



Alcatel White Paper

Building the Competitive Enterprise with User Centric IP Communication solutions



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User Centric IP Communication Solutions

1. Introduction

Enterprises now operate in a relentlessly faster and changing world of more equally matched competition, more demanding and fickle customers, 24-hour markets and global suppliers, intense cost pressures, and internet-driven technologies. What does it now mean to be competitive? How can IT and communications strategy help achieve competitive advantage?

In the internet economy advantage is temporary. Being competitive means going beyond immediate advantage to build a layered, durable and self-sustaining capability. It is only a competitive capability that can meet the changing needs of customers, improve internal and external communication flows and help face new challenges in mobility and responsiveness.

Implementing IP Communication solutions is at the heart of the new competitive enterprise. It addresses change effectively: not as a one-off solution but as a capability that can be renewed and delivered constantly.

And it helps deliver the best customer service and integrates into business to deliver greater efficiency and generate greater value.

2. The working environment: increasingly complex

The working environment is becoming ever more complex with the need to remain “always on”, fully reactive, and more efficient.

All attempts to improve the working environment and communication flow, to shorten response time and minimize access time to information have resulted in widespread user frustration. Users have become overburdened with too much information and communication tools that complicate their working day and reduce their efficiency. In January 2004 Alcatel surveyed more than 2000 end-users and found the following complaints:

Too many messages:

- 20% receive over 100 emails, voicemails and faxes daily.
- 25% get more than 10 voice mails daily and spend 21 minutes checking them.

Too many devices:

- 38% use 5 or more communication devices.
- 41% use at least 2 wireless devices when travelling.

Too complicated:

- 34% say there are too many automated menu options.
- Conference calls are still too difficult to schedule.



- 64% want a single place to check all types of message.
- 56% want a single follow-me number.

Information gaps:

- 72% do not have contact details on hand when trying to reach someone urgently.
- 48% want to receive alerts of important emails and faxes on their mobile.

This represents massively under-utilized resources despite high infrastructure investment and communication costs. The only way to remedy this situation is by integrating communication and data systems. But such a solution must also allow for the changing workplace.

Work is evolving around two things: relationships and mobility. These in turn are radically influencing decision-making, expectations of reactivity, and the role of information. Employees actually work for different people at different times, constantly interacting across, up and down, and outside the organisation.

IP Communication solutions have the capability to function as a fundamental application platform for all these changes.

3. Defining the different user profiles in the organisation

In view of the increasing importance of mobility, it is key to categorise the different user-profiles in an organisation. Although each enterprise is a special case it is possible to define three groups of users with seven main profiles in total:

- **Day extenders**
 - Executive
- **Mobile professionals**
 - Mobile sales, Field forces, Campus roamers
- **Deskbound employees**
 - Front office, Back office, Teamers

“Categorise workers in your organisation and identify their needs and requirements, set policies to optimize costs/benefits and choose architectures accordingly”

Gartner November 2004

The table below shows that every employee is mobile to some extent in their roles and requirements :

| Profiles | Examples | Mobility | | |
|-----------------------|--|----------|---------|----------|
| | | Desk | On-site | Off-site |
| Executive | CxO, senior mgt | | | |
| Mobile Sales | Sales | | | |
| Field Forces | Field Techs, Prof services Consultants, Accountants | | | |
| Campus Roamers | IT, Security, Maintenance, Manufacturing | | | |
| Front Office | Attendant, Receptionists, Help desk | | | |
| Back Office | HR, Finance, Logistics | | | |
| Teamers | R&D, Project mgt, Marketing | | | |

Day extenders: Executive

Includes the CEO, COO, CIO, CFO and all the management staff of a company.

Senior executives actively contribute to building corporate value; they spend on average one third of their time in their office, one third within the organisation (on site meetings, subsidiary and agency visits) and one third of their time outside the company (off site meetings with clients, suppliers, partners, shareholders, peers, journalists...).

These people need both real-time communication tools (telephony) and pseudo real-time (messaging services). In addition, they need to access reporting applications, information portals and knowledge-management platforms.



Mobile employees: Mobile sales

Sales people spend most of their time on the road.

These people must stay constantly reachable and be able to access corporate resources, information and databases. They also need real-time (telephony, notification) and pseudo real-time (messaging services) communication tools, as well as collaborative tools and business applications such as Customer Relation Management and Sales Force Automation, databases and reporting tools.

Mobile employees: Field forces

This population includes field technicians, professional services, consultants and accountants who spend most of their time outside the company.

These people must stay constantly reachable and be able to access corporate resources.

They make extensive use of collaborative work tools, real-time communication tools and messaging services. They also require access to business applications (Field Service Automation) and databases.

Mobile employees: Campus roamers

These include IT staff, people in charge of security, maintenance and manufacturing, who spend their time roaming inside the company.

All these people must also stay constantly accessible and use communication systems that provide real-time notification capabilities. In some cases they also need specific solutions providing personal alarms & security.

Deskbound employees: Front office employees

Includes receptionists, employees in charge of customer service, help desk, and sales attendants. By definition, these people spend most of their time at their desk.

Communication is their job and the most important factor is their ability to access central resources in real time to serve their customers.

Deskbound employees: Back office employees

Includes human resources, quality and finance departments, and people in charge of logistics.

In a nutshell, people who spend the majority of their time at a desk using task-specific business applications.

Deskbound employees: Teamers

Includes R&D teams, project managers, product managers, launching managers, marketing teams, legal department, and trainers.

Here the key factor is their ability to interact, communicate and collaborate with their internal or external customers and suppliers while minimizing travel costs.



All these user profiles have one thing in common: they need real-time communication tools and collaborative work tools that are integrated with their existing work environment and their business applications.

Alcatel IP Communication solutions are **user-centric** : they indeed provide a full set of telephony services and applications that recognize and service the various needs of these different individual users.

4. IP Communication solutions

Alcatel IP Communication solutions integrate business telephony voice services and business applications, they include:

- ❑ **IP Communication server** called **Alcatel OmniPCX Enterprise**, providing all the telephony and mobility services.
- ❑ **Cellular Extension application**, an application embedded in the communication server providing corporate telephony services on any mobile phone.



What is the Cellular Extension application?

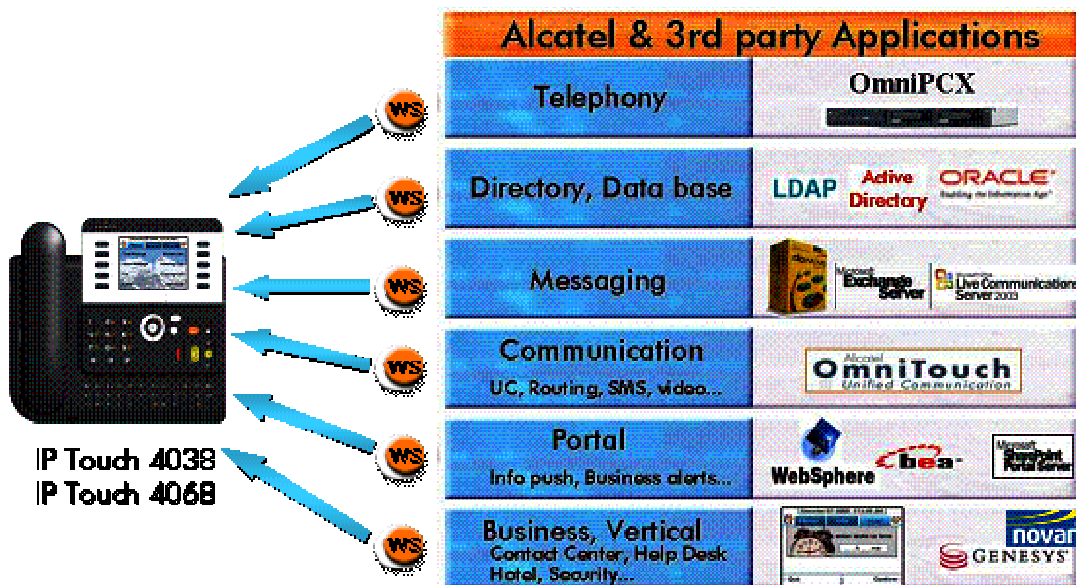
It is a software-based solution hosted in the IP Communication server that permits cellular phones to be seen as an extension of the corporate system. Services provided include: private dialling, last number redial, inquiry call, conference, transfer, all types of forwarding, voice mail notification....etc



- **An IP Unified Communication application suite called Alcatel OmniTouch Unified Communication.** It comprises of four mutually interactive applications :
 - **My Messaging:**
Your single multimedia in-box for voice, email and fax, plus filters, alerts, and an Automated Attendant.
 - **My Phone:**
Full phone services on PC and PDA including an IP Web Softphone.
 - **My Assistant:**
A vital One-Number facility to help people find you anytime, anyplace.
 - **My Teamwork:**
A virtual meeting room for conferencing via audio, data and video, plus instant messaging and 'buddy lists'.



- **IP application phones called Alcatel IP Touch** with graphical display, alphanumeric keyboard, Bluetooth interface and XML openness :



- **IP WLAN and DECT/PWT phones** for on-site mobility. It includes telephone sets specially designed for critical mobility.



Voice Over WLAN or DECT / PWT ?
Some guidelines:

| | DECT/PWT | VoWLAN |
|-------------------------------------|-----------------|---------------|
| Normalization | *** | ** |
| Voice services | *** | * |
| Voice quality | *** | ** |
| Voice & data convergence | * | *** |
| Opex | € | €€ |
| Capex (greenfield) | € | €€ |

- **Communication Web Services**; a set of XML/SOAP APIs to integrate communication services into business applications and processes.

Definition of Web Services:

A service is a software component enabling heterogeneous applications to communicate. A web service is a component of that type using Internet standards:

- XML: eXtended Mark up Language) a language for data exchange on the web.
- SOAP: (Service Oriented Application Protocol) protocol to make a service request via XML messages.
- WSDL: (Web Service Description Language) a meta language to describe Web Services.
- UDDI: (Universal Description Discovery Integration) a standard to list & register Web Services.

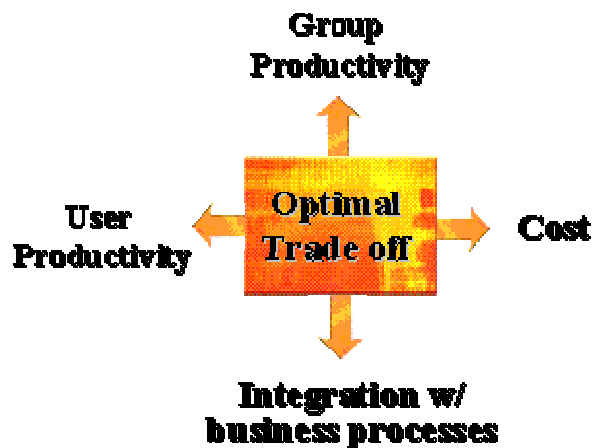
Among all these solutions, which one is right for a given user ?

5. Mapping of solutions with user profiles

Users are at the heart of the business and each one of them is unique: they need tools and applications adapted to their particular job and environment. Furthermore, it is essential to provide solutions that :

minimize costs : of training, deployment, integration and management.

maximize efficiency : user appropriation, user productivity, integration with other corporate applications and user acceptance.



The CIO challenge is to find the right compromise between user needs and cost.

The Chart below outlines our recommended communication solutions according to user profile.

| Profiles | Communication Devices | Communication Applications |
|----------------|---|--|
| Executive | IP application phone & GSM/Cell or PDA | Unified Communication Cellular extension |
| Mobile Sales | GSM/Cell or Smart phone, PDA | Cellular extension UC integrated in IS apps |
| Field Forces | Laptop or wireless PDA, GSM/Cell | Unified Communication Integrated in IS apps |
| Campus Roamers | Voice only: DECT/PWT Converged: WIFI | Standard telephony |
| Front Office | IP application phone | Power user telephony Unified Communication |
| Back Office | Standard phone set | Business class telephony UC integrated in IS apps |
| Teamers | IP application phone | Unified Communication |



Alcatel IP Communication solutions deliver benefits right through the business and directly affects the bottom line :

User benefits:

- Improved personal productivity, reactivity and decision making.
- Faster communication, richer information quality and flow.
- Satisfies their multiple needs as information demanders/suppliers.
- Facilitates collaborative work and customer service.

Benefits for business line managers:

- Mobile teams stay in touch, are more effective in the field.
- Referral up the line for advice or decisions is quickened.
- Increases efficiency of teams, particularly when geographically dispersed or multi-disciplined.
- Reinforces continuity and quality of core processes: customer contact, selling, supply chain and product lifecycle management.
- Strengthens the corporate knowledge base.
- Accelerates business processes.

| User profile | Alcatel IP Communication Benefits |
|-----------------------|--|
| Mobile sales | Always accessible: single phone number; VIP call screening, voice access to mail box Access to associates: Universal directory Access; advanced telephony features |
| Field force | Info access: mobile access to corporate resources; Universal directory Access Timely notification: automated notices; unified messaging, voice access to email Smoother interaction: audio conferencing/virtual meeting/nomadic; pop-ups, personal routing, VIP list; presence/buddy list |
| Campus roamers | Always accessible: from anywhere on site with localisation Timely notification: automated notices; personal safety alarms Faster problem resolution: rich telephony features on mobile; dial by name to find help |
| Front office | Better service to key customers: VIP filtering; call routing, pop-ups Smoother interaction with back office: directory access, audio, web & video conferencing; presence/buddy list Easier contact with customers: call back on voice mail/fax; call from customer data base |
| Back office | Quicker access to colleagues: presence/buddy list Smoother interaction with front office: directory access, audio, web & video conferencing Faster problem resolution: communication functions integrated into business applications |
| Teamers | Reduced travel: audio, web & video conferencing; data sharing Better team interaction: presence/buddy lists/ Info Manager Faster problem resolution: communication functions integrated into business applications |

6. Accelerating business process with IP Communication

Companies have set up costly and sophisticated business processes with the aim of improving reactivity to market changes and customer demands. Indeed, substantial improvements have been made during the last decade in the areas of business efficiency. For instance the time to market of the automotive industry has been reduced by up to 50% in the past 5 years.

“By 2009 the average lifetime of an enterprise’s business processes will fall by 50 percent” (0.8 probability)
Gartner November 2004

However, the challenge is to find further sources of improvement in the business processes. The critical areas where substantial progress is yet to be made are in the management of exceptions and connecting corporate knowledge silos.

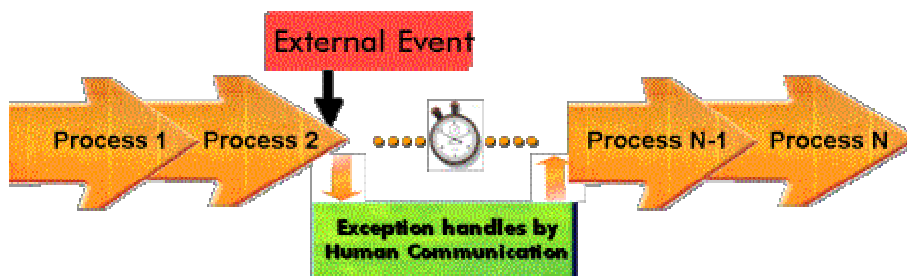
Managing exceptions

Core business processes run fine - until they hit an ‘exception’. Processes cannot yet handle difficulties smoothly.

This has two results. The process slows down until the exception is fixed. And it doesn’t get fixed without human intervention. The most common way to resolve a problem quickly is to ask someone for help: colleagues, your manager or partners.

Problem-solving and avoidance-by-anticipation are what customers remember; they are human skills, not machine programmable. And they involve people talking to each other. That is why so much of a company’s most valuable knowledge lies in people’s heads.

“Businesses should review all processes to see which have human communications as an element and then how these could be systematically supported”
Gartner November 2004



Untapped knowledge value

The most valuable information that employees can share concerns customers and their service history. Most of this knowledge also tends to be stored in an ad-hoc and unstructured way: employees’ memories, personal PC files or voice memos, folders on shelves and notes in desk drawers. A Gartner Group study estimates that this represents a massive 80% of a company’s most valuable knowledge, unable to be accessed by others and vulnerable to loss.



Alcatel IP communication solutions ensure that mobile workers, dispersed teams, customers and knowledgeable employees remain in contact and are able to access the information or get advice and decisions when needed.

Voice: reinventing a major business resource

Voice communication still represents by far the most common medium for everyday operations. It is unequalled for speed and contextual flexibility (for example, adding persuasion or reassurance).

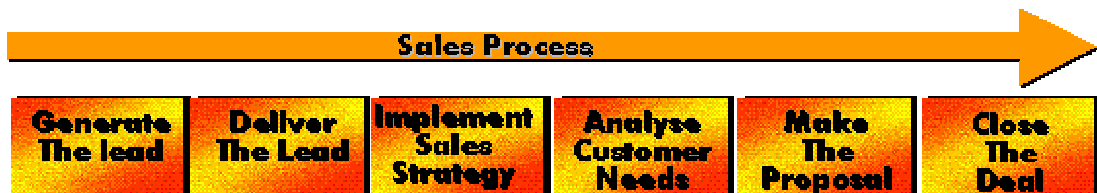
Having invested massively in business applications (ERP - Enterprise Resource Planning, SCM- Supply Chain Management, CRM - Customer Relation Management, SFA - Sales Force Automation...), companies now have to ensure that voice is fully integrated into those applications to provide real-time capability in the business process. And corporate users being at the heart of business processes, collaborative and communication applications are also key to delivering real-time capability.

“Businesses must evaluate Unified Communications in term of how they support process integration”
Gartner November 2004

This is why Alcatel’s global IP communication solutions, including communication web services and unified communication applications, are so innovative.

Accelerating processes to real-time

Let’s take the example of a sales process.



The marketing department has generated a lead. With real-time notification and voice access to the information, the travelling sales person will be able to handle the lead immediately.

Should he/she be slow in handling the lead, the sales manager in HQ, using his SFA software to track business opportunities can, by using Alcatel Communication Web Services without leaving the application, call the sales person immediately to accelerate the handling of the lead.

The sales strategy entails drawing on experience when handling similar types of customers to analyse their needs and design a comprehensive proposal. Collaborative tools such as multimedia conferencing will enable our sales person, although working remotely, to access and leverage all available corporate expertise in real time.



Closing is the most critical step of the sales process and necessitates immediate reactivity to customer demands on contractual clauses, lead times, pricing matters and so on. Whatever the sales process in place, immediate access to management is mandatory at this stage to handle exceptions. Call routing and screening, real-time notification and corporate telephony services on mobile phones are key to help close the deal quickly and professionally.

"By 2010, 80 percent of companies will have integrated communications into some business applications or processes"
Gartner November 2004

The order is then handed over to the back office for treatment.

When entering the order in the CRM application, if the back office realizes that there is a problem because the credit limit is reached, it can use Alcatel Communication Web Services* to find a solution rather than stopping the process. The ordering desk will be able to check the presence of someone in the finance department then call them, call the sales team, route the call to the customer and make a conference in order to solve this problem.

**Alcatel Communication Web Services integration performed with business applications from Salesforce.com, SAP, Siebel, Oracle and Pivotal.*



7. Improving the Customer Experience with IP Communications

The communication fragmentation noted in §1 above has its counterpart for customers and other contacts outside the company:

- 38% have sent an email but the company had no record of it.
- 68% have encountered an agent who had no record of their prior transactions.
- 65% callers will not hold for longer than 5 minutes.
- 56% have stopped doing business with a company due to a poor experience with a contact center (Alcatel survey –January 2004).

This represents massive dissatisfaction and lost revenue. The underlying weakness is a 'contact gap': not getting through, or getting through but having no relevant information available. A prime feature of better employee-customer interaction then has to be **real-time communication**.

Going real-time means business

Alcatel IP communication solutions support three capabilities vital to real-time communication with customers:

Proximity: ensuring customers can get close enough to enjoy your service, anytime/anywhere

- Personal contact, via voice and video.
- More contact points across different types of locations and all media, via the unified multimedia in-box.
- Real-time response and relevant answers, aided by pop-up guide menus.

Interaction: enabling your teams to interact better so as to serve customers quicker

- Availability of relevant caller information at moment of call.
- Quality of teamwork, via multimedia conferencing.
- Creating an inefficient work environment.

Continuity: leading employees to a common goal of better service

- Record and maintain full customer history.
- Prevent service disruptions.
- Give full access to the HQ experts teams, even in remote agencies.

8. The Overall Economic Impact

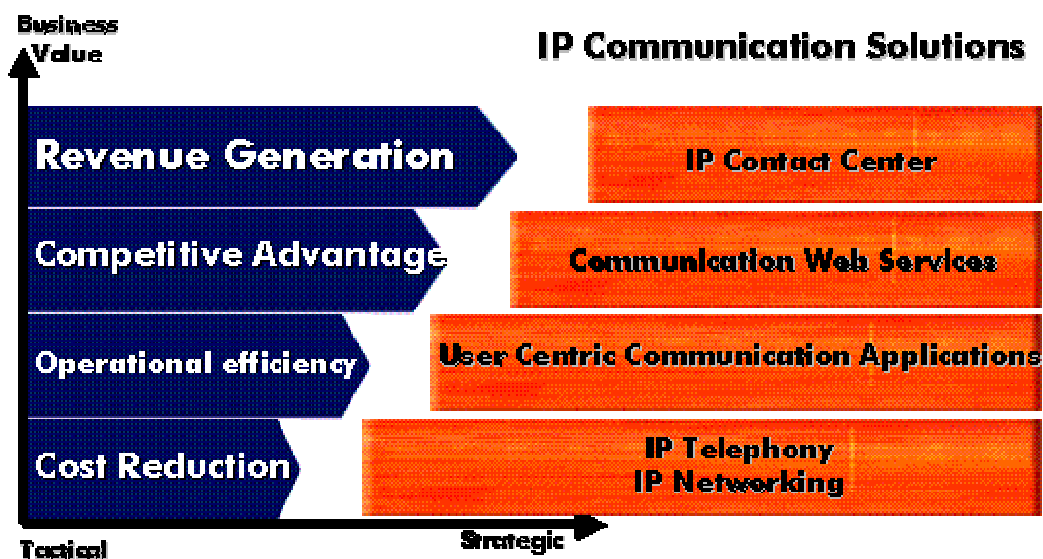
Integrated voice and data communication offers enormous opportunities for economies and values across the enterprise.

What can you expect from deploying Alcatel IP Communication solutions?

The benefits of IP Communication solutions can be quantified at several levels of business value for an organisation:

At the level of the revenue generation, at the level of the competitive positioning of the company in front of its main competitors, at the level of the operational efficiency and finally at the level of cost reduction that such a solution can generate.

The choice of an IP Communication solution becomes not only a tactical choice, but also a strategic one.



- Revenue generation

This is clearly the mission of IP Contact Center applications by providing end-users with a gateway to the business.

Companies that have implemented Contact Centers are able to provide fast answers, first call resolution and live support and self services and will be able to:

- Generate more business
- Improve customer preference
- Increase customer profitability



- **Competitive advantage**

The Communication Web Services are the most important piece of the puzzle for mapping communication and IT applications. All companies that integrate real time communication services into their business applications and processes, will have a clear competitive advantage on the market by:

- Accelerating business processes
- Treating faster the exceptions
- Reducing process cycle time
- Providing faster answers and services

- **Operational efficiency**

Meaning user productivity and group efficiency.

All IP Unified Communication, mobile and collaborative applications delivers efficiency improvements:

- Users: knowing they have proper tools improves morale and motivation.
- Fast, intuitive access to advanced telephony services (10-20% time savings).
- Fast, intuitive management of all media (up to 45% savings in interaction time).
- Better reactivity to requests (up to 45%).
- Improved off-site mobility (up to 25% savings in call management time).
- Better team interaction

- **Cost reduction**

IP telephony provides a rapid and measurable return on investments. It can reduce operating costs by up to 20%, mostly by eliminating unnecessary inter-site line charges and calls, as well as by centralising network management of all media.

Some example of cost savings:

- All internal calls routed over existing WAN (up to 40% savings).
- Shared cellular routing allows high volumes and reduced prices (up to 15%) and prevents the purchase of mobile infrastructure for low mobile user density.
- International calls routed via head office gateway (up to 20%).
- Web and audio conferencing applications reduce teleconferencing charges and travel costs (up to 75%).

Full openness to protect your investment longevity

Alcatel IP communication solutions easily integrate with existing IT resources to protect existing investments, while adding enormous value to your business applications.

The use of the open Internet standards (J2EE, SIP, XML/SOAP, VxML and Web Services) make it compatible with existing IP multimedia network standards, as well as future-proofed and compatible with third-party applications (portals, business intelligence, contact centers, CRM and other applications). This will allow you to exploit your existing infrastructure investments while being free to choose the most affordable path for growth.

"Businesses should examine emerging Internet telephony related standards as they may provide technical and business advantages"

Gartner November 2004



Where real value lies

- The focus of the one-off buy/sell transaction is being replaced by the **value of relationships** – between colleagues and across networks with customers, strategic partners and suppliers. Even companies that primarily sell products compete on delivering greater perceived service, not on product superiority.
- Whatever industry a company operates in, its main business is information management. No transaction happens without triggering a movement of data. This has become strategically acute: most critical corporate information is locked in peoples' heads; and in business application databases - ERP, CRM, SCM, SFA, PLM. It is vital to open up people and data to **manage information relationships**.
- The initial race to set up real-time communications has fragmented enterprise communications into multiple contact points across the business and at all levels, using different kinds of device and application. Enthusiasm has outpaced control. Few users enjoy satisfactory communications, many are increasingly frustrated – and real-time remains elusive. The answer is **communication integrated into business processes**.
- Employee **mobility** is now one of the major parameters of work. Business relationships and transactions are increasingly conducted between front office and back office people, interacting with other employees (sales forces and field forces) who are not at their desks.
- This creates a tension that requires more than simple flexibility of mindsets or organisation. **Flexibility** must be hardwired into how people work and interact. Consequently, **user centricity** concern should be the driver of corporate communication systems design.
- At the same time, communication and IT costs continue to rise : managing these new dispersed and heterogeneous networks is becoming more complex; fragmentation is feeding security threats. Strategic, agile **control** is paramount.

Alcatel IP Communication solutions support and drive all the above premises, by empowering the real-time integration of information and applications, personal interfacing, and collaboration.

9. The final word : Redefining competitiveness

Envisioning the enterprise in terms of business-wide relationships so as to improve user experience across the network; exploiting knowledge; enhancing and accelerating core processes: these are the keys to new competitive capability.

Alcatel IP Communication is the catalyst for this capability. It enhances the value of the user experience, exploits knowledge value, and increases the value of business processes.