
How IP communications is transforming collaborative relationships

Reiner Killmeier, Associate Partner, and Ralf Jungclaus, Managing Consultant, IBM Global Business Services, Germany
Executive summary

Solutions for integrated business communications from IBM unite and consolidate the various foundational communication capabilities of the emerging Internet Protocol (IP) networks to bring the long-awaited vision of voice and data convergence to fruition. Traditional telephony, e-mail, Web collaboration, videoconferencing, presence and instant messaging (IM)—previously available only separately—can now be unified. Therefore, balancing cost and capability, solutions for integrated business communications enable organizations to close the gap between voice and data and so unify all major aspects of employees’ relationships, inside and outside the enterprise, through every major channel of interaction.

Today’s collaborative strategies span data-centric information, communications and processes, from e-mail and IM to business applications and external Web sites. Tomorrow’s integrated business communications environments will integrate voice and video as well, enabling truly multimodal, multichannel collaboration inside and outside the enterprise. Flexible communication—in a timely manner, regardless of differences in devices or networks—is the real objective of integrated business communications at all levels.

Many see the convergence of voice, video and data communications as solely a technology issue—an IT networking and telephony challenge with some interesting benefits, but ultimately with a purely infrastructural impact on an organization. Forward-thinking organizations, however, are beginning to see its true potential: the power to transform business relationships, business processes and collaboration between employees, suppliers and customers. They recognize that voice and video have been the missing link in collaborative relationships.
Highlights

For organizations that invest in integrated business communications, the potential impact on business processes is deep and wide-ranging, as are the potential returns.

The gap between business applications and person-to-person communications is closing as open standards of IP networking enable the integration of voice, video and data.

These organizations require a clear strategy to facilitate the move from disconnected silos of voice, video and data capability to the delivery of new collaborative applications based on converged communications networks. They should assess how business and communications processes could be enhanced through this opportunity and plan accordingly. For organizations that invest in building environments for integrated business communications, the potential impact on business processes is deep and wide-ranging, as are the potential returns. Realizing that potential will require the support of partners that understand how to best approach the challenges and opportunities that lie ahead.

This IBM point of view is essential reading for senior management and decision makers responsible for strategy as well as customer-, supplier- and employee-facing processes.

What is integrated business communications?

Voice, video and data convergence is based on the emergence of IP communications. New IP communications systems provide a variety of new functions that extend beyond communication. With open standards of IP networking, the various communication servers can now collaborate efficiently to support multiple forms of contact with human users, whether as calls or messages, whether in speech or text and whether originating from people or automated application processes. IP infrastructure is helping to close the gap between business applications and person-to-person communications.
Voice and video communications have traditionally relied on discrete networks, e.g., public switched telecommunications networks (PSTNs), running alongside data networks such as the Internet. With a converged communications environment, however, voice and video are delivered across IP networks. They each become another data stream that is controlled and managed alongside communications from Web browsers, e-mail clients, databases, business applications, IM tools and all of the other network traffic generated by a typical business. As a result, voice and video communications can take place anywhere there is an Internet connection available, and via any device that supports IP.

It is true that integrated business communications is partly about Internet telephony and technologies such as Voice over IP (VoIP). The initial investments have been in networking products that simply replace existing telephony systems. IP telephony can indeed provide clear infrastructure and cost benefits compared with traditional telephone networks. From a business perspective, however, integrated business communications represents something far more significant. Communication is central to collaboration, and central to any relationship. The convergence of voice, video and data communications is set to transform business relationships and promote vastly improved collaboration between organizations, their employees and their customers. As telephony becomes an application, businesses can integrate communications and business applications to accelerate business processes and even transform the way they do business. Industry analysts share the view that convergence of communications and collaboration technologies will radically change the way people communicate in the next decade.
Converged business communications environments primarily support unified user interfaces in order to provide flexible, converged functionality to users of multimodal devices. However, this evolutionary migration to integrated business communications infrastructures and processes can provide additional benefits to the enterprise in the form of centralized, cost-efficient management and administration, and lower total cost of ownership (TCO) for communications applications.

**Converged communications: the missing link in collaborative relationships**
Collaborative environments streamline business processes by integrating disparate processes and applications into a single workplace used to facilitate employee-to-employee, employee-to-supplier and employee-to-customer relationships.

Voice and video are missing links in these collaborative relationships. In most organizations, voice and video networks are not integrated with the IT infrastructure, and as a result they cannot be integrated into the business process

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**Highlights**

*In addition to providing flexible, converged functionality to users of multimodal devices, integrated business communications can enable centralized, cost-efficient management.*

*The integration of communications and collaboration technologies has the potential to streamline processes, radically enhance business relationships and revolutionize the way business gets done.*
Highlights

Most collaborative business processes still require manual intervention at some point, and most face-to-face meetings are still tied to a physical location.

The need to switch to a separate, cumbersome and time-intensive communication channel can cause even the most efficient collaborative processes and systems to break down; voice and video form the missing link.

Because of this lack of integration, the most efficient collaborative processes and systems can break down when people have to switch to a separate, cumbersome and time-intensive communication channel. This may have a significant impact on relationships and processes. For example:

- Inbound telephone calls to an organization are delayed, and people are kept waiting while an operator launches an application manually to key in customer relationship management (CRM) information.
- A marketing team loses precious time on its project waiting for a domain expert to respond to voicemail and provide information for an urgent press release.
- A customer confirms a purchase order by telephone, but there is no firm record of the conversation—and the supplier has to add administrative overhead to reconstruct the message, and put up with the delay.
- A bank branch risks losing an investment customer because its portfolio manager is in a customer meeting, and its current communications technology does not enable effective forwarding of the call to an assistant.

Page 7

Highlights

• A customer service representative needs to divert a customer call to a product specialist, but first an appropriately skilled person must be identified, and that person’s availability must be checked. This takes time and does not demonstrate professional and efficient service.

• A group of geographically dispersed project team members cannot begin a conference call to discuss progress and gain business approval for new activities because key stakeholders are late joining the call and cannot be located by telephone. A later call also fails to secure the necessary approvals because additional information needs to be reviewed offline before a decision can be made.

• A regional sales manager who is frequently on the move is desperately trying to find details of a customer-focused audio conference and is frustrated by the inability to locate the dial-in details.

• The finance department is focused on lowering organizational communications costs—mobile telephones, fixed-line calls, audio bridge, call-in cards, remote/branch site telephony costs and so on—which seem to be impossible to reduce or even track.

• An aggressive move by a pharmaceutical competitor leaves one of its rivals’ product team with little time to assess the impact on their organization and their peers in the marketplace. Quickly bringing domain experts together becomes an arduous task.

When voice and video are integrated with the IT infrastructure and become part of the business workflow, the enterprise reaps the benefits of increased customer satisfaction, enhanced employee productivity and reduced costs.

IBM is teaming with networking industry leaders to help organizations take the lead toward truly effective, collaborative business with solutions for integrated business communications.

IBM’s collaborative technologies have already proven to benefit a huge variety of companies spanning a wide range of industries and business models. IBM, teaming with networking industry leaders, is helping organizations take the next big step toward more effective, collaborative business with integrated business communications and collaboration solutions.
By integrating voice and video with traditional collaborative communications environments, organizations can finally close the gap between voice and data, unifying major aspects of their employees’ relationships, inside and outside the enterprise, through every major channel of interaction. When that happens, devices, processes and applications that previously existed in isolation from voice and video use those services just as they would any other channel, device, application or information source.

That simple fact belies the wealth of potential business benefits it signifies for organizations that adopt integrated business communications strategies — evolving business relationships to improve collaboration, optimizing business processes through voice and video integration, improving the usefulness of business applications and streamlining communications infrastructure and costs.

Integrated business communications strategies open the door to a wealth of potential business benefits, including more efficient business processes, optimized business applications and streamlined communications infrastructure and costs.

Key features of an integrated business communications environment
What are the features of this kind of collaborative network? How does it work in practice? IBM, together with industry-leading networking providers, is already working to develop transformational solutions based on technology to support integrated business communications. The following are just some of the key elements of those solutions, many of which are already delivering benefits internally at IBM, as well as for IBM clients:

• Click-to-dial contact management
Click-to-dial is a simple but effective productivity tool that is enabled by converged voice, video and data communications. Collaborative portals, which typically provide contact lists from e-mail, groupware and IM applications, now incorporate voice and video channels as well. Wherever a contact appears onscreen, a user can click to automatically dial the IP handset or IP softphone of that person—or group of people—for instant discussion. The same applies to users or groups with videoconference capabilities.

Page 9

**Highlights**

- **Voice/video business-process workflow integration**
  Integrated business communications environments enable companies to embed multichannel communications into core business processes. Today, the most advanced workflows rely on e-mail or voice confirmation to obtain approval from a decision maker or respond to a customer issue, and this usually takes place outside of the core applications or workflow systems being used to drive the process. The smooth flow of processes often breaks down when manual intervention is required—and there is a risk of data loss between manual and automated steps.

  In an integrated business communications environment, the integration of all modes of communication means that communication is intelligently managed and tracked within the workflow. Using voice, e-mail and IM, a collaborative process can operate via the most suitable channel to execute the steps required to attain a business goal.

- **Voice, video and application integration**
  In an integrated business communications environment, voice and video can be integrated into core business applications such as CRM or enterprise resource planning (ERP). For example, a customer’s voicemail message can be linked to a detailed CRM record, so that when customer service representatives access the voicemail, they instantly see the customer’s details onscreen. Or, a purchasing clerk can simply click within a business/ERP application to dial a supplier to negotiate a better price—including a video link to support the negotiation process.

  An integrated business communications environment also allows people to interact more effectively with Web-based applications. Voice is the most natural interface there is, and converging on an IP infrastructure provides
Voice-based control of Web-based applications enables people to collaborate more effectively with IT systems.

IP communications, coupled with operational improvements, has the potential to transform the call center into a profit center by enabling consistent customer service regardless of where and how the customer contact is handled.

the basis for voice-based control of Web applications, from navigating customer service systems to simply browsing the Web in hands-free mode—for example, to get directions while driving. In effect, this extends collaboration between people to include more effective collaboration with IT systems, and as speech recognition technologies continue to mature, voice access will play an increasingly important role in more usable, accessible interaction with a huge range of applications.

• New call center capabilities

Today, call centers are becoming increasingly customer-focused and stepping up to solve problems and generate revenue. A proliferation of channels is giving companies a variety of opportunities to communicate with their customers. And with more opportunities for up-selling and new ways to cut costs, the call center is moving toward being a profit center.

In the past, the integration of voice required complex computer telephony integration (CTI) hardware and software. With voice becoming an application, it becomes more feasible to extend voice applications to more employees and to integrate business processes and business applications beyond the customer service environment.

IP communications, coupled with operational improvements, provides the potential to transform the contact center. One line capable of handling multimodal communications and combining multiple media and devices in the same session (e.g., voice recognition and graphical user interface) will enable a consistent customer experience regardless of where and how the customer contact is handled, and it may allow companies to save money by using a single network, which can further extend the contact center to agents working in other locations or even at home.
• **Presence awareness and relationship management**

Presence awareness, of the kind familiar to users of IM tools (with icons showing who is “available,” “in a meeting” and so on), can be extended to include voice and video communications as well. An employee’s workplace environment can display contact lists of colleagues and extended teams with real-time information about their availability for each communication channel—e-mail, IM, voice and video.

There are straightforward productivity benefits—employees can see at a glance who is available to take a call or start a videoconference, and who can only be contacted via e-mail or chat. The real benefit, however, lies in the ability to transform collaborative relationships by empowering employees to control the way communication takes place to improve teaming effectiveness and reduce the time required to make informed business decisions.

Users can establish rules about the channels through which they can be reached at any given time based on their availability, location, type of connection, the type of device they’re using and the priority of a communication. These rules might also be established at a departmental or company level—for example, to dictate the path of interaction for a customer call or a communication from a senior manager.

Perhaps a sales representative is in a departmental meeting; other employees can see that he’s unavailable to take calls, so they e-mail him instead. An incoming call from a prospect, however, is important enough to interrupt the meeting, and is routed directly to his mobile telephone. Or, a project manager needs to set up an urgent conference call with her team.

Through her portal, she can instantly see that two team members are available for a voice and video conference, two have voice-only communication and her key technical expert can only join via IM—making the conference worthwhile and enabling her to achieve her goals.
• **Remote virtual expertise**

Perhaps one of the most important drivers for converged communications is the rapid growth of personalized communications mobility fostered by handheld wireless devices such as cell phones, personal digital assistants (PDAs) and multimodal combinations of voice and text communication devices. Thorough convergence will, for example, provide call centers with the capacity for real-time invocation of remote virtual experts using presence management to solve customer service requests. But instead of being based solely on where the contact recipient is located, the telecommunication contact will be determined by more dynamic factors, such as:

- *The identity and importance of the contact initiator*
- *The urgency of the contact with the subject matter*
- *The modality of the contact, established dynamically based upon the device-dependent and circumstantial needs/preferences of both parties*
- *The ability of the contact recipient to easily control communications accessibility and modality in real time*
- *The enablement of a recognized contact initiator to know how and when to make contact (and get a response) with a recipient at any moment and with the contact method of choice.*


• **Rich-media applications**

A converged network provides a wealth of opportunities for new rich-media applications, from video conferencing for workgroup collaboration to e-learning to rich-media data mining and distribution of music or video promotional content.
Rich-media applications that are difficult to achieve today (because they rely on centralized videoconferencing suites or running separate applications for online training, for example) can become an integral part of employee-to-employee and employee-to-customer relationships. And, because converged networks provide equal access to voice and video as well as traditional data streams, it becomes possible to apply business logic and develop new applications to search and analyze audio/visual content. Applications might include surveillance and object recognition, voice search and conflict detection during customer calls.

IBM shares a common view with analysts in that we expect organizations to seek significant improvements in information exchange and collaboration in the very near future. Therefore, it appears likely that IT organizations will increasingly be challenged to provide adequate infrastructure resources for audio, video and animation.

- **Extension mobility**

  Traditional private branch exchange (PBX) has made significant advances toward number portability, with hot-desking giving employees some degree of freedom within a fixed location. The problem is that in a typical large, global organization there are multiple varieties of PBX installed at different locations, which limits the extent to which employees can take their telephony services with them wherever they go. When an employee is traveling or at home, the limitations of current technology prohibit number portability. As a result, people have to manage multiple fixed and mobile telephone...
numbers and play a “where are they?” guessing game just to have a simple conversation. In an integrated business communications environment, an organization can give each employee a dedicated extension number, with true extension mobility—so employees can be contacted worldwide on the same number wherever they have access to an Ethernet or virtual private network (VPN) Internet connection.

• **Infrastructure benefits**

By centralizing voice and video in the data center, organizations may realize significant infrastructure and cost benefits. Instead of running PBXs at each location that requires telephony services, organizations can centralize voice and video in the data center, preserving all the functionality of an advanced PBX but with significant cost, scalability and flexibility benefits.

An IP-based voice communication system running in a single data center can scale to hundreds of thousands of users, none of which need be tied to a specific exchange. Instead of separate networks and technologies for telephony and videoconferencing, it’s all integrated into a single enterprise IT infrastructure, reducing the TCO.

Other cost benefits may stem from reduced reliance on external voice- and videoconference service providers; reduced cost of information publishing for traditionally distinct channels such as interactive voice response (IVR) systems and the Web, and, in many cases, a reduced need for office real estate because employees aren’t tied to a physical workspace.
Another benefit of an IP-based communications system is that the environment does not have to be located in or managed by the organization itself. Hosted or managed IP telephony applications provide an alternative outsourcing model for the organization, without the hardware associated with a traditional centrex-type sourcing model.

**Organizational change**

Finally, the voice and data IT groups can converge to form a single team as well. During the migration from traditional systems to infrastructures such as IP telephony that support integrated business communications, a strong team is needed to ensure success, and the voice and data team must work together. Furthermore, the voice people must understand how the data infrastructure differs and what its potential and limitations are, and the data people must learn how voice applications are used in the business.

**Integrated business communications: transformational scenarios**

Collaborative portals, acting as a single, unified point of access for employees, partners, suppliers and customers, have already demonstrated clear productivity, teaming and communication benefits for a wide range of companies. These benefits are manifested primarily in the enhancement of internal employee-to-employee and employee-to-partner relationships. The integration of voice and video takes these collaborative benefits to the next level—and opens up a world of new opportunities for more effective customer collaboration. The integration of “islands” of voice, data, processes, applications and infrastructure can help organizations construct a single view of a customer, business pattern or group of transactions across all channels and drive fact-based insights back into their

Highlights

Converged communications in the call center can simplify and automate processes while enhancing the integration of communication channels.

core management processes in near real time, making such organizations highly responsive to the shifting demands of the marketplace. Organizational agility can be sustained through improvements in teaming effectiveness and business relationships. And customer experience improvements can enhance brand position, customer service, acquisition and loyalty. The following are just a few examples.

Collaborative call centers: enabling full service

Integrated business communications in the call center can simplify and automate processes while enhancing the integration of communication channels.

Self-care customers—both callers and Web users—have options for accessing real-time live assistance via self-service applications, whether in the form of immediate voice connections, instant text messaging or voice callbacks. Message distribution can be based on “skill-based routing,” directing customers to the most appropriate operator to address their requests.

Customers who are logged on to an organization’s Web site can immediately access live assistance via phone connections (click-to-dial and callback) and instant text messaging, or deferred assistance through e-mail forms messaging. Voice-portal technology is simplified and the integration made easier since there is only one platform: the IP one.

Call-center staff can be cost-efficiently distributed anywhere across the converged network—whether centrally, in branch locations or at home—or the use of outsourced labor services can be facilitated. All of these alternatives greatly maximize staffing resources across networks, regardless of location or type of communication devices.
Finally, for other customer-facing staff (“informal contact center”), convergence provides flexible individual communications that can be integrated with any form of customer contact. This will be particularly important for mobile customer-facing staff, i.e., field sales and field support.

Collaborative customer service: “dynamic branches” in banking
Bank branches have to support many different collaborative relationships—between employees in a single branch, between employees in different branches, between the branch and head offices, between the branch and call centers, and between the branch and visiting customers. Each branch has to manage relationships across multiple channels: the Internet, private networks, telephone and IVR, ATMs and over the counter. Most retail banks are trying to develop this multichannel relationship concept, but at the same time, they cannot implement full-service branches at every location because of the high cost of specialists in each of the many services they provide. Solutions for integrated business communications provide the opportunity to achieve this transformation. Each branch can become a proactive relationship center that uses voice, video and data communications to enhance collaboration through every channel of interaction. The result is a dynamic branch that can maintain local resources according to its size and location, and provide additional services to customers using converged voice, video and data networks.

For example, if a product advisor in a branch is not available when a customer needs advice, a bank may only be able to offer to make an appointment for a later date—an invitation to the customer to shop around. Convergence can allow the branch to videoconference in remote expertise from a contact center.
or another branch as an integrated part of both the process and the banking or CRM application on the user’s desktop. This may help not only increase customer satisfaction but also to contribute to boosting the win rate for sales.

An Internet customer who is stuck on the Web site can simply click on a “call-me” button and have a call-center agent share desktops to see what information has already been supplied, talking the user through the problem to capture an otherwise lost sale. With a converged infrastructure, this kind of multimodal collaboration is integral to the business process.

**Collaborative trading: B2B channel networks**

Integrated voice, video and data communications can bring significant benefits to a range of collaborative trading environments where data, communication and personal relationships are intrinsically linked. For example, an automotive manufacturer has a national network of dealerships that customers consider to be “one company” but that are really franchises with their own management, communication processes and business goals. The dealerships do work together, but on an informal basis, via telephone, e-mail and fax; they have more of a relationship with the head office than they do with each other, but by fostering collaboration, the dealer network may benefit them all.

With an integrated business communications environment, the dealerships can collaborate via a single portal that delivers application data, voice, e-mail, IM and video services as required to support their daily business activities. Sensitive negotiations can take place face-to-face by video. A customer in one location can see the specific car he’s looking for in a dealership on the other side of the country. The dealers have direct links to their channel managers at the head office and a unified platform for the latest corporate news, product announcements, promotions and other details.
Collaborative government: public sector
Governments all over the world are adopting electronic service provision to not only reduce costs but also provide a higher quality of service. Relationships are essential to public sector organizations, but they are more complex than relationships between a typical provider and customers because of the dependence of each party on information from the other. The public sector is increasingly driven by service level agreements (SLAs), charters and government initiatives to improve service while reducing cost; the public is driven by a need for better information, faster service and, in many cases, a legal requirement to provide information. As a result, the sector is founded on collaborative relationships in which each party is as dependent as the other on high-quality communication and service. E-government is central to the development of this collaborative service environment, and integrated business communications will play an important role in the evolution of electronic public services.

E-government doesn’t help the large number of people who simply cannot afford the technology to access the Web, however, and as a result there will still be costs involved in supporting over-the-counter inquiries and contact centers.

With an integrated business communications environment, governments can roll out lightweight access devices and IP telephones to provide direct access to the relevant department or personnel without incurring call costs: in government-managed estates, for example, or via public multimedia kiosks. They can integrate Web and IVR contact systems to maximize accessibility while reducing infrastructure costs, enable voice-driven access to key applications and even integrate video communication into social services and other sensitive areas of the citizen-government relationship.
Collaborative retail: integrated multichannel retailing

A collaborative portal with converged voice and data capability helps enable retail businesses to improve their services by integrating core capabilities, processes and organization across their retail channels (e.g., stores, catalog, e-store, call center, interactive television and mobile phones).

Such a portal can help optimize the customer experience by improving access to product specialists and information and providing a consistent experience across all channels, from prepurchase to purchase to after-sales support. It also allows the retailer to leverage a means of generating awareness and helps drive the right traffic from one channel to another for cross-sell, up-sell and customer service.

If additional product information is required, access to kiosks can be made available, again using methods of access consistent across other channels. By selecting a “help-me” option on the kiosk, the customer can initiate a conversation with a product specialist using an attached IP telephone handset. The specialist could be located in-store or anywhere in the world and could have immediate access to recent activity on the kiosk (so as to understand the product areas and requests the customer has already made through the Web interface on the kiosk) and thereby provide any additional information required. Such a request could even include video capability, enabling a specialist to provide visual guidance or demonstration to address a customer query. Again, this specialist could be located anywhere in the world, helping to make often scarce and expensive knowledge and expertise available in every store and across all channels.

Staff can have the ability to register for notification when selected business events (conditions, measurement points and so on) occur, and be notified interactively via PDA or wearable PC device, point-of-sale (POS) terminal or nearest IP telephone of those registered business events. A PDA could also
provide presence awareness information to further aid collaboration and accessibility. Integrating these access devices through a portal facilitates mobility for the store management team by providing access to all relevant capabilities from a multifunction telephony device, targeting information delivery directly to the people who need it.

Collaborative insurance: multichannel sales and service challenges

Today, insurance carriers interact with customers primarily through the captive-agent or independent-agent channels. But, more and more, alternative, less costly channels, such as the contact center and Internet, are emerging. As these channels have become more prominent, some insurance carriers have encountered difficulties in making cross-channel linkages during sales and service processes. For instance, when a sale is initiated in one channel and completed in another, insurance carriers are challenged to ensure that the process is seamless for the client. In addition, agents often do not have the ability to detect whether a customer has researched products online or contacted an agent in the past. The following scenario is an example of integrated business communications.

A customer researches insurance options on the company’s Web site. He is interested in life insurance and requests assistance via the click-to-dial option on the Web site or by phone. The contact center agent offers to connect the customer to an assistant immediately for a qualification interview. Through the use of systematic availability detection, the available assistant is autoalerted via an optimized messaging option (mobile alert, IM, phone call), links customer/call info to the CRM system on the portal and continues the qualification interview over the phone, without requiring the customer to repeat information he has already provided. The CRM system filters prospect data and sends a notification back to the assistant that the prospect has been initially qualified. A blood test is needed, so the assistant...
links to a physician-scheduling system and schedules the doctor appointment for the customer in his location. Additionally, a specialist agent is needed to advise the customer on some specific aspects of the policy and complete the sale. The system sends notification that the customer is available for a sales call to the available specialist agent through the ideal means (e.g., e-mail, IM, mobile call). The agent responds positively to the notification, enabling the system to connect customer and agent in real time over the phone to advance the sale. If a specialist agent is not available, the assistant schedules an in-person meeting with the customer to finalize the policy details.

Next steps: the roadmap for business transformation

IBM has years of experience implementing collaborative solutions for major organizations, providing a consistent user experience and empowering employees with the information and tools needed to help them to perform effectively, whatever their role. Now IBM is extending the potential of collaboration by integrating voice and video into the portal environment, with business processes and with applications.

An integrated business communications and collaboration strategy is the ultimate goal of a journey from disconnected to collaboration-enabled business processes, and ultimately toward communications-enabled business processes. This journey can be seen as a roadmap for business transformation.

By integrating voice and video into the portal environment, IBM is providing organizations with a roadmap for the journey from disconnected to collaboration- and communications-enabled business processes—and ultimately business transformation.
Achieving this goal requires a combination of business process, collaboration, hardware and software expertise. In IBM’s experience, implementing a successful integrated business communications strategy demands that an organization consider the following:

- **Development of a clear strategy**
  Where are you today on the roadmap, and what are you trying to achieve? Disconnected businesses need to move toward a more integrated, collaborative environment before embarking on a convergence project. Existing portal users need to establish a strategy for the convergence of existing telephony systems, which can be a major project in itself for complex, distributed organizations. Some companies have already solved their telephony infrastructure problems by migrating to IP-enabled systems but have no clear strategy for building applications that deliver improved collaboration and real business value.

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**Highlights**

*Implementing a successful integrated business communications environment demands that an organization first develop a clear strategy, beginning with the convergence of existing telephony systems.*

Page 2

Highlights

**Creating a portal for effective collaboration requires a complete understanding of the way processes work for each major part of a business.**

- **Establishment of a collaboration environment**
  Integrated business communications depends on an effective collaborative interface. An integrated, collaborative portal is the interface by which the majority of your internal users will interact with your business and communication processes. To create a portal for effective collaboration, you need to have a complete understanding of the way processes work for each major part of your business.

  Do you need to create functional workplaces, role-based workplaces, customer or supplier workplaces or a combination of these? What processes are in place for content creation and delivery? How will you manage personalization and authorization? How prescriptive does your portal need to be? How will it interact with existing communication channels, data sources and applications as you evolve to a true integrated business communications environment?

- **Management of business transformation and organizational change**
  The convergence of voice, video and data will likely have significant implications across your business. You need to prepare for the cultural impact on employees and customers, as well as the perceived effect on those responsible for managing voice, video and data. There has been some resistance from managers of telephony networks who see convergence as a disenfranchising force that shifts control of their responsibilities to the IT department—but in fact converged networks depend equally on IT and communications departments. Voice services are just as empowered by having access to IT resources as business applications are by being voice-enabled. Voice and data expertise are both required to deliver value to your organization.

**Businesses must prepare for the cultural impact integrated business communications will have on employees and customers.**
• **Enhancement of business processes through the IBM Component Business Model offering**

   IP communications capabilities enabling, for example, customer-care efficiency and enhanced service partner/supplier communication require integration and enhancement of the governing business processes. How can you enhance business processes to take full advantage of the opportunities of integrated business communications? The IBM Component Business Model™ methodology is a powerful approach to enterprise processes that allows seeing a business through a number of different lenses to create an analysis of business components that span siloed business units and to identify opportunities for innovation and improvement. Business components represent all of the unique activities that an organization pursues to create value as well as all of the people, processes and technology that enable these components to, in effect, act as stand-alone building blocks that deliver value to the organization. From the Component Business Model perspective, an enterprise is a collection of business components that are networked together. The modularity of business components enables an organization to react quickly and responsively to changing customer wants and needs as well as marketplace conditions. And because they are often reusable across products or business lines, these modular components offer an opportunity to reduce redundancy and lower operating costs.

• **Implementation issues**

   Do you have the internal resources and expertise to potentially host a much wider range of communication applications? Is your network infrastructure up to the task? Should you consider outsourcing? How can you maintain business as usual during the evolution of your voice, video and data networks? Integration empowers any business function to which relationships are important, which means it involves every business function, not just heads of IT and telephony.

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**Organizations can take full advantage of the opportunities of integrated business communications using the IBM Component Business Model methodology, a powerful analytical tool that helps to identify opportunities for innovation and improvement.**
• **Integrated architectures**

As voice communication is evolving into just another common service within the corporate (IT) network, a different view of voice-related services is essential to reaping the benefits. Voice-related services are provided by components that need to be integrated with the enterprise architecture, e.g., with applications to support business processes or collaborative environments. Voice-communication components are offered by a multitude of vendors, usually more than one of which are involved in comprehensive solutions. IBM teams with a number of vendors in this space, among them Avaya, Cisco, Nortel and Siemens.

**Conclusion**

Most organizations have some elements of an integrated business communications environment in place already, whether it’s a basic intranet portal or IP-enabled telephone systems. But that doesn’t mean they can simply combine a collection of disparate technologies to transform their business.

To realize the promise of convergence, you need a clear strategy to transform your organization from a disconnected business to one that has integrated key processes through collaborative environments. You also need to work with partners who understand the pitfalls and opportunities inherent in any major transformation. The impact on business processes is deep and wide-ranging, and so are the potential benefits. The voice revolution started with the invention of the telephone, which allowed people to collaborate one-to-one in real time. The Internet provided a many-to-many communication network, enabling organizations to engage in truly collaborative processes on a global basis for the first time. Today, the convergence of voice, video and data is set to create yet another sea change in business relationships and collaborative strategies.
For more information
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