Intelligent Communications Powers the Next Wave of Productivity Growth

www.yankeegroup.com

Executive Summary

The combination of IP networks and ubiquitous connectivity has created a world that seems much smaller today than it did in the past. As the world continues to shrink, the concept of place and time is no longer a barrier to corporate communications. Additionally, our extended enterprise continues to grow. It's not just internal employees that rely on corporate information, it is also customers, suppliers, vendors, partners and anyone else in a company's demand-through supply chain.

To compete in this new world, many organizations have introduced new tools to communicate better across the extended enterprise (see Exhibit 1). But these tools alone aren't enough to truly harness the power of the extended enterprise. To achieve this, companies need to deploy an intelligent communications strategy that combines traditional communications and collaboration tools with business applications. Intelligent communications will provide companies with the following benefits:

- **Better business agility:** Users will have the right information at their fingertips wherever they are. Organizations will be able to change and adapt more easily.
- **Improved customer satisfaction:** By having the right information available faster, customers can be answered faster and more accurately.

- **Faster problem solving:** Intelligent communications enables users to connect with other users in real time, speeding problem resolution processes.
- **Better bang for the buck:** Companies have spent millions of dollars during the past few years on new applications and on communications technology. The integration of the two provides a much higher ROI than if both are deployed in separate silos.

Exhibit 1
Communications Needs of the Extended Enterprise
Source: Yankee Group, 2007

Table of Contents

I. Distributed Enterprises Bring About the Need for Intelligent Communications

Most companies today are extended enterprises—global, networked organizations comprising employees, suppliers, partners and customers. These dynamic, distributed organizations have a flexible structure designed to move quickly in the face of global competitive pressures. Highly structured, vertically integrated, hierarchical organizations cannot respond to increasingly shorter windows of opportunity. Project teams in extended organizations are quickly assembled from disparate parts of the organization—often in multiple locations and even across geographies—then disassembled and reallocated as the opportunities arise.

Decision-making is distributed and dynamic, and communications must also be. To allow all users within the extended enterprise to communicate and collaborate, organizations have deployed a variety of communications tools (see Exhibit 1 on previous page). However, so far, organizations have not realized their potential. To do so, it is critical that these communications tools be managed within a holistic strategy and integrated into the business processes of the organization.

Exactly how critical? Competitive advantage is no longer about a single core capability; it's collective knowledge versus the collective knowledge of competitors. It's the effectiveness of a supply chain versus the effectiveness of the competitors' supply chain. The quality of the entire extended organization and how well each component collaborates and communicates with others in real time is now the basis for competitive advantage. Collaboration and communications are much more difficult today with the distributed, global nature of the enterprise. Intelligent communications improves the overall manageability and effectiveness of real-time communications, which makes the company more agile and responsive and enables global problem solving and new product deployment.

In this Yankee Group Report, we examine the emerging intelligent communications market for the real-time enterprise and the impact of having communications embedded into business processes. We highlight the major challenges organizations face and how current communications silos hurt the goals of the business. Lastly, we look at a case study of how a company used Avaya's solution to meet these challenges.

II. Communications Challenges of the Extended Enterprise

Simply having better communication and collaboration tools does not guarantee that corporate productivity will rise. There are many obstacles with the way organizations deploy communications tools. The most significant challenges include:

- **Management of communications technologies:** Organizations have invested millions of dollars in collaborative communications technologies such as voice, video and web conferencing technologies. These technologies have historically run on separate platforms and networks and often different silos in IT support them. This environment places the management burden squarely on the shoulders of the IT department, which often then passes it off to the end user. This frustrates the end-user community, which struggles to use and obtain reasonable technical support for these "productivity enhancing" technologies. Instead of increasing productivity, legacy collaborative tools are cumbersome and only deliver a fraction of their potential ROI.

- **Making collaboration and communications real time:** The rise of the internet and IP-based technology led to dramatic improvements in user productivity, but a real-time person-to-person communications medium didn't exist. This has changed with the near ubiquity of instant messaging and the increased adoption of IP telephony. Exhibit 2 illustrates that 82% of US enterprises have adopted IP telephony, with 58% having deployed it to a production environment. However, when deployed as a standalone communications technology, IP telephony only provides limited value. To realize the full value, end users must be able to find other people in the extended enterprise and invoke services in real time.

- **Empowering mobile workers and distributed decision-makers:** The individuals in an organization that are responsible for much of the revenue are typically the most mobile. The Yankee Group *2006 Transatlantic Wireless Business Survey—US Large Business* reveals that 41% of the workforce of US enterprises is now mobile (defined as away from their primary workspace 20% or more of the time). Yet, these individuals, who are often the most important to a company's success, have poor or inconsistent access to corporate resources. Key decisions-makers can exist anywhere, which makes real-time communications

critical to the decision-making process. Faster decisions can mean the difference between winning or losing a deal or getting to market with a new product within days instead of weeks.

These are significant challenges, and intelligent communications solutions can help overcome them, driving more revenue while lowering management and administrative costs. To understand intelligent communications, it's important to understand the landscape of communications technology and its evolving role in the extended enterprise.

Exhibit 2
IP Telephony Is Well Adopted
Source: Yankee Group 2006 US Economics of IP Communications Survey

What is the status of IP telephony in your organization?

- Planning 18%
- Testing 24%
- Fully Deployed 6%
- Multiple Locations 14%
- Few Locations 38%

n = 250
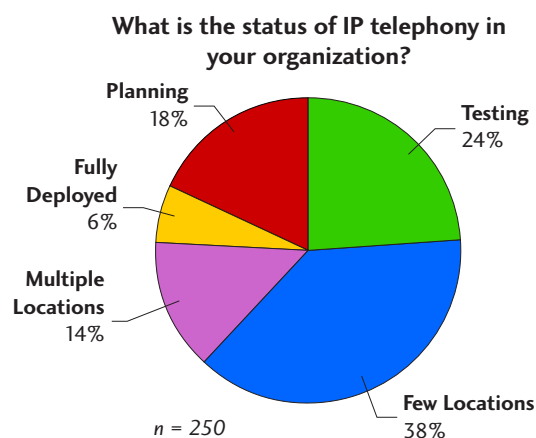
III. The Road Map to Intelligent Communications

Communications technologies have evolved in several phases. Yankee Group has identified four key phases to communications (see Exhibit 3). Communications have become a much more important component of enterprise productivity and will eventually be embedded into a company's core business process.

Exhibit 3
Business Communications Evolution
Source: Yankee Group, 2007

Intelligent communications:
Communications embedded into the fabric of the business. Communications embedded into business applications. Creates business agility, process improvement and leads to competitive advantage.

Unified communications:
IP-based communications integrated with collaboration tools such as conferencing, e-mail, instant messaging and presence. Value is on streamlining current communications process. Business applications still in silos.

Converged communications:
Voice, video and data on one network. Applications still exist in silos. Value primarily focused on IT process improvement and telecommunications cost savings.

Traditional communications:
TDM PBX, data network and business applications all live in distinct silos. Business impact is minimal.

Business Value

Evolution of Communications (Time)

Traditional Communications

In the traditional communications phase, the TDM voice network and data network were separate. Business applications reside in their own silos and are separated from the communications infrastructure. In this scenario, the "convergence" of these technologies was largely end-user driven, meaning that the onus was on the user of all these technologies to manage them (mostly ad hoc) and manually move information from one system to another.

Converged Communications

The converged communications phase was the early days of VoIP. The industry focused on reducing the overall cost of communications by converging voice and data networks. There were two primary sources of cost reduction from convergence. First, all calls within a company traversed the private data WAN instead of the public switched telephone network to reduce long-distance costs. Second, reducing the number of moves, adds and changes (MACs) and being able to manage the phone system centrally saved maintenance costs.

Depending on the number of on-net calls and the number of MACs, the savings would vary from a few percent to up to 50% of the overall TCO in some cases. In this phase, there was very little impact to the business user and the main focus was cost savings. However, the converged communications phase laid the foundation for unified and then intelligent communications.

Unified Communications

Unified communications brings together all the collaborative tools that users need, providing an integrated unified interface across their different devices and interfaces. This may be a user's PC, mobile device, desktop phone or any other device connected to the corporate network. This unified interface is similar to an instant messaging tool but extends to other IP-based collaboration tools such as VoIP, video, wireless phones and conference tools. Historically, these tools have been separate systems and managed by the user independently, which introduces an enormous amount of human latency into the process. Unified communications removes the human latency by creating a single interface to manage all of the communications tools.

This unified communications phase also introduces presence. Presence is the ability to understand the status of a user and the best way to communicate with someone in the extended enterprise. This is similar to the status one would see in an instant messaging session but extended to all forms of

communications. Users can identify quickly which other users are available and the best medium through which to reach them.

Unified communications ultimately removes much of the human latency that we have by making the end user the new convergence point for the technology. The value proposition of unified communications is to streamline the communications process for users, providing them with unified interfaces through which to access and manage all of their communications resources. This is a very powerful concept, but it still does not fully unlock the full potential of the IP world.

Intelligent Communications

Intelligent communications combines all of the capabilities from the unified communications world with business applications. In this phase, web services and service-oriented architecture (SOA) become the method by which business applications and communications technology converge. This can range from something as simple as information being transferred or can be as complex as a company's supply chain management process being altered because it is fed new information from the communications ecosystem.

Web services and SOA can be used to bridge the communications environment and business applications to enable better overall business agility. For example, finding an expert to answer a customer question can be as simple as calling a network-based service that uses a combination of presence, customer information and business rules to locate the best person across any mode of communication. This has historically been a very complex process that becomes much simpler in an intelligent communications environment.

Intelligent communications enables most organizations to be much more agile than ever before. The ability to respond to anyone in the extended enterprise at any time using any device with the right amount of business intelligence will power a new wave of corporate productivity. Processes that normally take hours to complete will be reduced to processes that can be completed in minutes. Companies will see greater customer satisfaction and more productive users and will be able to create new business processes without the human latency that was introduced into our communications environment in the past.

IV. Case Study: Intelligent Communications at Whirlpool

The role of intelligent communications is to embed communications technology into the business processes of the organization, streamlining the processes and allowing the creation of new ones. The following case study illustrates this.

Whirlpool Corporation

The Goal

Whirlpool Corporation, the world's leading manufacturer of home appliances, uses technology to create a competitive advantage. In the retail market, time to market is a critical success factor for leadership, and Whirlpool was searching for a way to reduce its overall manufacturing cycle time. Whirlpool had a vision of reducing many of its processes from months and weeks to days and hours by being able to respond to exceptions and events faster. Additionally, Whirlpool was looking to lower overall production costs and increase customer satisfaction.

The Vision

Current Whirlpool processes involve a human response when a process exception or problem arises. This human latency can introduce delays into a time-critical process. Whirlpool's vision was to address the process breakdowns and glitches with automated responses. When a triggering event occurs, the system will automatically alert the appropriate personnel or instantly set up a conference call. Ideally, the solution will use IT to transform the business by compressing cycle times, which will serve customers better, reduce costs, increase productivity and grow revenue.

The Solution

Whirlpool has a long history with Avaya. Whirlpool has an Avaya IP telephony solution at its Benton Harbor, Mich., headquarters as well as in its remote distribution centers. It also uses Avaya voice messaging and message networking. Avaya Contact Center solutions are used to support customer interactions; Avaya Global Services provides the support for all of these products. When it came time to search for a vendor to help communications enable a business process, Whirlpool again chose Avaya as its partner.

Working toward the goal of eliminating human latency, Whirlpool chose Avaya Communications Process Manager (part of an end-to-end solution for Communications Enabled Business Processes or CEBP), which includes services that expedite responses in ways that were not possible before the advent of intelligent communications.

Communications Process Manager is built on a service-oriented architecture (SOA) and provides the ability to track real-time, multichannel communications with process users as

well as decision-makers. Communications Process Manager leverages the industry-standard SIP to integrate with different communications resources as well as web services to be able to integrate them into Whirlpool business processes.

The Avaya CEBP solution enables communications-centric web services to be triggered manually or automatically, such as delivering notifications to a set of users by phone, e-mail or SMS text messaging, and then responses are gathered and tracked, coordinating an instant conference of all the users.

The Avaya Business Communications Consulting team worked with Whirlpool to identify supply-chain processes that would benefit from these communications services. Specifically, processes that require human intervention were targeted, particularly those that required time-critical collaboration between multiple people. These processes are the most likely to experience delays from the lag time of waiting for a human response.

Initially, Whirlpool is integrating Avaya Communications Process Manager with SAP Business Information Warehouse (see Exhibit 4). The Business Warehouse dashboard gives executives daily updates on the operational efficiency of company plants and order duration.

Exhibit 4
Intelligent Communications in Action
Source: Whirlpool, Avaya and Yankee Group, 2007
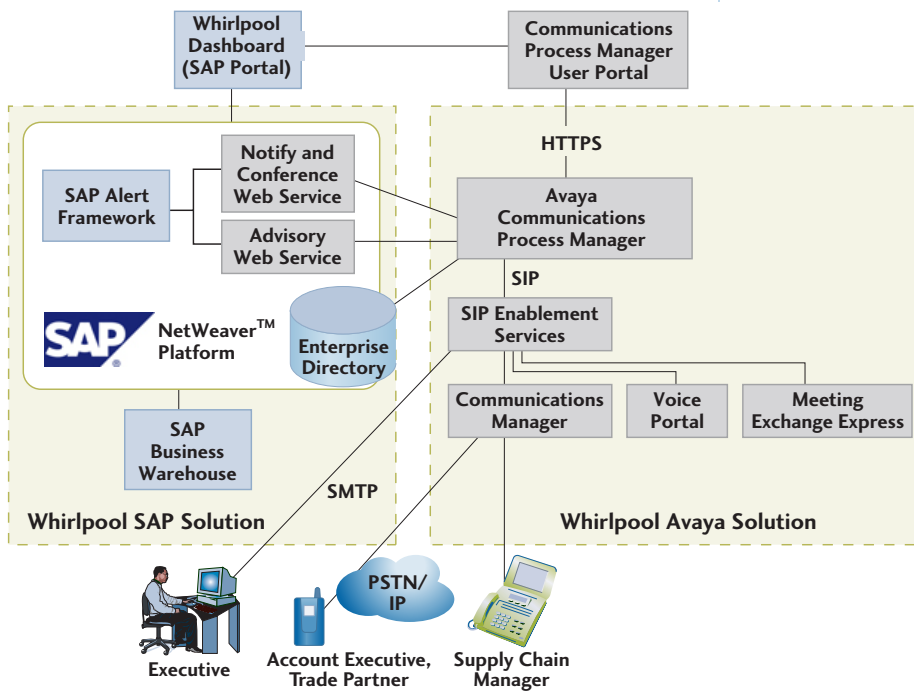
Avaya Communications Process Manager coordinates the interaction between SAP enterprise software and the underlying communications resources by using SAP NetWeaver to integrate communications with business processes—the goal of intelligent communications. The solution alerts Whirlpool staff to exceptions on a 24x7 basis, instead of waiting until the next morning. It helps those that are alerted to communicate and collaborate, allowing their responses to be much faster. Additionally, the solution will improve the information exchange between Whirlpool and its retailers.

The Impact of Intelligent Communications on Whirlpool

Whirlpool is expecting intelligent communications to have the following effects as it becomes embedded into the fabric of its organization:

- Faster response time by increasing the use of exception management through communications-enabled alerting
- Lowered operational latency by automating many of the current processes
- Increased proactive responses from the integration of internal and external data sources

For Whirlpool, using IP communications to simply lower costs or make minor changes to communications processes wasn't enough; intelligent communications is a holistic corporate strategy to innovate and enable business transformation. Communications technology combined with the application infrastructure are now a strategic asset at Whirlpool.

Integrating Avaya's Communications Process Manager into the SAP software, combined with Avaya's professional services, enabled Whirlpool to create business processes that were not possible when the communications infrastructure and application software existed in separate domains.

Over time, business processes with embedded communications will become standard for all organizations, but in the short term, Whirlpool is able to create a significant competitive advantage over companies that are not yet integrating these domains.

V. Conclusions

The combination of mobile technology, IP networks and application innovation has created a world where time and distance no longer matter. Users need the ability to communicate with each other at any point in time, over any device, anywhere they are with the right information. Organizations have not yet fully realized the benefits from the communications and application investments they have made in the past number of years—and will not until these two historically siloed environments are truly brought together.

This will enable organizations to not only improve existing business processes, but also create new, more streamlined processes that could not have existed with older technology.

Many years ago, the thought of deploying IP communications was risky to many organizations. Today, not deploying it has an even bigger risk; companies that do not deploy will not have the necessary business agility to keep up with the competition.

Intelligent communications will help transform companies by acting as the glue that joins end users, networks, communication technology and business applications. This will create the business agility that organizations require to achieve the next level of employee productivity and customer service. Companies that adopt intelligent communications will see the following benefits:

- **Faster decision-making:** Companies will be able to reach the right person wherever he or she is and retrieve the information required to make critical business decisions. The human latency that so often plagues organizations will no longer be there.
- **Better acceptance and use of collaborative applications:** Historically, the adoption of many new collaborative applications has been slow. By tying the collaborative applications to business processes, users will see an immediate workflow and productivity benefit. Over time, these tools will become mainstream, but companies willing to adopt today will gain a competitive advantage.
- **Work-life balance improvements:** Collaborative teams worldwide will be able to interact as easily as if they were in the room next door. This will minimize the amount of travel required for users to collaborate with one another. Additionally, users will have the same access to information whether they're in the office, at home or sitting on a beach. This will enable users to blend their work life and personal life more easily.
- **Improved customer satisfaction:** By providing the right information to businesses over any medium, companies can respond to customers much more quickly and accurately.

Yankee Group

Yankee Group has research and sales staff located in North America, Europe, the Middle East, Africa, Latin America and Asia-Pacific. For more information, please contact one of the sales offices listed below.

Corporate Headquarters

31 St. James Avenue
BOSTON, MASSACHUSETTS 02116-4114
617-956-5000 phone
617-956-5005 fax
info@yankeegroup.com

Europe

55 Russell Square
LONDON WC1B 4HP
UNITED KINGDOM
44-20-7307-1050 phone
44-20-7323-3747 fax
euroinfo@yankeegroup.com

Yankee Group | the global connectivity experts™

A global connectivity revolution is under way, transforming the way that businesses and consumers interact beyond anything we have experienced to date. The stakes are high, and there are new needs to be met while power shifts among traditional and new market entrants. Advice about technology change is everywhere—in the clamor of the media, the boardroom approaches of management consultants and the technology research community. Among these sources, Yankee Group stands out as the original and most respected source of deep insight and counsel for the builders, operators and users of connectivity solutions.

For 35 years, we have conducted primary research on the fundamental questions that chart the pace and nature of technology changes on networks, consumers and enterprises. Coupling professional expertise in communications development and deployment with hundreds of interviews and tens of thousands of data points each year, we provide qualitative and quantitative information to our clients in an insightful, timely, flexible and economic offering.

Yankee Group Link

As technology connects more people, places and things, players must confront challenging questions to benefit from the changes: which technologies, what economic models, which partners and what offerings? Yankee Group Link™ is the research membership uniquely positioned to bring you the focus, the depth, the history and the flexibility you need to answer these questions.

Yankee Group Link membership connects you to our qualitative analysis of the technologies, services and industries we assess in our research agenda charting global connectivity change. It also connects you to unique quantitative data from the dozens of annual surveys we conduct with thousands of enterprises and consumers, along with market adoption data, comprehensive forecasts and global regulatory dashboards.

Yankee Group Link Research

As a Link member, you have access to more than 500 research reports and notes that Yankee Group publishes each year. Link Research examines current business issues with a unique combination of knowledge and services. We explore topics in an easy-to-read, solutions-oriented format. With the combination of market-driven research and built-in direct access to Yankee Group analysts, you benefit from the interpretation and application of our research to your individual business requirements.

Yankee Group Link Interaction

Our analysts are at your further disposal with data, information or advice on a particular topic at the core of a Link membership. We encourage you to have direct interaction with analysts through ongoing conversations, conference calls and briefings.

Yankee Group Link Data

Yankee Group Link Data modules provide a comprehensive, quantitative perspective of global connectivity markets, technologies and the competitive landscape. Together with Link Research, data modules connect you to the information you need to make the most informed strategic and tactical business decisions.

Yankee Group Consulting

Who better than Yankee Group to help you define key global connectivity strategies, scope major technology initiatives and determine your organization's readiness to undertake them, differentiate yourself competitively or guide initiatives around connectivity change? Our analysts apply Yankee Group research, methodologies, critical thinking and survey results to your specific needs to produce expert, timely, custom results.

Yankee Group Live!

The global connectivity revolution won't wait. Join our live debates to discuss the impact ubiquitous connectivity will have on your future. Yankee Group's signature events—conferences, webinars and speaking engagements—offer our clients new insight, knowledge and expertise to better understand and overcome the obstacles to succeed in this connectivity revolution.

www.yankeegroup.com

The people of Yankee Group are the global connectivity experts™—the leading source of insight and counsel for builders, operators and users of connectivity solutions. For more than 35 years, Yankee Group has conducted primary research that charts the pace of technology change and its effect on networks, consumers and enterprises. Headquartered in Boston, Yankee Group has a global presence including operations in North America, Europe, the Middle East, Africa, Latin America and Asia-Pacific.