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FULL SPEED AHEAD!

In the race for first place, know where you're going, how you're getting there, and what technologies, processes, and tools are equipped for the journey.

EDS Getting There First

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AND THE HUMAN ELEMENT

The power is no longer in the
information, but in the sharing.

By Robert Shimp, Oracle Corporation



Q: What did the mirror say as it walked out of the magic show?
A: It's all done with people.

This fun house riddle illuminates one of the most interesting trends in information technology. In the past, there was a common perception that technology would enable a highly automated world where computers ran everything better and faster than humans. Even now, IT departments' tendency to focus on hardware and software reduces the concept of speed to faster processors and more efficient code. While computers have certainly accelerated a wide range of business tasks, they are only as good as the people who use them.

Speed in business is not merely about raw computing power. It's about working together to make better decisions more quickly, completing processes more efficiently, and adapting as workflows become more and more automated. Enabling people to do their jobs more effectively is a critical role for an IT infrastructure.

Thus while the mirror of IT often reflects the myriad tasks we have successfully automated, today's

forums drive much of the Web 2.0 phenomenon. Enterprise 2.0 extends Web 2.0 to the enterprise.

Every enterprise has point-to-point tools like email and voicemail. Increasingly, these popular tools are becoming part of a large collaborative infrastructure that also includes discussion forums, Web conferencing, and presence technology that lets users specify where, when, and how they prefer to be reached and what communications devices they're likely to be using. These Web 2.0 technologies are extending information far beyond what email or voicemail were able to do in the past.

How will this collaboration infrastructure change business? You need look no further than your call center. Call centers commonly use speech recognition software and interactive voice response technology to pass contextual information to the reps answering calls, so that critical customer information pops up on each rep's screen as the calls are transferred to his or her phone. Embedded



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challenge entails integrating information systems with human activities—especially with helping people capture and share knowledge. Today's real-time collaboration software and Web 2.0-based social networks are the precursors for something more important: a pervasive collaboration infrastructure that empowers individuals to be more creative and responsive to business needs.

The Evolution Toward A Collaborative World Wide Web

Let's start by defining some key terms. Web 2.0 refers to a broad set of online technologies and communications techniques that make the Web a more dynamic, interactive place for individuals and communities. While Web 1.0 grew up around a library of relatively static HTML pages, social networking tools such as blogs, wikis, and discussion

intelligence within the CRM system can route calls to reps specializing in particular issues based on their availability or a dynamic analysis of recent calls from the same phone number.

Some CRM systems use live help and presence technologies to speed up the support process even further. For example, subject matter experts can be grouped together to provide support on a particular topic. Live help systems automatically connect customers to the appropriate group and can escalate a Web conference to include multiple participants.

An Enterprise 2.0 infrastructure provides information about a user's availability to every other user or application that subscribes to his or her status. When presence is integrated into the business applications, users can instantly collaborate within the context of the process at hand.



Here's another example: In retail and manufacturing, Enterprise 2.0 techniques are giving rise to better business intelligence—a byproduct of sharing and interpreting information quickly. Supply chain management systems convey a tremendous amount of information among suppliers, manufacturers, distributors, and retailers. This enables customer demand to be quickly met, but it also increases the need to share information effectively.

While retailers typically maintain inventory reserves to compensate for inconsistent production or unexpected spikes in demand, market leaders reduce inventory by sharing information. In an Enterprise 2.0 world, that might mean creating a community of a few dozen people who can instantly exchange knowledge about everything from raw material shortages to shipping delays. Monitoring workload fluctuations and sharing best practices accelerate the movement of goods through the supply chain and speed up order fulfillment. If an order requires evaluation or analysis, the appropriate members of the group can chime in instantly.

This group could also set up blogs to facilitate topical discussions among the community or within special work groups. Presence awareness streamlines communication in a community like this. By integrating presence into supply chain

applications, community members can always determine each other's whereabouts, reach experts when needed, and form virtual work groups whenever collective action is required. Having key decision-makers on hand means members can immediately expedite freight, negotiate supplemental contracts, or notify customers of unexpected delays.

Over time, members can collaborate and publish collective knowledge of the group in a wiki, enabling them to share content directly on the network. A wiki is server software that allows users to freely create and edit Web pages. Incorporating highly accessible editing tools, these shared software assets speed up another essential variable in the IT equation: the development cycle. Editing Web 1.0 pages typically required help from a developer, or at least an HTML programmer, but today's wikis, blogs, threaded discussions, and other types of self-publishing systems enable users to easily create, manage, and update content.

Most wikis support hyperlinks and have a simple syntax for creating new pages and links between internal pages. Unlike blog posts, which are typically authored by individuals and relatively static once posted, wikis accommodate continual editing and group contributions so the content becomes

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an organic entity. This can be a powerful tool for documenting the knowledge collectively held by experienced employees, and making it accessible to new employees.

Taking Web 2.0 to the Enterprise

On the World Wide Web, social tools have become the foundation for faster, more effective, more interactive ways of communicating. Part of the beauty is their inherent accessibility and ability to break down barriers between publishers and recipients of information. Unfortunately, popular Web 2.0 technologies used by the general public don't address critical enterprise issues such as high availability, data security, or personal privacy.

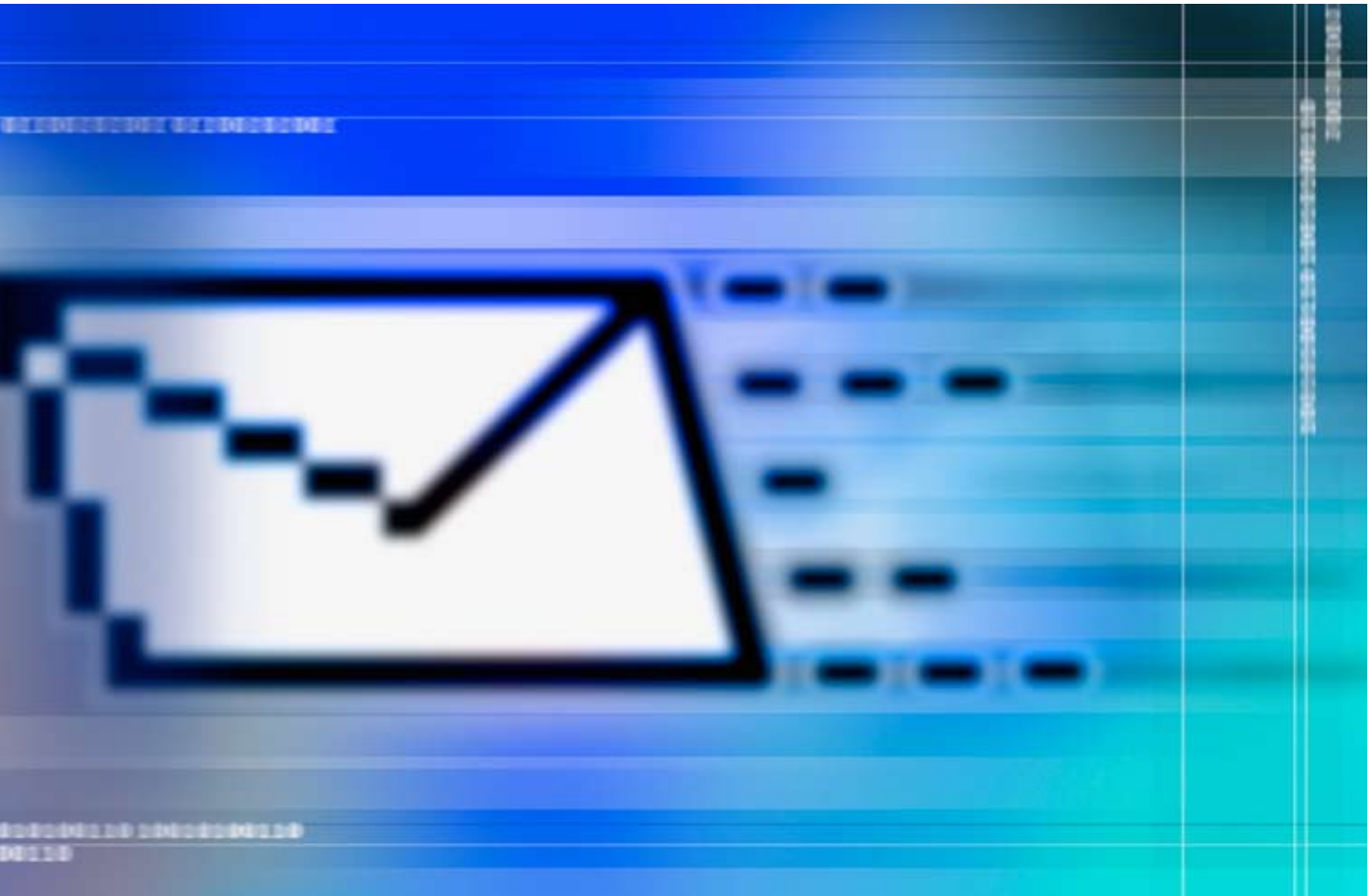
The challenge facing IT professionals is to help employees utilize these tools in the context of a controlled, secure, and auditable environment. Social networks flatten organizational hierarchies by making it easy for anybody to share knowledge

and expertise. Opening the avenues of collaboration is important, but we need to remember the ground rules. In the 20th century, information was power. Today, information *sharing* is power, so long as it is done wisely.

To address this need, technology vendors such as Oracle are creating Enterprise 2.0 tools that apply the same type of rigor to Web 2.0 networks as they do to enterprise applications. For example, Oracle's WebCenter Suite enables enterprise portals that weave processes, business intelligence, structured and unstructured content, communication, and Web 2.0-style services into the fabric of enterprise applications to create highly accessible—yet highly secure and reliable—work environments.

Since business data is often confidential, enterprise-caliber collaboration tools must incorporate safeguards to ensure that interactions remain private and that information is well-managed throughout its life cycle. Important exchanges must be maintained as corporate records and managed

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with consistent policies for proper governance, risk management, and regulatory compliance.

For example, in addition to providing an infrastructure for sending and receiving instant messages, Enterprise 2.0 tools should maintain an archive of instant messaging activity for auditing purposes. They should enforce privacy rules to ensure sensitive data isn't compromised or revealed through an unsecure medium. And they should be built on top of an identity management foundation to ensure users and administrators are only able to access specified applications and information.

While organizations have both ethical and pragmatic reasons for knowing communications are secure, many have been blindly forging ahead into the collaborative domain, allowing employees to use Web 2.0 tools outside of standard enterprise processes. That's a risky prospect. IT departments must offer a rich set of collaborative tools that are integrated with the enterprise's internal infrastructure to enforce existing policies for security, privacy, and control. These tools should also adhere to internal policies and external regulations.

The guidelines for this type of social interaction should start with a corporation's core values. Use these values to set basic ground rules, then establish a frame of reference to govern the types of interactions you permit people to have and the

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tone of those interactions. Loosely define the total volume of interactions and topic areas, some of which may be dictated by regulatory rules.

Consider the healthcare industry, which follows Health Insurance Portability & Accountability Act (HIPAA) guidelines that dictate which types of medical data can be shared. A social network that discusses patient needs and medical issues must take care not to reveal personal health records, or at least to limit which parts of those records can be seen. This can be accomplished within the database and the identity management system. These rules can be embedded within the business process to control which users can access what types of information online.



It's All in the Integration

At face value, implementing most Web 2.0 technologies is simple. But there are some unique challenges. Integrating an Enterprise Web 2.0 infrastructure with enterprise applications is key. Context is one of the important landmarks on the Web 2.0 landscape—partly because of its connection to speed and efficiency. Every task undertaken is done within a broader context, often as part of a larger process.

Unfortunately, most applications simply automate the task; they don't provide the context necessary to complete it. Users are required to leave what they are doing to research a question, find a document, figure out the next steps, or confer with other people—activities that consume much of our time and generally slow down routine processes. We must eliminate these distractions if we are to dramatically

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improve the way people work.

Integrating key services and information with the user interface can significantly speed up a simple transactional application.

Here's how it works: Consider a new employee who is registering online with various company applications, such as adding dependents to HR records for insurance purposes. In an integrated system, that on-screen transaction itself is surrounded by additional context that supports the user—everything a new employee might need such as a new hire tasks section, a help center, and a knowledge exchange.

Allowing users to add informal metadata, such as tags, helps to organize information. By tagging



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items, content creators as well as casual viewers can work as a community to put a piece of information into a variety of appropriate contexts (including its relationship to other tagged items) to facilitate browsing and searching.

Placing these various functions within a virtual work space makes it much easier for the employee to complete the tasks. Consider how much less efficient it would be if this user had to leave the application to dig through a repository or find someone who knew what to do next before returning.

Additional challenges arise from the mobile nature of the work force. A growing number of employees reside in nontraditional office settings, untethered from desktop computers and secure high-bandwidth networks. This highly distributed work force is just as likely to use a mobile phone as a laptop to interact with colleagues—a practice becoming increasingly more common with enterprise applications. An Enterprise 2.0 infrastructure must be able to accommodate many types of workloads on a broad range of mobile technologies, including connected devices such as PDAs, smartphones, mobile voice, mobile messaging, and even TELNET-based devices for industrial users.

Putting these tools at users' fingertips enables enterprises to revolutionize their businesses. Just make sure you carefully design systems, networks, and applications so employees can take full advantage of the capabilities without compromising security.

On the other hand, remember that you can't and shouldn't try to plan everything. Web 2.0 interactions are often spontaneous and serendipitous. Give the community some flexibility to define itself rather than trying to dictate exactly how participants should interact. You can't always predict how the heightened accessibility and social activity will affect or improve your business. You *can* embrace essential controls to protect against legal and cultural issues. With a proper policy framework and infrastructure to enforce it, you can put social and collaborative tools into the hands of employees with confidence, knowing they will find creative ways to use them without jeopardizing the business.

Facilitating Connections with SOA

Bringing Web 2.0 to the enterprise is about more than just adopting the latest technology; it's about changing traditional business models and tapping

into the creativity, intellect, and passion of every single employee. Thus the challenge for today's enterprises is to weave Web 2.0 technology and services into each user's work environment.

For most IT departments, the issue is not only how to use Web 2.0 capabilities effectively, but how to integrate those capabilities with existing applications, languages, and databases. You can speed up and improve many business processes—assuming you can integrate the collaborative tools.

Service-Oriented Architecture (SOA) has become a building block for Enterprise 2.0 by making it easier to tie users directly into enterprise business processes, as well as to automate those processes so employees can work together effectively. Just as people will collaborate through social networks, wikis, and Internet applications, Web services can be plugged in to enable powerful collaboration capabilities right within the business processes people use every day.

The discussion about the power of SOA typically focuses on the agility it affords applications and how those applications can make organizations more nimble. While agility is certainly a key driver behind SOA deployments, it is not the only one—and possibly not even the most important one.

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The real value of SOA comes in its ability to empower individual users and expand the horizons of potential interactions through context-sensitive applications.

If you're planning an event in a particular city on a particular date, a context-sensitive application might transparently pull information from a range of enterprise resources so that you can automatically see relevant facts about local employees, facilities, travel, and other services related to your project. This technology also manages relationships among people, processes, projects, and documents—commonly called context-sensitive role management.

Virtual work spaces are another technology that comes into play. Work spaces are containers for domain specific data, and they are important in the context of Web 2.0 because they enable direct interaction with Web data from things like blogs, wikis, and discussion forums. Again, it's all part of

the ultimate objective of creating an infrastructure that enables the user in any given context to access exactly the right types of information.

As organizations strive for higher levels of efficiency, productivity, and speed, the demands on the information worker are constantly increasing. Today's work environments must center around roles and tasks—not just on business functions—with each element of each task delivered in context for every user.

No organization can move to a full Enterprise 2.0 infrastructure overnight. How do you get there? Identify a particular problem, such as supply chain logistics, and then set up collaborative technologies to help resolve that problem, including communities for your vendors, suppliers, and customers.

Over time, collaboration and communication tools should be integrated into task-oriented applications, supporting a work environment that includes all types of desktop tools and mobile devices. Ideally, individuals should be able to tailor the environment based on their own preferences and the needs of the organization—publishing, sharing, and editing information on the fly to match the

activities of constantly shifting work groups.

Ultimately, most day-to-day transactions all will be automated, and people will only need to deal with the exceptions to those automated business processes. By integrating real-time collaboration software into standard business processes, exceptions can be handled at maximum speed to make sure key stakeholders always have the ability to share the information and insight necessary to move the enterprise forward. This will enable individuals to collaborate as needed and spend their time adding real value to the business. This will not only speed up critical activities, but will also enable a more enriching and fulfilling work place. [|s|](#)

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