

Collaboration in the Enterprise

July 2006

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Abstract

CEOs looking to grow their business are focusing on two areas: the strategic use of business intelligence and business process improvements. Underlying both initiatives is the need to harness and leverage intellectual assets and to provide support for the many ways in which people work with each other.

CEOs looking to strategically grow their business are continually focusing on improving process efficiencies throughout their organization. The target of their focus includes the use of business intelligence, business process improvement and overall worker productivity. The underlying initiative is the need to harness and leverage intellectual assets and to provide support for the many ways in which people work with each other.

Companies have found their magic bullet in collaboration technologies. Collaboration technologies include communication and messaging tools such as e-mail, instant messaging, and audio, video, and web conferencing, as well as information sharing capabilities. Such functionality allows companies to not only streamline their internal processes but also to reach out to their customers and partners, transforming their relationship with both.

However, successful deployment of the technology is dependent on there being a culture of collaboration within the enterprise. To that end, senior management needs to support and reward team behavior in order for a collaborative culture to take root.

Current collaborative software ranges from point solutions to enterprise collaboration platforms. As the market matures, analysts are predicting that the latter will subsume the former. As one of the leading providers of collaborative solutions, CollabraSpace offers an out-of-the-box collaborative platform, CollabraSuite, to those seeking an enterprise-wide solution that is secure, scalable, and extensible. Using CollabraSuite SDK, organizations who are focused on customizing their environment can quickly develop a maximally flexible solution, offering collaborative components.



Introduction

While still keeping an eye on keeping costs down, CEO's have switched their major focus on driving growth. To fuel growth, they are looking to the strategic use of business intelligence and business process improvement. Indeed, the latter heads the list of the top CIO priorities in 2006, according to the latest survey by Gartner. Hot on its heels are initiatives to 1) control enterprise operating costs, 2) attract customers and improve customer relationships, and 3) gain competitive advantage.

To execute on these priorities, companies are reevaluating the way they collect and use unstructured information as well as the way they do business. Intellectual property from online meetings, discussions, project reviews and mobile device interactions are now being captured and catalogued.

To execute on these priorities, companies are closely scrutinizing their intellectual assets as well as the way they do business. Ideas that are generated in meetings and discussions and those that are created in projects, emails, and online discussions are now being captured and catalogued.

In a bid to leverage this knowledge, access to these assets is being enabled across the company. Teams are no longer divided by artificial organizational boundaries; cross-functional teams are becoming the norm. Furthermore, with the focus on growth, companies are also reaching outside their own walls, to other companies, to form strategic partnerships, and to their customers, in order to improve service.

Tools for Collaboration

At the core of these initiatives is the very real need to actively support the way people work and deal with each other. In response, technology vendors have created tools that facilitate collaboration or packaged collaboration components in existing applications. These tools mediate communication and enable coordination and cooperation among groups who may be in different organizations, locations, and even time zones.

For communication among team members, the following tools are most commonly used:

- E-mail
- Instant Messaging
- Chat Rooms – text messaging for groups
- Audio Conferencing
- Video Conferencing
- Forums – for asynchronous online discussions
- Whiteboards – for real-time sharing of documents or images that participants can edit and annotate

Along with communication components, there is a set of functions that allows teams to share, create, and consult information. They include:

- Document Sharing – Documents (or software code) can be edited by members of a group, and the various changes and versions are automatically tracked
- File Sharing – Documents stored in a central location can be used by anyone with access to the file server and the right set of permissions.
- Information Sharing – Repositories of information from previous projects can be collected, indexed, and searched by teams working on similar projects.
- Find An Expert – People who can offer advice or answer questions can be identified, located, and contacted.

Lastly, the ability to preserve artifacts from such interactions (e.g., the transcript of a chat, the drawings and documents from a whiteboard session, the questions and answers from a consultation) forms the basis for future collaboration and is, in itself, a collaborative component.

Alone or in combination, these components bring the knowledge, experience, and resources together in a shared space. The resulting software can be as simple as a shared calendar or web meetings or as complicated as a full-pledged content management system for creating, capturing, and disseminating complex information to multiple channels. Currently, one of the most familiar collaboration applications is web conferencing, which has been part of the corporate environment for the last few years. CollabraSpace's flagship product, CollabraSuite® augments online meeting functionality with the ability to share documents and other information as well as consult in real-time with any experts who might be online at any time and be able to assist with any issues that may arise.

The Telecommunications Industry Association states that global revenues from collaboration applications (audio conferencing, video conferencing, web conferencing, unified messaging and instant messaging) reached \$1.5 billion in 2003, more than double the \$696 million from 2002. They forecast that collaboration revenues would reach \$11.4 billion by 2007.

Collaboration within your Enterprise

Such collaborative tools have the potential to make a huge impact in how you do business. Imagine being able to:

- convene project teams no matter where the individuals are
- provide teams access to documents, databases, and other information to support complex decision-making
- automatically capture information from collaborative sessions
- make your experts available to teams who need them
- publish information as soon as possible to individuals or to a broad audience
- engage with your customer in real-time, wherever they are

Being able to implement such functionality is also a boon for those businesses in industries where there is a requirement for compliance with government mandates and regulations. For example, publicly traded companies in the United States must comply with the Sarbanes-Oxley Act, which mandates stricter accountability (implying stringent processes and record-keeping) for corporate governance and transparency. Similar rules are under debate worldwide. To address the complexity associated with corporate governance as well as the challenges of compliance, software vendors have created a suite of solutions, commonly referred to as financial compliance process management (FCPM) applications.

FCPM applications support reporting, workflows for reviews and approvals, and documentation relevant to internal controls. Collaboration tools can provide communication channels during financial discussions, support expert reviews and approval steps from authorized users, and supply auditing and logging capabilities during the collaboration to support reporting requirements.

Another industry in which compliance is a major requirement is the pharmaceutical and biotech industries. As in financial services, collaboration tools are used to facilitate document management and regulatory compliance. These industries, however, are also heavily dependent on creating and harvesting intellectual capital. Given the global span of the companies in this space as well as the trend towards partnerships, collaboration tools that focus on knowledge management and support geographically distributed teams are crucial. The following table provides examples of the types knowledge used and generated by the teams working together in different phases of a pharmaceutical project.

Project Phase	Information	Collaboration
Discovery	<ul style="list-style-type: none"> • internal research results • databases • paper documents • competitor research 	Researchers and strategic partners use: <ul style="list-style-type: none"> • email and other messaging tools to communicate • document management tools integrated with their workflow to capture the knowledge being created and to meet regulatory requirements for record keeping • "Find-An-Expert" capabilities to identify and consult with the appropriate team members
Clinical Trials	<ul style="list-style-type: none"> • research parameters • project database 	Researchers and trial participants can use email and other messaging tools to communicate with each other. Participants can also avail themselves of online forums to have ongoing discussions about the data they are collecting.
Development	<ul style="list-style-type: none"> • results of pre-clinical and clinical trials • project history • patents • copyrights • publications • competitor research 	In addition to communication tools and document management, members of the development teams can avail themselves of "presence awareness," the ability to detect whether someone is online. In this way, team members can have discussions and consultations as needed, saving time. At this stage in the process, anything that cuts time helps bring a product closer to market and therefore, revenue.

More on Presence Awareness

Outside of instant messaging, the ability to know when someone is online has been little used. Yet, such simple functionality can yield great dividends in the context of complex business processes. Whenever there's a need to ask a question, consult an expert, or get approval for something, being able to do so on the spot can not only help you complete your task, it could potentially be the difference between success and failure.

And when information about someone's availability online is extended to include his or her computing environment (e.g., are they on a dialup connection or broadband? at work or at home?) and professional information (e.g., title, responsibilities, expertise), a process that requires input from different people, say coordinating a patient's care, can be markedly simplified. Should different specialists need to be consulted, the presence function can identify the ones who are currently available. Should tests be needed, the system can actively suggest the persons who can perform them instead of expecting a user to know of such people and then having to locate them.

Extending the Enterprise to your Customers

Collaboration tools not only help you within your enterprise, they also have the potential to transform your relationship with your customers. Imagine having at your fingertips a complete history of your interaction with them, the full resources of your company to answer any questions they might have, and the ability to complete a transaction with them, no matter how complex or involved it might prove to be. Collaboration tools enable a level of customer service that has, until now, been difficult or too costly to attain.

Take, for example, the contact center. These days the contact center serves as more than a help desk or a sales channel. Rather, it is the hub of all of your company's interaction with its customer. When you receive a call from a new or existing customer, you not only have the opportunity to address the issue about which they called but also to cross-sell, up-sell, or even just collect data for in order to tailor future interactions.

Companies have found that by using collaborative components such as web self-service, email, and live Internet interaction (chat plus shared screens or co-browsing), they can run a more effective and efficient contact center. With the ability to chat or exchange messages in real-time along with screen-sharing, your service reps can help customers fill out forms or answer questions about complicated information related to their call (e.g., financial advisors can explain investment allocation strategies, telecomm reps can work with you to create a telecommunications plan that fits with your current services and usage patterns). Add to this presence awareness functionality and your service reps now have access to the rest of your staff. Now, for example, they can identify just the right technician to solve a customer's problems or find a manager from which to get online approval for a complex transaction, effectively removing a barrier to completing a sale or interaction.

A further benefit of using collaborative components is that they enable you to provide different levels of customer service. By adjusting levels of support based on the complexity or size of the sale as well as other variables important to your business, you can better manage costs. Subsequently, you can allocate internal resources more judiciously. More innovative companies are collecting interaction information and integrating it with data across all customer touch points. The resulting analysis yields opportunities for more and more highly personalized interactions, thereby increasing satisfaction and eventually generating more revenue.

Challenges to Successfully Deploying Collaborative Software

However, adopting collaboration software across the enterprise goes beyond the technology. A 2005 survey by Forrester identified two factors as the biggest barriers to the adoption of collaboration software in an organization: its culture and concerns about security. Culture was more of an issue for internal deployments while security was more important, understandably, for external deployments.

When one views the software as merely a tool for implementing and reinforcing collaborative processes and practices, then the culture issue becomes obvious. Without the commitment to a collaborative culture, the tools to support it are ineffective. Just what is a collaborative culture? It is one in which workers:

- routinely share knowledge,
- work together in teams on specific tasks,
- are incented to work with others, and,
- are recognized and rewarded for team successes.

The last point is particularly important. It implies that the success of a deployment depends on management buy-in. It is within the purview of senior management to reinforce the value to the business of collaboration. Recognition of individuals in a team as well as the efforts of the team itself, whether it be with a token gift or a financial bonus, can go a long way towards ensuring that a collaborative culture takes root. In their paper called “Culture and Security are the Leading Barriers to Team Collaboration Adoption,” Forrester presents a checklist that assesses the current state of collaboration in your company. The types of questions range from working practices (e.g., Do people in different parts of the organization work together to complete business processes? Is there a system in place for people to seek advice from each other?) to measurements and incentives (e.g., Is teamwork measured in performance evaluations?) and even office layout (e.g., Does the layout of the office space encourage face-to-face, interpersonal interactions?)

For collaboration that reaches outside the enterprise, the security issue is paramount. Businesses need to be able to share privileged information across gateways and firewalls with a selected group. Furthermore, the users in this selected group have to have the proper permissions that allow them access to just the right set of items at the appropriate level. One vendor has implemented a software solution that easily allows collaboration through firewalls. Another vendor has implemented enterprise directories that manage user access controls. CollabraSuite offers programmatic security control, a role-based security mechanism where groups of users share specific permissions with the option to specify entirely at application deployment.

Towards an Infrastructure for Collaboration

As collaborative tools get absorbed within your enterprise, the market for standalone or point products is shrinking. Not only are enterprise applications being augmented with collaborative features, such capabilities are in fact moving into the infrastructure. Furthermore, other vendors are now creating offerings that easily integrate into this platform and also other applications.

This shift in the marketplace is in response to the issues that companies face as they struggle to develop an enterprise-wide strategy for collaboration and information sharing. Currently, most companies that have collaborative applications in-house are in the first or second stages of adoption:

Stage 1	Stage 2	Stage 3
<ul style="list-style-type: none"> • Separate application for each business need • Solutions segregated by organizational groups • Purchased as needed 	<ul style="list-style-type: none"> • Point solutions • Still organizationally segregated, but widespread adoption • Functionality duplicated • Integration spotty 	<ul style="list-style-type: none"> • Enterprise solution • Evolving towards a standard collaboration platform • Beginnings of an enterprise-wide Information Strategy

However, as workers gain experience with the tools, they generate additional requirements that will naturally move them to the next stage. They will want the convenience of using the tools within the context of their day-to-day activities. If they use instant messaging or chat applications to reach their colleagues or if they have a "Find-An-Expert" application to help them with their questions, they're going to want that functionality when they are, for example, working on team projects, doing research for a clinical trial, or preparing documents that require approvals at various stages. Having to launch a separate application is a barrier to its use. For workers, it is also one more application to learn. Any gains in efficiency from the use of the collaborative tool are quickly lost when workers have to invest additional time to master it as well as switch business contexts to use it.

Much of the collaborative functionality is so basic to the way people work (e.g., communication and messaging, information exchange) that it makes sense to move it out to the enterprise. Thus companies are moving towards enterprise-wide collaborative platforms and services, eliminating point or duplicate products, and widely deploying a set of tools throughout the business.

In the short term, however, the choice between application-based collaboration vs. infrastructure approaches will not be an easy one. Forrester notes that building the business case for a collaboration platform is a major undertaking, requiring input and data from multiple business units. The benefits are similarly dispersed. Gartner estimates that in 3-5 years, the market will consolidate and by 2009, "the integrated collaboration service market will largely subsume today's point collaboration technology markets – for example, e-mail server, shared workspaces, IM, videoconferencing and web conferencing."

Your Collaboration Strategy with CollabraSpace

CollabraSpace's approach to collaborative tools provides you the flexibility to meet your short-term needs while allowing you to plan for the future. CollabraSuite®, its collaboration platform, is a collection of graphical real-time components that can be used to build customized collaborative environments. Built on top of J2EE technologies, it thus addresses issues such as enterprise security, firewall navigation, scalability, and extensibility, all areas of concerns in any collaborative strategy.

Its framework is made up of core functionality that addresses specific collaboration services. These services can be deployed stand-alone, can be combined together to create collaborative communities, or can be combined with other third party provided components to provide content rich web-based applications with integrated collaboration capabilities. Each component is designed to add powerful collaboration features to existing applications, web pages, and portal frameworks. This flexibility makes it possible and cost effective to easily integrate these capabilities into various domains in which they are needed.

Out of the box, CollabraSuite® software shows a metaphorical representation of a physical workplace. The virtual environment is made up of campuses, buildings, floors, and rooms that can communicate seamlessly over distributed systems. This representation models a flexible underlying architecture that allows private meetings, group communications, or seminar style conferences for an entire enterprise.

When a user logs into the CollabraSuite® system, they are entering a virtual room where they can meet other users, chat with users, share documents, or participate in audio and/or video conversations. Not only can users collaborate with others in their current room, they can also see users working in other virtual rooms via a real-time presence awareness capability. Users can instantly join users in another room by simply clicking a button.

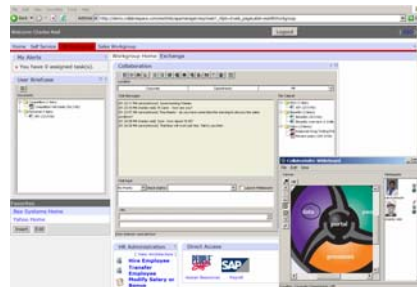


As users move around the collaborative environment, they can bring their virtual briefcase with them, filled with documents that only they can see. Documents in a user's briefcase can easily be shared with other users by dropping the document into a room. In addition to storing private documents in a user's briefcase, CollabraSuite® provides the ability to store documents within rooms (virtual file cabinets). These documents can then be viewed by any user within the room.

The metaphorical representation of a physical workspace provided by CollabraSuite® software reflects security aspects of the physical environment. The rooms that users meet in can be arranged into a virtual floor of unlimited rooms, thus allowing for the grouping of like rooms by functionality or other common means. The floors can then be arranged within a virtual building, and numerous buildings can be grouped to create a virtual campus. Finally, multiple campuses can be connected with one another via campus-to-campus communications.

CollabraSuite® functionality includes:

- Document storage and retrieval
- Text chat
- Audio/video capabilities
- Presence awareness
- Navigation
- Paging
- Online user display
- White boarding
- Lightweight html style note editor
- Open API
- Remote Campus Access



CollabraSuite® components can also be used to customize your existing collaborative environment or can be put together to create a new environment specifically tailored to your needs. In addition to the standard capabilities (Text Chat, Instant Messaging, Whiteboard, Room Document Storage or File Cabinets, Personal Document Storage or Briefcases, and Audio/Video Conferencing), one feature stands out: real-time presence awareness.

Presence awareness allows users to identify who is online at any given time. It underlies “Find An Expert” capabilities, showing the availability of a team member to do a task, answer questions, or participate in an activity. Combined with additional information about a person's title, area of expertise, or particular skill set, it is suddenly a mechanism for bringing your company's intellectual assets to the forefront, letting employees across the company tap into the collective knowledge distributed among your human experts.

CollabraSuite® offers two unique Presence Awareness features: The Room Occupants List and Online Users.

Room Occupants: The CollabraSuite® Room Occupants component allows users within a room to visually see who else is in the room. The users get a choice of seeing a detailed list of users in the room or for seeing images that users have selected for themselves in their user profile. The Room Occupants list also allows a user to pull up contact information for users, send them a private instant message, and place point-to-point calls to the person. Likewise, CollabraSpace recognizes that user anonymity can be important. The Online Users list can be customized to restrict Presence Awareness capabilities to those users located in the same room. Presence awareness can also be disabled at the room level. This allows the ability to conceal the presence of users and groups for unique requirements.

Online Users: The CollabraSuite® Online Users list allows a user to arrange the display of those users logged into the collaborative environment, grouping and filtering users based on attributes such as user name, and location. This provides a vehicle for users to easily organize virtual teams and quickly navigate the virtual environment, instantly transporting them to select locations in order to join their peers or initiate new collaboration threads.

Users can also retrieve profile information of other users such as full name, skill set, contact information, and last login. In addition, the Online Users feature offers users an easy mechanism to send private instant messages to other users and place point-to-point audio/video calls to selected individuals.

According to Sam S. Adkins, a learning technology researcher and the Chief Research Officer at Ambient Insight, "The true innovation in these systems is not the immersion or the technology, but the multi-user capability. Multiple workers can interact with the system and one another in real time. Human interaction dominates the experience, and the technology fades to the background. Enhanced human interaction is the greatest appeal of collaboration."

About CollabraSpace

CollabraSpace, headquartered in Annapolis, Maryland, is a leading provider of real-time, web-based collaboration solutions that become part of the fabric of an organization, transforming the way its members and communities of interest communicate and collaborate. By heightening personal interaction as well as access to relevant, current information and subject matter experts, CollabraSpace's systems enable organizations to work as one – anytime, anywhere. The company develops and provides secure web-based software and platforms that include audio/video sharing, document sharing and storage, whiteboarding and instant messaging, as well as a J2EE application development platform. More information about CollabraSpace can be found at www.collabraspace.com.

For more information, please call 1.800.480.1013.



CollabraSpace
Revolutionary Collaboration