White Paper

Social Bookmarking and Social Networking lead to increased worker productivity and faster innovation in the enterprise

November 2007

Unleashing the Collective Intelligence of the Enterprise

Increasing team collaboration and unlocking employee potential via social networks.

I. Connecting workers to information

In the enterprise of today, it's natural for people to collaborate and share ideas even when no one requires them to do so. These informal social networks—working on mutual self-interest—can unleash creativity and mobilize collective expertise across the organization. However, most traditional enterprise applications hinder this level of collaboration through cumbersome, outdated, and rigid workflows that limit the creation and sharing of information and knowledge within the business. In many companies, it's common for multiple people to be working on the same project and never know it.

These constraints have driven users in increasing numbers to a new generation of consumer based Web 2.0-type applications and tools which they have begun to also leverage at work. These consumer based tools allow individual workers to store and track information pertinent to their jobs, but make it almost impossible to share this knowledge with others inside the enterprise who might be working on similar projects. Additionally, these public tools require that confidential or proprietary information be put outside the corporate firewall, which can place the entire company at risk.

To meet this growing need for information access that is easily available and secure, social software applications have emerged that are built and designed from the ground up for the enterprise. These applications, packaged as appliances, reside inside a company's firewall, provide the same level of usability and features of consumer social software, but direct them toward a collaborative business goal. At the same time, these appliances integrate easily into existing IT infrastructures, provide enterprise-grade security, and are seamless for employees to adopt.

Social software applications allow workers to structure information anyway they like, share relevant data easily from inside or outside of the company, connect with like-minded people across the enterprise, and spur collaboration anywhere in the company.

II. Overcoming obstacles to productivity in the enterprise

Enterprises compete in an increasingly globalized economy in which information grows exponentially by the day. Companies with distributed workforces find it understandably difficult to harness the collective expertise of their extended organization. Without information-sharing and social networking tools, workers are locked into organizational and informational silos. Overcoming these obstacles and improving the flow of information involves the following:

> **Information sharing and discovery.** Employees invest a great deal of time looking for the information they need to do their job – and often, they can't find it. According to a recent survey by Accenture, nearly 60 percent of managers say they can't find the information they need as a consequence of "poor information distribution."[1] Worse, somebody else in the organization may have precisely the information an employee is looking for or may be trying to solve the same problem. But because there's no way to connect these individuals, or for these individuals to discover each other, multiple parallel efforts are pursued to little effect. Furthermore, when users

[1] http://newsroom.accenture.com/article_display.cfm?article_id=4484

do come across information they are often left wondering about the quality and context of that information. Often the same information would have been touched or consumed by several others in the company, but organizations fail to capture that signature and miss out on an opportunity to build and harness the collective intelligence of their organization.

Finding people. Corporate directories are normally structured according to name rather than area of expertise or interest, so employees in effect have to know who they're looking for in order to find them. This "top down" approach, in which people must know specific information (like a name) in order to discover a common area of expertise, is an obstacle to information discovery and prevents employees with similar interests from finding each other and sharing their resources.

Creating useful business intelligence. For the first time, enterprises can now compete and increase their competitive advantage based on the strength of their human capital instead of settling for marginal gains through supply chain operational efficiencies. This human capital must be identified and empowered in a meaningful way in order for it to be accessed, shared, and leveraged for competitive advantage.

Some workers will take it upon themselves to engage in these three processes in order to satisfy the demands of their own job roles. However, if the businesses can formally support these processes as a matter of company-wide IT policy, it will see wider spread productivity gains. Longer term, the payoff is even greater: a repository of collective knowledge that no longer depends on individuals for its preservation.

III. Existing solutions add pieces but don't solve the whole puzzle

Employees at large organizations may use a number of tools to enable information access and sharing, including enterprise search, consumer search, employee directories, and consumer based social networking and bookmarking applications. However, none of these tools can entirely address the full scope of employees' needs, and they are difficult if not impossible to integrate. In absence of a comprehensive solution, the full value of the enterprise's collective intelligence remains untapped.

Enterprise search. Enterprise search is common to virtually all large organizations, and allows employees to look for useful information on their company intranet. However, too often the enterprise search user gets results that mimic what they would find on the consumer web: that is, a large number of results with the desired item possibly buried several pages back. And because the spiders crawling the corporate intranet may not be able to read outdated formats or access legacy storage, the desired item might never be detected in the first place.

For enterprise users, a single high-quality result is far more valuable than a large quantity of mediocre ones. These users need a search engine that can rank results not by popularity, as on the consumer Web, but by usefulness to the individual who is conducting the search. In this context, a useful or high-quality result means one that can answer the following questions:

- Who else did this same or related search inside my enterprise?
- What did they find?
- Did they like what they found, and if so, where is that information?
- Can I see it?
- Can I contact or network with this person?

Consumer search. While the corporate intranet is usually a user's first resort for product- or company-specific information, the public Web is still a vital resource. But, as mentioned above, search engines like Google, MSN, and Yahoo tend to rank results by popularity rather than value. A final issue with consumer search is that, because it isn't integrated with enterprise search, users may perform the exact same search on both sides of the corporate firewall hoping to find the one answer they want, and wasting a significant amount of time doing it.

Employee directories. For years, the employee directory served as an admittedly crude social networking tool: it was the primary means by which people found each other within the enterprise. But employee directories, by virtue of the fact that they are structured by the very information someone is least likely to know – name and department – have failed to connect people very efficiently. What is needed is a directory that can funnel search from the general (experience, area of expertise, or interest) to the specific (name) rather than the reverse.

Consumer based Social networking. Networking sites like LinkedIn and Facebook help people make new professional connections and discover existing ones. They're a valuable tool for professional development and career advancement. They are not, however, very useful as a platform for knowledge sharing – but they could be. At present, the structure of the information on these sites makes it difficult to locate people with similar interests or areas of expertise.

An enterprise social networking tool that allowed employees within an organization to locate subject matter experts, find people who had worked on similar projects, or get a fast answer to a specialized question, would be far more valuable. At its best, enterprise social networking could help make explicit the collective knowledge that was previously implicit in the workforce, residing in the heads and on the desktops of individual employees. It would also allow workers to establish relationships with subject matter experts to whom they could return for more information and collaboration in the future.

Consumer based Bookmarking and tagging applications. Many resourceful enterprise employees have turned to free social software such as del.icio.us to help them organize information and share it with other people who have similar interests. This software has broadened peoples' awareness of how and why to share information, and has introduced them to practices such as tagging and bookmarking.

As useful as they are, free services encounter serious limitations when it comes to the corporate firewall. Large organizations cannot have confidential or proprietary information, or even references to such information, accessible from the public Web. As a result, employees using free services can use them to bookmark only that information which is generally available (and likely not as relevant to their work as proprietary company information), or may use them to bookmark restricted information, thus potentially breaching corporate security and compliance regulations as well as compromising corporate intellectual property.

IV. Enterprise requirements for efficient information access and sharing

The enterprise has its own specific needs when it comes to information access and sharing. Security is paramount; search capabilities must be more robust, extending to the far reaches of the enterprise; and functionality must be flexible and seamless to integrate with employees' existing work flow.

This latter point is of particular importance because it has such an influence on rates of adoption. Employees are more likely to resist using a tool if it forces them to adjust their work style. If it is easy to use, intuitive, and relatively unobtrusive to their normal course of work, it can overcome many objections to adoption.

The requirements for an effective enterprise information access and sharing tool include:

Intranet and Internet search. Users must be met at their point of search, wherever they turn to it – whether it's behind the corporate firewall or on the public Web.
Ability to connect experts (people) with specific search keywords. This allows users to create pools of subject-specific knowledge and easily locate subject matter experts.
Ability to create social networks for specific projects. Users can share bookmarks and contacts so that everyone working on the project is connected and has access to the same materials.

Dynamic user profiles. Allows users to stay up to date with other users' interests and areas of expertise as they change.
Seamless integration with existing enterprise search technology. This makes the tool more manageable from an IT perspective, and eases user adoption because it "piggybacks" on their existing workflow.
100% behind-the-firewall security. An application that lives behind the corporate firewall keeps data completely safe and secure.
Recognized as "Best of Breed" industry solution. Proven success and reliability is essential. Enterprises have too much at stake to take a chance on an untried technology.

V. Connectbeam: Harnessing the power of social networking

Connectbeam was designed from the ground up as an enterprise social software solution. Packaged and delivered as an appliance, it combines the productivity and knowledge-sharing enhancements of Web 2.0 styled social software with the robustness and security of an enterprise grade application. It is, as the description suggests, a hardware appliance that resides within a company, behind the corporate firewall, and hosts the Connectbeam application. The solution integrates seamlessly with existing enterprise and Internet search engines while remaining completely secure, so that companies can extract a greater ROI from their existing intranet resources and infrastructure investments. This means organizations are always in full and complete control of their Connectbeam software appliance.

Connectbeam social software effectively builds a dynamic, self-updating repository of the collective intelligence of the enterprise. The tool addresses several key areas:

Information discovery and sharing. Connectbeam helps contextualize and categorize information from systems inside and outside of the company, using a rich application framework of social tagging to evaluate search results based on the usefulness of a particular term to others in the enterprise. Whether the user searches from the corporate intranet or the Internet, Connectbeam shows the collective intelligence of his/her social network at the user's point of search.
People discovery. Connectbeam helps people find each other based on expertise. As users search for information, the Connectbeam application provides not only search results but also the names of other users who are interested in or related to the search term. It also enables social networking by allowing interested parties to form or join a social network around communities of interest. By reducing the time and effort necessary to coordinate like-minded groups, this naturally increases the value of collaboration.
Community. Connectbeam creates social networks that include professionals whom users can call upon for assistance with specific projects. Users working on similar projects can form communities to keep stakeholders in sync. Communities can be restricted (by invite only) or discoverable by all (anyone can join and contribute).
Expertise and profiles. Dynamic profiles of individuals are generated based on their social bookmarking and social networking patterns, providing users complete flexibility around levels of visibility, thus making it easy to find the right resources.

Consumer based services such as del.icio.us and LinkedIn offer some portion of these feature sets: del.icio.us enables tagging and bookmarking, while LinkedIn supports social networking. But these services are not integrated with each other and do not work behind the firewall. Connectbeam is the first enterprise grade application to combine social bookmarking concepts with social networking, with the belief that social networks inside businesses will form and thrive only in the context of information and discovery. Enterprise users will want to build a social network of colleagues if those colleagues can help them advance in their work and projects.

In addition to Connectbeam, companies such as IBM and BEA Systems both produce applications that integrate with their other software suites, while the UK-based company Cogenz provides its own hosted service. However, each of these applications leaves out key features. A review by David Greenfield in eWeek notes that, of this group of four major enterprise social software vendors, only

Connectbeam has a security feature restricting group access by preventing groups from seeing each other's bookmarks and bookmarked documents[2]. Greenfield goes on to say, "While every product but Cogenz's Enterprise Edition returns bookmarked results within search results, only Connectbeam does so on leading enterprise search platforms such as Fast and Google."[3]

In addition to providing the most thorough enterprise and secure enterprise social bookmarking appliance, Connectbeam has also been recognized as a strategic partner by major industry players and garnered numerous awards and recognition from the analyst and publisher community. It was named a Cool Vendor of 2007 by Gartner and a Trend-setting Product of 2007 by KM World. Network Computing Magazine called it "a pioneer" in the tagging and social bookmarking space, while Social Computing Magazine wrote that "Connectbeam has mastered Social Search."

VI. Conclusion: Collective intelligence as a competitive differentiator

Large enterprises are finding it increasingly difficult to gain operational competitive advantages as trends like globalization and outsourcing make it possible for even the smallest companies to compete effectively with larger players. The enterprise still has one significant competitive advantage, however: its collective intelligence. The accumulated skills, knowledge, and experience of enterprise employees, combined with large companies' extensive archives of data, research, marketing collateral, and other materials, can all be put to better use for the business. Connectbeam provides the infrastructure to produce immediate employee productivity gains – but more significantly, it allows enterprises for the first time to measure and empower its human capital.

In a research report on enterprise social software, Gartner's Nikos Drakos suggests that the success of social software is determined in both the short and the long term. Good social software makes it easy and fast for a user to contribute – but it also allows users to capitalize on the contributions of others for future benefit:

> "Successful social software is characterized by the frictionless immediacy with which user contributions become part of an existing body of information. … Participation is usually not prescribed as part of a formal process, and it is self-selecting (that is, participants are free to decide whether, when and how to participate). However, participation is a necessary, but not a sufficient condition for success. The hallmark of successful social software applications is not that they make it easy to contribute, but, more importantly, that they pool user contributions for further use or refinement."[4]

By implementing Connectbeam's social software appliance, businesses can provide employees with a flexible, time-saving information access and sharing application that leverages an organization's existing technology, provides 100% security, and significantly increases productivity. And, by providing an organic structure for knowledge and information assets, it is a tool that becomes more valuable with time and use.

Allowing people to connect in an organization gives them access to the information they need, accelerates collaboration and unlocks the collective intelligence of the enterprise – an increasingly vital asset that has been overlooked and undervalued. By supporting the growth of informal networks with Connectbeam social software, organizations eliminate information bottlenecks and radically improve performance across the enterprise.

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[2] http://www.eweek.com/article2/0,1895,2168780,00.asp
[3] http://www.eweek.com/article2/0,1895,2168781,00.asp
[4] Nikos Drakos. "Enterprise Social Software to Boost Efficacy of Non-Routine Work," Gartner, September 4, 2006, p.3