

USING WIKI AS A CORPORATE KNOWLEDGE SHARING SYSTEM

Alexandru Bajenaru Ph. D Student
Academy of Economic Studies Bucharest
Faculty of Commerce
Bucharest, Romania

Abstract: : The business world is changing at a fast pace. The multinationals, the relocation of the production centers, the virtual integration trend of companies, the ubiquitous text, audio and video communication channels and devices, the overwhelming amounts of information, the power of the new consumer, are all signs of these changes. The economy is switching from a physical resources oriented, to an information and knowledge oriented one. The most important resource a company has becomes the human resource, the people of the organization, with the information and knowledge they possess and use to deal with the everyday challenges. Beginning with getting an insight into the concepts of information and knowledge, the purpose of this paper is to evaluate the benefits of a Wiki as a collaborative knowledge sharing platform, able to harness the collective knowledge of a company in the highly competitive today's knowledge economy.

JEL classification: M14, M15, M21

Key words: wiki; social networks; collaborative knowledge network; collective knowledge; web 2.0 technologies

1. INTRODUCTION

Collaboration is one of the central concepts in what it's called the new economy. The web and the globalization are impressive forces that have the power to change from the roots the way companies act. Traditionally, it was about guarding one's company valuable secrets, it was about strict and robust hierarchies, about owning inside the company as much as possible to limit the dependence of the company from outsiders, especially suppliers, that were considered almost enemies, in the meaning of the continuous struggle to maximize the benefits out of every transaction, regardless of the outcomes for the so called partners. In the new economy, novel ways of doing business appeared, like total quality management (TQM) or outsourcing strategies, and getting recently to the virtual integration and the power of the consumer. It becomes increasingly important in today's reality the strong and lasting relationship that one company has to develop with its suppliers and clients, if one company wants to be competitive in an economic world that is today more about openness and sharing than about being closed and secretive (1).

The web has changed also, being maybe one of the most prominent supporters of the consumer in the transition to the empowered, demanding, pretentious that he is today. People use blogs, Wikis and video platforms like YouTube to express themselves openly on the web, tags to find and help others find more easily what they are looking for,

¹ Tapscott, D., Williams, A. D., "Wikinomics: how mass collaboration changes everything", Penguin Group, pp. 40, 2006

Google's suggest function to shortcut through the enormous maze the Internet represents, webinars to learn on the web, RSS to effortlessly keep track of the things they are interested in, social networks to keep in touch with friends, colleagues and partners, online games to spend their free time, all under one big umbrella of technologies and functions reunited under the web 2.0 revolutionary concept. And it is no different in companies either, although at a different pace, but the people taking the new technologies inside the company, and the company slowly learns how to put all these tools at work for the benefit of the company.

It is a world of abundant information, and of sharing and knowing, and the companies are trying to harness that wealth of information to stay on top, and keep an edge over his competitors. It is common knowledge that information today means power, so companies are using a variety of tools to acquire, store and find the best use for the information it can obtain. And because the information doesn't flow by itself, but it is managed by people, companies are, and the ones that are not, should understand the constant growing value of the human resources as keepers, creators and users of the information.

The aim of this paper is to look into the information and knowledge concepts from an organization point of view, evaluate the essential aspects of the information management and knowledge sharing processes in the company, and present the benefits of the Wiki as a knowledge sharing platform inside an organization, as a mean to support better knowledge sharing in a highly competitive, information dependant economic environment.

2. THE HUMAN RESOURCES AS THE MOST IMPORTANT RESOURCE FOR COMPETITIVE ADVANTAGE

There are several factors in achieving a competitive edge over the competition. One could be the physical position of the factory or store in relation to his suppliers and/or clients or consumers. Another one is the technology needed in a particular productive sector, so the better the technology, better products come out of the factory, faster, offering higher productivity and lower production costs, and better chances to compete. The cost of technology, especially in manufacturing sectors, was, and still is, a major cost barrier for new entrants that seek to develop a business in that sector. But in today's economy, services become increasingly important, and the "production" of services is many times dependant only on know-how, rather than on technologies, tools or heavy machines. Speaking about information and communication technology (ICT), in the early days there were similar cost barriers, with the EDI and proprietary channels and applications, but today IC technologies are much less expensive, much more affordable, ubiquitous and many times even free. For a long period of time, ICT seemed to be the ultimate tool, the ultimate panacea for all organizational problems. But after the initial wave of excitement, companies realized that computers are here to automate things, to do the routine work and handle with precision large amounts of data, and the ICT, generally speaking, was here to facilitate the flow of information towards where it was needed, and not to solve problems in itself, just by putting them in place. It was the employee, who is actually using the computer, the automated process, the software, the employees are the force that determine whether an ICT implementation works and pushes the company up the value scale, or fails (^{2,3}). So, when technology is, or tends to be no more a source of competitive advantage,

² Hugos, M., "Essentials of Supply Chain Management", John Wiley & Sons, Inc., pp. 246-247, 2003

³ Yamamoto, G. T., Karaman, F., "Barriers to E-Procurement Adoption:

when the Internet offers the possibility to sell and buy virtually to and from anybody no matter the distance, when the competition is “just one click away”, the human resource remains probably the only true source for competitive advantage (^{4,5}).

Focusing on ICT, there still exist an ongoing debate about the large number of failures in implementing e-business solutions. Enterprise resource planning (ERP) implementations that failed, installed client relationship management (CRM) systems that never delivered the expected return on investment (ROI), efforts to integrate legacy systems that never achieved results. The debate still exists on whether the fault is on the technology, or the people involved, but the balance appears to be inclining on the people side, because ICT are recognized as disruptive technologies that require an open organizational culture in order to succeed (⁶). Also, it is acknowledged that often exist a delay between the moment of the actual investment and implementation of ICT and the moment when it starts to offer results, delay that could be explained by the same fact that people need to learn, adapt and understand the benefits of the new systems to use it properly and make it work (⁷).

In the information economy, the keeper of the information from the management point of view is the employee, so they must be treated accordingly. Many companies state that their main and most important resource is the people within the company, but many fail to prove it acting against these statements in difficult economic situations (⁸). In harsh economic times, like the current global crisis, companies tend to get rid of the employees, because it is a cost that can be faster reduced than, for example, selling a production line. Also, the new technologies require new skills, so the “old” employees have to deal with the idea that if they do not adapt quick enough, they will be replaced. All of this is true, but in the information economy, also known as the knowledge economy (⁹), companies should understand the importance of the human resources, the importance of the human resources management and strategy, the need of a plan regarding the human resources, through methods of training and organizational learning, to maximize the productivity of the human resource, once it is freed from routine work (¹⁰).

3. APPROACHES IN KNOWLEDGE AND KNOWLEDGE MANAGEMENT DEFINITION

The data is considered as being a simple signal or fact, while information represent data that has a meaning, or value for the receptor of that information. Knowledge could be considered as the next step above information in terms of complexity, as containing information but also abilities and understanding built on information, that help the keeper of the knowledge in problem solving and decision making (^{11, 12}). There are even authors

The Turkish Case” in Pani, A. K., “E-procurement in emerging economies : theory and cases”, Idea Group Inc., pp. 120, 2007

⁴ Fletcher, P. A. K., “From Personnel Administration to Business-Driven Human Capital Management: The Transformation of the Role of HR in the Digital Age”, in Gueutal, H. G., Stone, D. L., “The brave new world of eHR : human resources management in the digital age”, Jossey-Bass, pp. 20, 2005

⁵ Goodman, J. A., “Strategic customer service”, Amacom, pp. 169, 2009

⁶ Chaffey, D., “E-Business and E-commerce Management”, 4th Ed., Prentice Hall, pp. 29, 2009

⁷ Hawking, P., Foster, S., Stein, A., “A B2E Solution: Change Management Perspectives”, in Singh, M., Waddell, D., “E-Business Innovation And Change Management”, Idea Group Inc., pp. 129, 2004

⁸ Wilson, T.D., “The nonsense of ‘knowledge management’”, in Information Research, vol. 8, No. 1, pp. 28, October 2002

⁹ ****, OECD, Knowledge-Based Economy definition, September 2005, <http://stats.oecd.org/glossary/detail.asp?ID=6864> – extracted, 26.02.2010

¹⁰ Singh, M., “Innovation and Change Management”, in Singh, M., Waddell, D., “E-Business Innovation And Change Management”, Idea Group Inc., pp. 15, 2004

¹¹ Nicolescu, O., et al., “Sistemu informational managerial al organizatiei”, Editura Economica, pp. 141- 142, 2001

¹² Chaffey, D., “E-Business and E-commerce Management”, 4th Ed., Prentice Hall, pp. 590-591, 2009

that believe that there is yet another level of complexity above knowledge, wisdom, needed to deal with the most complex and unstructured situation dealt in company reality (¹³).

But the true debate is over knowledge management. Starting from the roots, there are specialists considering that knowledge is only in people's heads, thus it cannot be managed. Data and information can be managed but knowledge cannot. Knowledge is what one individual knows, and he applies that knowledge to solve the everyday challenges. The knowledge is an interpretation and combination of information, used to solve a specific problem, by a specific individual, in a specific context, at a specific time. The same individual, facing similar problem but in different context could use the information he holds, combining them to produce new knowledge, and solve the problem in the new context. Another individual, possessing the same information, could interpret them in other ways, thus creating different knowledge. When one individual shares the knowledge he has on a certain topic, the receiving individual sees that knowledge as information, and he will use that information to create his own knowledge. So, from a sender point of view, it can be called knowledge sharing, and from a receiver point of view, it becomes information sharing. Speaking from an individual point of view, if that knowledge is intended to be captured and stored to be reused, it could happen, but in the form of information, that can indeed be stored. From this angle, one could see the knowledge sharing process, but not the knowledge management, but rather the information management (¹⁴, ¹⁵, ¹⁶, ¹⁷).

As the individual is the basic entity in the human society, the company is the fundament of the economy. Considering all the above about information and knowledge, but taking it up, from the individual point of view to the company's, the theory should be maintained, and one could argue that organization also possesses knowledge, not only individuals. When considering complex activities, like building an automobile, it is understood that the knowledge to build that automobile is the company's knowledge, not of an individual, because (although there could be exceptions) no single individual could have all the knowledge on such complex process. That leads to collective knowledge, and in particular corporate knowledge, as the combination of information, experiences and corporate skills needed to solve problems of an organization. The company's knowledge resides in its written procedures, but also in the heads of his employees.

There are three types of knowledge: explicit, implicit and tacit. The explicit knowledge is the knowledge expressed and shared in an organization, as the written work procedures that specify how a task should be conducted, while the implicit knowledge is the knowledge perceived by the keeper but not expressed. This knowledge exists in the heads of the employees, they are aware of its existence and make use of it when needed, like when they have to react to a situation that has no written procedures about it, but they do not express it until asked to do so. Tacit knowledge on the other hand, although there are opinions that consider implicit and tacit knowledge to be synonyms, it is best described as hidden knowledge, hidden even from the keeper itself, that doesn't know he knows it, forgot about it, or could find impossible to express that knowledge. While explicit

¹³ Wen, Y.-F., "An effectiveness measurement model for knowledge management", in Knowledge-Based Systems, Elsevier, pp.1, 2009

¹⁴ Wilson, T.D., "The nonsense of 'knowledge management'", in Information Research, vol. 8, No. 1, pp. 3,11,13, October 2002

¹⁵ Debbie, R., "A social software/Web 2.0 approach to collaborative knowledge engineering", in Information Sciences, Elsevier, pp. 2, 2009

¹⁶ Compton, P., Jansen, R., "A philosophical basis for knowledge acquisition", Academic Press Limited, pp. 1, 1990

¹⁷ Meloche, J.A., Hasan, H., Willis, D., Pfaff, C.C., Qi, Y., "Cocreating Corporate Knowledge with a Wiki", in International Journal of Knowledge Management, Vol. 5, IGI Global, pp. 7, 2009

knowledge is already captured in different forms in the organization, implicit and tacit knowledge are more difficult to identify, and capture, for the reuse (^{18, 19, 20}). As an example, there are specialists that consider that inside an organization processes can be divided in two main categories – canonical and non-canonical. The canonical business processes refer to the specifications and official procedures of a job or task, where explicit knowledge is involved, while the non-canonical refer to what actually happens every time the same job is carried out, when the knowledge worker, the worker that creates and uses knowledge (²¹), is using the implicit knowledge to solve the unique issues that might arise (²²).

4. KNOWLEDGE-RELATED ACTIVITIES AND TOOLS

The most important activities related to the knowledge concept are the creation, retention, sharing and using of knowledge.

There are various ways to create knowledge – individually or as a team, by induction or deduction, learning and training, brainstorming, from external consultants and so on. The knowledge created can be of any type – explicit, implicit or tacit, and every type of knowledge is important to be developed, because one type of knowledge can stimulate and help to obtain the other types, through socialization, externalization, combination or internalization (^{23, 24}).

While all types are important in the long term, the only type of knowledge the company can capture, or store, is the explicit one. While implicit knowledge resides unexpressed in employees' minds, and the tacit knowledge remains hidden, the explicit knowledge, in the form of information, can be identified, stored, organized, managed.

The sharing process probably is one of the most complex in knowledge-related activities, because it can on one side share directly explicit knowledge, through the use of intranet technologies for example, but also participate in the creation of knowledge, through mind stimulation social activities, where explicit knowledge can be passed on, but also can provide the needed context to stimulate implicit knowledge creation.

Using the knowledge is the ultimate, and most important goal in an organization. Knowledge is created, stored and shared to the end of being used, to enhance the company's performance, to allow the company to be more competitive in its environment (^{25, 26}).

The e-mail, intranet, electronic mediated groups, video-conferences, FAQ's, webinars, Wikis, are modern tools that support the creation, sharing, storing and the use of knowledge. And if the human resource is the most important one, then the company should

¹⁸ Chaffey, D., "E-Business and E-commerce Management", 4th Ed., Prentice Hall, pp. 591, 2009

¹⁹ Wilson, T.D., "The nonsense of 'knowledge management'", in Information Research, vol. 8, No. 1, pp. 23-25, October 2002

²⁰ Vandaie, R., "The role of organizational knowledge management in successful ERP implementation projects", in Knowledge-Based Systems, Elsevier, pp.2, 2008

²¹ Meloche, J.A., Hasan, H., Willis, D., Pfaff, C.C., Qi, Y., "Cocreating Corporate Knowledge with a Wiki", in International Journal of Knowledge Management, Vol. 5, IGI Global, pp. 3, 2009

²² Vandaie, R., "The role of organizational knowledge management in successful ERP implementation projects", in Knowledge-Based Systems, Elsevier, pp.4, 2008

²³ Huang, J.-J., "The evolutionary perspective of knowledge creation – A mathematical representation", in Knowledge-Based Systems, Elsevier, pp. 1,3, 2009

²⁴ Wilson, T.D., "The nonsense of 'knowledge management'", in Information Research, vol. 8, No. 1, pp. 24, October 2002

²⁵ Wen, Y.-F., "An effectiveness measurement model for knowledge management", in Knowledge-Based Systems, Elsevier, pp.2, 2009

²⁶ Chaffey, D., "E-Business and E-commerce Management", 4th Ed., Prentice Hall, pp. 591, 2009

concentrate in maximizing the use of this resource, by creating an environment that favor the development of the employees, and the development of the collective knowledge (²⁷).

5. WIKI AS A KNOWLEDGE SHARING PLATFORM

Organizations try to capture the knowledge in the form of information, to organize it in order to facilitate the use and improvement of the information for the benefit of the company (²⁸). This has been done even before the ICT era, but the ICT proposed a multitude of tools to help with that aspect.

Traditionally, the company thought that could capture all the significant knowledge, either explicit or implicit, in special designed databases, but researchers found that the process of building the databases, and the capturing of knowledge was costly and time consuming. Even more, the traditional approach was top-down, with very few people inside the organizations being responsible to build, for example, comprehensive intranet databases, containing highly structured information, on all topics that were considered important, with no or little implication from the other knowledge workers (²⁹).

Communication for knowledge workers is being carried out in two ways – by channels, like e-mail or instant messaging services (IM), or by the use of platforms, like intranets, websites or portals. While the channels are private ways of communicating and information sharing, the sender and receiver of the message being the only ones able to access the information, the platforms are more open, with few people posting information available for a larger group of employees. Studies revealed that people prefer to use channels rather than platforms, but also revealed that in knowledge related aspects, neither one of the above technologies fully satisfies the needs of the knowledge workers (³⁰).

Knowledge was considered in a classical manner the work of experts. The experts were the ones that created and offered their knowledge to the other employees. Also, it was a comfortable way for top management, that could control the process, and approve what should be learned and done in the organization. But there are shortcomings to this approach. For one, experts have their field of expertise, which is generally narrow, so for complex issues, there was need for collaboration (³¹) between smaller or larger group of experts, that could or could not be available, or the company able to afford them. Because of the fact that the work of the expert should not be questioned, it had to be verified before the dissemination, and also because the hierarchical system, there was a delay, sometimes significant, between the moment of the actual creation of the knowledge, and the moment of sharing that knowledge (³²). In today's dynamic economy, time matters more than it did 10 or 15 years ago.

Collaboration is becoming a crucial element in the business environment. Once acting like separated silos of information, today the company's departments must be linked in a continuous flow of information, to be able to respond in a timely manner to the requirements of the market. If the traditional approach between suppliers and clients was of aggressive competition, today more and more companies choose to integrate into their

²⁷ Chaffey, D., "E-Business and E-commerce Management", 4th Ed., Prentice Hall, pp. 591, 2009

²⁸ Meloche, J.A., Hasan, H., Willis, D., Pfaff, C.C., Qi, Y., "Cocreating Corporate Knowledge with a Wiki", in International Journal of Knowledge Management, Vol. 5, IGI Global, pp. 2-3, 2009

²⁹ *Ibidem*.

³⁰ McAfee, A.P., "Enterprise 2.0 The Dawn of Emergent Collaboration", in MIT Sloan Management Review, Vol. 47, pp. 3-4, Spring 2006

³¹ Hu, C., Racherla, P., "Visual representation of knowledge networks: A social network analysis of hospitality research domain", in Hospitality Management, Elsevier, pp. 3, 2007

³² Lykourantzou, I., Papadaki, K., Vergados, D.J., Polemi, D., Loumos, V., "CorpWiki: A self-regulating Wiki to promote corporate collective intelligence through expert peer matching", in Information Sciences, Elsevier, pp.1-2, 2009

corresponding supply chain, and outsource everything that is not crucial for their business. The same way, the need for collaboration inside the company between the knowledge workers becomes consistently important, although the majority of companies are not comfortable with too much openness and sharing, preferring the closeness and control and the top-down approach⁽³³⁾.

With the advent of the web 2.0, the social networks, the individual contributions and sharing were more common, and people started to use them more and more not only in their personal, but also in their professional life. This trend became Enterprise 2.0, as in the web 2.0 tools used to the benefits of the organizations⁽³⁴⁾. As Enterprise 2.0 emerged, social network systems appeared as an alternative to the classical expert knowledge systems, the second being characterized as a system with one expert offering explicit knowledge to many employees, while in the first case the group or community shares explicit knowledge to let individuals create their own knowledge and share it in return⁽³⁵⁾.

A Wiki is a linked system of editable web pages. The Wiki pages are created and edited through the browser, without the need of any other special program. Also, the systems keeps track of all the changes that occur inside each page. Because of these characteristics, mainly simplicity, edit ability, traceability, the Wiki is well suited to store and share information, and give the possibility to learn in a participative, collaborative manner. A Wiki allows an individual to create a Wiki page on a topic, and all the other members of that community could edit it, make comments, make changes, eliminate or add content to that page, and all of these changes are recorded, so everybody could see who changed when^(36, 37).

In the traditional manner, corporate knowledge was stored in information portals or websites, stored in the organization's intranet. As already stated, the information was there by the work of a few, experts and "guardians" of the information, and disseminated to the large mass of knowledge workers. There was no participation, almost no involvement from the part of the knowledge workers, they were only accumulating the information that was given. The interactive part, was through the channels like e-mail or IM, but that knowledge that was being shared remained for the eyes of only a few each time an e-mail was sent or received. The Wiki comes to give the power to the people, in what it is called the "wisdom of the crowds", "crowdsourcing" or "crowdpower", giving the power of the collective knowledge to the community, that is actively taking ownership of the information, creates and improves the group knowledge, leading to what it is believed to be the collective wisdom, the work of many that, if a critical mass is achieved, should produce better results than the work of a few, even experts^(38, 39, 40).

³³ Meloche, J.A., Hasan, H., Willis, D., Pfaff, C.C., Qi, Y., "Cocreating Corporate Knowledge with a Wiki", in *International Journal of Knowledge Management*, Vol. 5, IGI Global, pp. 2, 2009

³⁴ McAfee, A.P., "Enterprise 2.0 The Dawn of Emergent Collaboration", in *MIT Sloan Management Review*, Vol. 47, pp. 4, Spring 2006

³⁵ Debbie, R., "A social software/Web 2.0 approach to collaborative knowledge engineering", in *Information Sciences*, Elsevier, pp. 1, 2009

³⁶ Meloche, J.A., Hasan, H., Willis, D., Pfaff, C.C., Qi, Y., "Cocreating Corporate Knowledge with a Wiki", in *International Journal of Knowledge Management*, Vol. 5, IGI Global, pp. 2, 2009

³⁷ Ravid, G., Kalman, Y.M., Rafaeli, S., "Wikibooks in higher education: Empowerment through online distributed collaboration", in *Computers in Human Behavior*, Elsevier, pp. 3, 2008

³⁸ Meloche, J.A., Hasan, H., Willis, D., Pfaff, C.C., Qi, Y., "Cocreating Corporate Knowledge with a Wiki", in *International Journal of Knowledge Management*, Vol. 5, IGI Global, pp. 3, 2009

³⁹ Lykourantzou, I., Papadaki, K., Vergados, D.J., Polemi, D., Loumos, V., "CorpWiki: A self-regulating Wiki to promote corporate collective intelligence through expert peer matching", in *Information Sciences*, Elsevier, pp. 2, 2009

⁴⁰ Fitz-Gerald, S.J., Review "e-Preneurship—From Wall Street to Wiki", in *International Journal of Information Management*, Elsevier, pp.1, 2008

Social networks are about knowing people, social knowledge networks are about knowing what others know. It is believed among specialists that there is a strong positive relationship between knowledge creation and social networks, because social networks create the basis for good relationships, stimulate interactions and dialogue, becoming a tool that allows one individual to connect to another that has the right knowledge, and who is willing to share it (⁴¹, ⁴², ⁴³). Researchers state that if in the classical approach people were forced to give away their knowledge, through social networks they are doing it willingly, and find satisfaction in sharing the knowledge they possess (⁴⁴).

Knowledge workers react differently to a Wiki type of tool. There is a first group, individuals well acquainted to the web technologies, that participate in a Wiki just for the satisfaction of contributing, and of creating, and sharing of the information, motivated by the openness of the system and the sense of authorship and ownership of the information. These are the individuals that spent the most time in a Wiki environment, creating a lot, even if not all if useful or meaningful for the organization. A second group, a more pragmatic type of individual, that is driven by a clearer scope or objective, like improving the customer satisfaction, or their reaction to the outside factors, that create knowledge but also sort and categorize previously created information to be able to easily locate and use when needed. And there is a third group, the traditionalists, mainly workers that were not “raised” in the digital age, that will participate if imposed through hierarchical system, and that will try harder than the other individuals to input only what they believe is necessary and valuable for the organization, and do it by struggling with the Wiki as a rather uncomfortable new technology (⁴⁵).

From a global perspective, Wikipedia is a landmark regarding Wiki technology and use, providing the most successful example of collaborative work. People from all around the globe is involved in creating and improving it, with the help of nothing more than a web browser and ones knowledge. And although there are voices that claim Wikipedia is not a trustful source, and the quality of the articles is questionable, and even Wikipedia itself says it should not be cited in academic research, Wikipedia is providing decent quality information, at hand and ease of use, and could provide a starting point for more in depth research (⁴⁶). Even more, recent studies contradict the arguable quality of Wikipedia’s articles, also in high expertise fields like surgery and medical information (⁴⁷). But moving away from the public Internet, organizations and institutions around the world are taking the Wiki seriously, perceiving the benefits and using it to enhance their performance. From more obvious examples from the ICT world like IBM and Microsoft, to multinational pharmaceutical and oil companies, to famous museums like The

⁴¹ Jones, P.M., “Collaborative Knowledge Management, Social Networks, and Organizational Learning”, NASA Ames Research Center, Human Factors and Technology Division, pp.3, http://human-factors.arc.nasa.gov/publications/collab_know_paper.pdf - extracted 23.02.2010

⁴² Hu, C., Racherla, P., “Visual representation of knowledge networks: A social network analysis of hospitality research domain”, in Hospitality Management, Elsevier, pp. 2, 2007

⁴³ Gibson, S., “Web 2.0 tools gain enterprise acceptance”, eWeek, New York, Vol. 26, pp.1, April 2009

⁴⁴ *ibidem*, pp.2

⁴⁵ Meloche, J.A., Hasan, H., Willis, D., Pfaff, C.C., Qi, Y., “Cocreating Corporate Knowledge with a Wiki”, in International Journal of Knowledge Management, Vol. 5, IGI Global, pp. 13, 2009

⁴⁶ Tumlin, M., Harris, S.R., Buchanan, H., Schmidt, K., “Collectivism vs. Individualism in a Wiki World: Librarians Respond to Jaron Lanier’s Essay “Digital Maoism: The Hazards of the New Online Collectivism “”, in Serials Review, Elsevier, pp.7, 2006

⁴⁷ Devgan, L., Blakey, B., “Wiki-Surgery? Internal validity of Wikipedia as a medical and surgical reference”, in [Journal of the American College of Surgeons](#), Vol. 205, Elsevier, September 2007

Smithsonian, and to the CIA and US Department of Defense, all are success examples of embracing the benefits of a Wiki as a knowledge sharing platform (^{48, 49, 50, 51}).

a. Critical factors in Wiki success

For a Wiki to be functional, there are a few requirements, a few critical factors that determine its success: culture, management support, simplicity and usability, commitment of users, single platform system (^{52, 53, 54}) (Fig. 1).

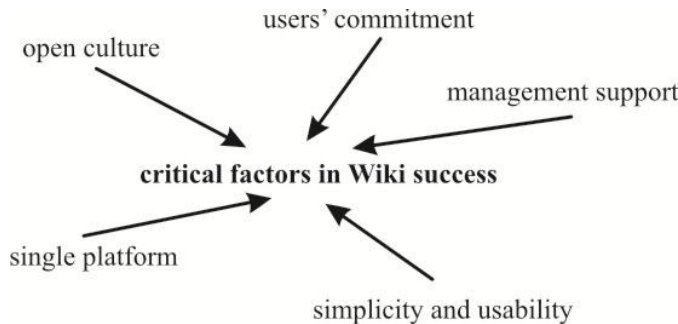


Figure no. 1 – Critical factors in Wiki success

The culture factor refers to the openness of the organizational culture, that is essential for a Wiki project to succeed. In fact, every disruptive, new, companywide system or technology has the same demand – it needs a culture that is open, that supports a learning organization, supports the share of knowledge, and understands the benefits of combined top-down/bottom-up, formal and informal approach to knowledge creating and sharing.

Again, as any other similar broad new system, a Wiki needs management support, and also involvement. This kind of openness provided by the Wiki is new for the organization as a whole, but for the individual knowledge workers as well. So, especially at the beginning, it might not be sufficient for senior managers to install, approve and recommend the use of the Wiki, but they should also serve as examples, and use the system themselves to promote it.

A Wiki is a simple tool, and that is one of the major advantages of this technology. It must be kept simple, advanced functionality must be sacrificed in order to encourage the use of every, more or less ICT savvy, knowledge worker. Simplicity must facilitate usability, the functions embedded in the Wiki must offer simplicity and ease of use in terms of editing, categorizing, searching and finding, and using the information.

⁴⁸ ****, “DOD 'WIKI' INCREASES TECHNICAL COLLABORATION”, in US Fed News Service, Including US State News.Washington, D.C.: February 2010,
<http://proquest.umi.com/pqdweb?did=1952737111&sid=1&Fmt=3&clientId=63820&RQT=309&VName=PQD> – extracted 23.02.2010

⁴⁹ Chaffey, D., “E-Business and E-commerce Management”, 4th Ed., Prentice Hall, pp. 596, 2009

⁵⁰ Long, E., “Smithsonian Goes Wiki”, in Government Executive, Washington, Vol. 42, January 2010,
<http://proquest.umi.com/pqdweb?did=1938700251&sid=1&Fmt=3&clientId=63820&RQT=309&VName=PQD> – extracted 23.02.2010

⁵¹ Gibson, S., “Web 2.0 tools gain enterprise acceptance”, eWeek, New York, Vol. 26, pp.1, April 2009

⁵² Debbie, R., “A social software/Web 2.0 approach to collaborative knowledge engineering”, in Information Sciences, Elsevier, pp. 2, 2009

⁵³ Meloche, J.A., Hasan, H., Willis, D., Pfaff, C.C., Qi, Y., “Cocreating Corporate Knowledge with a Wiki”, in International Journal of Knowledge Management, Vol. 5, IGI Global, pp. 15, 2009

⁵⁴ McAfee, A.P., “Enterprise 2.0 The Dawn of Emergent Collaboration”, in MIT Sloan Management Review, Vol. 47, pp. 7-8, Spring 2006

A Wiki means nothing without the users. The knowledge workers have to understand the Wiki and their benefits, have to embrace the new system and use it in order to offer proper results. They have to be trained and motivated to use the Wiki, the Wiki has to be made part of their job description, especially for those categories of employees that tend not to participate, even though, it always must be remembered that knowledge could only be volunteered (⁵⁵).

A single platform is needed because otherwise the organization will end up with a series of information silos, with poor communication between them, poor retrieval and overall poor sharing capabilities.

b. Company's benefits from Wiki technology

The Wiki is simple, so there is no necessity for expensive and time consuming training sessions. The Wiki benefits from the diversity of its contributors, on the independence and decentralization of the employees, that have different backgrounds and expertise levels, and are facing different contexts and even cultures, and can offer innovative answers from innovative points of view. Another advantage of the Wiki resides in the power of aggregation, by allowing an article to be edited and improved until it reaches collective consensus. Continuing the idea, the Wiki demonstrated that by having more contributors, achieves better performance, more users participate, the better finished and precise is the final result, this being the reason why a Wiki may offer good and swift solutions even when it has to deal with large number of users, and huge amounts of information. A Wiki offers traceability, so the previous versions could be seen and evaluated by those who seek a solution to an issue. Also, the traceability in turn allows control, by indentifying who changed what, and be able to hold responsible the ones that act with malevolence. The Wiki promotes ownership, responsibility and the feeling of giving back to the community, that could “per se” induce higher motivation than a financial incentive. A single platform Wiki system offers a centralized yet flexible and worldwide accessible source of information for a company, with special benefits for the highly decentralized companies that have multiple offices around the world (^{56 57 58 59 60 61}) (Fig. 2).

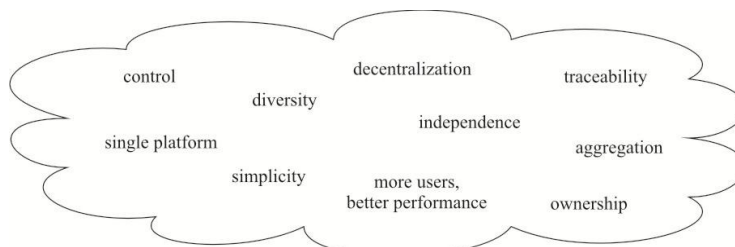


Figure no. 2 – Company's benefits from Wiki technology

⁵⁵ Chaffey, D., “E-Business and E-commerce Management”, 4th Ed., Prentice Hall, pp. 593, 2009

⁵⁶ Debbie, R., “A social software/Web 2.0 approach to collaborative knowledge engineering”, in Information Sciences, Elsevier, pp. 3, 2009

⁵⁷ Lykourantzou, I., Papadaki, K., Vergados, D.J., Polemi, D., Loumos, V., “CorpWiki: A self-regulating Wiki to promote corporate collective intelligence through expert peer matching”, in Information Sciences, Elsevier, pp. 2, 2009

⁵⁸ McAfee, A.P., “Enterprise 2.0 The Dawn of Emergent Collaboration”, in MIT Sloan Management Review, Vol. 47, pp. 7, Spring 2006

⁵⁹ Ligdas, N., “Using a wiki portal to support operational excellence at Shell”, in Knowledge Management Review (Online), Chicago, October 2009, <http://proquest.umi.com/pqdweb?did=1904057361&sid=1&Fmt=3&clientId=63820&RQT=309&VName=PQD> – extracted 25.02.2010

⁶⁰ Gibson, S., “Web 2.0 tools gain enterprise acceptance”, eWeek, New York, Vol. 26, pp.3-4, April 2009

⁶¹ Tapscott, D., Williams, A. D., “Wikinomics: how mass collaboration changes everything”, Penguin Group, pp. 264, 2006

c. Threats, limitations and possible solutions in Wiki implementation

Some of the Wiki limitations and threats come from the already mentioned requirements. If it is not open, the organizational culture can be a major barrier in implementing a collaborative knowledge sharing platform like a Wiki. If the management doesn't show his support, employees may not have the sufficient stimulus to use the system. If it is not simple and usable, the people will prefer to seek answers somewhere else, like on the Internet. If the knowledge workers do not understand the need and value of the Wiki, and if the use of Wiki does not provide a form of motivation, they will probably not use it. If it is not on a single platform, the wealth of information will become divided, and the aggregation will not happen, and the critical mass needed will probably not be achieved.

Aside from these threats, there is very important issue related to the Wiki style collaboration, and that is the quality issue. There are a lot of specialists concerned about the outcomes of the work of the contributors, because even if they are willing and motivated, they may not have the right information and knowledge on a particular topic, and that could mean misleading articles that could do more harm than good for employees looking for answers. In theory, the more users contribute, the better the result, but one cannot foresee how many iterations could be needed for an article to reach a certain standard or degree of quality. To solve this problem, one proposed solution could be appointed or self-appointed guardians or custodians of information, namely experts or experienced and trusted knowledge workers, that could supervise all articles in their particular field of expertise (^{62,63}). Another solution could be a complex expert peer matching system embedded in the Wiki systems, allowing that once an article is created, even though it is published but without mentioning the author, it is immediately submitted to an iterative process of reviews from individuals considered experts in that particular area, until the article reaches a desired quality standard. When the standard is reached, the article is labeled as compliant, and his author and contributors are revealed, to ensure authorship and motivation (⁶⁴).

Another danger is the possible loss of valuable time in using the Wiki as a new "toy". While some employees might find difficult and challenging the use of Wiki, and others may not have the proper motivation to do so, others may enjoy it too much and end up by neglecting their other tasks. While it is beneficial to have as much contributors as possible, a line has to be drawn, by the management if the employee is not able to do it himself (⁶⁵).

Presented last but not without importance, the difficulty in evaluating the ROI for social collaborative platforms as the Wiki is another important issue. Even if it is not a very expensive tool, it does not need significant hardware resources, does not demand high levels of training, it is still very important to understand whether the Wiki is delivering or not results, and even more, the expected results. One proposed way of evaluation is the

⁶² Lykourantzou, I., Papadaki, K., Vergados, D.J., Polemi, D., Loumos, V., "CorpWiki: A self-regulating Wiki to promote corporate collective intelligence through expert peer matching", in Information Sciences, Elsevier, pp. 3, 2009

⁶³ Ligdas, N., "Using a wiki portal to support operational excellence at Shell", in Knowledge Management Review (Online), Chicago, October 2009,

<http://proquest.umi.com/pqdweb?did=1904057361&sid=1&Fmt=3&clientId=63820&RQT=309&VName=PQD> – extracted 25.02.2010

⁶⁴ Lykourantzou, I., Papadaki, K., Vergados, D.J., Polemi, D., Loumos, V., "CorpWiki: A self-regulating Wiki to promote corporate collective intelligence through expert peer matching", in Information Sciences, Elsevier, pp. 2-4, 2009

⁶⁵ McAfee, A.P., "Enterprise 2.0 The Dawn of Emergent Collaboration", in MIT Sloan Management Review, Vol. 47, pp. 8, Spring 2006

number of users, on the already stated principle “the more, the better” (⁶⁶), but this is somewhat limited, and could be counterbalanced by the excessive loss of valuable time and the high quantity but with poor overall quality of the articles. Another possibility is to evaluate the articles that hit the imposed quality standard, or better said the topics of these articles and to benchmark them against an already developed structure of essential topics from the company’s point of view that had to be covered.

6. CONCLUSIONS

The market of enterprise social software was 280 million \$ in 2007, and it was estimated to reach 1,06 billion \$ in 2012, an increase of almost 400% (⁶⁷). That is another proof that Wiki and other technologies included in the umbrella of enterprise social software are getting acceptance in the business world. The Wiki can be seen as a democratization of knowledge (⁶⁸). Like all technologies, the Wiki has advantages and shortcomings, but there is an increasing effort to find solution to these limitations. As today’s company is working more and more with its “collective mind” rather than with physical resources, a Wiki could represent a powerful tool in the hand of the organization, to harness the individual and collective knowledge and to maximize the benefits provided by the ever more important human resource, to be able to succeed in the highly competitive knowledge economy.

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⁶⁶ Gibson, S., “Web 2.0 tools gain enterprise acceptance”, eWeek, New York, Vol. 26, pp.3, April 2009

⁶⁷ *Ibidem*, pp.2

⁶⁸ Meloche, J.A., Hasan, H., Willis, D., Pfaff, C.C., Qi, Y., “Cocreating Corporate Knowledge with a Wiki”, in International Journal of Knowledge Management, Vol. 5, IGI Global, pp. 15, 2009

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