



## WHITE PAPER

# Creating Competitive Advantage Through Converged Communications

Sponsored by: Siemens Enterprise Communications

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### Key Message

The availability of a global telecommunications infrastructure has allowed enterprises to become more distributed and to operate key business functions such as finance, manufacturing and customer contact centres across the world. In a quest for increased profitability and efficiency, the outsourcing and offshoring of non-core competencies to geographic areas with high-skilled and low-cost labour availability have become increasingly popular.

Global ICT allows enterprises to be more distributed and to operate across the world.

CEOs of large enterprises that are looking to increase market share and attract new customers in this increasingly globalising world need to realise that there is a real threat that inefficient and ineffective communications and collaboration throughout the entire business process will hamper the achievability of shared business goals.

CEOs are looking to increase market share and attract new customers.

CFOs that are looking to decrease the enterprise cost structure, while at the same time increase efficiency, need to realise that the expected profitability and efficiency increase of consolidation and globalisation has a real danger of being offset through ineffective collaboration between workers, customers, partners and business units.

CFOs are looking to decrease enterprise cost structure, while increasing efficiency.

An IDC survey among 100 large enterprises in Germany, France and the UK shows that 68% of these believe that the number of mobile employees in the enterprise will increase. Similarly, 43% believe that the number of virtual teams within the company will increase. In addition, a significant percentage of enterprises believe that the number of global WAN sites, the number of ways to reach a customer and the number of teleworkers are all on the increase.

Not surprisingly, 90% of enterprises agree that an advanced communications feature such as the ability to instantly share all relevant documents and communications within a virtual team is useful or very useful. Also, 86% agree that the ability to instantly communicate with a coworker regardless of time, location, or method is useful or very useful. An increasing headache for management, however, is that only between 25% and 35% of enterprises have these features.

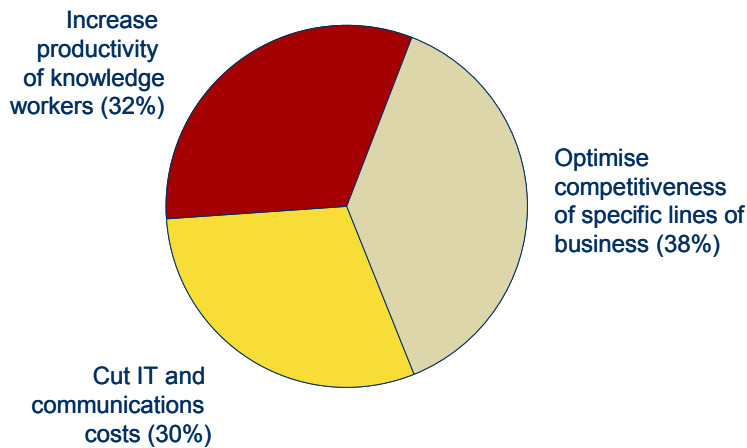
In order to support the above CEO and CFO business goals, and to plan for the continuing virtualisation of work and business units, CIOs need to leverage ICT infrastructure to optimise business processes, support new ways of working and communications and foster innovation, thus enabling competitive advantage. With 70% of the surveyed large enterprises stating that they had a goal to either increase knowledge worker productivity or line of business competitiveness (see Figure 1), IDC believes that the new goalposts for the CIO have been firmly set.

CIOs need to leverage ICT infrastructure to optimise business processes, support new ways of working and communications, and foster innovation, thus enabling competitive advantage.



**FIGURE 1**

What Best Characterises the Top Priority That Your IT Department Wants to Address in the Next 12 Months?



N = 100

Source: IDC, 2007

This white paper, written by IDC and commissioned by Siemens Enterprise Communications, argues that enterprises can compete more effectively in the global marketplace, increasing revenues and lowering costs through deployment of innovative ways of connecting people, processes and information. For the purposes of this white paper, IDC completed 100 telephone interviews with CIOs and IT directors in France, Germany and the UK. The random sample was supplied by IDC and consisted of multinational enterprises with more than 5,000 employees.

## Competitive Global Environment

In the span of just a few years, the opportunities for globalisation have reached the stage where they manifest themselves in practically every industry sector and affect companies of all sizes. But globalisation also increases the challenge for senior management to boost top-line growth and support margins in the face of increasing pricing and cost pressure. Few businesses are immune to this development. Recently Burberry, a large UK luxury fashion brand with a long tradition, moved its production facilities from Wales to lower-cost overseas destinations. Outsourcing is now so widespread that Wall Street investment banks are outsourcing parts of their equity research to India, just as it is common for firms to out-task parts of their accounting or human resources processes to specialist firms. Even outsourcers themselves are out-tasking certain business processes to control costs. The big accounting firms are all increasing their operations in India for this very reason.

Globalisation increases the challenge for senior management to boost top-line growth and support margins.

These globalisation trends place ever-greater demands on communications requirements. In addition to being able to communicate with their customer base, businesses must communicate with their international divisions, their global suppliers and outsourcing partners. IDC believes that today's communications infrastructure still largely reflects the ad hoc nature of its evolution rather than a well thought through

design. This ad hoc approach works as long as voice communications and simple Internet connectivity account for the vast majority of communications needs.

However, as the role of business processes becomes an increasingly important criterion for defending a firm's competitive advantage, the role of enterprise communications changes.

The communications requirements of the future will be about the integration of IT applications and platforms irrespective of time and place, enabling increased productivity of knowledge workers, and optimising the competitiveness of lines of business (see Figure 1). Quality of service will be just as crucial as interoperability of systems. IDC therefore sees the way forward as depending on open standards and systems. So an efficient enterprise communications infrastructure is an increasingly important aspect of a firm's competitive advantage — without becoming a core activity.

Communications requirements of the future will be about the integration of IT applications and platforms.

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### **Business Process: Collaboration, Communication and Virtualisation**

Any business process that involves humans requires regular collaborative work among participants to achieve a shared business objective. In the global multinational enterprise of today, business processes are no longer bound by time, location or company. Participants in business processes are in different locations, in different timezones, and can be employees, business partners, temporary workers or customers.

Any business process that involves humans requires regular collaborative work.

Business processes can be split into management processes such as strategic management; operational processes such as manufacturing, sales and purchasing; and support activities such as accounting and IT support. Departments in an organisation can be organised by function, product line, customer, geography or business process. Most enterprises have a mix of the above, making it increasingly complex and difficult to communicate effectively. In addition, most enterprises increasingly have to deal with one or more of the following new ways of working:

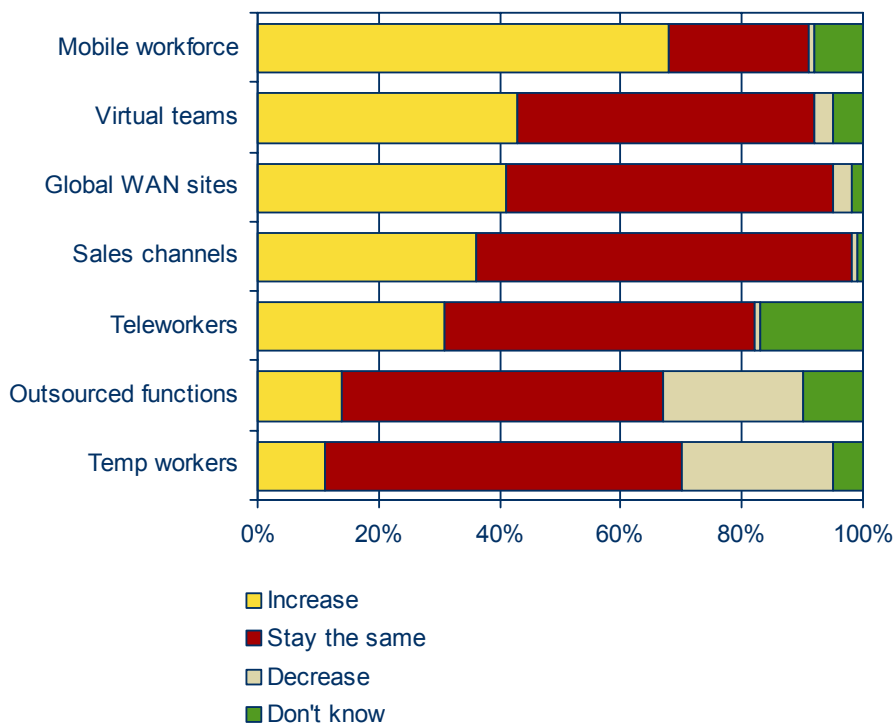
Business processes can be split into management processes, and departments can be organised in various forms, making it increasingly complex to communicate effectively.

- ☒ Virtual teams, designed to replace the more traditional hierarchical work organisation. Virtual teams replace the permanence of administrative structures with the flexibility of task-oriented teams that bring skills and expertise together as and when required, and promote the development among workers and managers of a new variety of skills, competencies and responsibilities.
- ☒ Globally distributed business functions, aiming to centralise competencies to geographic areas with high-skilled and/or low-cost labour availability. For instance, a shared financial services centre, replacing in-country financial teams.
- ☒ Outsourced non-core functions, enabling an enterprise to focus on its own core competence, while leaving other tasks to be done by other organisations that have excellence in that particular area.
- ☒ Multichannels targeting the same customer through different means, for instance via the traditional branch office, the Internet, the mobile phone, etc.
- ☒ Growing flexible workforces, including mobile employees, telecommuters and temporary employees.

European large enterprises confirm that the above new ways of working are on the increase (see Figure 2). In fact, 68% of enterprises believe that the number of mobile employees in the enterprise will increase. Similarly, 43% believe that the number of virtual teams within the company will increase, and 41% say that the global WAN will grow. The only somewhat significant decrease that enterprises pinpoint is in the areas of outsourcing and employing temporary workers. A quarter of respondents actually believed they would see a decrease in these areas.

**FIGURE 2**

What is the Trend in Your Company for the Next 24 Months in the Following New Ways of Working?



N = 100

Source: IDC, 2007

As the above trends show, today's enterprise is truly global and virtual. As a result, truly pervasive communications should not be bound by time, location or method. Today's organisations require the ability to collaborate on-demand — anywhere, anytime. They need access to the right information and people at the right time and place. To make this happen, firms need collaboration tools and infrastructure that give them in-context access to the appropriate communications methods from within the business applications they already use every day. Communications and Web technology enables them to do just that.

Truly pervasive communications should not be bound by time, location, or method.

## Web 2.0 and Unified Communications

Today's enterprise workplace is an amalgamation of different functions and features that are not really aligned with or talking to each other. In fact, desktop navigation can be very time consuming and unproductive. Inaccurate data interpretation, inability to locate crucial information, decisions based on incomplete data and the loss of process-context are all issues that every knowledge worker faces on a daily basis. There is the additional risk that the navigation processes knowledge workers perform are not easily tracked or audited by our organisations for quality control or regulatory compliance purposes.

The next step in the evolution of workplace applications, aptly named Web 2.0, will take us to knowledge-inducing applications that actually make users smarter by adapting to any business process and enabling information workers to easily access and share the right information in the office, on the road and in virtual teams.

Web 2.0 refers to Web-based technologies that enable groups to organise and share information and media and for capturing and sharing ad hoc information that may not otherwise be documented. Figure 3 highlights the key advantages of Web 2.0 technology.

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**FIGURE 3**

### Advantages of Web 2.0 Technology

Advantage	Description
<b>The human element</b>	Web 2.0 employs technologies such as blogs and wikis that employees are accustomed to use in online environments.
<b>Intuitive/adaptive user interface</b>	Web 2.0 interfaces are built on proven and familiar user interfaces from the Internet world. They are based on open standards that are designed to be flexible and adaptive.
<b>Makes employees smarter</b>	Working with familiar interfaces and applications makes it easier for workers to find knowledge.
<b>Adaptive business process</b>	Through mashup technologies, Web 2.0 applications can be easily and quickly constructed and changed.
<b>Add value</b>	Web 2.0 makes it easier to build knowledge resources.
<b>Highly collaborative</b>	Web 2.0 makes it easier for employees to share knowledge.
<b>Location independent</b>	Because they are Web-based, Web 2.0 applications can be accessed from wherever the user has Web access.

Source: IDC, 2007

Unified communications (UC) is one of those ICT terms that can be easily misunderstood or taken out of context. It is often confused with unified messaging. Unified messaging refers to solutions that unite email, fax and voice messages in a single mailbox that is accessible by PC, Web browser and telephone with basic voice menu commands and text-to-speech capabilities.

IDC defines unified communications as a software infrastructure platform that consolidates directory, routing and management of communications across a growing set of applications, all accessible through desktop and mobile devices and as functions available to business applications developers. Unified communications typically include:

- Advanced IP telephony calling and management
- Web, audio- and videoconferencing
- Instant messaging
- Pervasive presence management and awareness
- Calendar and other PIM functions
- Email, fax and voicemail
- Integration with existing horizontal and vertical business applications
- Custom communications applications

Unified communications offer a much broader range of benefits for both information workers and IT staff than these individual applications offer alone. The key benefit of UC lies in delivering asynchronous and real-time collaborative applications as part of a comprehensive set of IP communications services. These are available to workers of all types and roles within unified user interfaces and contextually within next-generation enterprise workplace applications.

Unified communications offers a much broader range of benefits for both information workers and IT staff than these individual applications offer alone.

With globalisation placing ever-greater demands on communications requirements, unified communications is another element that will enable employee productivity and line of business competitiveness. Figure 4 highlights the impact that unified communications has on enterprise applications.

**FIGURE 4**

Impact of Unified Communications

Enterprise Applications	Impact of UC
Collaborative computing applications	Collaborative applications as part of a comprehensive set of IP communications services to workers of all types and roles
CRM and contact centre applications	Revenue-generating multichannel contact centre, integration of the contact centre with the sales and the marketing organisations
Enterprise mobility	Enhanced platform for providing call management capabilities to mobile workers

Source: IDC, 2007

**Web 2.0 + Unified Communications = Enterprise 2.0**

The combination of Web 2.0 and unified communications enables what is more often referred to today as Enterprise 2.0. Enterprise 2.0 relates to simple, free platforms for self-expression; emergent structures, rather than imposed ones; and bringing order from chaos. Web 2.0 technologies such as RSS, blogs, tags and wikis are core to Enterprise 2.0.

Enterprise 2.0 relates to simple, free platforms for self-expression; emergent structures, rather than imposed ones.

These technologies are finding their way into the workplace. For example, mashups are appearing in business solutions that use the mashup/composite application model to create dashboard-like interfaces containing all of the relevant up-to-date information that business managers need to take actions (see Figure 5).

**FIGURE 5**

## Comparing Web to Workplace

Web	Workplace
Web mashups	Composite applications
AJAX, Flash	Thin client acting with more style than rich client
Social networking and tagging	Worker sites for communications, knowledge sharing, etc.
Blogs, wikis, RSS	Collaborative content creation and sharing
Voice over IP, presence, IM	IP-enabled communications and messaging

Source: IDC, 2007

Bringing social networking into the workplace (Figure 5) is not about finding interesting people to date but rather finding people within your organisation with the knowledge and experience to provide guidance and best practices for completing a work task in a better and more efficient way.

IDC argues that Enterprise 2.0 is not just about RSS, blogs, tags and wikis, but also about voice over IP, presence, IM and the integration of these with existing horizontal and vertical business applications. In this sense, Enterprise 2.0 is the sum of Web 2.0 and unified communications and enables new ways of working.

An overwhelming majority of European enterprises believe that having innovative collaboration and communications technology is a very good thing (see Figure 6). For instance, 90% agree that the ability to instantly share all relevant documents and communications within a virtual team is very useful or useful. And 86% agree that the ability to instantly communicate with a coworker regardless of time, location or method is very useful or useful.

At the same time, surprisingly, only 26% of the surveyed enterprises have a solution in place that enables employees to instantly communicate with a coworker regardless of time, location or method. Only 32% have a solution in place that enables employees to instantly share all relevant documents and communications within a virtual team. The majority of enterprises believe it would be useful or very useful to be able to set up a conference call with a single mouse click, yet only 5% have this feature.

Social networking is about finding people within your organisation with the knowledge and experience to provide guidance and best practices.

**FIGURE 6**

How Useful Do You Think This Is?

Converged Communications Features	Useful + Very Useful	Have This Feature
The ability to instantly share all relevant documents and communications within a virtual team	90%	32%
The ability to instantly communicate with a coworker regardless of time, location or method	86%	26%
Being able to access the relevant information at the right time through a single communications method	85%	23%
Have all your communications methods available on every device	84%	13%
Knowing what the best way is to reach a coworker before making contact (phone, mobile phone, email, IM)	82%	22%
Putting through a call to a coworker or business partner with all the relevant information attached	81%	29%
Having one intuitive interface to manage all communications	79%	23%
Accessing email, fax and voicemail from a single interface	78%	10%
Having a single identity for every user	77%	49%
The ability to set up an audio, Web or videoconference with a single mouse click	54%	5%

N=100

Source: IDC, 2007

IDC believes that if the goal of increased worker productivity and line of business competitiveness is to be achieved, CEOs and CFOs need to be aware of — and fix — the mismatch between demand and implementation. After all, as the research shows, globalisation, virtualisation and flexible working are on the increase, and there is a real risk of losing the positive impact of consolidation and virtualisation on the bottom line through inefficient and ineffective communications and collaboration. It will be the role of the CIO to address this issue.

CEOs and CFOs need to be aware of — and fix — the mismatch between ICT demand and implementation.

## Vision and Strategy

The role of the CIO in the emerging enterprise communications environment is much more strategic than the traditional role of an "IT fixer". Not every CIO will make a successful transition, but the ones that do will gain in influence. As enterprise communications infrastructure becomes an increasingly important aspect of a firm's competitive advantage, its design must support the firm's strategy. Moreover, the CIO must devise a scalable and flexible design that supports shifts in a firm's strategy.

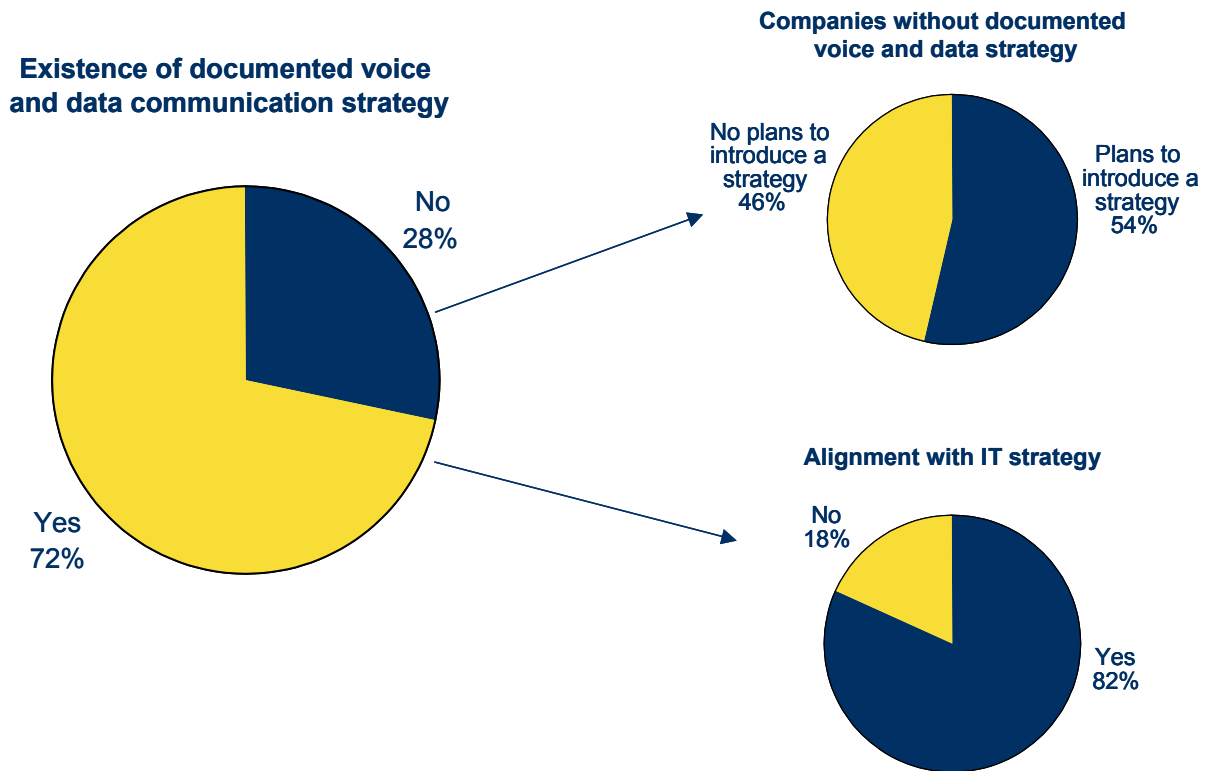
The role of the CIO in the emerging enterprise communications environment is much more strategic than the traditional role.

IDC believes that a CIO must be included in a firm's top-level decision-making process. That involvement is a two-way process. On the one hand, the CIO is made aware of the firm's strategic direction. In return, the CIO highlights technological opportunities and obstacles that might underpin or obstruct the firm's strategy. This approach helps develop the adequate design of the enterprise communications infrastructure.

Of course, there are great differences in the way companies shape their voice and data communication strategies, as can be seen in Figure 7. Interestingly, more than two-thirds, or 72%, of enterprises have recognised the importance of having an aligned voice and data communications strategy in place. Of those, 38% have aligned their voice and data strategy with their overall IT strategy. A further 44% claim that they have such a project in place already. However, of the 28% of enterprises that do not have an aligned voice and data communications strategy in place, almost half (46%), have no plans to align their voice and data strategy with their overall IT strategy.

**FIGURE 7**

Voice and Data Communications Strategy



N = 100

Source: IDC, 2007

The vast complexity that the migration to Enterprise 2.0 architecture entails will test the ability of senior management to successfully push forward the transformation. No such migration will be made easy, but the need for and value of simplicity in light of complexity is evident. Vendors that design their solutions with that need for simplicity in mind should find an interested audience among CIOs.

Enterprise 2.0 architecture will test the ability of senior management to successfully push forward internal transformation.

In theory, the simplest solution would be a proprietary enterprise communications infrastructure. Under such a scenario, all systems would perfectly communicate with each other, thus making interoperability a non-issue. In practice, however, proprietary solutions often run the risk of creating integration and interoperability issues. Legacy solutions might not yet be fully depreciated or still run effectively. The firm might prefer specialist providers for certain applications that are not easily integrated into proprietary solutions. Similarly, the firm's customers and partners might have solutions that face similar interoperability challenges.

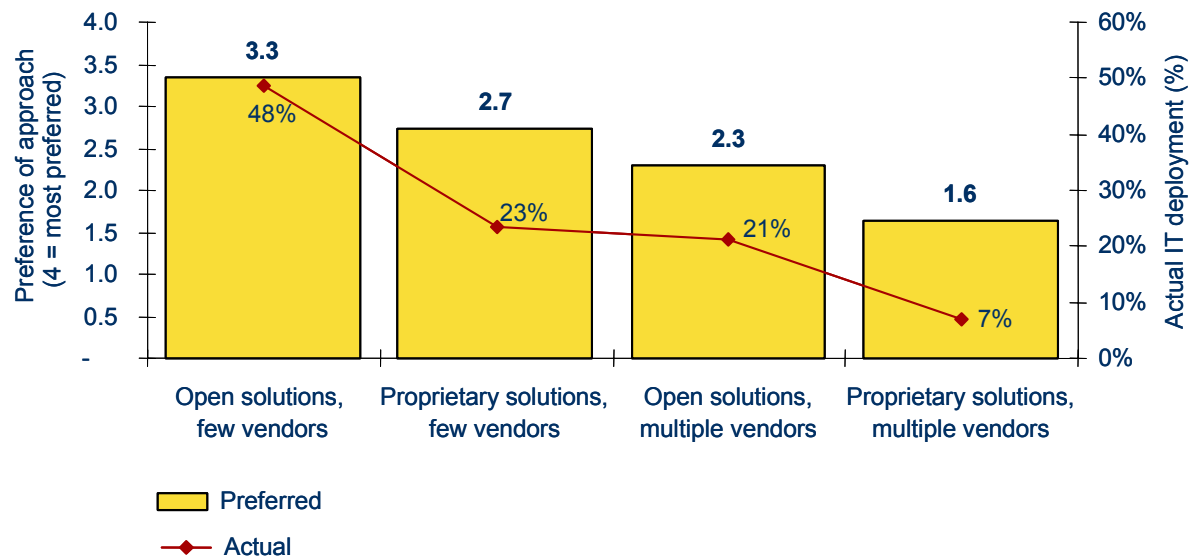
An important finding in our survey is the observation that the number of vendors matters more than the issue of open versus proprietary solutions. We believe that the value CIOs place on the issue of having to deal with few vendors stems from the demand for simplicity. Focusing on simplicity as a key end-user requirement should thus be a core focus for vendors of open solutions.

The number of vendors matters more than the issue of open versus proprietary solutions.

Figure 8 compares actual IT deployment scenarios with preferred options. Respondents ranked their preferences from 1 to 4 to indicate the strength of their preferred deployment. The left hand axis shows the average value for each option. The findings indicate that the top priority for users is a limited number of vendors they have to deal with. The second priority is to have open solutions. When having to deal with many vendors, open solutions are preferred over proprietary solutions.

**FIGURE 8**

Preferred and Actual IT Deployment Strategies



N = 100

Source: IDC, 2007

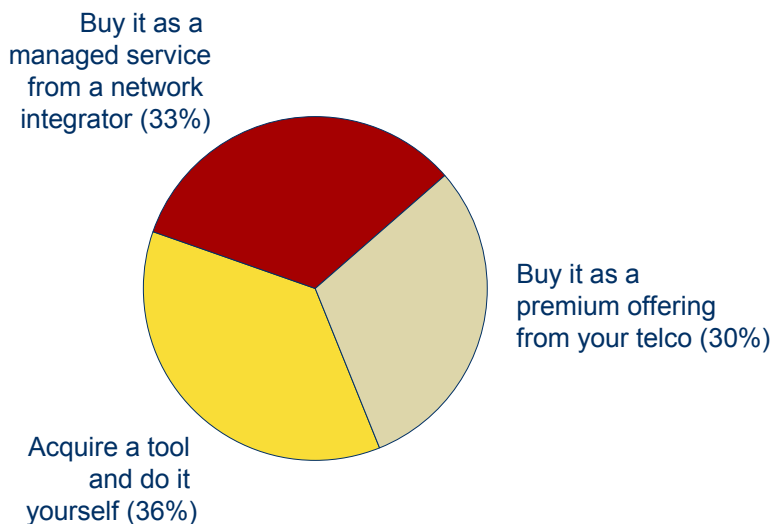
IDC therefore believes that open architectures offer the more promising migration in approaching Enterprise 2.0 architecture. But few firms are interested in migrating to Enterprise 2.0 architecture in one single step. A gradual migration, in line with a firm's financial and strategic possibilities, is a much more likely scenario. Thus, in addition to an open architecture, vendors that offer a flexible migration path should be well positioned.

Open architectures offer the more promising migration in approaching an Enterprise 2.0 architecture.

Although 63% of enterprises would develop an Enterprise 2.0 architecture with outside assistance, the do-it-yourself spirit remains strong among companies, with 36% of enterprises stating that they would prefer to acquire tools for convergent communications solutions that allow them to implement these solutions themselves. Among those enterprises that would purchase convergent communications solutions, more than half of all enterprises (52%) would choose a solution from a network integrator rather than a telco.

**FIGURE 9**

If You Wanted to Have the Previously Described Features, Would You Rather:



N = 100

Source: IDC, 2007

In IDC's view, the most important aspect in the migration process refers not to technology per se, but to the human side of the transition process. Successful vendors will have to put in place first-class customer support that offers a helping hand before, during and after the migration to an Enterprise 2.0 architecture. We believe that customer service will be a key differentiator between vendors of communications solutions. Vendors must also develop a solution that blends in with and supports existing and emerging business processes. Only if an Enterprise 2.0 architecture reaches the staff it is intended for does it have a chance of enhancing a firm's competitive advantage.

The most important aspect in the migration process refers not to technology per se, but to the human side of the transition process.

## Bottom Line

All too often technological solutions are forced upon staff without analysing particular business processes that have emerged in a firm. Employees will therefore have to find ways to adjust their business processes to match the technological design instead of the other way round. Who does not remember the introduction of a new software solution, such as sales force automation, that required a completely new way of entering data? Just imagine the implications of the introduction of a much more complex solution like enterprise communications.

All too often technological solutions are forced upon staff without analysing particular business processes.

Enterprise 2.0 architecture only provides the potential for enhancing a firm's competitive advantage. It does not guarantee to do so. In fact, we believe that an ill-conceived introduction of enterprise communications could have a detrimental impact on a firm's efficiency.

Enterprise 2.0 architecture only provides the potential for enhancing a firm's competitive advantage — not a guarantee.

For any economically sensible calculation of a return on invested capital (ROIC), several issues must be taken into account:

- ☒ Of course, the capital investments (capex) of the actual implementation form the basis of any such calculation.
- ☒ Secondly, a firm must compare the ROIC against the weighted average cost of capital (WACC). By definition, a successful project will result in an ROIC that is larger than the WACC. This is basic economics but many firms still do not pay sufficient attention to this fact.
- ☒ But a firm should also include indirect costs that the implementation of Enterprise 2.0 architecture triggers, such as staff training costs and time lost due to having to adjust business processes in light of a new technological design.

Without going into too many financial details, it is clear that the more complex the enterprise communications solution, the larger the potential for opportunity costs to depress the ROIC calculation. Simplicity of the enterprise communications solution therefore matters for the bottom line.

Thus, the business case for enterprise communications solutions is enhanced by a technological design that supports employees and existing business processes. Importantly, the design must provide the flexibility and scalability that changes in strategy and evolving business processes bring. Significantly, although next generation networks (the migration to all IP-based network infrastructure) drive convergence, many employees are likely to take longer in adapting to a converged communications environment.

The business case for enterprise communications solutions is enhanced by a technological design that supports employees and existing business processes.

Over the longer term, the most challenging task could turn out to be merging two worlds together: IT and telecommunications. IDC is certain that this transformation is crucial if enterprise communications solutions are to deliver their full potential. However, everybody with experience in ICT markets knows that IT and telecommunications professionals wear different hats and see the world through different glasses. Thus, perhaps enterprise communications solutions will only fully arrive with the arrival of next-generation staff. Open standards and architectures support this process in our view.

The most challenging task could turn out to be merging the worlds of IT and telecommunications together.

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## Methodology

For the purpose of this white paper, IDC performed 100 telephone interviews with CIOs and IT directors in the UK, France and Germany. The random sample was supplied by IDC and consisted of large enterprises. Respondents represented a reliable cross-section of different vertical markets. The following qualifiers were taken into account to ensure IDC talked to the right interview partners:

For the purpose of this white paper IDC has performed 100 telephone interviews with CIOs and IT directors.

- The organisation needed to employ at least 5,000 people worldwide.
- The organisation needed to have a multinational WAN connecting international business sites, which was defined as a private network using leased lines, a managed data network service, or a secure virtual private network over the Internet.
- The respondent needed to have (at least partial) responsibility for the company's strategy and choice of services with regards to ICT.

The interviews were undertaken between March and April 2007.

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