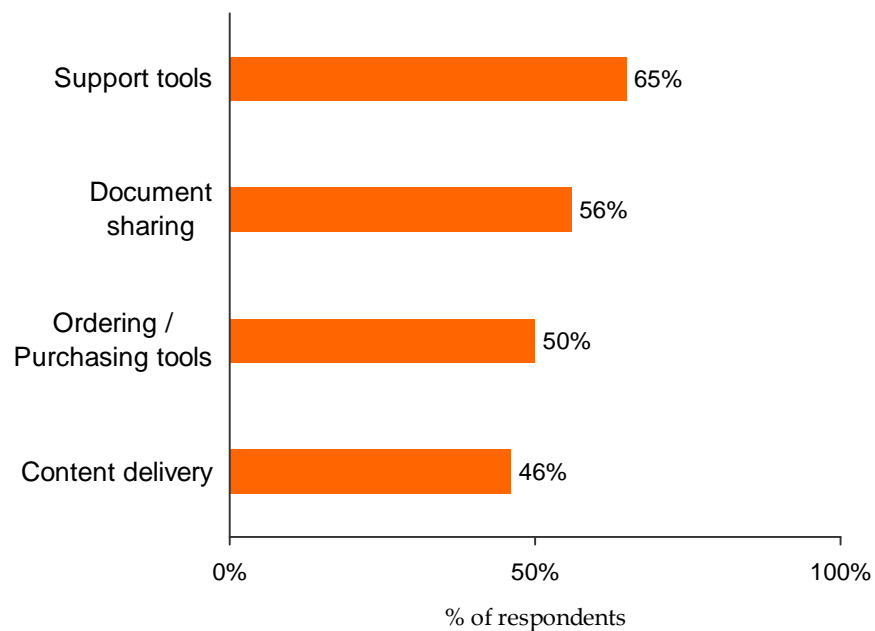
	Percentage of organisations that		
	Currently ...	Plan to...	Have no plans to ...
... Integrate Suppliers or Partners with their IT system	58%	11%	18%

⁸ Base: all respondents, 200 (don't know and refusal answers are not shown in the above chart)

Applications shared with Partners / Suppliers

Organisations who provided the following applications to their partners / suppliers (see chart 5) stated that they did so in order to reduce lead time and operation expenditure resulting to a more efficient organisation.

Chart 5: Applications shared with Partners / Suppliers⁹



Benefits of and barriers to integrating Partners / Suppliers with organisation's IT system

Organisations that have adopted a virtual enterprise set-up with their partners and / or suppliers stated that they have become more efficient, responsive and accurate.

However, the main barriers perceived to why partners and suppliers have not been fully integrated with the organisation's IT system yet are:

- a) Technological challenges mainly: security issues, compatibility and cost
- b) Human requirements: 'change of management style'
- c) Operational requirements: 'change of organisational structure'

⁹ Base: all respondents who offer secure remote access to their Partners and/or suppliers, 116

Figure 4: Summary benefits of and barriers to offering secure remote access to Partners / Suppliers

	Main Benefits gained or perceived from ...	Main barriers perceived from ...
... Providing secure remote access to Partners / Suppliers	<ul style="list-style-type: none"> • Increased Efficiency • Improving Suppliers/ Partners relationships (better communication, more accurate, faster, increased security) • Improving Supply Chain Management 	<ul style="list-style-type: none"> • Security issues • Cost of technology • Compatibility • Requires new management / organisation structure
... Sharing applications with Partners / Suppliers	<ul style="list-style-type: none"> • Increased Efficiency • Improving Suppliers/ Partners relationships (better communication, more accurate, faster, increase security) • Improving Supply Chain Management 	<ul style="list-style-type: none"> • Security issues • Cost of technology • Compatibility • Requires new management / organisation structure

For further detail please see appendix B, charts 11 and 12.

"It has improved our communications with our partners, we save time and the information exchanged is more accurate."

"In our case, we have not extended integration to our partners yet because they all use unique purchasing systems and the cost and complexity of adoption is prohibitive. It will happen though."

"We know we will benefit 'the technical solution' is relatively straight forward but what about the human element... we just need to come up with the appropriate solution"

"If we can crack compatibility and the security required then it's a no-brainer"

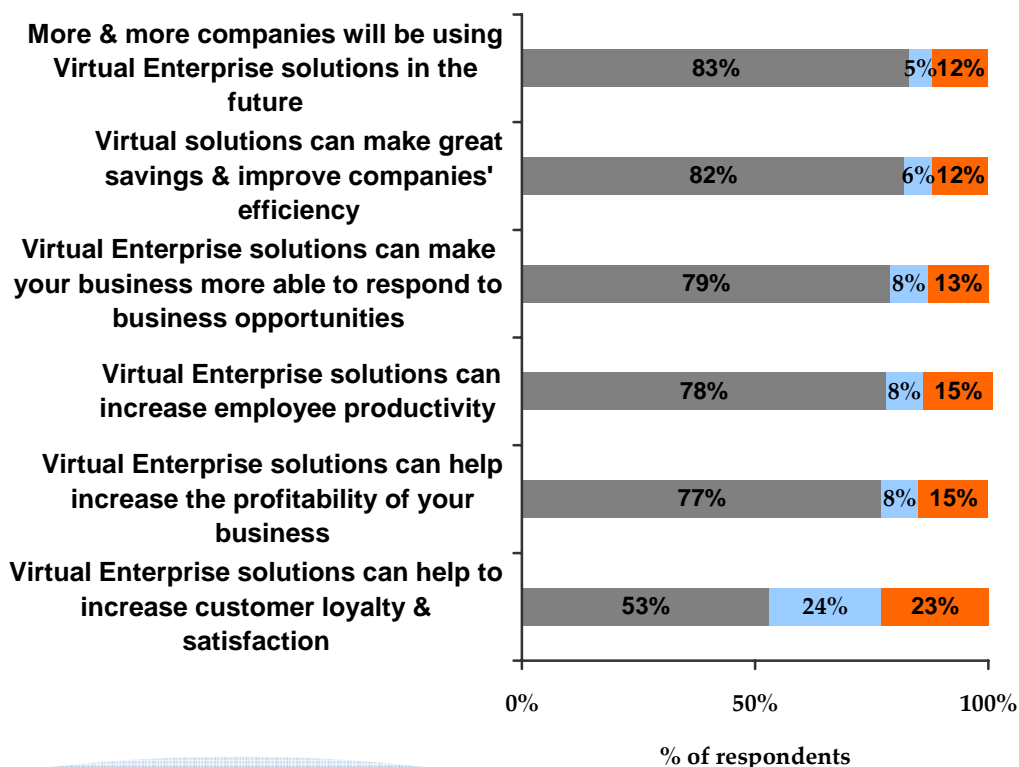
Section 7

Perception of virtual enterprise solutions

The consensus is that virtual enterprise solutions will be adopted more and more by organisations. To use some of the respondents' words, *'it's the way forward,' 'if we don't we will cease to be competitive.'*

Respondents were asked to state whether they agreed or disagreed with the statements shown in the chart below. All agreed with the following statements apart from the last one, 'virtual enterprise solutions can help to increase customer loyalty & satisfaction', as respondents felt that this was too early to tell and generally were unable to comment (as most of the respondents were IT / Telecoms / Coms Personnel); as one respondent put it, *'I am not directly involved with that aspect'*.

Chart 6: Perceptions and views regarding what virtual enterprise solutions might be able to deliver¹⁰



"This is where business is going. The market leaders and the small flexible companies will adopt it, but the medium sized will wait to see what happens. It will all be done on a need-to basis, with key companies pushing others to adopt later."

■ Agree ■ Disagree ■ Don't know

¹⁰ Base: all respondents, 200

Q: Please tell me whether you agree or disagree with the following statements: ... (single code)

Appendix A

Chart 7: Benefits – Secure remote access to internal network ¹¹

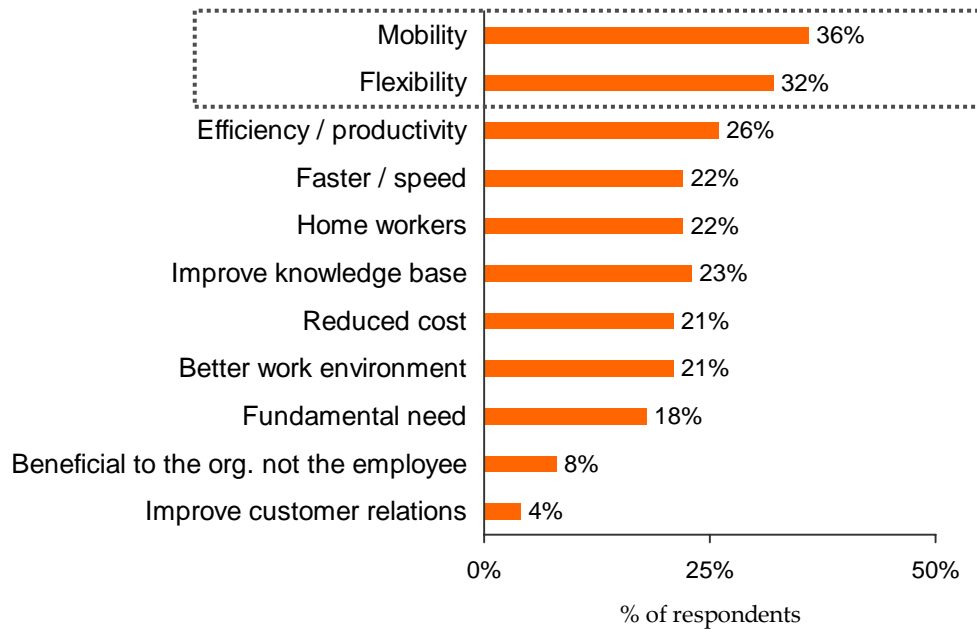
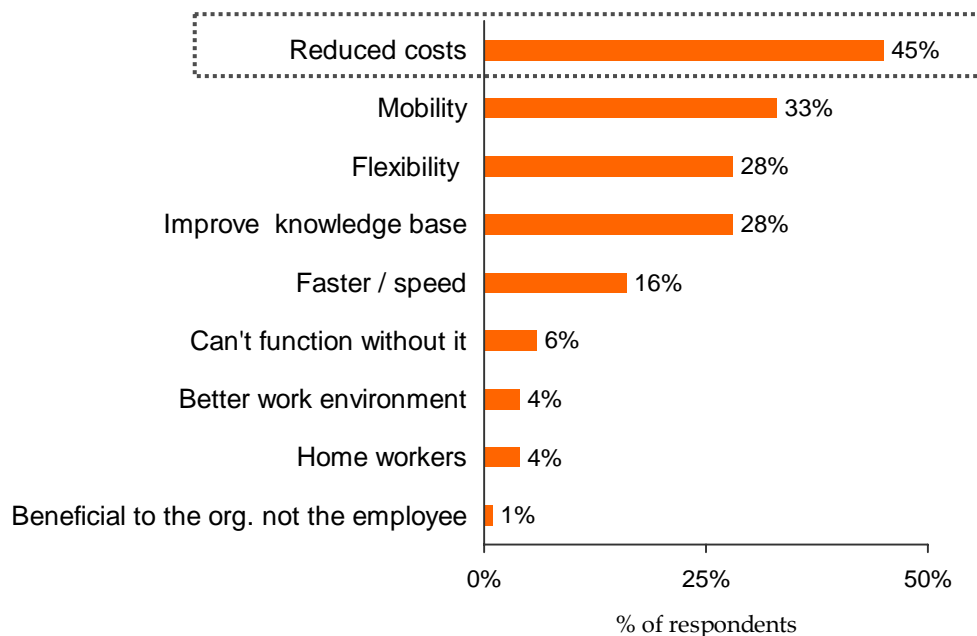


Chart 8: Benefits – Secure remote access to Multimedia sharing applications ¹²



¹¹ Base: all organisations offering secure remote access to multimedia sharing applications, 69
Q: How do you think your organisation has benefited from offering secure remote access to multimedia sharing applications to your employees, (multi code)

¹² Base: all organisations offering secure remote access to multimedia sharing applications, 69
Q: How do you think your organisation has benefited from offering secure remote access to multimedia sharing applications to your employees, (multi code)

Chart 9: Benefits – Hot desking ¹³

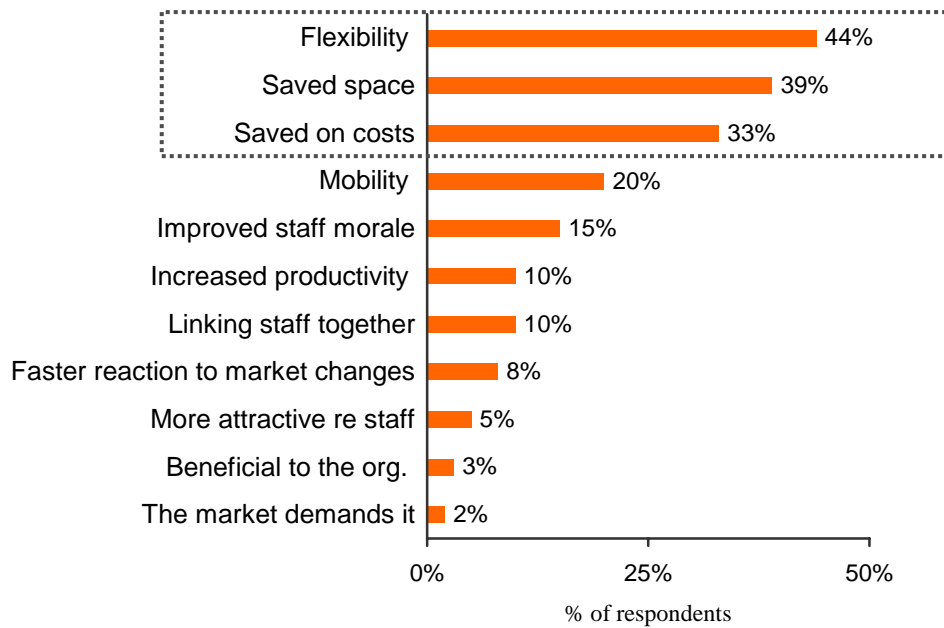
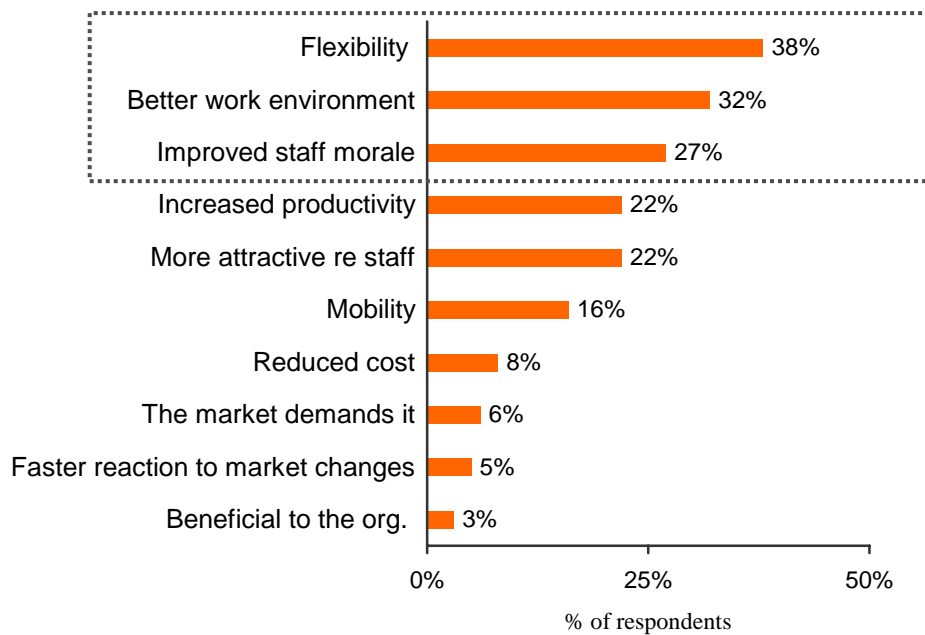


Chart 10: Benefits – Flexible working ¹⁴



¹³ Base: all organisations offering hot desking facilities, 147

Q: How do you think your organisation has benefited from offering hot desking facilities? (multi code)

¹⁴ Base: all organisations offering flexible working capabilities, 166

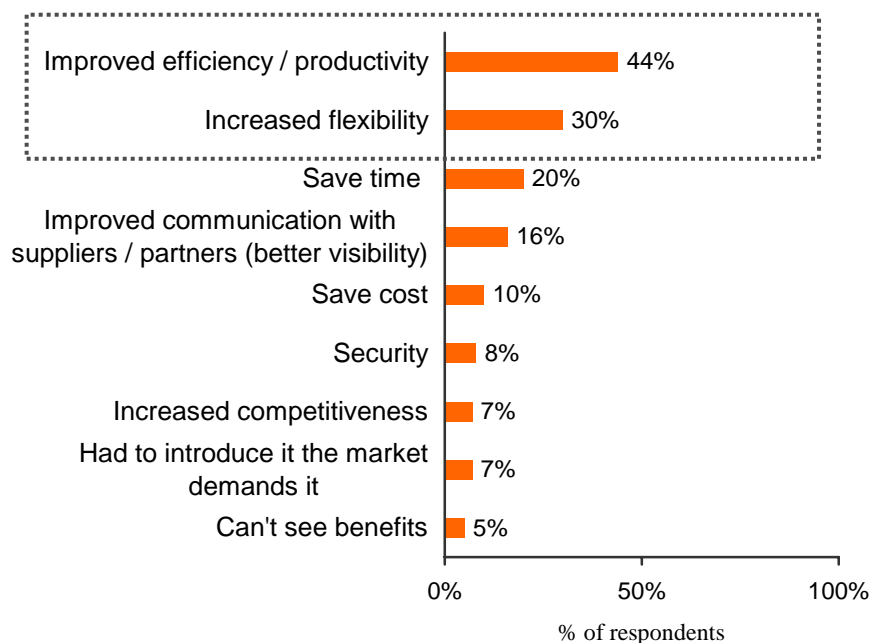
Q: How do you think your organisation has benefited from offering flexible working capabilities? (multi code)

Appendix B

Chart 11: Benefits – Secure remote access to organisation’s network for their Partners / Suppliers ¹⁵



Chart 12: Benefits – Sharing applications with Partners / Suppliers ¹⁶



¹⁵ Base: all organisations offering secure remote access to organisation’s network for partners / suppliers, 116. Q: How do you think your organisation has benefited from ...? (Multi code)

¹⁶ Base: all organisations sharing applications with partners / suppliers, 105

Q: How do you think your organisation has benefited from sharing applications with partners / suppliers? (Multi code)



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