



Web 2.0 Best Practices for ECM

This white paper explains the significance of Web 2.0 in the context of Enterprise Content Management and how it will change the face of business.

Web 2.0 Best Practices for ECM

Executive Summary

The term Web 2.0 was coined over four years ago and has come to define a new generation of technology and more importantly a new style of online social interaction and collaboration. In its early days, Web 2.0 was characterized by such tools as MySpace, Facebook and Wikipedia which were mostly seen as social tools not business tools. These tools made it easy for people to build new online communities of friends or people with similar interests. It also facilitated the sharing of personal as well as business content or knowledge. With the Baby Boomers retiring and Generation Y making up a large percentage of the workforce, Web 2.0 tools are finding their way into more and more enterprises. Enterprises are now jumping on the social computing bandwagon and evaluating the opportunities these technologies provide. For some enterprises, Web 2.0 technologies may offer the promise of what knowledge management programs of the 1990's tried to capture.

This whitepaper provides a look at how Web 2.0 and social computing technologies have evolved and how they have changed the way people communicate. As Web 2.0 technologies become more prominent within the enterprise, there is a need to control and manage its use. A new breed of tools will become available that merge social computing with enterprise content management and collaboration tools. This paper offers 10 best practice tips for enterprises as they look to leverage and extend Web 2.0 technologies within their organizations.

Introduction

Speaking to the IT architects of multi-national corporations about their plans around using Web 2.0 in enterprises, it is clear that most have plans to incorporate Web 2.0 technologies.

Forrester predicts that by 2013, social software, the application of Web 2.0 for the enterprise, will grow at an annual rate of 43% per year to \$4.5 billion. This is quickly becoming the fastest growing sector in the Enterprise Software industry. However, many people are generally confused by what Web 2.0 is and its significance in the workplace and in culture. The term Web 2.0 has been around for four years now and was coined by technology gurus Tim O'Reilly and John Battelle to describe the resurgence in activity, venture capital and huge audiences that surrounded new emerging web sites. Since that time, there is no concise definition for Web 2.0.

Web 2.0 can be explained more by example than by defining the technologies that make it up. A collection of brands/companies provide the metaphors for what Web 2.0 technology is such as Google for search, YouTube for video, Flickr for photos, MySpace and Facebook for social networking and Wikipedia for wikis. More recently sites like Twitter have expanded our understanding of Web 2.0. These brands become the nouns and verbs describing Web 2.0 as a new way of socializing, communicating and sharing with each other. By being the first to create critical mass in the Web 2.0 / internet space, these brands have been able to define the way we will live and the way we will work.

After all, it was IBM who helped define the PC revolution when they named their desktop computer a Personal Computer.

Web 2.0 Best Practices for ECM

Web 2.0 – Revolution and Interaction

Web 2.0 is not so much a revolution in technology, but in how people use the technology and how people interact with each other as a result of that technology. In most cases, the technological innovations have been happening behind the scenes with a build out of inter-networking and highly scalable technologies using open source. The open source sharing of code used to build Web 2.0 sites has made it possible to build and manage them on a modest budget and deliver incredible new content and services to absolutely anyone while maintaining great performance. As a result, a whole new class of people has access to technology that they would not have had beforehand.

With Web 2.0, internet and desktop technology is no longer the domain of the geeks and nerds. Real people, average people, artistic people, old people, young people are all connecting to the internet and discovering each other. The web sites, in turn, are reacting and evolving at a very rapid rate to adapt to these new users.

Since the introduction of the internet along with the rapid infrastructure build-out and the new generation of Web 2.0 sites, users are seeing one of the most dramatic democratizations of technology since the PC revolution, if not the telephone. Through universal access, people discovered that computers can be used for far more than information; that they can be used as a medium of expression, sharing and revelation.

While the PC gave computing power to most office workers and many home users, it was generally within the constraints of software created by others, using information created by others, in business domains defined by others. The information that users created and shared tended to be very textual, columnar, organized and very factual. If the PC generation wanted to liven-up the information, they would likely add in a few clip art pictures to express what they were trying to say. In short, it was an environment that was invented by geeks and nerds and generally appealed to similar personality types.

By broadening access to information and technology, more (and differently types of) people looked for ways to leverage the technology to express their personalities both socially and professionally. If a person was musical, visual, artistic, auditory, adventurous, sympathetic or caring, he or she could share art, prose, music, visuals or images with people around the world who shared similar interests, rather than a production studio in the person's town. As a result, the internet saw an uptake in Web sites that catered to introducing one friend to another - first Friendster, then MySpace and slightly more recently Facebook.

Depending on a person's mode of expression, he or she might end up going to Flickr for photos, YouTube for video, or Last.fm for music before linking it all into a personal page on a favorite social networking site. The socialization and communication enjoyed by this expression and sharing creates a truly different feeling that no spreadsheet or presentation could ever provide. For many people, these activities have become compulsive and addictive in the process. Research shows that the new

Web 2.0 Best Practices for ECM

“millennial” generation may even prefer social computing over TV as the average age of television watchers in the US is now 50 years old.

These compelling experiences have attracted huge numbers of people to Web 2.0 sites. Just as in any revolution, once critical mass is achieved, the revolution takes on its own momentum and is self-adapting. The critical masses are now dictating what is interesting and what is not. And what is acceptable is far more likely to be the Web 2.0 sites and capabilities that minimize constraints and empower people. For example sites that allow individuals to write, like WordPress, to edit, like Wikipedia, or to tag interesting content, like Digg, have quickly become popular. Once Facebook removed its restrictions on who could join or who your friends could be, it too quickly grew exponentially to over 100 million users.

Participation & Contribution

By lowering the barriers to participation, anyone can contribute to a site like Wikipedia or YouTube. While the actual number of people actively contributing content is cited at less than 1% of all users according to an article in *Time* on the 25th April 2007, this still represents hundreds of thousands of authors and contributors (when you have critical mass). This doesn't take into account social networking sites where everyone is a contributor by simply creating / updating their home page or responding to a friend's homepage.

The most powerful aspect of this participation is the feedback of the masses. Many people comment on blogs when they feel passionate about a particular subject and are more likely to rate information provided or write online product reviews. In a world swamped with information, feedback on popularity and rating, hallmarks of Web 2.0 sites, provides a valuable indicator of what is important and what the leading trends are.

This new level of participation has also created community driven content. Dubbed "Wisdom of the Crowds" by James Surowiecki in 2004, a mass of individuals on average is smarter than any one person or expert could ever be. Wikipedia is a good example of how community driven content can be just as accurate as the Encyclopedia Britannica, and much faster at correcting mistakes.

Social computing and Web 2.0 tools have made it easy to participate, contribute content and see user feedback. The challenge has been tying these tools and their benefits back to the enterprise. For example, many large corporations have skills or profile pages for their employees but they are rarely updated. Social computing tools may hold the answer as senior executives are more likely to update their Facebook or LinkedIn profiles than their corporate skills page.

Many have suggested that Web 2.0 is something that must be tamed. Perhaps this is missing the point. Web 2.0 is not anarchic nor is it necessarily bad for business. To try to control Web 2.0 is like trying to put one's finger in the dyke. In fact, when companies try to restrict access to Web 2.0 they either find that the roadblocks have been circumscribed or that potential employees will go elsewhere.

Web 2.0 Best Practices for ECM

Generation Y, Baby Boomers and Empowerment of the Internet

Generation Y, the generation born between 1978 and now, is expected to grow from 25% of the US workforce to 47% by 2014. This is a generation that has only known the empowerment of the internet and has become accustomed to it. To limit and control their use of the internet would only disenfranchise them. By empowering this generation it could yield not only an optimistic workforce, but also provide an engaging conversation between employees, their customers and their partners in a participatory and enlightened collaboration. As the Baby Boomers start retiring and taking with them their knowledge, it is even more important that the new generation have the ability to collaborate and capture the knowledge.

For the past two decades, knowledge management programs have tried to capture this knowledge but have failed and Web 2.0 is offering a new promise of attaining it. Interestingly, the *Time* article suggests that workers over 35 are more likely to contribute content to Web 2.0 sites. This might be an early indicator that older generations will also want to contribute their knowledge through Web 2.0.

Software vendors are now jumping on the bandwagon with social software and collaborative features as an opportunity to provide a new class of products for the enterprise. Many new social software tools have repackaged capabilities from another era of enterprise software. In some cases, vendors are looking at their portfolios and asking whether this is what they were doing all along. This misses the point. Web 2.0 has so far outstripped enterprise software as we know it in usability, accessibility and empowerment, that it causes a mass rolling of eyeballs at its mere sight of the repackaged tools, not just the new generation, but most others as well.

Enterprise software vendors will get there, but with much coaxing and coaching of a new generation. It will take a few years, but eventually vendors will figure out that Web 2.0 is not just a few new collaboration features and highly interactive web technologies, but empowerment of their users and the ability to draw in a critical mass of users from outside the trusted circle.

Web 2.0 Best Practices for ECM

Those who are familiar with the ease of use and empowerment of Web 2.0 sites like YouTube, Wikipedia and Facebook are aware of what is possible and have high expectations for enterprise social computing. What is likely to happen is a rethinking of how enterprise content management (ECM) and collaboration tools can integrate with Web 2.0. The next generation solutions will need to manage content, projects and people using both internal and external Web 2.0 sites. What are starting to emerge are best practice recommendations for how organizations can use Web 2.0 and social software as part of a larger ECM and collaboration strategy.

Web 2.0 Best Practices for ECM

1. Focus on the Creative Knowledge Workers

Enterprises need to focus efforts on supporting free-form informal and social processes for project and personal collaboration to make knowledge workers more effective. As knowledge workers utilize both internal and external content enterprises need to consider how they will support the environments knowledge workers are familiar with outside of the enterprise.

2. Focus on the Community

Social computing is all about the communities they create. Enterprise should embrace product driven community micro-sites. This may mean moving away from a company site to form stronger franchise / product / brand communities. These communities should support both traditional online and interactive or viral communities. These new micro-sites should provide an opportunity to test messages, solicit feedback, create buzz and company evangelists.



3. Focus on Blurring the Internal and External

Enterprise users require access to content and experts from sources that are internal or external to their company. A typical worker will often search Google first for information before internal document libraries. As a result, organizations need to provide access to external resources already available (i.e. LinkedIn, Wikipedia, digg) to make knowledge workers significantly more productive.

4. The New Content incorporates Content, Projects and People

For enterprises to embrace Web 2.0, next generation software must manage content, projects and people. This means managing content that is created both internally and externally, manage people / colleagues and experts within the enterprise and identify their knowledge areas as well as manage collaboratively the different projects that individuals are included in (or have an interest in).

5. Focus on Security & Lifecycle Management for Web 2.0

For the enterprise, security is always a concern. With Web 2.0 enterprises need to ensure that the whole lifecycle of content is securely managed. This includes making sure that company assets have a required process for creation, review and approval especially when multiple contributors are involved. Another level of lifecycle management is change set – the staged deployment, changing publishing characteristics, timed launch of documents as well as the expiration, retention and archival of documents. Concerning Web 2.0 sites, this includes whole site versioning and site regeneration. This is similar to wiki tools that require appropriate controls when editing a live site.

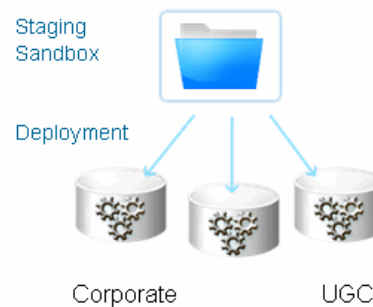
Web 2.0 Best Practices for ECM

6. REST-based Architecture

More and more Web 2.0 and social computing tools are being built on a REST-based architecture making it a key requirement for any enterprise content or collaboration tools. The REST architecture supports external and internal mash-up making it highly effective in delivering core content services via a rich internet application interface. This means that enterprises need to have a Web oriented focus rather than a service oriented architecture.

7. Focus on Cost Effective Web 2.0 Scalability

To make Web 2.0 work within the enterprise there needs to be scalability. There are a number of best practices to achieve this. First, enterprises can scale out over a number of smaller machines in a clustered environment or they can leverage low cost, high-availability through a web farm architecture. Secondly, enterprises need to look for tools that separate and partition content to manage different types of content or code – for example internally deployed content or user generated content (UGC). Lastly, enterprises can replicate for scalability across different offices or geographies.



8. Turn Auditing Upside Down

Social search is all about turning traditional ECM auditing features upside down to deliver immediate value to the user. Enterprises can use traditional audit facilities in ECM solutions on “most viewed, features, voted for, downloaded” content to derive valuable data feeds – similar to those in Facebook. The feeds should display information on friends/colleagues/peers – most viewed, features, voted for, downloaded content. Enterprises should use OpenSearch, the acknowledged industry standard for search, to enable multiple internal repository searching as well as external content searches.

9. Engage Customers in their Channel of Choice

Just as employees have their own preference on how they like to work and access information, so do customers. The Web offers multiple content platforms – Facebook, Twitter, community sites, etc. Enterprises need the ability to publish and access content in the tools their customers are using. For example, use Facebook to engage customers through social interaction instead of direct mail.

10. Rapid Roll-out with Lightweight Scripts and Open Standards

Enterprises need to be able to deliver applications and functionality rapidly. This can be achieved by utilizing the following tools: Lightweight Scripts, REST Architecture, RSS, Atom Publishing, JSON, OpenSearch, OpenID.

Web 2.0 Best Practices for ECM

A Change in the Enterprise

Enterprise systems won't change immediately, but they will probably change faster than people expect. However, rather than treating Web 2.0 content and technology suspiciously, corporations need to evaluate and secure the information that must be controlled and open up the rest to participation. For example, at the Enterprise 2.0 conference in Boston in June 2008, Pfizer presented how they were using open source technology to enable Web 2.0 collaboration. This is a brave move in the highly regulated world of pharmaceuticals, but they have recognized clear boundaries of what must be regulated in content - particularly in manufacturing and research practices - and what can be opened up, such as redefining process or identifying new potential areas of research. Pfizer has created a vision and a reality that uses the same technology as Wikipedia to create Pfizerpedia, a wiki of processes and ideas that feed into the main areas of research and manufacturing.

Change in the enterprise is more likely to come from outside as well. In all likelihood, the information worker, uses Google more than any of his or her internal IT systems. Workers even rely on blogs to track what is happening in your industry more than they rely on industry press. Enterprise workers are likely to use these and other Web 2.0 technologies to track what is happening in the business world as well as the social world. As a result, these Web sites will set further expectations on the internal systems enterprises use and a requirement to integrate internal information with these external sources of information.

Web 2.0 has an answer for this as well with an integration technique known as "mash up", the ability to mix information from multiple sources using the web browser itself as the point of integration. These external sources of information also provide something that the internal information systems could never provide; a critical mass of opinion utilizing the "Wisdom of the Crowds". Enterprises will ultimately need to combine external opinion with internal opinion to get more accurate predictive decision making with their own unique insights inside the enterprise.

Summary

Ultimately, the most profound effect Web 2.0 will have is on the way we do business rather than the technology we use. Employees will use this freedom of speech to provide valuable feedback for the business. Employees will have the freedom to assemble teams with customers without interference. Customers will become part of the decision making process and allow software vendors to design the most imaginative products and services. Control will be limited to those areas that ultimately must have control and free up the creative process to speed and enhance business. Empowered employees will build more productive businesses and become more fulfilled participants in the business.

With any opportunity comes risk and embracing Web 2.0 is not without its risks. However, smart businesses can already see the opportunities and are willing to take those risks.



Alfresco Software Inc.
428 University Avenue,
Palo Alto, CA 94301, USA
Telephone: 877-334-3227

Alfresco Software, Park House,
Park Street, Maidenhead,
Berkshire, SL6 1SL, UK
Telephone: +44 1628 860 500
Fax: +44 870 868 1233

info@alfresco.com
www.alfresco.com

0808