



Bringing Wikipedia to Work: Open Collaboration within Corporations

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Wikimania 2007

The three principles of open collaboration

- **Egalitarian:** everyone can contribute
- **Meritocratic:** contributions are valued based on quality
- **Self-organizing:** collaborators develop their own processes

Open collaboration drives wikis, open source, etc.

- Open collaboration motivates and empowers collaborators
- Open collaboration utilizes resources you never knew you had
- Open collaboration can lead to superior results

Wikipedia is based on these open collaboration principles

How to bring open collaboration (and its benefits) to work?

PART I

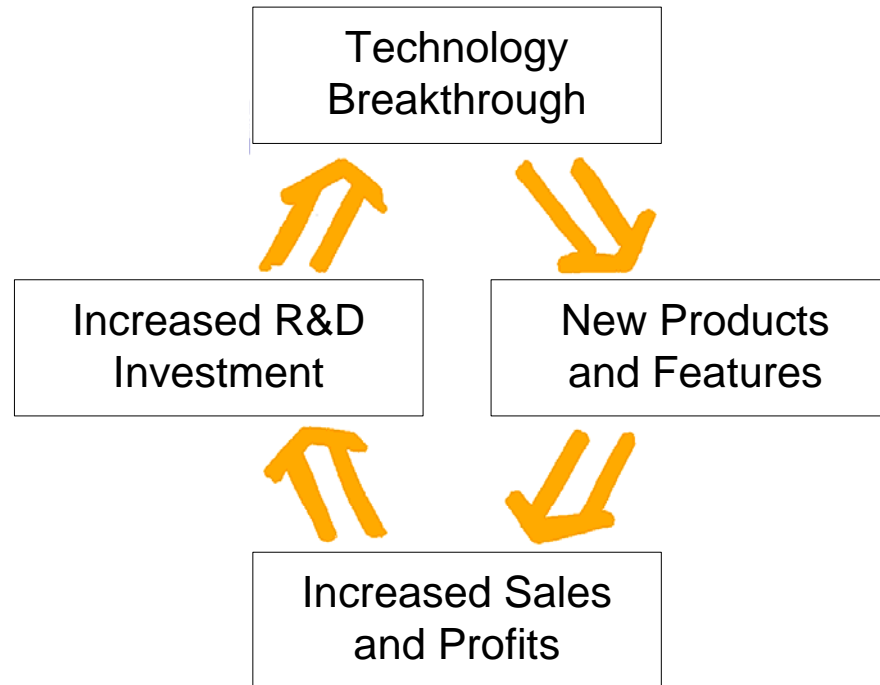
Open innovation...

Open space...

Open source...

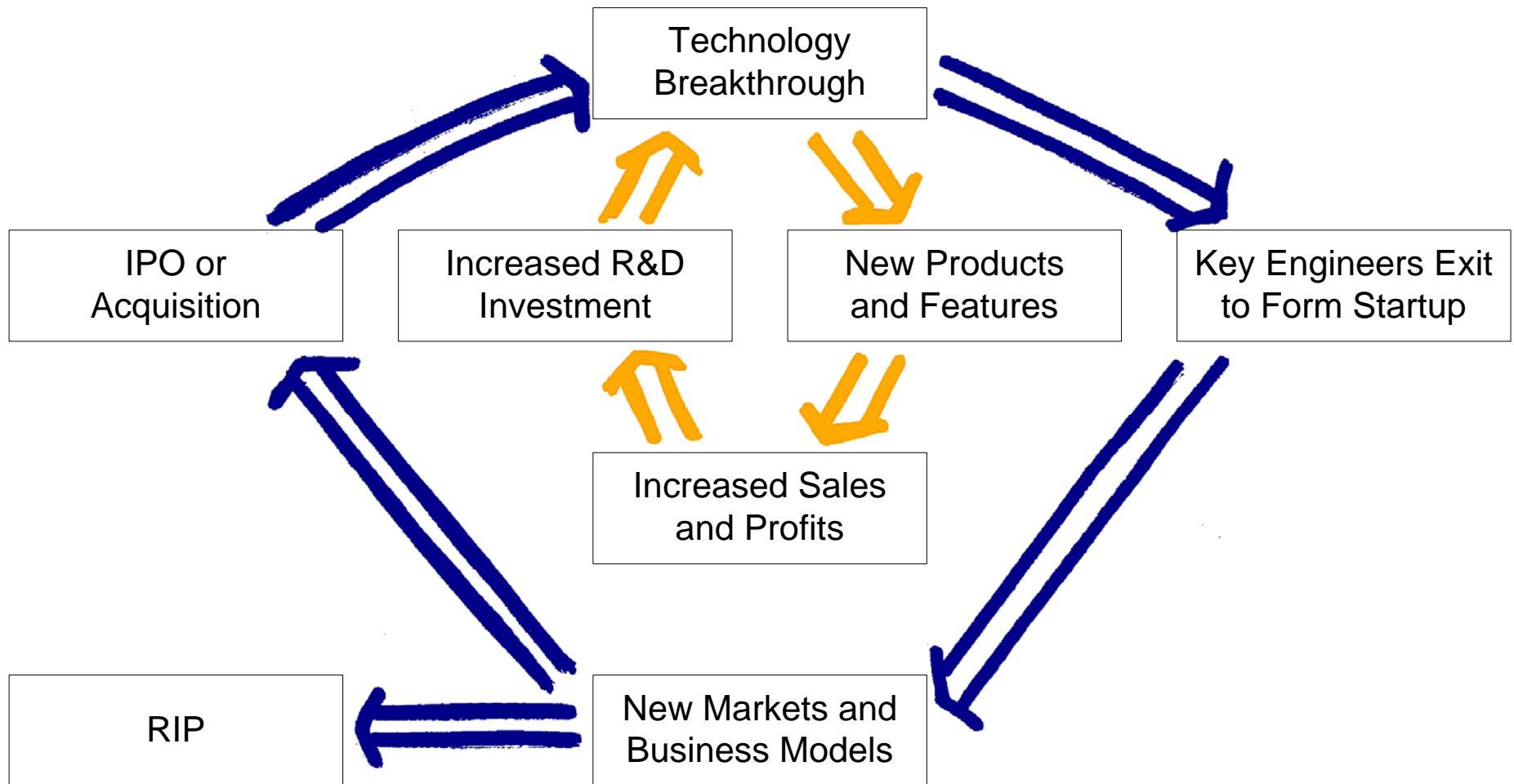
Open collaboration...

Traditional "Closed" Innovation



From: Henry Chesbrough, Open Innovation, HBS Press, 2003

The Open Innovation Life-Cycle



Principles of Closed vs. Open Innovation

Closed Innovation

- The smart people in our field work for us
- To profit from R&D, we must discover it, develop it, and ship it
- If we discover it ourselves, we will get it to market first
- The company that gets an innovation to market first will win
- If we create the most and best ideas of the industry, we will win
- We should control our IP so that our competitors don't profit from us

Open Innovation

- Not all the smart people work for us; we need to work with outside people
- External R&D can create significant value
- We don't have to originate the research to profit from it
- Building a better business model is better than getting to market first
- If we make the best use of internal and external ideas, we will win
- We should profit from other's use of our IP and we should buy others' IP if it advances our business model

A meeting technology

- **Invented about 20 years ago by Harrison Owen**
- **Surprisingly effective, thrives in complex situations**
- **Acknowledges and explicitly works with self-organization**

Based on four principles and one law

- **Whoever comes is the right people**
- **Whatever happens is the only thing that could have**
- **Whenever it starts is the right time**
- **When it's over it's over**
- **The law of two feet**

Only two failure modes

- **No passion of people**
- **Attempted process control**

No single corporate entity owns the source code

- Sometimes non-profit regulates affairs based on broad consensus

Interactions, copyright, patents are regulated by license

- Usually copyright remains with programmer/company

Rank and position are determined by peer evaluation

- But beware of initial conditions, commercial interests, status greed

Commercial open source follows related principles

From: Dirk Riehle, The Economic Motivation of Open Source: Stakeholder Perspectives, IEEE Computer, April 2007

Benefits of Community Open Source

For the software development process

- **Fast and free feedback loops by engaged users**
- **Broad skill set of interested developers**

For the businesses behind the people

- **Faster, leaner, easier marketing**
- **Sharing of development cost, free contributions**

Much of this because of the law of the two feet

Community open source process...

- **Recognizes smart people are spread around**

Community open source businesses...

- **Recognize significant value can come from outside work**
- **Recognize competition is with business models, not technology**
- **Recognize to win you need to combine the internal with external**

Community open source...

- **Also leads open innovation in important aspects**

Open Source Forges and Collective Intelligence

The image shows two overlapping browser windows. The top window is SourceForge.net, displaying a navigation menu with 'SF.net', 'Projects', 'My Page', and 'Help'. The bottom window is freshmeat.net, showing a search bar, a navigation menu, and a list of project news. The news items include 'Asymptote 1.25 released', 'Gallery 1.5.6 Released', 'KeePass 2.02 Alpha released', and 'Pantheios 1.0.1 (beta 24) Released'. The 'znc 0.047' project is highlighted with a detailed description and a table of categories, focus, license, and URLs.

SourceForge.net
 Create, Participate, Evaluate
 Welcome, driebie | Log out | My Favorites

freshmeat.net
 home | browse | articles | contact | chat | submit | faq | newsletter | about | stats | scoop
 Search for [] in projects [] Go Section Main [] Go

Project News RSS

- Asymptote 1.25 released** 2007-04-11 14:15 - Asymptote
 Asymptote (<http://asymptote.sourceforge.net>) is inspired by MetaPost but with an improved C typesetting that LaTeX does for scientific text. [Read More »](#)
- Gallery 1.5.6 Released** 2007-04-11 14:12
- KeePass 2.02 Alpha released** 2007-04-11
- Pantheios 1.0.1 (beta 24) Released** 2007-04-11

[Project news archive »](#)

Software Categories

- Clustering
- Database
- Desktop
- Enterprise
- Financial
- Games

znc 0.047
 by [prozack](#) - Wed, Apr 11th 2007 15:14 PDT

About: ZNC is an IRC bounce/proxy with many advanced features like detaching, multiple users, multiple clients per user, channel/query playback buffers, SSL, IPv6, transparent DCC bouncing, C++/Perl module support, party line, and Web administration.

Categories	Focus	License	URLs
Communications :: Chat :: Internet Relay Chat	N/A	GNU General Public License (GPL)	Home News Downloads Screenshots FAQ Contact
Internet :: Proxy Servers			

curl and libcurl 7.16.2
 by [Daniel Stenberg](#) - Wed, Apr 11th 2007 15:14 PDT

About: curl and libcurl is a tool for transferring files using URL syntax. It supports HTTP, HTTPS, FTP, FTPS, SCP, SFTP, TFTP, DICT, TELNET, LDAP, and FILE, as well as HTTP-post, HTTP-put, cookies, FTP upload, resumed transfers, passwords, port numbers, SSL certificates, Kerberos, and proxies. It is powered by libcurl, the client-side URL transfer library. There are bindings to libcurl for over 30 languages and environments.

XML
 Take me to a [random project](#).

Apr 11 2007
 prev go next

Username

Password

Remember me

Please note that you must have **cookies** enabled in your browser to be able to log in.

LATEST ARTICLES

Editorials
 - [Java Web Services Tools \(Feb 24th\)](#)

freshmeat
 - [freshmeat fone \(Apr 1st\)](#)

Hewlett-Packard's "progressive open source"

- Inner source (within firewall)
- Controlled source (in DMZ with partner access)
- Open source (on the "open" Internet)

Progressive open source to address the following problems:

- Left hand does not know what right hand is doing
- Large firms get frequently reorganized, lose institutional memory

Does open source provide the same benefits in-house as outside?

From: Dinkelacker et al, Progressive Open Source, ICSE '02, IEEE Press

SAP's Internal Software Forge

The screenshot shows a Mozilla Firefox browser window displaying the SAP Forge website. The browser's address bar shows the URL <https://forge.sap.corp/>. The website's header features the SAP FORGE logo on the left, a search bar with a dropdown menu set to "Software/Group" and a "Search" button in the center, and "Logout" and "My Account" links on the right. Below the header is a navigation bar with three tabs: "Home" (highlighted in yellow), "My Stuff", and "Wanted".

The main content area is titled "Welcome to SAP Forge!". It contains several paragraphs of text and a bulleted list of features. The right sidebar contains three sections: "SAP Forge Statistics", "Top Project Downloads", and "Highest Ranked Users", each with a "[More]" link. The footer of the page includes the text "Wishing you pleasant collaboration, The SAP Forge team" and a status bar at the bottom of the browser window showing "forge.sap.corp".

Welcome to SAP Forge!

SAP Forge is a collaboration system that was set up in order to encourage cooperative work within SAP. Why? Because the success of most projects nowadays depends on the quality of collaboration between people. This includes internal collaboration among project members and external collaboration with other groups.

SAP Forge provides tools for increased transparency and improved collaboration. It makes it easier for people to collaborate and accumulate shared knowledge, even when they are spread across multiple sites, countries, and time zones.

Specifically, SAP Forge provides:

- A single point of entry for all project-related information
- Message boards / discussion forums
- Issue trackers for: bugs, feature requests, patches, etc.
- Task management
- Mailing lists
- Website hosting
- Permanent archival for file releases
- Document management
- News & announcements
- Surveys
- Source Code Management (SCM) repositories like CVS and Subversion (Perforce integration is being planned)
- Full backup
- Total web-based administration

Participation

To get the most out of SAP Forge, you'll need to [register as a site user](#). This will allow you to participate fully in everything SAP Forge has to offer. You may of course browse the site without registering, but will *not* have access to all of its features. If you have questions or you need help, use the [help forum](#).

Set Up Your Own Project

[Register as a site user](#), then [login](#) and finally, [register your project](#).

Help Improve SAP Forge

You can help make SAP Forge better by [reporting bugs](#), [suggesting features](#), [helping other users](#), or [writing code](#).

Wishing you pleasant collaboration,
The SAP Forge team

Egalitarian: whoever shows up is the right people

- On the Internet: whoever cares
- Within a corporation: whoever cares

Meritocratic: contributions are evaluated based on their merits

- Status and seniority do not grant extra rights
- Egalitarian and meritocratic view of peers

Self-organizing: follows its own processes

- Meta-contributions (processes) are contributions too
- Contributors ensure context fit but allow for idiosyncratic variation

Has found a straightforward expression in wikis

PART II

Wikis and open collaboration

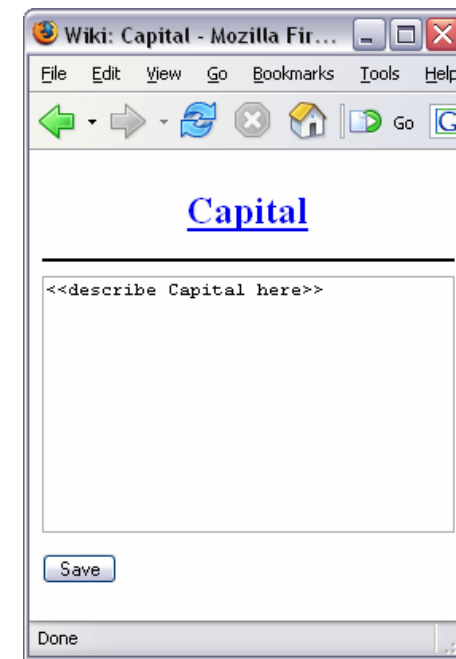
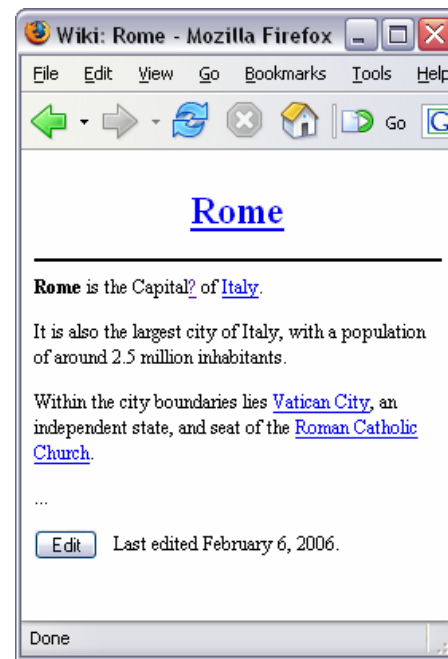
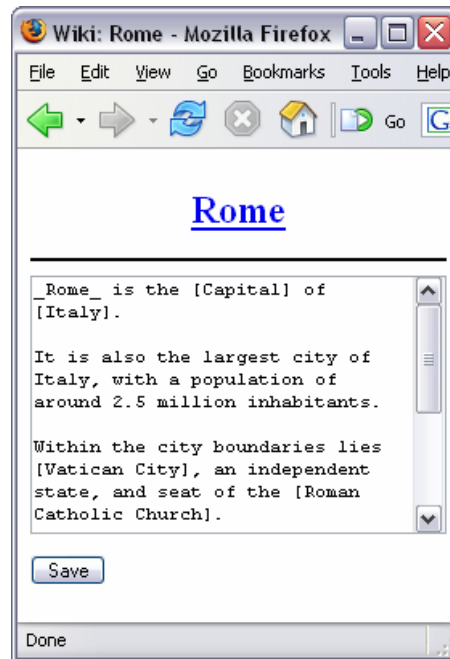
Wikis and software projects

Seeding and gardening a wiki

More wiki best practices

What's a wiki?

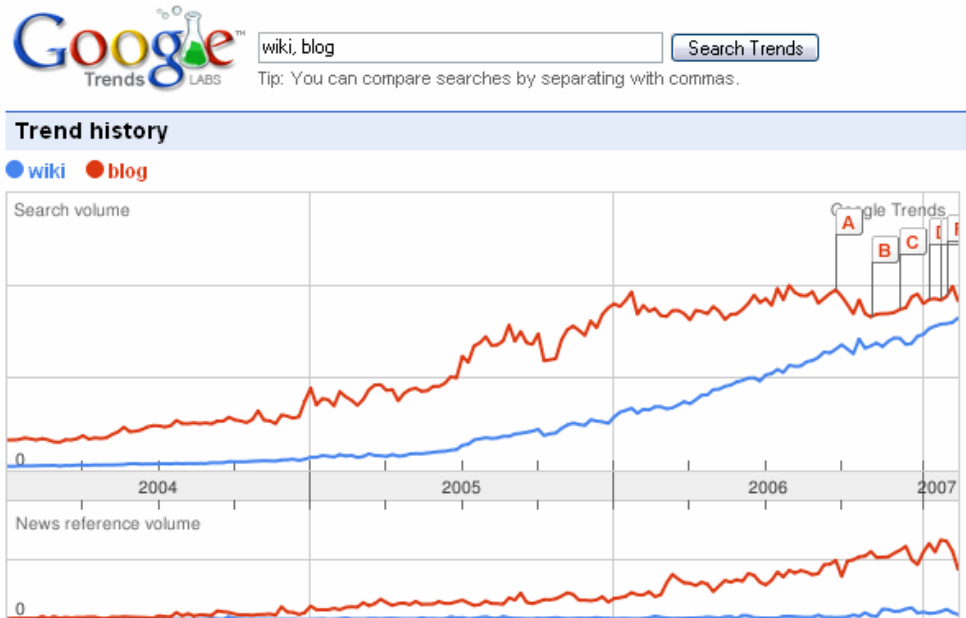
- The simplest collaboration tool that could possibly work
- (Paraphrasing the inventor, Ward Cunningham, 1995)
- Most well-known example: Wikipedia



Public and Corporate Uses of Wikis

	Public Internet	Institutional	Single-Person
Content Management and Portals	<ul style="list-style-type: none"> University dept portals Event portals News portals, blogs 	<ul style="list-style-type: none"> In-house portals Blackboard systems Simple filing system Meeting org and notes 	
Collaboration	<ul style="list-style-type: none"> Event organization Non-profit sites Collaborative authoring 	<ul style="list-style-type: none"> Educational uses Lightweight WfM Lightweight DS 	
Knowledge Management	<ul style="list-style-type: none"> FAQ, self-help Ref. lists, bibliographies General encyclopedias Domain-specific KM 	<ul style="list-style-type: none"> FAQ, self-help Ref. lists, bibliographies Glossaries, handbooks Organizational memory Community of practice Software dev processes 	<ul style="list-style-type: none"> Personal Information Mgmt (PIM)
Communities	<ul style="list-style-type: none"> Campaign sites Newspapers Wasting time... 	<ul style="list-style-type: none"> Cross-functional shared interest 	
Application Platform	<ul style="list-style-type: none"> Integrator for mash-ups 	<ul style="list-style-type: none"> Small custom apps Tool integration protocol 	

Proof Points for the Importance of Wikis



Cities [Regions](#) [Languages](#)

Top cities (normalized)

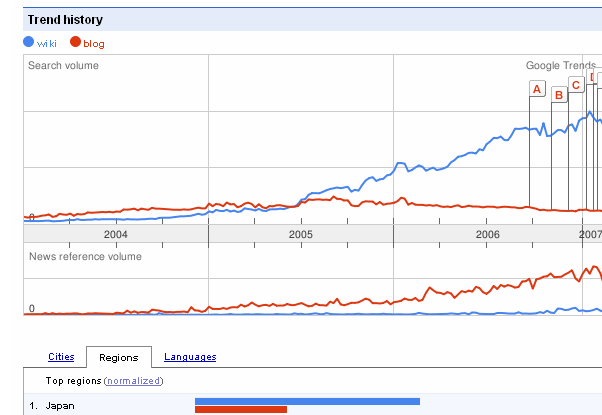
1. Tokyo, Japan	
2. Chiyoda, Japan	
3. Nagoya, Japan	
4. Osaka, Japan	
5. Singapore, Singapore	
6. Pleasanton, CA, USA	
7. Vienna, Austria	
8. Sydney, Australia	
9. Dublin, Ireland	
10. Austin, TX, USA	

Socially and culturally

- Wikipedia
- Domain-specific wikis

Commercially

- Software products
- Analyst coverage



Japan

Open

Incremental

Organic

Mundane

Universal

Overt

Unified

Precise

Tolerant

Observable

Convergent

From: Ward Cunningham, Design Principles of Wiki, WikiSym 2006 Keynote

Wikis and Open Collaboration

Egalitarian: Everyone is invited (within a given context)

Meritocratic: Contributions are evaluated based on their merits

Self-organizing: Wiki communities develop their own processes

For more details, please see:
Dirk Riehle, How and Why Wikipedia Works: An Interview With Angela Beesley, Elisabeth Bauer, and Kizu Naoko, WikiSym 2006, ACM Press



For internal collaboration

- **Hardly a tech company without an internal wiki these days**
- **Standalone or integrated with other tools, for example, a forge**
- **Chordiant uses wikis for project management and collaboration**
- **IBM used a wiki to develop its IP manifesto, base of its new IP policy**

To engage with the ecosystem

- **Wikis are becoming a tool of open collaboration with the ecosystem**
- **Like internal collaboration, well integrated with ecosystem processes**
- **F5: DevCentral for technical users community for shared development**
- **SAP's SDN wikis for knowledge sharing in SAP's ecosystem**

Addition to email, spreadsheets, file sharing, and instant messaging

Partly taken from: BusinessWeek.com, No Rest for the Wiki, March 2007

Uses in software projects

- Requirements definition
- Product and project management
- Project and system documentation
- Project reporting (by hand as well as automated)
- Describing and running functional tests (FIT)

Dominant use is for KM (from RTFM to RTFW)

- How the source code is laid out
- The meaning of some core abstractions
- How to set up your local build environment
- Where to find the reports
- And so on...

Have dedicated evangelist and seeder for wiki

Release only with content; don't release empty wiki

Choose a wiki engine with a beginner's option

Have well-working RSS feeds and reader culture

Offer templates for common tasks and common wiki pages

Reduce friction through help pages, provide training

Direct requests for information to wiki where applicable

Integrate wiki with your standard business processes

Add wiki collaboration to performance management

Be bold! (In editing and refactoring, from Wikipedia)

Develop and use clear conventions and categories

For contentious contents, use a talk page rather than a phone

Depending on the content, sign your contributions

Develop process along with regular contents

Allow for multiple wiki instances

Scope of a wiki should be topic-oriented, not task-oriented

Organize by products/components rather than projects

Err on the side of larger but few wikis to avoid balkanization

Don't forget but be light on access restrictions

Have senior management buy-in and participation

Create credibility by bringing in outside experts

Look to and learn from Wikipedia for working processes

Egalitarian: Everyone is invited (within a given context)

- Be light on access restrictions
- Don't erect artificial boundaries
- Encourage participation

Meritocratic: Contributions are evaluated based on their merits

- Don't sign contributions where unnecessary
- Don't use status and seniority as arguments
- Have senior management accept critique like everyone else

Self-organizing: Wiki communities develop their own processes

- Be bold in editing and refactoring (don't be afraid of change)
- Watch for and codify emerging (business) processes

We are experiencing a major shift in the IT industry

Open collaboration provides new principles of engagement

Open source and wikis are great tools for such engagement

Companies can benefit internally from open collaboration

Internet

- **Wikipedia:** <http://www.wikipedia.org>
- **SDN wikis:** <https://www.sdn.sap.com/irj/sdn/wiki>
- **BusinessWeek.com, No Rest for the Wiki, March 2003**

References

- **Henry Chesbrough, Open Innovation, HBS Press, 2003**
- **Dirk Riehle, The Economic Motivation [...], IEEE Computer, April 2007**
- **Dinkelacker et al., Progressive Open Source, in ICSE '02, IEEE Press**
- **Ward Cunningham, Design Principles of Wiki, WikiSym 2006 Keynote**
- **Dirk Riehle, How and Why Wikipedia Works, WikiSym 2006, ACM Press**