

Web 2.0 for the Enterprise: Setting the Foundation for Success

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Collaborative Web 2.0 technologies enable enterprises to foster employees' critical thinking and creativity while providing a platform to capitalize on their innovations for product and process improvement.

EXECUTIVE OVERVIEW

In today's dynamic and global business environment, enterprises face ever-increasing pressure to stay competitive and achieve sustainable growth through agility and innovation. The traditional ways of addressing business challenges overlook a rich resource—employees. Collaborative Web 2.0 technologies enable enterprises to foster employees' critical thinking and creativity while providing a platform to capitalize on their innovations for product and process improvement.

Oracle WebCenter Suite allows organizations to effectively tap into employees, an abundant source of innovation, by combining rich Web 2.0 capabilities such as blogs and wikis, online collaboration, enterprise mashups, tagging, and social networks with the power of enterprise applications to create a comprehensive, integrated, standards-based next-generation user experience. Oracle WebCenter Suite lets users shape their information and applications around the tasks they need to accomplish every day, rather than navigating from one application to another just to find out what is happening within their business. Combining Web 2.0 services, social networks, and enterprise applications, users can take control of their work environment, share ideas and information with one another, and make the overall business run more productively.

INTRODUCTION

Web 2.0 technologies have generated an enormous amount of interest over the last few years. As a result, enterprises are looking for ways to leverage these exciting new technologies. First coined in 2004, Web 2.0 is defined by Tim O'Reilly, the founder and CEO of O'Reilly Media, as “the business revolution in the computer industry caused by the move to the internet as platform, and an attempt to understand the rules for success on that new platform. Chief among those rules is this: Build applications that harness network effects that get better the more people use them.”¹ The power and value of network effects can be demonstrated by how some of the most popular internet sites and Web-based communities have successfully leveraged technologies that can engage the community, such as blogs, wikis, mashups, tagging, and social networking.

¹ O'Reilly, Tim, “What Is Web 2.0,”
www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html.

WEB 2.0 TERMINOLOGY

Blogs

As of July 2007, Technorati, a blog search engine, is currently tracking 92.3 million blogs and more than 250 million pieces of tagged social media.

Every day, there are more than 175,000 new blogs. Bloggers regularly update their posts to the tune of 1.6 million daily, or more than 18 updates per second.

Source: Technorati
(www.technorati.com/about)

A Weblog, commonly referred to as a blog, is an online publication or journal containing commentary on news or a particular subject. It contains frequent, informal, short posts, which are displayed in reverse chronological order, by one or more contributors. A typical blog contains text, images, and links to other blogs, Web pages, or other media related to the topic. Blogs harness the valuable network effects by allowing readers to leave comments at will.

Enterprises are using blogs for both internal and external communication. For example, product management might use a blog to gather feedback on product direction. And an executive might leverage a blog to establish thought leadership, gather feedback, or engage with a community, much the way GM's FastLane blog (<http://fastlane.gmblogs.com>) does.

Wikis

One of the best-known wikis is Wikipedia, an online encyclopedia that has approximately 7.8 million articles in 253 languages, which are written collaboratively by volunteers around the world and can be edited by anyone who has access to the internet.

Source: Wikipedia
(www.wikipedia.org/wiki/Wikipedia:About)

A wiki is a collaborative Web site that can be edited by anyone who has access to the site. The word *wiki* is short for *wiki wiki*, a Hawaiian word meaning fast. Wiki is also sometimes referred to as the acronym for What I Know Is. A wiki enables documents to be written collaboratively in a simple markup language using a Web browser. The pages that make up a wiki are interconnected via hyperlinks. The key characteristic of a wiki is the ease in which pages can be created and updated.

By leveraging wikis for their decentralized approach to managing information, enterprises today are improving internal collaboration and building knowledgebases. For example, a sales team might use a wiki to gather information about competitors or to set up a request for proposals knowledgebase. Engineering might use it for internal project documentation. And the support team could use a wiki to coordinate customer support activities.

Mashups

Combining more than one complementary datasource to create a completely new service is considered a mashup. Typically, the content used in mashups is sourced through a third party via a public interface or API. Some of the most common mashups today use Google, Amazon, Flickr, and Yahoo! APIs. For example, one of the first Web mashups was HousingMaps (www.housingmaps.com), which combines real estate listings from Craigslist (www.craigslist.com), an online classified advertising service, with Google Maps (<http://maps.google.com>). By selecting a city and price range, the result is a Google map with colored balloons displaying the description and location of each property. With sites such as Google, Amazon, and Flickr providing APIs, users can leverage their information in ways that they never dreamed of before. Enterprises could apply this technology to combine sales order data with mapping technology to get a clear understanding of where possible distribution strains might occur.

Tagging

Tagging is a simple yet powerful way to embrace the power of network effects. Tagging enables the creator of the content item as well as the readers to classify and categorize content using keywords that are relevant and useful to them. Two examples of Web sites that use tags are del.icio.us (<http://del.icio.us/>), a social bookmarking site, and Flickr (www.flickr.com), a photo-sharing site. Del.icio.us enables users to bookmark many sites and then tag them with descriptive words, allowing other people to search by those terms and find pages that others found useful. Flickr is a service where users can tag images with many specific keywords, allowing searchers to easily find images related to a certain topic.

By giving users the ability to tag content using their own words rather than forcing them to use an unnatural taxonomy or hierarchy, enterprises applying this technology make it easier and faster for users to find relevant information.

Social Networking

Social networking sites are communities for people who share interests and activities, or who want to explore the interests and activities of others. Users can create a profile for themselves and become “friends” with other users. Social networking or collaboration has grabbed a lot of attention over the past year with popular consumer-focused sites such as YouTube, MySpace, and LinkedIn.

Primarily, enterprises are using social networking for knowledge management and expertise location. Providing access to extended profiles that include competencies, project experience, past positions, and even the ability to share bookmarks or tags can make it easier to harness an enterprise’s internal knowledgebase, not to mention the potential of additional valuable network effects.

Bringing Web 2.0 into the Enterprise

Although enterprises are bullish about harnessing the power of these Web 2.0 technologies, much of the value of these technologies could be underused if they are implemented and used as disparate silos of information in an organization. For you to fully leverage the power of Web 2.0, you will need to not only enable Web 2.0 technologies to interact and connect with each other, but also integrate them within an enterprise’s existing applications, processes, and communication mechanisms. According to *CIOs Want Suites for Web 2.0*, a recent Forrester report, the CIOs surveyed reported a strong desire to purchase Web 2.0 technologies as a suite and from large, incumbent software vendors.² Forrester also indicated that suites make both the integration between Web 2.0 technologies and back-end system integration easier because prebuilt integration points can reduce the need for costly customizations.

With LinkedIn, members can set up profiles, usually highlighting work skills and experience, as well as invite contacts into a known network. They can search profiles by name, company, function, and so forth to help drive business, find future employees, or locate expertise. LinkedIn has more than 10 million members and is growing at a rate of 100,000 new members each week.

Source: “Networking Opportunities: Social Networking for Business,” *EContent* magazine (May 10, 2007), www.econtentmag.com.

² G. Oliver Young. “CIOs Want Suites For Web 2.0.” Forrester Research: Cambridge, MA. March 20, 2007. www.forrester.com

Oracle WebCenter Suite brings Web 2.0 to the enterprise with the industry's most comprehensive, integrated, and standards-compliant user experience platform. By enabling enterprises to seamlessly blend a complete set of Web 2.0 services into their applications and processes, Oracle WebCenter Suite allows organizations to fully engage with their users and tap into the power of network effects. This results in access to an abundance of new ideas and innovations from their communities—an imperative in today's dynamic, global economy.

TRADITIONAL WAYS OF ENABLING INNOVATION

The majority of successful businesses today leverage a business model that was developed by General Electric and improved by Ford nearly 100 years ago. It involves a key visionary tapping into his or her unique knowledge for improving some part of his or her own life or the lives of others. They traditionally set direction and practices for employees to enable the company to meet these goals. And they hire a set of managers to keep the employees focused on getting to the finish line as fast as they believe is possible. This model is often built on the premise that all the great ideas are started at the top and then doled out to be implemented by the minions of employees. Although this model does provide the immediate success of the company, it doesn't guarantee success over time.

Lack of Key Pathways to Express Innovations

There are obvious flaws in this model. If the employees have suggestions to improve on the idea or disagree with key principles, there are often no avenues for them to express their proposals for improving on the edicts. Many companies in business today are fond of saying things like, "Our employees are our critical resource." However, without key pathways to foster refinements of existing ideas, employees are less passionate about what they do and less motivated to make improvements. So while the visionary was quite passionate about the initial idea, over time the employees become less and less passionate about the end goal of the company. The challenge here is to find ways to tap into the passions of every individual and increase their stake in the ultimate success of the company, thereby rapidly improving the current business.

Limiting Visionary Thinking to the Executive Level

A second flaw with the traditional model is a key dependency on the visionary to keep thinking of the next great idea to drive the company forward. This clearly exposes the company to business competition if the senior visionary doesn't continually break out of his or her own traditional thinking or takes his or her eyes off the ball for a split second. Take a look at the open letters sent from Bill Gates to all the employees of Microsoft, in which he said:

"The Internet? We are not interested in it." — Bill Gates, 1993
(www.quotesandsayings.com/gbillgates.htm)

“Sometimes we do get taken by surprise. For example, when the Internet came along, we had it as a fifth or sixth priority.” — Bill Gates, 1998
(www.quotesandsayings.com/gbillgates.htm)

It’s surprising that senior executives typically think they have a monopoly on new, creative ideas. The challenge is to break away from this traditional thinking and tap into each and every employee for new ideas and innovative business strategies.

Knowledge Embedded with Individuals

The final flaw in this traditional model is the lack, or sometimes suppression, of synergy between the core resources—employees. There are always pockets of knowledge or business know-how that remains in the minds of key employees. When they get promoted or leave the company, everyone else scrambles to relearn what once was already known. Even if these key employees were able to document their critical understanding of the business, that documentation is likely stored on their hard drive and not on a system that can be accessed by other employees. If the other employees do locate the information, they still have to manually connect the information to its context—something that would normally exist if the document had been created in a participatory, interactive, and context-rich environment. The challenge to team collaboration is stimulating the flow of ideas to improve the existing processes and putting these ideas into the context of the business process or applications.

COMPANY EXAMPLES—EMPOWERING EMPLOYEES TO INNOVATE

The following companies have found ways to address each of these challenges one at a time. These companies have not endorsed this paper; nor were they consulted in the authoring of this document. The information below was derived from publicly available information on the internet and from a conversation with Gary Hamel—world-renowned author, speaker, and business thought leader—on October 5, 2006. Oracle’s focus is to provide a foundation that enables every company to adopt these new ways of running their business.

Improving Products and Processes at Toyota

There have been many published business stories on the success of Toyota. The early studies tried to understand why Toyota consistently showed growing market share, increasing customer satisfaction, and significant customer loyalty. A quick summary of the incorrect theories for the company’s success ran the gamut from sheer luck to key management hires to superior robotic automation. But they all ended with the revelation that the company’s employees were incredibly satisfied with their work environment.³

Further investigation of Toyota’s success revealed that its key business practice was that any employee, if they felt they could improve the production process, was

³ Morris, Langdon. “Bottom-Up Innovation: Insights, Ideas and Innovation.” RealInnovation.com. (<http://www.realinnovation.com/content/c070430a.asp>)

allowed to stop the entire multibillion-dollar production line to fix the problem immediately.⁴ They weren't told to fill out a form and submit a request. They weren't told to educate their management chain on the improvement and build consensus among all the managers. They were asked to identify the problem immediately and suggest a solution. Sometimes within hours, these new changes were implemented in the overall production process.

To see your ideas considered seriously and adopted immediately by the entire company is extremely empowering for employees. This provides each employee with an obvious channel for their individual passions to significantly improve the relevance of their work to the company and that of the company to the industry.

Cultivating New Business Opportunities at Google

The meteoric success of Google over the past few years continues to puzzle onlookers as to how they keep coming up with great new ways of finding, presenting, and delivering information and processes to end users. The speed at which end users start leveraging the company's new capabilities outpaces the speed at which it delivers these services. In conversations with the key executives at the company, they have usually credited the fact that "luck" is on their side.⁵

However, there is a critical reason why Google consistently provides new services that change the way end users think about problems and present information in a unique way. Google makes sure that every engineer in its organization dedicates a portion of their time (some say as high as 20 percent) to creating and developing new ideas. And the guidelines for what they must work on are very loosely defined. The directions are quite simple: "Work on whatever you want."⁶

Although many companies will have a hard time dedicating this much time of their key engineering resources, the question is if they can afford not to. But in the context of solving a direct business problem, it is clear that companies need a way for employees and teams to channel their thoughts, pull in information from other sources, refine ideas based on new information, and then leverage their knowledge in promoting these ideas to achieve future organizational success.

Fostering Team-Based Productivity at Whole Foods

A third company that has been studied recently is Whole Foods, the world's largest organic food retailer. The Whole Foods slogan is "Whole Foods, Whole People,

⁴ Kanellos, Michael. "Inside Toyota's Hybrid Factory." CNET News.com. October 10, 2006 (http://news.com.com/Inside+Toyotas+hybrid+factory/2100-11389_3-6124334.html)

⁵ Hammonds, Keith H. "How Google Grows...and Grows...and Grows." *Fast Company*, p. 74. New York, NY; Mansueto Ventures, March 2003. (<http://www.fastcompany.com/magazine/69/google.html>)

⁶ Garone, Liz. "Google: Bottom Up Innovation." *The 360*. October 26, 2006. (<http://360techblog.com/google-bottom-up-innovation/2006/10/25/>)

Whole Planet,” emphasizing its goal to reach far beyond just being a food retailer. Whole Foods’ Web site states:

“Our ability to instill a clear sense of interdependence among our various stakeholders (the people who are interested and benefit from the success of our company) is contingent upon our efforts to communicate more often, more openly, and more compassionately. Better communication equals better understanding and more trust.”⁷

One fact about the company’s hiring practices is that it doesn’t have a manager in each store who decides on new employee hires. It has a group of employees in each area of the store interview the prospective new employee and then take a vote. If the candidate doesn’t receive more than two-thirds of the votes of the team, then he or she is not extended an offer. Whole Foods believes so strongly in building team dynamics that the company makes public to every employee the compensation and financial terms for the entire company. Every employee knows what every other employee makes. In fact, with such openness of information, the Security and Exchange Commission has demanded that Whole Foods treat every employee as an insider of the company.⁸

Whole Foods clearly believes passionately in cultivating teamwork and team-based interactions. The company wants to tap into everyone’s experience and vision for how to improve the products and services it delivers to its customers by ensuring that everyone has a stake in the company’s success.

ORACLE WEBCENTER SUITE ENABLES WEB 2.0

Oracle WebCenter Suite provides key Web 2.0 services for any enterprise to quickly and easily put into practice these revolutionary concepts.

Using Blogs and Wikis for Effective Collaboration and Communication

The first major goal of Oracle WebCenter Suite’s Web 2.0 services is to enable enterprises to tap into the critical thinking of every employee, build better processes, and make the employee more relevant to the entire organization. The traditional model of passing around versions of Microsoft Word documents are no longer going to get in the way of promoting and refining ideas for new business strategies. Through the use of wikis, blogs, and discussions, enterprises can now ensure that every employee’s voice is heard and that each employee is provided with a channel to promote and refine new ideas.

Blogs used in the enterprise provide authors with a way to capture their thoughts and then deliver information to others immediately. The author’s colleagues and

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⁷ www.wholefoodsmarket.com/company/declaration.html

⁸ Levering, Robert and Milton Moskowitz. “The 100 Best Companies to Work for in America” *Fortune*. January 12, 1998. (http://money.cnn.com/magazines/fortune/fortune_archive/1998/01/12/236444/index.htm)

other readers of the information can provide direct feedback to enable the author to refine the thoughts and concepts for a more-polished proposal.

Wikis enable a quick creation of content and team-based refinement of these thoughts to ensure the immediate availability of new information. Users simply access a Web site and provide their feedback directly on the page that others might have started. Many users can access the document and work on it at the same time, ensuring that everyone has the latest information. If a concept is incorrect, the user edits the fact directly. There's no waiting for the original author to forward you the document. And there's no chance to update the wrong version of the document.

Using Enterprise Mashups to Cultivate New Business Opportunities

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The second goal of Oracle WebCenter Suite's Web 2.0 services is to enable enterprises to cultivate new business opportunities by capturing the aggregate knowledge and information from all of their critical resources. Oracle WebCenter Suite includes a set of capabilities that enable enterprise mashups. Recall that the concept of a "mashup" is the ability to take any piece of information on the Web, integrate it with another piece of information, and make the combined work relevant to a specific user. Oracle WebCenter Suite takes this basic concept and extends it to every structured and unstructured part of business application information to enable enterprise mashups. Any individual employee can pull information determined to be significant to the business task into Oracle WebCenter Suite, which then maintains all these connections for the other employees to leverage.

For example, sales representatives in a specific region might know of new political policies that would impact their company's core business. By relating the various news stories and potential impacts to the sales figures, those sales representatives allow other users to leverage their local knowledge. As a result, the global sales manager will be able to provide a much more accurate forecast when determining product sales projections for the coming fiscal year. The traditional model of using instincts and "gut feeling" can now give way to relevant local facts derived from the individuals who possess the knowledge to make the best choice for the enterprise.

Using Social Networks to Accelerate Innovation

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The third goal of Oracle WebCenter Suite's Web 2.0 services is to enable enterprises to foster team-based dynamics to ensure that the productivity of the group is much greater than that of any one individual. A community is a group of users with a common set of goals and passions around a particular topic. Oracle WebCenter Suite brings this notion to users in a business context.

Leveraging Oracle WebCenter Suite's Web 2.0 services, teams of users can refine their ideas, bring the right experts into the conversation, and include the relevant business applications and data in an ad hoc fashion to quickly determine the right outcomes. Oracle WebCenter Suite provides these capabilities in an extremely easy-to-use environment, so that the community members can focus on completing the

task at hand instead of figuring out how they can represent their idea on a computer. Designed to be user friendly, Oracle WebCenter Suite can help you consistently engage all the team members in an ad hoc fashion to provide their viewpoints in the context of the team's goal.

CONCLUSION

Bringing Web 2.0 to the enterprise is more than just the latest technology; it's about changing the traditional business model and tapping into the creativity, intellect, and passion of every single employee. It is much more important for companies to understand the changing trends in business than to just implement the next "hot" technology product. Oracle WebCenter Suite enables companies to foster the development of new ideas, tap into critical employee thinking and knowledge, and enable the synergy of teams to revolutionize their existing business models and achieve lasting success.



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Oracle Corporation
World Headquarters
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Worldwide Inquiries:
Phone: +1.650.506.7000
Fax: +1.650.506.7200
oracle.com

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