ProjectLocker ™

Software Quality On Demand℠

A Short Guide to Wikis

A Project Locker Whitepaper
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Introduction

Every few years it seems companies are led to believe that there is a new technology on the horizon that will fundamentally alter the way they conduct business. The process usually begins with a flood of press articles promising the new technology can do everything short of printing money. Around the same time, a few companies start reporting outsized gains in productivity and revenues as a result of having implemented the new technology, usually with the help of upstart vendors.

Next come the management gurus and consultants armed with graphics-laden powerpoint presentations. Smelling the next multi-billion dollar market opportunity, they hastily descend onto corporate campuses and hold court at high tech business confabs. Their main message is that the end is nigh for those businesses that don't incorporate this new technology into their existing processes.

"Adapt or Die!" becomes the mantra of the day for consultants, analysts, and reporters. Their words become the start gun, signaling the time has come for millions of dollars to be spent ripping up legacy systems and replacing them with the next new thing. "Hurry up," they insist, "before the *next*, next new thing comes along!"

This familiar run-up of initial enthusiasm for a new technology, usually followed by a longer period of disillusionment, is what Gartner Group has referred to as the "hype cycle." In accordance with the hype cycle, emerging technologies progress through the stages of conception, market over-enthusiasm, disillusionment, and then an eventual understanding of the technologies' relevance and role in a particular market or domain.

One might think that this natural progression suggests that companies should wait until technologies are safely past the hype stage before adopting them, however this isn 't always the case. There are dangers associated with both believing and *disbelieving* the hype. As a result of the Hype Cycle, companies can feel compelled to invest prematurely in a technology because it is being hyped or, conversely, they may ignore a technology just because it is not living up to early expectations. In order to successfully position themselves for the future, companies must be selectively aggressive in identifying those technologies that can have a major impact on their business and invest in them earlier in the Hype Cycle.

Over the past year, no sector would seem to be more over-hyped than so-called social software, specifically those applications that breakdown traditional models of content distribution and allow for greater collaboration among users. Articles about blogs and their brethren, wikis, graced the covers of publications such as *Business Week*, *Fortune* and *Time*. Although much of the initial ink was given to

describing the rise of corporate blogging, the recent attention has now turned to wikis.

Wikis are most commonly defined as a type of website that allows a large number of users to add and edit content in a highly collaborative manner. According to Wikipedia, the largest wiki in existence, wiki's are "a simplification of the process of creating HTML web pages combined with a system that records each individual change that occurs over time, so that at any time, a page can be reverted to any of its previous states." While many basic wikis focus on allowing people to post and edit simple text, more sophisticated wikis can handle file attachments, video, and even e-mail messages. In addition, some wikis provide a variety of tools that allow the user community to easily monitor the constantly changing state of information on the wiki and discuss the issues that emerge in trying to achieve a general consensus about wiki content.

According to the Gartner Hype Cycle, wikis are just beginning their descent from the crest of the hype wave, coasting into territory where real business value can be recognized.

Gartner Emerging Technologies Hype
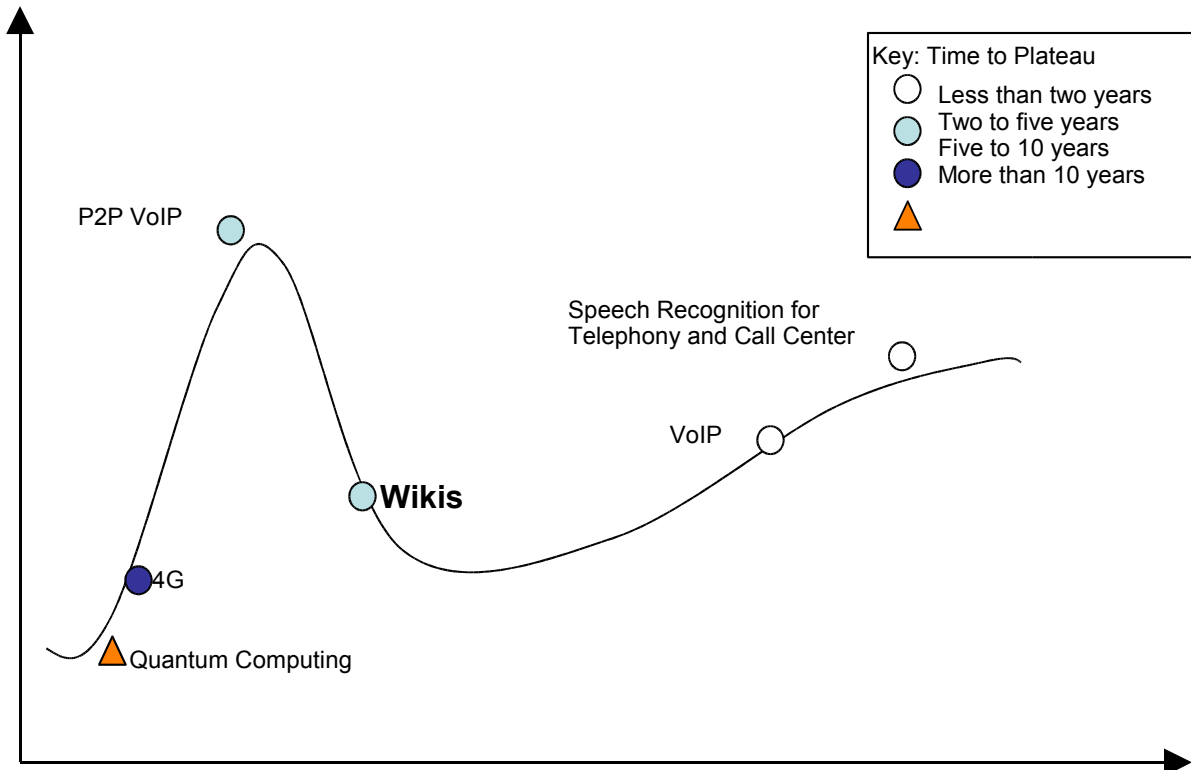
Given the fact that wikis are in this transitional phase, now is the perfect time for organizations to begin assessing the role this technology could play in their businesses. This whitepaper is intended to be a "hype free" discussion about the following topics related to wikis:

- How wikis differ from other corporate technologies
- Practical approaches to assessing the business value of wikis
- Some real world examples of wikis in action
- Thoughts on wiki best practices and implementation

As such, this whitepaper does not aim to be an exhaustive report on the background or business applications of wikis, but instead seeks to provide technology and business decision makers with a basic understanding of the technology that will allow them to make informed decisions about the role of wikis in their organizations.

What is a Wiki?
As was pointed out in the introduction, a wiki is any website that allows users to easily add and edit content within an HTML browser. While this concept is simple enough, a quick Google search on the term "wiki" yields thousands upon thousands of entries.   What originally started as a single open-source software project has spawned hundreds of derivative applications with names like Instiki, TikiWiki, and WikiWiki.   At last count there were over some 200 different types of wikis in use, with each of these being updated and spawning spin-offs and plug-ins that provide new functionality almost daily. These wikis differ dramatically in their adoption, as well as their intended audiences, with some wikis being better suited for personal rather than corporate use.

Though the type of wiki employed may differ from company to company, the types of tasks for which wikis are used are basically the same. Specifically, day-to-day usage of the application typically falls into the following three categories:

Project Management

- Wikis may be used as a central repository for capturing constantly updated product features and specifications
- Wikis may provide a central repository for simple issue tracking and resolution
- The iterative nature of wikis allow team members to track the development history of projects over time

Collaboration

- Internally, wikis allow simple text-based collaboration on internal documents such as company guidelines, reports, and product specifications
- Externally, wikis are useful for collaboration with customers, suppliers, and other stakeholders on key business documents and ongoing projects

Knowledge Management

- Because wikis can be easily updated by anyone in the organization, wide-ranging company documents, such as guidelines and FAQs are more easily kept accurate and up-to-date

One of the most common and reliable versions of wiki software used by large corporations is TWiki. CNN, Ericsson, Lucent, General Electric, Sun Microsystems, Texas Instruments, and Motorola all rely on TWiki to power their internal business discussions.

TWiki's corporate popularity over other available wiki software stems from the following characteristics:

- A notion of so-called "webs" that allow the wiki administrator to segregate areas of collaboration into their own distinct logical entities, each with their own set of authorization rules and topics
- A modular plug-in and skin system that allows corporations to easily customize the application
- A well-established base of users and developers

Even though TWiki has clear benefits over other common types of wikis, it still bares some of the limitations common to most wikis. Because the editor is a simple web form, users will occasionally encounter areas of non-WYSIWYG editing. Nevertheless, rich text can be written using a very simple, intuitive markup language (WikiSyntax) that takes under a half hour to learn.

Aside from having a tough time differentiating the many varieties of wiki available for download on the Internet, businesses often struggle to understand the real difference between wikis and other software that may already be present in their organizations. One common initial response is to equate the functionality of a wiki with that of a document management system. Because users can submit and edit documents in both systems, it is assumed that the two systems do essentially the same thing. This is very misleading.

Wikis differ dramatically from content management systems in several key ways:

- Wikis are cheap, extensible, easy to implement, and don't require a massive software rollout because of their ability to interface well with existing network infrastructures.

- Wikis are Web-based and thus present little or no learning curve in the adoption cycle

- Wikis allow the user to determine the relevancy of content rather than being dependent upon a central distribution center or a linear distribution chain.

- Wikis organize themselves organically, allowing users to create their own site structure, or <u>ontology</u>, rather than have it imposed upon them by the developers of content management software.

What the benefits above allude to is the inherently collaborative nature of wikis, as opposed to the workflow structure of content management software. This is what distinguishes wikis and gives them the upper hand. Even so, one must be careful how one defines this collaboration. While wikis are structurally capable of handling real time conversation, it is not their forte. Instead, wikis excel at document-based collaboration where multiple users have equal power to access and edit documents related to ongoing projects.

While it is clear how wikis constitute a significant technological departure from traditional content management systems, one must be careful not to oversell wikis' potential applications. One such example of overselling is a recent vendor claim that wikis can ultimately become a replacement for the company intranet. If you take the basic definition of the intranet literally as, "the internet captured behind a firewall" it seems ridiculous to suggest that wikis could take the place of one. Moreover, while wikis can help facilitate a variety of corporate communications and effectively store and archive a wide variety of documents, not every business application should be migrated to a wiki platform.

Strategic Importance of Wikis
While wikis offer benefits that are distinctly different from those offered by other common corporate applications, these differences do not answer the question of whether wikis are right for any particular business. One way of answering this question could be to assess the economic benefits of wikis in corporate settings. However since little hard data exists on this topic, one would be hard pressed to come up with a definitive answer.

In fact, it could be argued that efforts to pin down the economic ROI of deploying a wiki misses the point. Since wikis are inexpensive, both to deploy and maintain, very little ROI would be needed in the first place. Also, given the evolving nature of the application, it is very likely that many unseen benefits of wikis will not be considered.

In assessing the potential impact of wikis, one might do well to take a lesson from the early days of e-mail. Although many tried to detail the cost savings associated with e-mail by measuring the related reductions in postage, increases in worker productivity, and various other metrics, these estimates paled in comparison to the actual value brought by e-mail itself. This major discrepancy occurred primarily because e-mail ultimately changed the way people worked, not just how they exchanged documents.

Wikis, if they live up to their potential, will be much less about changing the way people store and edit documents, than it will be about changing the way innovation takes place. Jimmy Wales, the founder of Wikipedia and a former high tech executive, touched on this possibility when he stated that, "Wikis are

really a social innovation, not a technological one… [With wikis] People don't have to get permission to do something useful." From an organizational standpoint, getting full strategic advantage from wikis will require corporate leadership with a vision of innovation that puts openness and collaboration at its center.

It is no surprise then that some of the early wiki adopters have been technology firms, where shared information is the raw fuel for innovation. Motorola provides a key example of how such organizations have deployed wikis. The company uses TWiki to foster multinational collaboration among its Systems-on-Chip Design Technology teams. Crawford Currie, an executive with the company, reports, "[Motorola is] now hosting 7 different TWikis, extending the 'team' from an on-site project team to a virtual team including members in Germany, UK, France, Australia, Russia and the US, with about 60 regular contributors (and growing)." According to Currie, TWiki has helped Motorola's virtual teams to more efficiently capture requirements, issues lists and internal documentation.

Similarly, IBM currently has several wikis, including one for company jargon and acronyms on its intranet. With thousands of employee blogs, the IBM team set-up a wiki to establish corporate blogging guidelines. Because of the collaboration wikis allow, employees and management were able to complete the guideline in 30 days.

Whether companies use wikis to help far-flung teams collaborate on new products or to set corporate policy, there is a common thread that binds them altogether. At their core these companies are committed to the idea of free flowing information as a catalyst for corporate innovation and organizational change.

Wikis in Action
Companies may refer to anecdotes like the ones cited above or they may choose to conduct small scale experiments of their own to determine the value of wikis to their organization. In fact, many companies may already be experimenting with wikis and not even know it. These days it is not uncommon for enterprising employees to take it upon themselves to set-up and host wikis for their individual teams. Since there are many open source versions of the wiki software freely available online, any moderately tech savvy worker can install and maintain the software without burdening their IT organizations.

What these activities demonstrate is that the demand for the type of collaboration and information sharing capabilities wikis provide often comes from the bottom up. Rather than viewing these unauthorized trials as a negative, companies should come to view them both as a testimony to the value wikis bring to the workplace and an opportunity to see wikis in action.

Once inside the organization wikis tend to undergo an almost Darwinian evolution, moving from rogue software tool to technological cornerstone. This is

because at some point the administration of the wiki usually becomes too much for a single person or others get wind of the benefits certain teams are experiencing from wikis and demand one of their own. At this point, management usually takes notice and tries to either reign in the proliferation of "rogue" wikis (usually to no avail) or find a way to standardize wiki usage across the organization. This is where some of the largest mistakes can be made.

Organizations planning to deploy wikis on a broad scale must pay close attention to the following areas if they hope to reap the full benefits of wikis over time:

- *Technical Administration of the Wiki*
  Although a single wiki is relatively easy to maintain from a technological standpoint, once organizations begin to introduce wikis on a broader scale (i.e. for multiple locations and departments) they should consider outsourcing the function.   Outsourcing wikis to hosted providers gives businesses a fast, effective deployment solution. Additionally, using a hosted solution allows organizations to standardize around a single wiki platform, while forgoing any large initial technology investments.

- *Organizational Patterns of Behavior*
  Every organization has its own unique way of doing things. However, these patterns of behavior don't always directly translate into online interactions. For this reason, companies should consider assigning a person or a team to manage the interactions that occur on the wiki, especially at the beginning. Although wikis grow organically as users add to them, wiki managers can help organize them into an easily understandable structure right at the outset. They can also be on hand to answer questions, which will help drive user adoption. Additionally companies instituting wikis, should not waste time trying to convert people who resist, but rather let social pressure work it out.

- *Natural Lifecycle/Progression of Implementation*
  As was pointed out in the introduction of this whitepaper, all technologies inevitably go through a period of evolution where there is the promise of untold benefits, the disappointment of diminished returns, and then finally the reality of attainable goals. This lifecycle suggests that companies should look to minimize their risks where they can, but be careful not to be overly cautious in ways that could cause them to lose their competitive edge. In practice, this means company's must have a willingness to experiment with new technologies in ways that don't handicap their future efforts; starting small and moving towards an enterprise solution only once a clear strategic vision is present.

During the later stages of wiki deployment companies may be tempted to invest in enterprise wide systems that seem to offer added benefits above and beyond basic wikis. These investments must be aligned with both the users' needs and the business' focus and future requirements. By balancing vision and investment,

companies can reap substantial rewards.

Summary

Wiki has sometimes jokingly been said to stand for the acronym, "What I know is." Even though this phrase is not related to the origin of the name (wiki is actually derived from the Hawaiian word for quick) ask any business user of wikis what it is they know about wikis, and you will get a common answer. *Wiki's dramatically change the way people work.*

Wikis are significantly different from other corporate applications because of their inherently social nature. The ability for corporate users to collaborate on any number of internal projects in an online environment where everyone is given an equal voice, is not only empowering, but speeds the process of innovation.

At this point in wiki's evolution, the benefits described above are not merely hypothetical. Leading companies in technology, entertainment, and manufacturing have adopted open source wikis to handle a variety of tasks with much success. In some cases, companies have been able to coordinate the work of employees on multiple continents or speed the development of internal guidelines.

In addition to the possible benefits wikis provide, the technology is relatively low cost and easy to implement with the help of an outsourced provider. Although companies may be tempted to invest in costly enterprise wide wiki systems they should experiment with smaller hosted wiki solutions that have the ability to scale. This is likely to be the most successful approach for companies that are still unsure of how wikis will fit into their overall business strategy.

In conclusion, companies should not be afraid to implement wikis in their organizations in the near future. Rather than viewing the adoption of wikis as giving into the hype, companies should see these small-scale experiments as a concrete way to determine wiki's <u>real</u> value to their organizations and whether the technology warrants further investments.