KM VERSUS ENTERPRISE 2.0:
A FRAMEWORK TO TAME THE CLASH


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**ABSTRACT**

Traditional knowledge management has been characterized by a primarily top down approach. However, this approach is starting to be too far from people expectations. Web 2.0 technologies are changing the way people are communicating and collaborating, offering a more flexible virtual environment. The adoption of these technologies inside a company is called enterprise 2.0.

This research explores the background to the traditional knowledge management approach and describes the strategic potentialities and the conceptual roots of enterprise 2.0. In particular, the aim of this paper is to tame the sceptical position by demonstrating the benefits of social technologies, the major component of enterprise 2.0. Through an empirical study, this paper presents a bottom up framework to highlight new technology potentialities and understand how supporting current users’ needs. Finally, building up both theoretical analysis and empirical study through a pilot project, the paper provides guidelines to help management to adopt enterprise 2.0.

**KEYWORDS**: social network, enterprise 2.0, knowledge management, knowledge sharing
1. INTRODUCTION

Knowledge management (KM) refers to processes and practices through which organizations generate value from knowledge (Grant, 2007). KM can be defined as a systematic discipline and set of approaches to enable information and knowledge to grow, flow and create value in an organization (Rao, 2005). Traditional KM was characterized by a primarily top down approach and by specifying all contents structures in advance (Davenport, 2008). The changes of organizational management and the evolution of external context led to a development of KM approach.

With the passing of time several drivers have contributed to the KM evolution. First of all there is an evolvement in the way knowledge was supposed to be. For example in the 70s and 80s knowledge was managed as a stable and explicit thing; then a more mature perspective saw knowledge as dynamic and constantly changing, describing tacit knowledge as company’s know-how (Gardner, 1983). Other drivers are given by the organizational management approaches and the consequent KM main tasks and focuses. In addition, the available technology was vital to enable and support KM and the evolution of information technology has been very fast continuous during the last decades (Tyndale, 2002). From an IT driven perspective, KM has evolved to a more human orientation, in which people are at the centre. Traditional approach is becoming not suitable anymore, even inside big companies with a consolidated culture (Leidner, et al. 2006). Enterprise 2.0 can help to add greater interactivity into the KM environment, anyway a structured approach is needed.

The aim of this paper is to find the better way to collect users’ perceptions in order to understand real needs and feelings and to know how addressing and exploiting enterprise 2.0 potentialities.

As deeply described in the next pages Enterprise 2.0 is characterized by a bottom up approach and it can be successful only if people are ready to collaborate and share knowledge. For this reason, the main target is to understand the real needs and perceptions of operative users, who are the ones that do the work.

The research methodology is based on the finalization of a questionnaire in order to assess personal behavioural preferences and real needs respect to the current technological offer. The objective is to understand how people like to work and it is not concerned with people’s abilities. With this type of assessment there are no right or wrong answers, but the results can show the real feelings of users. The results can be extremely helpful to managers to address the adequate action plan for a more effective knowledge management.

The questionnaire is based on literature (Ruggles, 1998; Wirzt et al., 2010; Rao, 2005) referring also to practical case studies, such as the Siemens one (Davenport and Probst, 2002). The methodology takes into account the evolution of KM approach during time, which is deeply described in the next section.

Next sections are organized as follows. Section 2 studies the background of traditional KM approach and systems. Section 3 analyses the differences between the traditional KM approach, based on enterprise 1.0, and enterprise 2.0. Section 4 presents the framework and the case study, which describes the application of a pilot project in Eni, an integrated energy company, committed to developing its activities in research, production, transport, transformation and marketing of oil and natural gas. Finally, Section 5 highlights and summarizes the application of the framework.

2. THE BACKGROUND TO THE TRADITIONAL KM APPROACH
Knowledge exists within people, products, and processes (Grant, 2007). From the late 1970s important studies have contributed to understand how knowledge was produced, used, and diffused within organizations (Rogers, 1971; Allen, 1977). By the mid-1980s, the importance of knowledge as a competitive asset was clear, even though most organizations still lacked strategies and methods for managing it (Cleveland, 1985; Drucker, 1988). In those years great attention was paid on artificial intelligence and expert systems, and important concepts as knowledge engineering, acquisition and knowledge-base systems emerged (Barney, 1991; Gardner, 1985). In the late eighties the Sloan Management Review published its first KM related article (Stata, 1989).

In the 70’s and in the 80’s the initial approach to KM assumed knowledge as a sort of stable thing with dimensions and volume (Boulding, 1966). Knowledge was expected to be explicit, structured, organized in taxonomies, and semantically unambiguous (Tuomi, 2002). In this first perspective information could be transformed into knowledge through a theory or a model and knowledge became usable when the context was inflected into the theory (Nonaka and Takeuchi, 1995). The early emphasis was on information systems (Tuomi, 2002). The focus in artificial intelligence research in the 1970s and 1980s was on automated processing of knowledge (Bobrow and Winograd, 1977; Schank and Abelson, 1977; Simon, 1976). Also document and database management systems were growing, due to the increasing capability to store information. The traditional view of KM has treated knowledge in terms of pre-packaged or taken-for-granted interpretation of information, often residing in technological databases (Kogut and Zander, 1992; Malhotra, 2002). The strongly top-down traditional KM approach was an easy consequence of these conditions, enforced by the idea of controlling knowledge through the use and the control of information systems (Senge, 1990).

Subsequent developments in KM have been concerned less with data and more with organizational learning, especially the transfer of best practices, and the management of intellectual properties (Grant, 2007). In the nineties, the interest in knowledge grew as the result of several factors, such as the recognition of the importance of know-how and intellectual capital for the rising of the knowledge-based economy (Grant, 2007). The widespread proliferation of new media such as the internet contributed to the explosion of knowledge management initiatives. By 1990 several well known firms had instituted focused knowledge management programs (March, 1991; Davenport and Prusak, 1998; Wiig, 1997). The concept of KM as an important tool in achieving greater innovation was consolidating (Grant, 2007; Tiwana, 2000).

A more mature perspective started to see knowledge as a not constant thing, but dynamic and constantly changing. The term knowledge management started to be in widespread use. The most widely read work was published on Harvard Business Review by Nonaka and Takeuchi about the Knowledge-Creating Company (1995).

According to Sveiby (1995) there were still great expectations on new developments in information technology and its potentialities, especially in the management of information. There was also a tradition in hierarchical organizations (Gulati et al., 2000; Liebowitz et al., 2000) and cultural barriers in sharing knowledge, feared as a loss of power (Skyrme, 1998). Also in this case the approach was strictly top down, because a strong control from top management was necessary to manage and guide knowledge through rules and procedures (Nohria and Hansen, 1999; Zack, 1999).

In the late nineties, a more evolved approach to KM brought in the concepts of tacit knowledge, social learning, communities of practice, emphasizing on systemic organizational change where management practices, measurement systems, incentives, tools, and content management needed to be co-developed (Van der Spek and Spijker, 1997; Von Krogh et al, 2000). Information and communication technology (ICT) was remarked as only an
enabler, but started to play an important role in knowledge management systems (KMS), since it facilitated many of the technology and people-based activities and helped to support KM processes (Alavi and Leidner, 2001; Tyndale, 2002). Moreover, with new technologies, the concept of KM was evolving towards a new vision more based on people participation. KMSs are systematic approaches to manage organizational knowledge (Grant, 1996; Schwartz et al., 1999) typically utilizing information and communications technologies. KMS integrates an extensive range of tools depending on its capabilities. Besides Artificial Intelligence technologies, KMS also includes intranets, document and content management systems, workflow management systems, business intelligence, visualization tools, groupware and e-learning systems. The purpose of KMS lies in enhancing the ability of employees to recreate value-added knowledge and increase their company’s intellectual asset (Diericks and Cool, 1989; Huber, 1991; Bloodgood and Salisbury, 2001). In light of the SECI model (Nonaka and Takeuchi, 1995), the major objective of the KMS was to transform tacit knowledge to explicit knowledge and vice versa.

The inclusion of KM as an organization’s best practice was meant to ensure that collaboration was institutionalized and that knowledge sharing occurred (Rivera and Ortiz, 2009). Knowledge transfer was started to be referred to as the most important and challenging knowledge activity due to the high complexity it possesses (Davenport and Prusak, 1998). This complexity arose from the fact that knowledge was not only created by and rested within individuals, but was also embedded in particular ways of thinking and acting (Chini and Ambos, 2005; Kostova, 1999). The need of providing incentives for people to share knowledge and collaborate started to undermine the convictions of a strict top down approach. Moreover organizational approach was changing, recognizing more effectiveness on leadership, and therefore in inspiring and motivating, while less on commanding and strict control. To survive in extremely dynamic conditions organizations needed to become more organic, focusing less on rigidity and more on participation, giving more reliance on workers (Wiig, 1997).

There were many cultural barriers on sharing knowledge. Motivating people to cooperate voluntarily started to be one of the key challenges organizations of early 2000’s (Smith and McKeen, 2003). This was not a simple task, since voluntary cooperation can neither be supervised nor forced out of people (Stauffer, 1999). No KMS can work unless the participants fully understand the benefits and unless employees have formal and informal incentives to participate (Grant, 2007). Traditional KM systems provided a great value, but they lacked incentive for employees to collaborate, contribute their knowledge, and assure continuity. Figure 1 synthesizes the evolution described in this Section.
3. ENTERPRISE 2.0: A RESPONSE TO ENVIRONMENTAL CHANGES

The evolution of management lies in strategic allocation of chaos, risk, and uncertainty, combined with predictable and efficient execution of production (Tuomi, 2002). Enterprise 2.0 represents a fundamental change in the traditional structured KM order by creating controlled chaos.

From the late nineties and the early 2000, new-economy companies faced complex demands for knowledge creation and knowledge sharing that span traditional organizational boundaries (Sapsed, et al., 2002). Innovative enterprises that employed technology to facilitate independent, project-based collaborations were the hallmark of the new economy (Quinn, et al., 1997). Such collaborations could range from arms-length information sharing to highly interdependent joint cooperation in the creation of new products and services (Best, 2001). Information technology started to make possible a variety of collaborative workspaces for project teams, companies, and industry clusters or networks (Alberghini et al., 2009; DeFillippi, 2002). KM theory is evolving to a more human orientation and new challenges of KM tool usage are emerging. The purpose of socialization combines both technological and personalization (Perrin et al. 2007).

The last information technology innovations brought a revolution in people approach to collaboration and knowledge sharing. In particular, web 2.0 marked a fundamental change in the way of using internet. Web 2.0 is a collection of methodologies and technologies that facilitates interactive information sharing, interoperability, user-centered design and collaboration on the world wide web. Web 2.0 tools include blogs, wikis, RSS, mash up, instant messaging and social bookmarking.

The concept of using web 2.0 technologies inside an organization is one of the aspects of the so called Enterprise 2.0 phenomenon. The term "Enterprise 2.0" was first coined in 2006 by Andrew McAfee and defined as the use of emergent social software platforms within companies, or between companies and their partners or customers (McAfee, 2006).
In other words enterprise 2.0 is the use of "Web 2.0" technologies within an organization to enable or streamline business processes while enhancing collaboration. It permits to connect people through the use of social-media tools.

It is not an easy task to define the scientific status of Enterprise 2.0, there has still been very limited research on new developments and environmental changes inside a firm related to web 2.0. Enterprise 2.0 potential is to this day non-systematically exploited, as there are significant barriers that hinder the effective exploration, such as the lack of robust, standardized metrics for social media, and it is in the very early stage. Anyway this kind of research is growing in the last years. There is still a debate about the relationship between Enterprise 2.0 and KM, but it is clear that applying web 2.0 technologies and emerging social behaviours can help to add greater interactivity into the KM environment.

An important part of Web 2.0 is the social Web, which is a fundamental shift in the way people communicate. The social web consists of a number of online tools and platforms where people share their perspectives, opinions, thoughts and experiences. As a consequence the major component of Enterprise 2.0 is the enterprise social software. It includes social and networked modifications to corporate intranets and other classic software platforms used by large companies to organize their communication. Web 2.0 applications tend to interact much more with the end user. Social networking is adaptive and user-driven and closer to people needs. Moreover new generations are used to dealing with social technologies, choosing them as their preferred method of communication with peers (De Gennaro, 2010).

According with Davenport (2008), the most important difference between classical KM and Enterprise 2.0 is the “emphasis on emergence of content structures in E2.0, rather than specifying them in advance, as early knowledge managers had to”. There are also many other differences. KM is characterized by a structured top down approach, while enterprise 2.0 means connecting and networks and it is marked by emergent autonomous behaviours (McAfee, 2006). Beside friction and bureaucracy, enterprise 2.0 set agility and flexibility, with fuzzy boundaries which are far from the silos of traditional structured information systems. Enterprise 2.0 is characterized by emergency and unstructured environments. It is user-driven and permits to access to the right information at the right time through a web of inter-connected applications, services and devices. In addition the concept of folksonomy replaces taxonomy. A folksonomy is a system of classification derived from personal free tagging of information to annotate and categorize content (Vander Wal, 2007) and it is also known as social tagging.

Table 1 summarizes the differences between the traditional approach (enterprise 1.0) and enterprise 2.0.

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<tr>
<th>Enterprise 1.0</th>
<th>Enterprise 2.0</th>
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<td>Top Down</td>
<td>Bottom Up</td>
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<td>One way</td>
<td>Two way</td>
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<td>Bureaucracy</td>
<td>Agility</td>
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<td>Rigid</td>
<td>Flexible</td>
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<td>Control</td>
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<td>Taxonomy</td>
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Recent studies demonstrated that the nature of rewards and incentives derived from Web 2.0 are very psychosocial and do not involve tangible or hard rewards such as monetary compensation (Paroutis and Al Saleh, 2009).

Enterprise 2.0 offers benefits such as encouraging collaboration, unlocking innovation, enhancing productivity, capturing critical information and signalling real skills. Web 2.0 technologies connect people in ways that make it easier to collaborate. Targeting such connections could increase knowledge sharing between highly skilled workers, refining the information available to them. For what concern innovation, the openness of Web 2.0 allows a broader range of collaborators to participate, generating new possibilities for creation and discovery throughout the enterprise. Then web 2.0 has the potential to create network effects that leverage the productive power of the group, improving both the quantity and the quality of work.

Social Technology, which is a major part of web 2.0, has exploded into the web world, but they are still vastly misunderstood. Organizations are only recently starting to appreciate the full collection of social technologies’ capabilities, and experimenting the hypothetical benefits, in the most of cases they are still blocking their use.

The capability to flexibly and rapidly reconfigure and generate competencies is becoming a core competence of the corporation (Tuomi, 2002). Inside a company, social technologies can help to capture critical information, designing an implicit knowledge real-time map by signalling real competences and leadership, and reveal people trends.

In this section several benefits given by enterprise 2.0 have been identified, anyway some observations need to be done. Enterprise 2.0 is about collaboration, but collaboration isn’t about software. Good collaboration is more effective through the use of collaborative and social tools, but with poor collaborative practices these new tools could provide less value. In other words, social technologies can provide always updated information, but a structured approach is necessary to fulfil their vast potential.

4. THE FRAMEWORK AND CASE STUDY

4.1 The field of study: Eni

Eni is a major integrated energy company, committed to growth in the activities of finding, producing, transporting, transforming and marketing oil and gas. Eni is active in 79 countries with a staff of about 80,000 employees. Eni is committed in frontier initiatives in the field of renewable energies.

In 2010, Eni reported net profit of €6.32 billion and a market capitalization of €59.2 billion. In the context of the competitive scenario and the changes affecting the company, the protection enhancement of the company’s intellectual and intangible capital is of growing significance and demands constant attention to ensure its development and spread throughout the organization.

Eni’s knowledge management system is made up of 53 active practice communities and involves 2,624 members.
Eni considers KM as a key element of the company's intangible assets that enables the effective use of the knowledge existing inside the company and the professional development of the people involved. In fact KM has a dual objective:

- to systematise the explicit knowledge present and widespread in organisations in order to facilitate its more effective re-use;
- to elicit the tacit knowledge of people in such a way as it ensure that it becomes an asset that can be shared within the company.

4.2. The pilot project

This study presents a first approach enterprise 2.0 thorough a pilot project leaded by the Eni Corporate ICT area. This project was born from a brainstorming of a group of people, as a sort of experiment to exploit new technologies potentiality. The brainstorming arose from the observation of the current situation of employees’ new needs and behaviours and from considerations about the technological offer inside the company, respect to the external landscape.

First of all the need of putting people at the centre emerged, in contrast with the strong bureaucracy that characterizes all the well structured big companies. In particular letting appear real competences and leadership was one of the most perceived requirements. Moreover there were many other needs, such as the necessity of a flexible and efficient environment to support the constantly change of business requirements, due to an always more complex background. The internal technological landscape was very well equipped, but the rapidly evolving external environment highlighted some new aspects to take into account. People were starting to be used to deal with new technologies, such as web 2.0 and that was changing their approach to collaboration and interoperability on the world wide. So, there was an emerging gap between the rigidity of the strict organizational rules and procedures and the external easy and flexible world. For this reason the ICT people decided to break the traditional approach by surfing the wave of the new technological offer, through a bottom up approach tailored on employees’ needs. The aim was to tame the skeptical positions about enterprise 2.0 by demonstrating the strategic potentialities of social technologies.

4.3. The framework

The aim of the pilot project was to understand if and how supporting current users’ needs and trends through the adoption of consolidated technologies and then establishing the modalities of their implementation. Respect to the Siemens case, this is a pilot project which investigates the enterprise climate from a bottom up perspective. There are no expected incentives or bonus, because the objective is to let emerge autonomous behaviours by introducing new tools which will be used only because attractive and useful.

As previously described, enterprise 2.0 is the application of web 2.0 technologies inside a company. Among web 2.0, social technologies offer a wide range of products and possibilities, but the early adoption of them should be gradual, especially in a consolidate context. In order to effectively capture users’ perceptions and behaviours and understand how adapting the new technologies to the context specificity a structured framework was devised. This framework has the specific target of evaluating the lacks of the extant technology and assessing the current situation.

To measure attitudes and needs about available technology, a questionnaire based on Likert scales has been applied to a representative sample of 153 employees working in the
information and communication technology (ICT) area. A Likert scale is a psychometric scale widely used in questionnaires and it was named after its inventor, psychologist Rensis Likert (1932).

To assure the integrity of this study it is important to establish a point of view of the role of knowledge in the firm. According with Ruggles (1998) this study takes into account the major processes of the management theory that can be managed about knowledge. Respect to the Ruggles survey the target of this study presents some differences. This survey, of about 80 items, is oriented to understand the real perceptions of operative users and it does not inquire into managers’ strategic decisions. It proposes eight major categories of knowledge activities which are represented through eight survey dimensions.

- general perception of KM
- knowledge creation and capitalization
- diffusion, utilization
- utility expectation
- utility perception
- tangibles
- expectations respect to strategic objectives

The eight dimensions help to analyse the real gap between users' expectations and experience. In this way the survey can be a useful instrument to support managers to discover the real attitudes and behaviour of their collaborators and find the better way to involve them. From previous studies (Ruggles, 1998, Wirtz et al. 2010, Rao, 2005) the biggest difficulties in managing knowledge where in changing people’s behaviour and mapping organization’s existing knowledge. These perspectives were from the executives' point of view. This study wants to analyse people’s perceptions and their need, from a bottom up point of view. The following charts summarize some of the aggregate results about users’ perceptions.

First of all we asked people their perceived meaning of KM. It was seen as a way to share knowledge by the 66% of people while only the 4% saw KM as an IT tool (Figure 2). It is an interesting aspect that reveals the awareness of sharing knowledge as a linchpin of KM for the majority of people. It is a good starting point, also because it was recognized to KM a great importance in growth and change management.

![Figure 2: General perception of KM definition](image)
Other results of the perceptive analyses have focused on knowledge diffusion, expectations and perceptions from tangibles, as depicted in the following. For the following items the individual was invited to define his attitude towards each statement by choosing among a number of four scores (“strongly disagree, disagree, agree, and strongly agree”). In this way the choice method was forced since the middle option of "neither agree nor disagree" was not available. On the contrary the “not sure/not applicable” option was available.

It is true that the final outcome of any effort is a function of who does the work. A good environment can incentivize people to work better. By understanding needs and feelings of operative users, the executive managers can choose the better way to manage knowledge and improve enterprise climate.

Looking at the results, sharing experience with other people and workshops has been recognized as the main sources of knowledge creation and capitalization. It is the same also for what concern the knowledge diffusion dimension (Figure 3), in which results are very similar. In fact, sharing experiences, in combination with training courses and teamwork, have been recognized as well mostly relevant in favouring knowledge diffusion, while surveys and periodic communication are in the last positions. The items proposed in figure 3 refer both to literature (Ruggles, 1998; Papoutsakis, 2007) and common practices in Eni.

Figure 3: Dimensions of knowledge diffusion

Figure 4 presents a set of parameters to compare expectations and perception about KM utility. The seven parameters shown in the chart refers to literature, in particular to Rao’s (2005) “8Cs” audit framework (connectivity, content, community, culture, capacity, cooperation, commerce, capital) adapted to this context. Expectations about KM utility are very high, in particular for collaboration and sharing knowledge (Figure 4). This means that people are definitely aware of KM importance. On the contrary the perceptions about what it is really available are quite low, especially for the competence map. Finding the right person with the right competence is one of the most important issue facing companies today, but it is not an easy task to be implemented. For what concern connectivity and collaboration they are enough effectively perceived. The introduction of new collaboration tools provided an improvement in satisfaction.
With regard to tangible activities, people were invited to define their attitudes respect to the following statements:

- Procedures and best practices are clear for each process
- I can easily access to other projects documentation and know the lessons learned
- Competences are well defined and a knowledge map exists
- All IT systems are well integrated
- Information are always updated and available on different systems
- I quickly find information needed

The previous statements were chosen from empirical evidence of the most common issues emerged from feedbacks that collaborators gave to their managers. We collected them through informal interviews. Results confirm low perceptions especially for the competence mapping and the easy accessing to lesson learned and process documentation. In fact, tangible activities are a sort of specification of some aspects of utility perceptions. The main expectations with regard to strategic goals are about the improvement of the easiness of search and quality of information.

The results emphasize the need for collaboration and sharing experience. People demonstrated to have great expectations, because they feel the potential of new technologies and they are aware of innovation. They find some difficulties with the actual available systems, especially in mapping people skills, experiences and lesson learned.

### 4.4. The outcomes

Enterprise 2.0 technologies offer a wide range of products and possibilities. Being able to always catch and understand user needs is crucial, especially in a complex environment such as a multinational company. To better follow employ needs and to facilitate their work a social network was selected among enterprise 2.0 tools. Social networking sites are very special tools, since they allow users to create their own personal virtual space and a relationship network.

Reasons that leaded to a social network were given by three social media and web innovation metrics (Figure 5). The first one is the return on attention which is a key metric of attention scarcity and refers to the value got in return for the time spent looking for what it is wanted and needed. Communities demonstrated wide cost reductions and a huge returned value in
change of attention. The second one is the *return on information* metric, which is based upon the value of relevant data returned through search. Communities are an ideal pool to find information about people, needs and preferences. The third one is the *return on skills*. Communities are able to attract users with high capabilities and social networks make possible to build a knowledge map.

![Figure 5: Key metrics](image)

The previous metrics represent the KPIs to monitor people behaviour and increase their participation. More in detail RoA metric includes the number of participants, the number of relationships, the average time spent on site, the audience (number of current participants) and utilization frequency. RoS metric includes particular actions done by participants. For example, in a social network these actions are the personalization of the personal profile, such as personal photo and background, the change of the mood and also the document uploading and blogs and comments writing. RoI metric can be represented by the frequency of newsletter and periodic communications that users received. User participation is favoured by the capability of inducing and gratifying the joining pulse, going through the daily user flow.

The main outcome of the pilot project is a structured way to apply enterprise 2.0, listening to real needs. Enterprise 2.0 represents an evolution of communication services and a development of social relationship. The pilot project was applied to a representative sample of people inside the ICT area. The “motivational design” guidelines (Giacoma and Casali, 2009) were followed for the implementation. An initial autonomous and constantly growing viral diffusion demonstrates a good response from users, whose feedbacks are at the moment very positives. And the response was very positive.

Another outcome is given by the guidelines for the application of enterprise 2.0. A golden rule is always analyzing data to be ready to support new requirements and changes. Tools should be usable, easy and well integrated to encourage contribution. It is important a continuous and active listening to people and the monitoring of keyword analysis and behaviour patterns. The enterprise search tool has to be very powerful, as search solutions are blending traditional approaches with web 2.0 functionality. Every context is different and it is absolutely important take into account people maturity level about new technologies. It is important to carry out every initiative in a gradual way and choose the strategic objective for each phase basing on people perceptions and needs.
5. DISCUSSION AND CONCLUSIONS

Traditional knowledge management presents some limitations. It is difficult to control and manage knowledge in a top-down way. The complexity of new environments creates different dynamics and changes inside an organization. Storing information in databases or simply using collaboration tools could be not enough to support the huge quantity of information and documents produced daily. The results could be chaotic. Inside a company it is necessary to combine structure with flexibility and integrated architectures and semantic technologies are becoming fundamental to enhance the KM effectiveness. Moreover, the challenges to team-based collaboration are not only technological, but also managerial.

This study highlights many benefits that enterprise 2.0, in particular social technologies, can bring. For example, one of the issues of the community of practices is to find a way to let emerge people who work actively and have a thorough knowledge of the subjects. A social network has this feature embedded on it. In Eni, more than 2600 persons are part of the 53 communities of practices. Let those people be signalled inside the company can be a gratification for them, a good service for people who need help from them and a way to improve meritocracy. Besides enterprise 2.0 foster transparency and greater collaboration and help to leverage knowledge sharing and transfer.

The empirical application of the framework lets emerge the real perception of users. It can be helpful to support managers to find a better way to involve their collaborators in KM processes. Results revealed that users are often constrained to employ many tools to reach their goals. Mostly they use IT tools to search people, find contacts and information about colleagues’ positions and to communicate. The introduction of new collaboration tools demonstrates a constant growing trend of utilization of web 2.0 technologies.

It is important to note that the findings of this study are based on a large, yet single, organization. Thus additional research needs to be conducted in order to further validate them. Nevertheless, the framework, illustrated in this study may be helpful in any organization to understand people’s perceptions and implement enterprise 2.0.

The difference from an ordinary consultancy project on introducing KM system into an organization lies in the nature of social networks. Social networks are strategic tools, which can radically change the approach to collaboration and to KM. They provide users with an own personal virtual space, through which people can communicate.

From the implementation point of view the necessity for a modular solution emerged. Modules can follow users' needs detected by the analyses of the current situation, offering several new services to people and creating a connected working environment. The main feature is that individuals exchange views between each other in real time and can get the right information from the right people.

The approach adopted in Eni during this pilot project was not structured in a similar manner of other big companies, such as PWC e Siemens, where at every level within the organization, the congruence between objectives, structures, processes, people and supporting infrastructure has been verified. Despite of this the experience of our project demonstrated as well that a successfully implemented social network will add enormous value to a knowledge management program.

REFERENCES


Giacoma G., Casali D. (2009) “Motivational Design: Una metodologia per il social network design” Creative Commons by-sa 2.5 (ita) http://creativecommons.org


Skyrme D.J. (1998), Knowledge management solutions: the IT contribution. Special issue on Knowledge Management at work.