Wiki Strategy Whitepaper:

The New Collaborative Paradigm

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Overview

The advent of Web 2.0 technologies has caused explosive demand for social collaboration products for both internal enterprise use as well as online communities. This demand is driven by the great benefits they bring to both users and the organizations which adopt these new innovations. As well, Web 2.0 technologies are spurring a continual shift in how people work and interact with coworkers, suppliers, customers and other constituencies.

Wikis are a centerpiece of the social collaboration movement. While the technology was invented in the late 1990s and most famous for powering Wikipedia, it only began to be adopted by commercial enterprises in 2005. Compared to blogs and forums, it is the least known technology but one with the most potential for enterprises given its many attributes that touch multiple areas including collaboration, intranets/file servers, knowledge base, content management, project management, and Web publishing.

This whitepaper is a discussion about what is a wiki, what does it do, what applications are they suited for, what benefits do they bring, what are the different types of wikis and evaluation criteria for adoption. It is geared towards the business user and manager for internal enterprise collaboration. For customer-facing communities, please download The New Paradigm for Online Communities.

Explosive Demand

Both market research and anecdotal evidence show without a doubt that the use of wikis is growing rapidly in all quarters. There are over a million wikis of all kinds in the U.S. alone.

Social Collaboration Software Market Growth		
2007	**2011**	**CAGR%**
$226M	$707M	41%

Source: Gartner Group, Aug. 2007

> *Monthly downloads of top 4 open-source wikis is approx. 400,000.*
> *--SourceForge.net and MindTouch, Inc. estimates*
>
> *"50% of U.S. enterprises will be using wikis by 2009."*
> *--Gartner Group, 2006*
>
> *"In almost every big corporation, some group is already using a wiki."*
> *--Andrew McAfee*
> *Harvard Business School*

The New Collaborative Paradigm

What's driving the explosive growth is the emergence of a new collaborative paradigm, which is propelled by the Internet and globalization. This new paradigm has the following elements:

Collaboration is Critical

The Internet-revved global economy has made collaboration a critical element of competitiveness. In a survey by IBM, 80% of CEOs see collaboration as being critical to growth, and 73% of knowledge workers collaborate frequently.

Speed Wins

In the age of global competition, the 24 x 7 "business day", and ever shorter product cycles, speed is everything. It wins for those who have it, and kills for those who don't.

The World is Flat

The need for speed and agility has flattened the organizational hierarchy. The old industrial model of centralized, top-down decision-making is passé, making way for the ascendant new model of bottoms-up collaborative participation
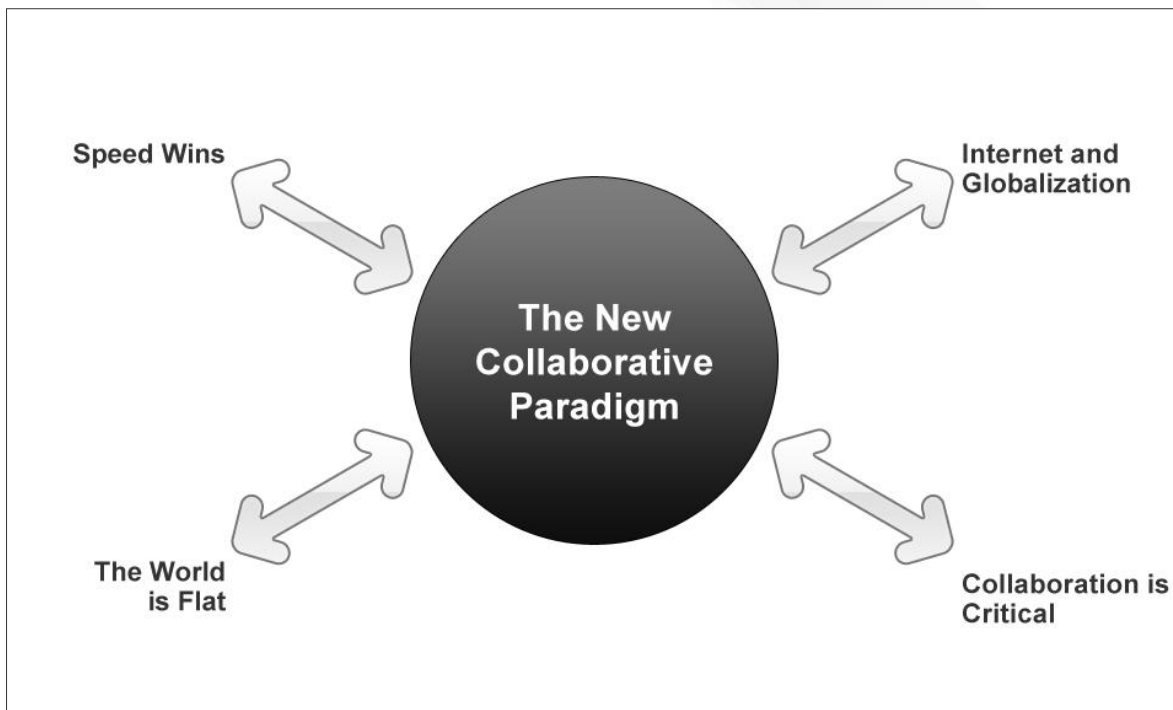
The Hassles of Collaboration Today

The new collaborative paradigm exposes many of the pains and hassles of even simple collaboration today, which are characterized by two problems:

- Working in individual information silos
- Hard to use and restrictive systems

Information workers today are armed with unprecedented computing and communications power. But each person represents an individual information silo and single point of failure. When multiple people need to cooperate on a single project, the complexities are geometric with every additional person. E-mail is the collaborative tool of choice today, through which 70% of the documents and files used to work with others are transported. Consider a couple of typical scenarios played out in businesses around the world everyday:

> *58% of knowledge workers find it challenging to share information and collaborate. Some workers spend 30% of their time finding the right documents.*
>
> ***Cognition Partners***
> *November 2005*

The E-mail Shuffle

John is working with colleagues in India, Chicago, Miami and HQ. He sends out a document for comment and review. Chicago and Miami comes back with comments on different points; India claims never getting the mail after John tracked him down 3 days later. A week later John sends out rev. 2 after individual e-mail exchanges with each team member. Many of the same points are made by each person. Several days later, responses come back, with questions such as "Why did HQ not like my approach when it worked in India?", "Chicago is very different from Miami" etc. By next week, John is trying to keep track of rev. 3.1a from India, 3.1a—HQ from HQ, 3.1 from Miami. Then the team members start exchanging revisions with each other, and all hell breaks loose… Sound familiar?

Where is It? Who Has the Latest Rev?

You know this story. Alice is a new employee who needs the old version of a brochure to update. She scours her laptop inherited from her predecessor Trisha with no success. She calls coworker Bill, who isn't sure where the file is either. He goes through his email and documents. No luck. Bill looks on the shared file server, no cigar. Bill asks Candice, who worked on the project but said she sent everything to Trisha. What does Alice do?

These are just a couple of the typical real-life scenarios we all go through. The results are the same: frustration, wasted time, and lagging productivity. All because the software tools we use today are not built for collaboration, but rather, for individual productivity.

The Wiki Solution

A wiki (from the Hawaiian term *wiki wiki*, meaning fast) at its simplest is an editable webpage. A wiki is a web-centric collaboration platform, vs. an individual-centric productivity platform that's the PC. So, instead of working on a document in Microsoft Word in your own machine viewable only by you, you can create, edit, share, store and search documents, emails, images and files through a web site accessible 24 x 7 by authorized users.

With a wiki, there is no more need to do the e-mail shuffle: everyone can be on the same page via the Web. There is no need to sift through individual data silos; everyone can go to the central working platform and information repository.

Wiki: A Web-Centric Collaboration Platform
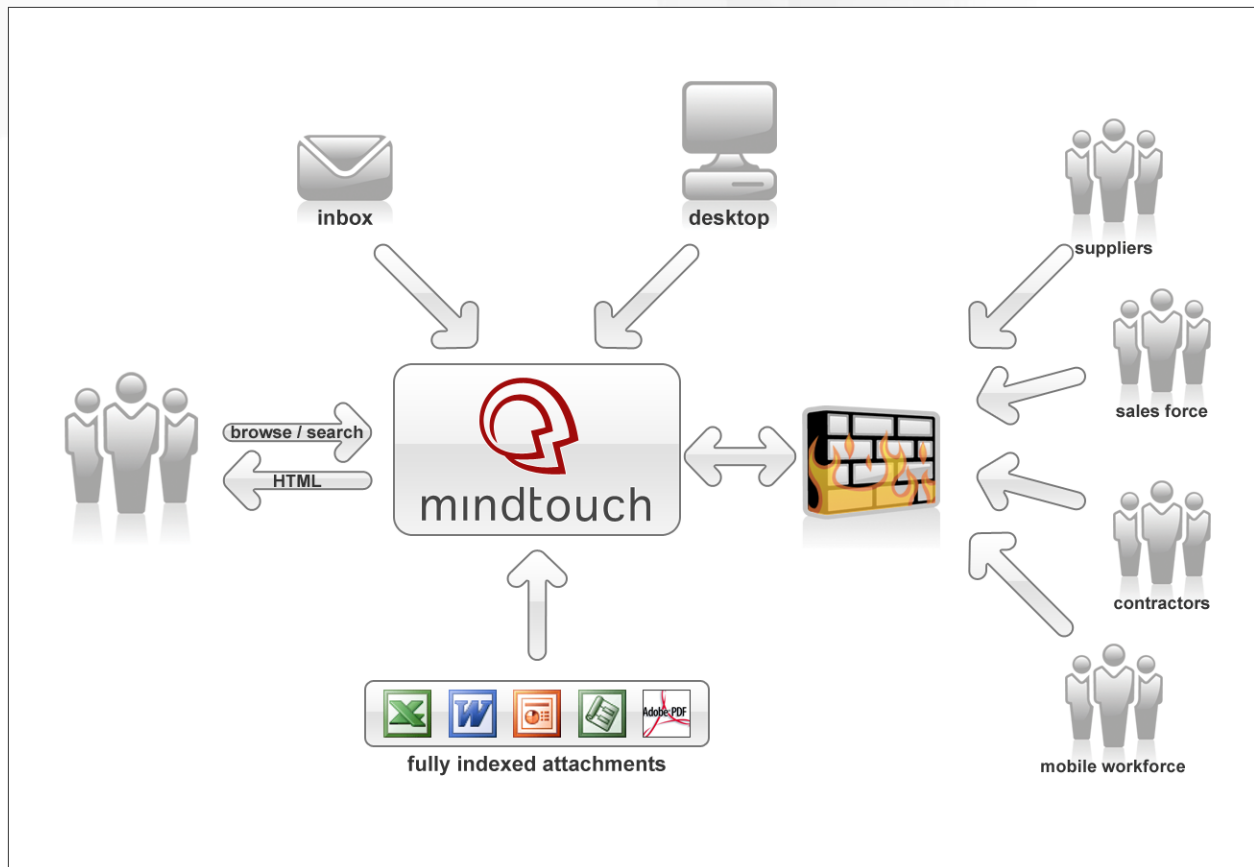
Wikis typically also are easier to use and more flexible than traditional collaboration or content management software from Microsoft, Documentum, IBM and the like. Content creation is much easier and free-form, vs. rigid taxonomies to conform to. Wikis let users find information in context, so it's more easily identified and understood. Unlike an intranet, no one needs to know html or programming to manage a wiki.

> *"A traditional project management tool simply cannot reproduce the environment of collaboration and involvement that wikis create."*[1]
>
> *--Ezra Goodnoe*
> *"How to Use Wikis for Business"*
> *InformationWeek*
> *Aug 8, 2005*

Wikis are at the center of the ongoing shift from a desktop-based to a web-centric world, and they straddle both. Given its multiple personalities, the technology has the potential to become the foundation platform for collaboration in the future.

Value Proposition

A wiki is a versatile and low-cost software that can be used in many ways: a dedicated collaboration tool, enhanced intranet, easier file server, data repository, project management or even Web publishing tool. It facilitates the exchange of information within and between teams by making information available and usable any time, anywhere. Everyone in an organization can capture, discover, edit and contribute content. Information is archived contextually in a logical order and placed for use again in the future.

Wikis enable users to save lots of time and hassles in sharing information and collaborating on projects:

- Decrease the e-mail shuffle
- Reduce time to find information by up to 30%
- Make it easy for employees to find, share and act upon information
- Build a repository of past documents for re-use

Wikis: Straddling Two Worlds
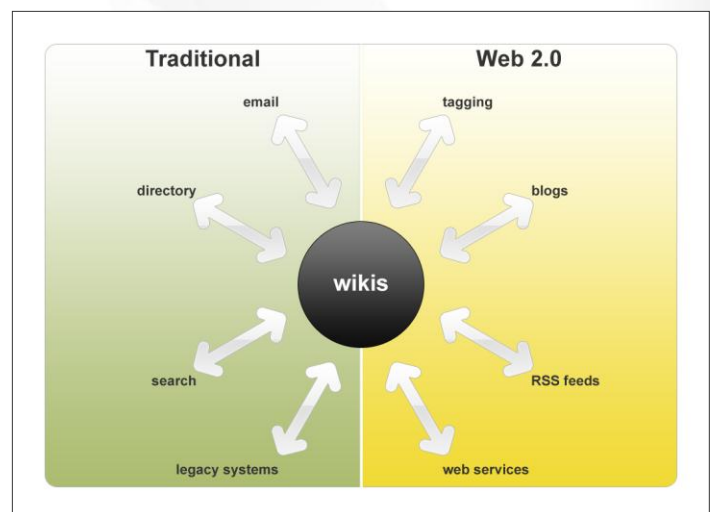
- Eliminate version tracking issues ("what is the last version, who has it, where is it?")
- Know employees are always using the most current information
- Make content remotely accessible

A survey of corporate wiki users by ACM lays out the multiple benefits of wiki usage across companies:

Information in wikis was of immediate relevance	81%
Work is easier by keeping updated	75%
Disseminating my knowledge is easier	71%
Increase collaboration efficiency	63%
Increase knowledge reuse	69%

Source: Corporate Wiki Users Survey, WikiSym '06, August 2006, ACM

In the end, it's all about increasing collaborative productivity, leveraging knowledge, and accelerating speed to gain competitive advantage.

Applications

Among all the enterprise social collaboration technologies, wikis are the least known but gaining awareness and adoption rapidly.

Wikis are versatile tools that can be used in a plethora of applications across industries, research institutions and government agencies. Their use in the enterprise can be grouped in 4 categories:

Which of the following types of social media does your company use?

- Knowledge base—technical support, product features, expertise, compliance documents, standards.
- Project collaboration—jointly authoring documents, meeting agendas and notes.
- Idea generation—brainstorming, collecting feedback and suggestions, new product concepts.
- Research--analyzing markets, competitors, customers, technologies.
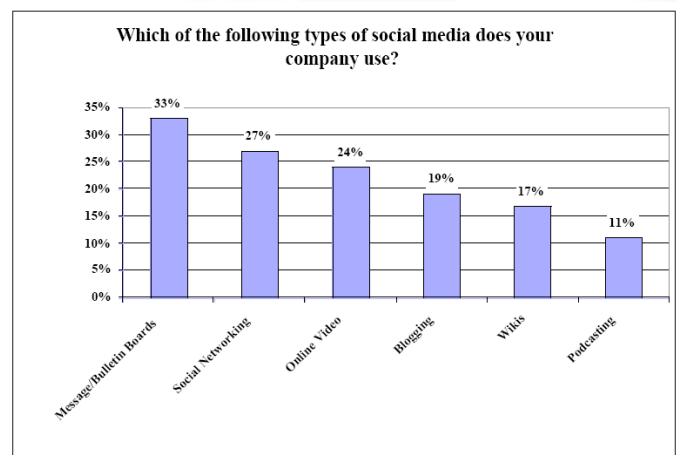
Externally, wikis are also an effective tool for brand building and strengthening customer relationships. For example, eBay uses a wiki to allow its community of 200 million users to write and edit articles on how to better use the auction site. Amazon has long encouraged community involvement and social networking of its customers via wikis. Online media properties are just beginning to use wikis to harness user-generated content on communities and other hyperlocal content to boost traffic and targeted ads. For more information on the use of wikis for customer-facing communities, please download The New Paradigm for Online Communities.

Multiple ways to wiki

This section focuses on the pure wiki products in the marketplace. It does not address suites or large enterprise collaboration products where wiki functionality is just part of the whole, with great variations to the prominence of wikis, how they are implemented, how easy they are to use etc. We can say, through general observation of "compositeware" in general and specific analysis of those in the wiki space in particular, that these products tend to be difficult to use, rigid, and at times unsatisfactory because they try to be all things to all people.

There are five types of wiki implementation, just like other types of popular software. Below is a description of the various options appropriate for business use, and the pros and cons of each.

Open Source

There are hundreds of open-source wikis out there.

- **Pros**—Open source means a community of developers developing, debugging and updating the product. An open source wiki will let you view and even alter the source code. It's usually free and you're not locked into one vendor.

- **Cons**—Most open source software is for the DIY (do-it-yourselfer). You need to be technically savvy to set up, configure and maintain the wiki, or rely on the IT crew. You must stay on top of the technology, monitor it and follow development. If you choose to customize the wiki, you will need someone to support it. In addition, you'll need to configure your Web application server and database, keep your applications up-to-date, and configure your operating system.

  Almost all open source wikis use their own markup language which for most business users is cumbersome and difficult to use. Therefore usage will be low, and switching to another one is painful. Another big problem is that most of these software are projects, not commercial products backed up by a support plan from a company. That's why the main users of open-source wikis are developers.

- **Caveats**—Selecting an open-source wiki can be challenging because the strength of the company supporting it is critical. There's a difference between an open-source project that's just community driven and one that has a company backing it. If you choose open source, choose a wiki backed by a 'real" company so you have the peace of mind in knowing the product will be supported.

Hosted Wiki

- **Pros**—It's an instant wiki. Setup is immediate and anyone with Internet access can get right to it. There is a wide variety of options and vendors to choose from. Hosted wikis are simple to use, inexpensive and require zero IT involvement. It is ideal for small workgroups or small-medium businesses (SMBs).

- **Cons**—Security and data custody are huge issues because you are using a server outside the corporate firewall. The cost can go up if you have large amounts of data to store, and your bandwidth is determined by the vendor. In fact, you are entrusting your business to the vendor. You'll need to develop a company policy for using hosted sites, and decide what is or not appropriate for storing on a server not owned by your organization. Since most hosted wikis cater to individuals and SMBs, many enterprise-class features relating to content management, permissions, and site administration are not available.

- **Caveat**—If you're not moving much data around or dealing with critical information, a hosted wiki might be appropriate.

Commercial Software

- **Pros**—The wiki is on your own network behind the firewall. You own your data and have complete control. You should be able to configure it for remote access.

- **Cons**—You have to set it up and maintain it. It requires configuration and installing other software components to start and patch over time--unless your vendor offers automated applications management and updates.

- **Caveat**—This is a good choice if extensibility is important and you have the IT infrastructure in place, because a wiki built on open standards can be integrated with other applications and customized.

Hardware Appliance

Buying a wiki appliance means owning the dedicated hardware as the wiki is completely embedded in the machine and you don't have to install or configure any software.

- **Pros**—Your wiki is secure behind the firewall. With the right solution, setup should be plug-and-play and not require IT involvement. Users can access it remotely and securely. Your bandwidth and storage are unlimited. IT can be in control with no additional overhead if the appliance is remotely managed.

- **Cons**—Some setup might be required, as well as some technical support. The IT department might be reluctant to add another appliance to the network. You also need to keep up with the

technology and make sure updates are made, although a solution that offers remote management eliminates these hassles.

- **Caveat**—If this wiki solution sounds like the best fit for your organization, look for an appliance that offers secure remote access, automated backups and hardware failure monitoring.

Software (Virtual) Appliance

A virtual software appliance is a technological innovation that combines the best aspects of enterprise software with the ease of hardware, except it is installed on the hardware of your choosing, and is done so in minutes. All software components are neatly bundled and pre-configured in a single image. This image is then placed on any computer you like and executed. You can move it from one computer to another at anytime afterward.

- **Pros**—you can have your wiki wherever you like, just like commercial software. Installation and setup can be completed in 15 minutes and doesn't necessarily require IT's involvement. The software appliance approach takes the best of both the traditional software approach and the hardware approach and combines them in a way that delivers both convenience and flexibility. In large enterprise deployments, virtualization actually can reduce hardware requirements for the company.

- **Cons**— Since virtualization requires running another operating system and other software atop Windows or Linux, for example, there may be a slight performance degradation in a few cases when your CPU utilization is above 75%. Otherwise there will not be any noticeable slowdown in performance.

- **Caveat**—As with hardware appliances, make sure your software appliance is backed by a company that ensures security and automatic software updating; otherwise you could be jeopardizing the security of your network, risking your data while incurring the hassles of manual updates.

Choosing the Right Wiki

Beyond the basics that define a wiki, there are many variations in the available offerings in the market. Thus the challenge is choosing the right one for your use. It's not the bells and whistles or even the price that should be the first concern. In our opinion, the four most important features to look for when choosing a wiki are:

1. Ease of use
2. Open standards
3. Integration and Extensibility
4. Security

Ease of use	Open standards	Integration & Extensibility	Security
As with any technology, ease of use is critical because people will simply avoid using one that's difficult to learn and use. Make sure the wiki offers a WYSIWYG rich text editor, image embedding, file attachments, and an intuitive interface. Information should be able to be organized in flexible hierarchies. Training should take less than 30 minutes.	Stay away from open-source wikis such as Twiki and MediaWiki that store in non-standard formats, or you might discover someday that you can't use your own data. Open standards—especially XML--ensure that as your content grows, it can be easily integrated with existing ERP, CMS and other corporate applications.	Wikis are not a replacement for email or other software your staff uses on a daily basis. To fully benefit from a wiki, it should have a rich API that lets you integrate it with existing systems so it truly is a platform you can extend, customize and use for the long term.	Security is, of course, a paramount concern when dealing with corporate information. Check out presence of features such as multi-level user permissions down to the page level, support for LDAP, ActiveDirectory and other authentication and site administration services.

Once the big issues have been decided, use the checklist below to evaluate each option:

Wiki Feature	Yes	No
Content Creation		
• WYSIWYG rich text editor		
• Rich media support (videos, images, slide shows) etc.		
• Hierarchical organization & navigation		
• One-click linking		
• Simple page & file action menus		
Tagging		
• Keyword		
• Chrono (time-based)		
• Tag definitions		
Versioning & Reversion		
• Page & file versioning		
• In-line comparison of page versions		

	Yes	No
• One-click page reversion		
• Restore deleted pages & files		
Search		
• Search engine used		
• Search attachments		
• Search meta data		
Attachments		
• File & image attachments		
• Attachment history		
• Attachment links update		
• Attachment meta data		
• Attached files are versioned & indexed for searching		
Alerts & Notifications		
• Global log		
• User contributions log		
• Watch lists		
• Automatic e-mails		
• Popular pages		
• Page statistics		
RSS Feeds		
• Global		
• User		
• Watch list		
Access Control		
• Multi-level permissions down to page level		
• Secure application authentication		
• Support for external authentication systems (LDAP, Active Directory, Drupal, Wordpress, Joomla)		
• Robust Apache authentication		
• Restrict pages to read-only		
• Restrict hierarchies		

	Yes	No
• Page commenting		
Customization & Skinning		
• Multiple templates & skinning support for site customization		
• Easy interface for modifications		
• Change site logos		
• Customizable navigation bar		
Administration		
• Site metrics (Google Analytics)		
• User preferences		
• Real-time account status		
• Site map		
Integration & Extensibility		
Standards-based format (XML)		
Bidirectional API		
Content portability		
Plug-ins and widgets		

MindTouch Deki Wiki Solutions

MindTouch's offers a unique product in the social collaboration market. Its award-winning Deki Wiki is:

- Downloadable as free open-source software backed by a comprehensive support offering for different environments, use cases and budgets.

- Both a feature-rich and user friendly wiki application for enterprise end users as well as an application platform for developers to develop social publishing and collaboration applications for the enterprise and online communities. You can choose what product to download and deploy.

- Available both as a virtual software appliance with all the benefits of a quick install as well as source code with root access that developers need.

In short, MindTouch's Deki Wiki combines the best attributes of different wiki types into one easy-to-consume package for end users and developers.
Download Deki Wiki

The table below summarizes the key features of MindTouch Deki Wiki:

Open-source software	✓
Free download (unlimited users)	✓
Technical support plans and services	✓
Software virtual appliance	✓
Fast download and install	✓
WYSIWYG interface	✓
Open standards (XML data exchange)	✓
LDAP, Active Directory support	✓
Bidirectional API	✓
Web services Extensions	✓
Source code	✓

"MindTouch is transforming the wiki from the Web's best collaborative authoring tool into an open source service platform with a Wiki heart. Their Deki Wiki is perhaps the most extendable Wiki tool available today."

Read/WriteWeb

For more information, visit http://wiki.mindtouch.com/Deki_wiki