

# Politics : Web 2.0: An International Conference

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*Web 2.0 and organizations: what is at stake?*

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# Presentation plan

- When Web 2.0 Pervade the firm:
  - Brief overview
  - Outstanding facts
  - Identified corporate uses and benefits from the literature
  
- Emerging results from a corporate wiki study:
  - Research design and method
  - Diffusion process
  - Appropriation: critical elements
  - Forms of cooperation
  - Wiki as a Knowledge Management tool

# **When Web 2.0 pervade the firm**

## **State of the art**

## Web 2.0 within firms – a brief overview

- The concept of web 2.0 enterprise emerged at the fall 2005 in the North America in a first period. Europeans markets followed quickly.
- The transposition of Web 2.0 tools and "philosophy" from the private sphere to the professional one requires smooth adaptations to fit with:  

Companies constitute a more constrained framework for the deployment of decentralized interactions
- The Web 2.0 business trend growth follow the trend of numerous innovative apps & technologies but wikis, blogs, social networks and RSS feeds remain the more adopted basics
- Behind the generic title "enterprise 2.0" one finds different tools that generate particular constraints and benefits for different purposes
- In any case, the main target is composed with knowledge workers

# Penetration of the services and first experiments: outstanding facts (1)

- During the last months, well known consulting firms have realized surveys about penetration of web 2.0 services within firms
- Results are very variables and difficult to compare because the surveys have different perimeters
- Nevertheless, firms are interested in all the concerned technologies
- The results of these studies must be considered with caution but some points are beyond doubt:
  - Technologies are already well known, due to pre existing residential uses
  - Introducing Web 2.0 technologies within firms is no more confidential
  - Firms are realizing experimentations, facilitated by inexpensive technologies

# Penetration of the services and first uses: some outstanding facts (2)

- Survey published in February 2007 in *Information week* (n=250, telecom and computer advisor)
  - 32% of the respondents have a strategy concerning the implementation of Web 2.0
  - They evaluate the usefulness of services as following
    - Wiki: 47%
    - Mash up: 43%
    - Flux RSS: 31%
    - Blogs in relations between clients and partners: 31%
    - social networking tools: 30%
    - internal blogs : 26%
- *Mac Kinsey survey*, in January 2007 (n=2847 executives, worldwide perimeter).
- Respondents who know the technology and think their firm does invest or will invest in this technology is following :
  - Social networking tools: 28%
  - Wikis: 21%
  - Blogs: 27%
  - Flux RSS: 21%
  - Mash up: 8%

# Penetration of the services and first uses: some outstanding facts (3)

- *Economist Intelligence Business Unit survey, in 2007 (n=400 executives)*
  - 80% of respondents consider that 2.0 technologies are an opportunity to increase growth or margin within their firms
  - 75% think that the most important impact will be focused on the interactions between the firms and its customers
  - Less than 5% consider that these technologies are a threat for the firms
- *Centre for Marketing Research survey, (n=121 firms inside the 500 US firms that have the highest growth)*
  - 27% of respondents use social networking tools, 19% use blogs and 17% use wikis.
  - 66% of them consider that social media are important for the future success of their firm

## Identified corporate uses and benefits from the literature (1)

	<b>Corporate Uses</b>	<b>Benefits</b>
<b>Blog</b>	Creation of communities of interest around free topics. Expertise Identification	Social networks constitution and creation of social capital. A small number of users create a dynamic that involves more people.
<b>Wiki</b>	Knowledge sharing, management and creation of collaborative contents	Management of informational capital. Share of informal knowledge.
<b>RSS feed</b>	Alert notification of new content	Real-time information Increased reactivity

## Identified corporate uses and benefits from the literature (2)

	<b>Corporate Uses</b>	<b>Benefits</b>
<b>Social bookmarking et tagging</b>	Collaborative Indexation. Identifications and resources sharing.	Spill over effects of social search for all users above ≈15% contributors.
<b>Mashup</b>	Customization of generic services	Value added by synergy with existing services
<b>Social network platforms</b>	Building of new interactions	Finding potential competences and collaborations

# Emerging results from a corporate wiki study



# Research Design & Method

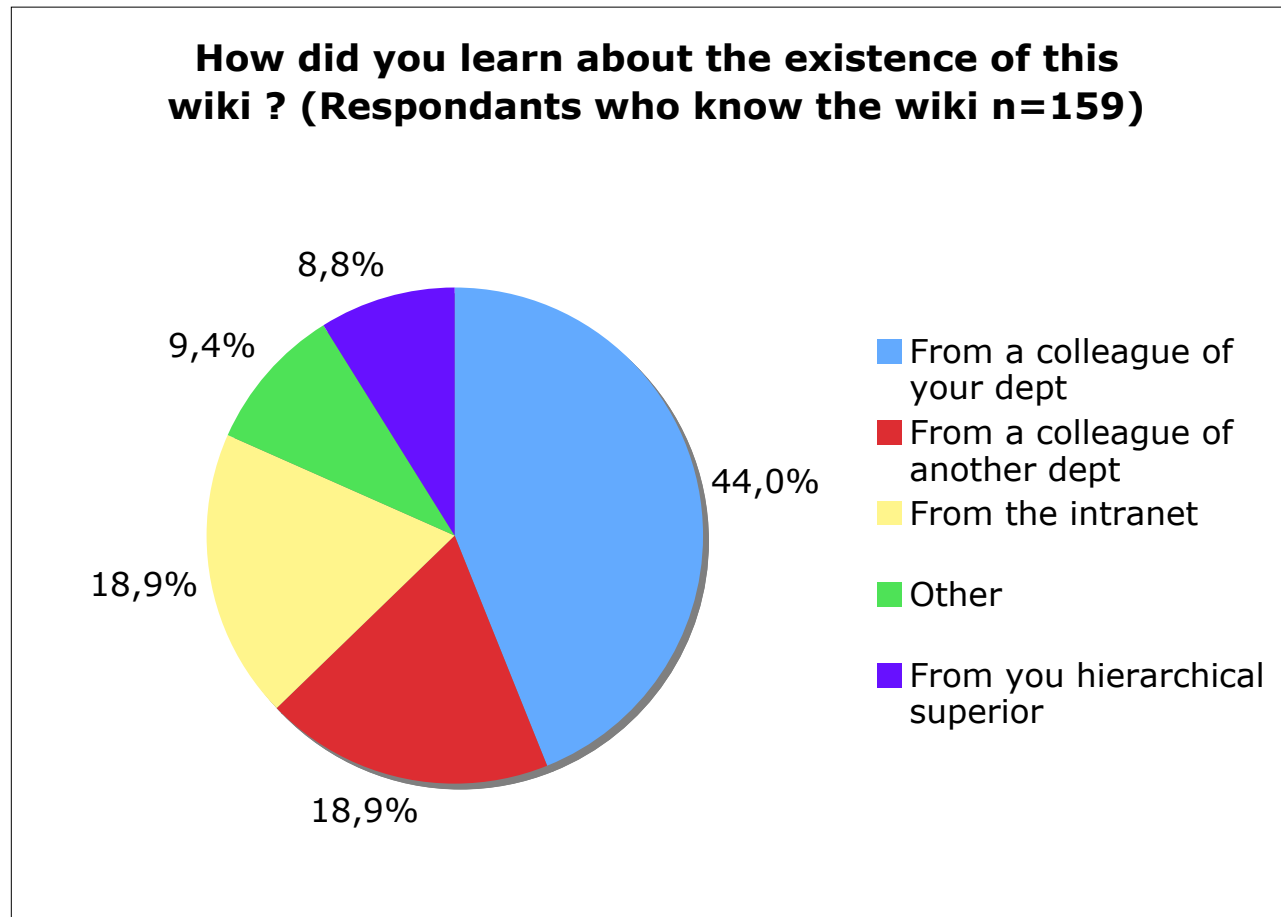
- Field:
  - A corporate wiki launched in fall 2005 based on wikimedia engine
  - More than 900 registered users
  - 403 contributors amongst them
  - More than 4000 edited pages
  
- Method:
  - An extensive literature review on corporate use of cooperative tools
  - A research mixing qualitative and quantitative data
  - Qualitative: In depth interviews with 15 contributors and 15 lurkers (active readers who never contribute)
  - Quantitative: an on-line survey that cover a larger scope of wiki users as well as non users (n=389)

## Diffusion process (1)

- The wiki has been launched by a small number of employees according to individual and local initiatives
- This group still represent the hard core of the most contributing users
- Initially the wiki was intended to deal with local coordination problems and to improve collaborative work processes between team members but it quickly spread to other parts of the organization
- The management let users appropriate the tool without any constraint or restriction and then institutionalize the wiki
- The wiki diffusion was largely influenced by employee's mental representations of "how the wiki should be used to..." and the way they discovered its existence (work mate, team member, foreman, organization, ...)
- We faced here a typical case of bottom up innovation process that lead us to analyze the key factors of diffusion success and failure, and t

## Diffusion process (2)

Viral diffusion works in corporate settings as well as in the public sphere



## Appropriation: critical elements (1)

- **Classically, the ease of use appear as the most critical element for wiki appropriation by users**

Perceived Ease of Use is contrasted among user

- Acknowledge as evident for some of them
  - « No, there wasn't any problem to get used to the wiki tool »
  - « Yes, pretty easy, yes. I don't know, I get on right away »
- Less obvious for others
  - « Everyone can modify an entry. But everyone can't creat a whole page at the first use »
  - « For me, it was a bit difficult to appropriate the tool because of the divers ways people structured information amongst programs »
- Totally absent for a few
  - « For real, joining a document or an image, it's quite hard, so we won't do it »
  - « We faced a wiki that wasn't practical to add links, the editing process is way to complicated »

## Appropriation: critical elements (2)

- **Appropriation mechanisms depend on multiple modalities**

- With team project logic, wiki appropriation is set up by norms internalization by every team member

- « It's the rule in ANRT (*project name*) »

- « I ask to everyone to put the news and progress in the wiki »

- « So, the foreman sent an e-mail to inform us for wiki use »

- Appropriation partially depends on individual mental representation that contributor do on his audience

- « We thought that people from the administration look at the wiki. So we already have this audience in mind when we edit our content, that's why we don't fill it with too many technical information »

- « Actually, I have more a vision of who "I would like" read my content than who effectively read it »

## Appropriation: critical elements (3)

- **Appropriation is fostered by a smooth articulation with the set of already existing practices of other tools, notably e-mail**

- E-mail remains the most used and easier tool

- « Because I'm quite used to deal with the mail, wiki is recent, but for instance, tools like Pubex (*CMS*), project management tool are quite... harder to use. So, wiki is located in the middle, easier to user than Pubex ... or project management tools, but I use it les than... than e-mail. »

- E-mail enable to initiate a wiki experience

- « Putting it into my signature I have a place where at first glance people can retrieve the presentation instead of putting it as an attachment »  
*(talking about the wiki link that it put under his signature in the body of the e-mail)*

- 68,5% of the respondents had their first contact with the wiki by the mean of a link in a mail

## Appropriation: critical elements (4)

### A dynamic that requires support

- **Appropriation by an insufficient number of user won't generate critical mass and the tool will fall apart**

- The seemingly or real disorganization is an appropriation barrier

- « In spite of it requires a little administration and a regular use, so finally, no one has time to spend on it and concretely we don't use it at all »

- Wiki animation by a hard core of intensive user is necessary

- « That's the dynamic of every site, every web or gathering place, if there's no core with more than one person, I think... being alone is not sufficient and we loose motivation quickly, so, if there's no core of people that take care of up date, events diffusion... Actually, it's normal , it's like all other stuff... it's like a real life club, it ends in a few weeks or months. It's logical. There's no miracle »

## Forms of cooperation (1)

- **Cooperation is induced by the tool but not necessary identify as cooperation**
  - Wiki use fit with institutional proximity cooperation, it will enrich it with a new channel
    - « I used it as a way to work with colleagues for setting up activities presentation pages »
    - « They are from the project team » (*who actually read it*)
  - Cooperation between geographically dispersed team is reinforced
    - « What works well is technical specification. When we have a project dispersed among diverse sites, what we've putted in the wiki, that are these technical specification patterns for enabling co workers to be informed about the state of the project progress at distance »
    - « We also use it because we know that people from UK, Spain, San Francisco and Boston are reading what we do »

## Forms of cooperation (2)

- **Cooperation is induced by the tool but not necessary identify as cooperation**
  - Asynchronous cooperation is improved
    - « no need to wait he finishes the whole development and writes a word document »
    - « A person used it constantly for up dated what she done on her part what enabled the others to progress at the same pace and interact with her writing in the wiki things like “could you specify this part because I need it” »
  - In some cases the wiki only reinforce already existing cooperation
    - « It facilitates a lot communication between colleagues who work on similar activities »
    - « When I participated in the wiki, it was mainly with people that I already knew »

# Forms of cooperation (3)

## Cooperation barriers

- **Cooperation barriers stem from numerous and diverse causes**

- The lack of clarity around the tool's aim inhibit cooperation

- « Initially it was a diffusion tool, even for idea sharing »

- The lack of institutional mark hinder cooperation

- « There's no validation process »

- The centralized management of access permission impede some cooperation

- « We weren't able to work via the wiki because that presented an internal network access with the remote work »

# Wiki as a Knowledge Management tool (1)

- **Wiki is prone to diverse interpretations when considered as a knowledge management tool**
  - « I see it as a library » « the wiki would be like the access page to different documents that are in a library » « The wiki is the drawer with index card except that its intranet links »
  - « I'm head of the ANRT project upon which we have another but actually we don't use it as a communication channel but rather as an access platform to shared documents »
  - «The wiki is rather used for informal things that we want to share, possibly, enriched by others. The e-mail is not really productive. Word documents are too static. Wiki is located between e-mail and word document »

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## Wiki as a Knowledge Management tool (2)

- **Wiki, considered as a knowledge management tools, causes different reactions concerning its ability to do it**
  - Some person, indeed, mention the auto organization libertarian argument
    - « It's an highly interactive tool that foster an "in the course of water"-like edition process »
    - « That's because we don't have to manage where we put the knowledge ...so info, news in brief, are fill in a batch. There a research engine that enable to search! »
  - But a majority remains in a structuration logic
    - « Everyone will use it coming with its own touch and it will difficult for me to retrieve the information because there's no shared rule between users »
    - « Limits are not at the tools level, limits are at the quantity of information that we process and the way they evolve »

# Wiki as a Knowledge Management tool (3)

## Browsing and Knowledge Management

- **Browsing represent a strong limit when the wiki is intended to be used as a knowledge management tool**
  - “In the course of the water”-browsing don't fit with knowledge management expectations (*Highly related to the wikimedia engine*)
    - « I don't find browsing easy: everyone has the initiative to put links wherever he wants, so there's no uniformity. It happened to me to get on a page where there was no mean to get back. The only mean I found was to use the home page button »
    - « I confess that I lose myself a lot »

## Concluding thoughts

- Companies are more and more open to experiment new collaborative tools emerging from the private sphere under the label “Web 2.0”. They have less and less fear of unintended effect of loosen control and security culture.
- Viral diffusion process witnessed in the private sphere works as well as in corporate settings but requires a fine tuning of the organizational involvement on regulation and management topics. Too supervision kills innovative behaviours and too free uses blur the aim of the tool and its results.
- Cooperation is improved essentially at the team project level, for geographically distant team purpose, and for asynchronous cooperation. For unknown co-worker, cooperation requires a shared rule formation.

## Concluding thoughts

- Wiki as a Knowledge Management tool requires that editing norms and knowledge sharing norms are common at the organizational level. The management line has an important role to play in formulating precise guideline and in clarifying the aim of the tool as well as to inform employees about the wiki existence and its position in the existing Information System.
- Our research lead us to address the individual dynamic that impulse innovation and diffusion of web 2.0 tools in corporate settings. In parallel we saw that companies have to find a fine tune grain concerning their strategy between openness for foster fruitful employee's innovative behaviour and the directive to give employees a comprehensive view of the tool's aim.

Thank you.  
Any Questions ?

