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**Support 2.0 @CPAT project at Bosch: how
to successfully implement Enterprise 2.0
concept**

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Introduction

The analysis presented in this paper focuses on the Support 2.0@CPAT project, developed within Bosch, that aims to implement a social networking software to the support process. The project is part of a bigger rollout plan that involved the whole company structure and will transform it into a widely connected company. We had the opportunity to work on this project and follow its development from the early stages, gaining useful insights and valuable knowledge about the enterprise, the new software and what makes all of this “2.0”. The choice to analyze this topic is due to the fact that the so-called social economy a trending phenomenon that is having a huge impact on businesses worldwide, it is growing fast and it will most likely be the future of company communication and process development. We had the chance to observe and study the influence of web 2.0 technologies from an advantaged point of view, analyze the improvements and the challenges this new paradigm brought on.

In general the support topic is relatively easy to adapt to 2.0 technologies: it is embedded within the very concept of support the idea of exchanging knowledge and cooperating to find a solution. Even so, there are aspects of social collaboration that can't be universally solved and need fine tuning to fit the specific case. Company culture, management style and commitment, employees background are key variables to keep into consideration once setting up an enterprise 2.0 system. We started from the very beginning, defining the basic structure of the new support community; we nominated community managers and trained them; we provided tools, best practices and training material for all community members. After the initial phase we submitted a survey to understand our community managers' point of view on the network and on the community; we gained precious feedbacks and evidences that we used to address possible improvements and problems that need to be fixed.

We compare all the information we gathered about our community with the existing use cases and literature: we try to find a correlation between theories and this project. The outcome of this analysis will result on useful insights on how to better implement an enterprise 2.0 environment.

1. Enterprise 2.0: theoretical background

The project analysis carried on in this paper is empirical and case-specific, therefore it needs a solid literature background to create a framework and consistent performance metrics to evaluate the results. We are going to review the most important contributions regarding E 2.0 topics and then address the most suitable to our use case scenario.

1.1. Evolution of Web from 1.0 to 2.0

To understand the true meaning of the enterprise 2.0 concepts we have to look back at the beginning of the '00, when a major shift in the usage of the web happened.

The name Web 1.0 refers to the first, early stage of development of the World Wide Web: the main elements characterizing its design were static pages, hyperlinks and top-down approach with almost no interaction with users. The information on a page, even if useful, never changed, thus creating no incentive for the users to visit it again. Who visited a page had no possibility to act or to contribute to the content because there was no possible interaction. The websites were maintained by webmasters, who were the only ones in charge of changing, updating or adding new content. We could say this was a “read only” approach: few creators with the vastly majority of users acting just as consumers of content.

The definition Web 2.0 describes the second stage of development of the World Wide Web, when the Internet is characterized by interconnected web services, user generated content and social networks. It is a new kind of web, a dynamic and fast-growing community where everyone can and is encouraged to take part and contribute. The internet became a more social environment: from a place where people could only search for information, it developed into an interactive platform where people exchange opinions, make friends, interact and share knowledge.

Terry Flew described in these terms what he believed to be the main characteristics of the evolution from Web 1.0 to Web 2.0: "move from personal websites to blogs and blog site aggregation, from publishing to participation, from web content as the

outcome of large up-front investment to an ongoing and interactive process, and from content management systems to links based on tagging (folksonomy)"¹.

Tim O'Reilly, in his blog post about the meaning of the definition Web 2.0, pointed out another big difference between the two stages:

“Web 2.0 is the era when people have come to realize that it’s not the software that enables the web that matters so much as the services that are delivered over the web. [...] Is the era when people are recognizing that leadership in the computer industry has passed from traditional software companies to a new kind of internet service company.”²

The focus shifted from the web itself to the people using it. Social sharing platforms like Facebook, Twitter, Reddit or Youtube have been growing exponentially and became the new reference points for the web: users get involved, engaged to create and share new content. The user is no longer a passive, static player, but it becomes protagonist, contributing and interacting with virtual communities. All the key players of the Web 2.0 era managed to build their success harnessing the collective intelligence: they delivered services enabling users’ collaboration together with web applications that can be used no matter from which operating system, device or location (clear examples are Gmail or Google Maps).

The web 2.0 environment is built around key tools and technologies that mark the difference with the previous period. Of course technological evolution will develop even further and will expand existing possibilities, but there are fundamental building blocks that clearly characterize what we call web 2.0.

Among them we can find wikis, blogs, forums, tagging, peer-to-peer and social networking. One of the most important is definitely the wiki: it’s a web application that enables users to co-create a piece of content. Each member of the wiki can add, edit or delete content on a shared virtual space; peculiar characteristic of this tool is that there are no fixed guidelines and each wiki can be adapted to better suit needs of the users:

¹ Flew, T., *New Media: An Introduction*, Oxford University Press, 2008

² <http://radar.oreilly.com/2005/08/not-20.html>

² <http://radar.oreilly.com/2005/08/not-20.html>

each one has the same right to contribute inside that common space. Another widely adopted tool is the blog. The name is an abbreviation of weblog and it consists of a series of posts, displayed in reversed chronological order, published on a website. One blog usually covers a specific topic about which the author wants to write about. In contrast with the wiki, blogs aren't meant to be highly interactive: comments to posts are usually allowed, but only the blog author has rights to publish new content. Main usage of a blog is to inform, share and post updates to a broader audience than it would have previously been possible. Under the same category as blogs we can put podcasts, which are a more engaging version of the latter: podcasters publish audio or video contents, instead of written ones. People can subscribe to podcasts and automatically download the new episodes as soon as they're available.

Content creation and sharing is the core of the web 2.0 concept, but the flood of new contributions would be impossible to organize and, thus, useless without a proper structure. Here comes the tagging feature: tags are labels that can be assigned to every piece of content and they make it searchable. They display information like topics, context, author and every other useful coordinate to enable every user to retrieve it in the future. Another useful technology that has been widely adopted as corner stone of web 2.0 is RSS (really simple syndication): it enables users to subscribe to single websites and receive notifications regarding updates. The notifications consist only of title, a brief summary of the post and the link to the web page: there's no limit to the number of RSS feeds a user can subscribe to and there are many different software solutions that help them to keep all the feeds organized. Between all the aforementioned technologies, the one that revolutionized the most the web is peer-to-peer. It is based on the concept of peer review and sharing. Inside an online community, members exchange information and rely on the others to check, comment, edit and review them: content gain more value thanks to extensive collaboration of members of the crowd³. Peer to peer also refers to the system of directly sharing files between members of the community (peers).

³ "The Collective Intelligence Genome", T.W. Malone, R. Laubacher, C. Dellarocas, MIT Sloan Management Review, 2010, Vol. 51, No. 3

1.2. *Informal network and social media as its extension*

In the last decades the importance and impact of digital technology on the behavior of both companies and people has grown exponentially. It's fundamental to understand the drivers of the phenomenon before digging deeper into the topic of this thesis. Web 2.0 technologies demand a different approach than the traditional knowledge management tools widely adopted in the '90, like enterprise resource planning (ERP) or customer relationship management (CRM): as a matter of fact we can refer to them as "social". They're based on information technologies, which provide the framework where they can be applied: they're web-based tools that users can access to from both mobile and desktop devices, allowing the same experience and functionalities regardless the medium. They empower the networking skills of every user in a democratic way: through these technologies everyone inside the network can add, edit, share and create content or communities; the right to contribute is universal. People are allowed and motivated to share their interests, tastes, activity they're doing: the social interaction is the very base of the system because it brings to the creation of a growing pool of shared knowledge. Under this description can be categorized both social media and enterprise 2.0 tools. Best examples of the firsts are widely used platforms such as Facebook, Twitter or Youtube. Success of this kind of networks is due to a set of specific characteristics. First of all being social is an attitude common to every human being: looking for someone to share ideas and thoughts with, creating groups and forming communities based on their own interests; these are natural behaviors that can be seamlessly translated into virtual networks. The implementation of a social environment to an already existing platform is relatively an easy process: adding the ability for the users to communicate, share and connect can be beneficial for the system, even though it is only a feature and not the core aspect. Since almost every process can be made more social adding few features on top of an already existing architecture, what makes the difference is the level of integration into the system and company strategy. One of the factors that play a fundamental role in the success of these technologies is the ability to extend the communication possibilities far beyond the limits of the offline environment: limitations such as place and time no longer apply because users can interact virtually with everyone across the globe through a web service. Something

similar was possible even before, but the speed and the scale are unprecedented: each person can get in touch with a much larger group of people, broadening his network and creating new relationships. The improved communication also enables new ways of content creation. In contrast with the web 1.0 dynamics, where the content creators are only a small percentage of the whole internet community, today one of the most common ways to create content on the web is co-creation: users can interact with piece of content already available online adding comments, sharing it to their network, adding information and so on. The number of content co-creators has been growing exponentially, thus revolutionizing the very concept of “content”: from a static piece curated by an editor to a dynamic discussion brought on by many contributors. A direct consequence of the above mentioned characteristic is the ability for the user to skip intermediaries and directly connect to the source of the content. The empowered ability to connect with people and companies around the web enables users to link, discover and share information much faster and independently. The effects on the real economy hit mostly the medium/small intermediary businesses like travel agencies or music stores; on the enterprise level, users can interact between different teams or business units directly, without having to strictly rely on hierarchy: connections are based on shared knowledge, personal skills and common problems rather than job titles. One last key aspect to keep into consideration is the ability to gain deeper insights into topics discussed inside the network. Users, except the basic netiquette rules, interact usually with almost no filters. This freedom brings to a more open and honest dialogue and the information shared are far more valuable. We can perform more accurate researches filtering the data and get a clear picture of the opinion among the users about a specific topic. Looking at B2C oriented networks (such as Facebook) this means a higher ability to profile the image of a company, its reputation and the opinion of its customers: traditionally this kind of market researches could only be performed through surveys or other expensive ways, now its far easier, faster and much more accurate. On a enterprise 2.0 network this means for everybody the ability to look for discussions, forum topics, solutions and opinions shared by other colleagues around the world: people can look for a solution and connect directly with the person who posted it.

1.3. Roadblocks for contribution

Knowledge sharing is a critical success factor inside an enterprise 2.0 environment. The biggest issue is that, as many studies⁴ and empirical experiences suggest, sharing is a personal and individualistic behavior and, in order to unlock the full potential of social networks, the management have to analyze and get rid of the possible barriers to contribution. The tools and functions provided with social technologies are meant to facilitate the sharing knowledge process across the company, to let the knowledge flow with no barriers across business units, departments, branches and countries. The point is that the implementation isn't easy and has to face multiple challenges on different levels.

There are many potential knowledge-sharing barriers and many studies already provided a possible categorization. We are going to follow Riege⁵'s categorization and give an overview of the most common and relevant barriers according to literature; the list is divided between individual, organizational and technological barriers.

1.3.1. Individual barriers

Under this category we list those barriers that are linked to individual beliefs and are peculiar to each user: they origin from people's perceptions, actions and behavior. They directly influence attitude towards open collaboration in an online working environment, so an accurate analysis of them is very likely to be a winning move to successfully implement an enterprise 2.0 system.

- **Lack of trust:** in an online community there's no direct contact between workers, even if they're working together on the same project. This affect the level of trust people have towards other colleagues: they don't know the source where the information comes from. Especially at the beginning, when community members don't know each other, credibility and accuracy of co-

⁴ Gee 2002

⁵ Riege 2005

workers have yet to be proven. Since the aim of an online community is to enable users to share valuable knowledge, many don't feel comfortable to be totally open with others without trusting them completely.

- **Credit:** this one can be seen from two perspectives. From one side many users fear of not receiving recognition and credit for contents and knowledge they shared in the network. Keeping in mind that knowledge became one of the most valuable assets for employees, losing authorship can be a big drawback and, consequently, become a powerful barrier to knowledge sharing. From the other side, some workers believe that sharing knowledge and, most of all, being recognized for every piece of content they've shared would eventually weaken their position inside the company. Because of the transparency policy inside the network, every activity is public and people aren't certain about the possible reaction of their manager.
- **Lack of time:** time is a precious and highly valuable resource. Even though employees are aware of the possible benefits coming from the use of 2.0 tools, they often see them as something "else": they consider the new system as an add-on, a new tool that is added on top of their already busy schedule. Up until now there was no time in workers' daily workflow dedicated to knowledge sharing or to understand the potential of the platform: due to time constraints, people prefer to focus on tasks that are more beneficial for them on the short term.
- **Lack of training:** given the high level of difference with previous technologies, the new tools can be hard to handle without proper training, especially for non digital-natives employees (whose social networking skills are usually more developed). The learning curve in these cases isn't steep, which means that real potential and clear vision of the benefits of an enterprise 2.0 environment can be understood only after spending some time working with the platform. It's a management responsibility to provide employees not only the right tools, but also the adequate training opportunities in order to speed up the adoption rate and the efficiency of the new system.

- **Background:** especially in geographically dispersed companies, people often find themselves working together with colleagues from different countries and a common problem is the ability to communicate without misunderstandings. The language problem is only secondary in comparison to the culture one: national culture is a complex set of values, beliefs, ethics and educational principles. When dealing with the same challenge, different people have different approaches and reactions based on their own background: difficulties emerge when colleagues can't understand each other's behavior. This is a barrier that is especially critical in companies that rely on knowledge sharing for developing core activities.

1.3.2. Organizational barriers

Under this category we list all those barriers related to the organizational structure of the firm. The framework within which all the activities are put in place plays a key role in the enterprise 2.0 success: it has to facilitate and support the flow of knowledge between employees and business units.

- **Integration:** each firm developed its own vision, mission and culture. They shape the organization; the processes and the way people work and interact inside the company. One of the biggest issues happens when the enterprise 2.0 system is disconnected or doesn't fit the existing framework. Implementation has to be carefully crafted and adapted to the specific case, otherwise it won't meet both the strategy goals and the needs of employees and it won't be accepted. Common problems are related to lack of managerial support for sharing practices: unclear (or even sometimes too detailed) guidelines just confuse employees about how to handle new tools, thus reducing effectiveness and adoption rate of the new system.

- **Hierarchy:** according to many studies⁶, there are some organization structures that better support knowledge sharing practices, for example ones that are more open and flexible. Contrariwise, a strongly hierarchical and rigidly structured organization could be a tough barrier to knowledge sharing. A complex set of rules and procedures inhibits and slows down effective sharing practices: in a really formal working environment, where employees are supposed to strictly follow guidelines, there is almost no space for open and spontaneous sharing.
- **Competition:** especially in inside big, international companies, competitiveness between business units is a threat to successful knowledge sharing. Following a strict cost-center driven thinking, business units and functional areas could not fully embrace open collaboration. The know-how developed inside a specific unit is often considered from the management as added value and competitive advantage for budget allocation, thus keeping managers from sharing it easily. Inside an ever connected working environment, all the business units are dependent on each other and could reap greater benefits for to the whole company when effectively applying the enterprise 2.0 paradigm.
- **Communication:** managers play an important role in the implementation process. They define guidelines and implementation roadmap of the new system. Problems arise when these decisions are not endorsed by everyone or are not properly communicated to employees. Lack of managerial commitment directly lead to poor implementation in the business unit under their control and, consequently, to an inconsistent application of the enterprise 2.0 tools at a company-wide level. Moreover unclear communication of guidelines and policies influence negatively the efficiency of the whole system, constraining the flow of knowledge. Managers have to act as drivers, provide full support and reassure employees about privacy and knowledge sharing issues.
- **Reward:** an enterprise 2.0 system will only work when its users will start using it regularly and effectively. Employees have to first understand the rules to be

⁶ Nonaka, I. and Takeuchi, H. (1995), *The knowledge-creating company : how Japanese companies create the dynamics of innovation*, Oxford University Press, New York

able to actively use it. Users need motivation to learn and use a new tool; therefore the lack of transparent rewards and recognition systems can hinder the adoption and development of the system. The debate about which remuneration system, monetary or non monetary, match this kind of environment is still ongoing, but there is a shared conclusion: sharing process needs to be natural, so monetary incentives hardly have stable effects on the long term and neither have a relevant impact on corporate culture⁷. Users need to feel somehow rewarded for their contribution and this can only happen when organization culture embraces knowledge sharing and emphasizes reputation based on contribution.

1.3.3. Technological barriers

Under this category we list all those barriers specifically related to the information system itself and to the 2.0 tools. To unlock its full potential, the enterprise 2.0 system has to be crafted, adapted and personalized for each company. It is not only a matter of technology, but also the way people interact with it: interactions are delicate and have to take into consideration both organization culture and employees behaviour. The huge potential of social technologies is clear, but the key point is to achieve the best implementation that enables to exploit it to the fullest.

- **Support:** new tools and procedures need training and time to be learned. Especially during the initial phase, a reliable support system is essential: the lack of technical support, whether internal (power users/experts) or external (software house that developed the software), will slow down adoption rate because users have to deal with unknown software features and errors by themselves and proceed by trial and error. There has to be a common repository, a hotline or, at least, a forum where users can go to find assistance about enterprise 2.0 software

⁷ Riege, A. (2005), "Three-dozen knowledge-sharing barriers managers must consider", *Journal of Knowledge Management*, Vol. 9 No. 3, pp. 18-35.

problems. Moreover without prompt maintenance of integrated IT systems, work routines and communication flows will stuck and soon users will soon drop the platform.

- **Mismatch:** enterprise 2.0 environment has to be adapted and tuned to each single firm. More specifically it has to meet employees and organizational needs. When there is no match between individuals' requirements and integrated IT systems, the whole system fails: sharing knowledge activities won't reach a critical mass because users perceive the tools only as time-consuming instead of value adding.
- **Integration:** workers have already plenty of tasks and platforms to work on. One of the risks of introducing a new networking system is that it runs on a different software with totally different guidelines: users would perceive it as something disconnected from the existing working environment, something put on top of it without real connection. Lack of integration between enterprise 2.0 systems and existing processes interfere with the way people perform tasks. The tools have to be easy to use and seamlessly integrated to efficiently support the workflow.
- **Mobile:** the rate of smartphone adoption in companies is rising fast. Granting secure access to the network not only from the computer at work, but also from (selected) mobile devices will enable workers to be connected more easily, everywhere. Once the problem of a secure and reliable remote connection is solved from an IT perspective, employees can dedicate some time to knowledge sharing even when they usually would not, for example during business travels or when attending a conference: it would give them the opportunity to be more spontaneous and inspire sharing.

1.4. *Drivers to collaboration*

Analyzing and reviewing existing literature on the topic⁸, we can see how there are no universal and always valid drivers that spark users' willingness to collaborate. Since the balance between technology potential and workers needs is unique, implementation strategies have to fit the unique company environment. Empirical research is required to understand the impact of these measures on different levels of the firm. We can though list and summarize the most relevant drivers into three main categories, depending on which field they are implemented:

- **Motivation:** to promote a positive and contagious knowledge sharing behavior, managers can integrate the measurement of knowledge sharing as a key performance indicator in employees performance review: they could evaluate contribution and give formal recognition to employees that excel in this field. Officially and publicly reward positive sharing attitude can motivate other users to do the same. What is a key aspect is the non-monetary dimension of the incentive: it has to embrace company values and culture to trigger effects on the long term (researches⁹ stressed how non monetary incentives are much more effective in this field). This kind of incentives can only work inside a company culture open to collaboration and sharing: there has to be consistency between addressed and perceived values.
- **Integration:** to become relevant and effective, knowledge sharing activities have to be integral part of the daily workflow. Enterprise 2.0 tools need to be embedded in day to day tasks, management need to establish clear and formal guidelines about knowledge sharing processes and the initial push to embrace the new system needs to come directly from the top management. A transparent and open organization will enhance the flow of shared knowledge.

⁸ Paulin, D., Winroth, M. (2013). Riege, A. (2005),

⁹ Morey, D et. Al, 2002

- **Culture:** Knowledge-sharing practices need to become integral part of the company culture. Effortless sharing practices have to become the norm, in order to promote informal networking and collaboration. A common mistake is trying to fit the existing culture to the new web 2.0 paradigms, whereas the key is to fit the new system to the existing company culture.

1.5. Enterprise 2.0

Enterprise 2.0 is the use of emergent social software platforms within companies, or between companies and their partners or customers.¹⁰

The first to theorize the concept of “Enterprise 2.0” was Andrew McAfee, associate professor at Harvard Business School. In his paper he states how communication technologies were not able to take full advantage of the network: they failed to capture and share the all the new best practices and output created by knowledge workers. He focused then his attention on those technologies able to empower the workflow and make visible these performances within the company: he labeled these ones as “Enterprise 2.0”.

The deep change brought by the web 2.0 had a relevant effect also in the enterprise management theory. People tried to apply the paradigm of web revolution in the real working environment. Thanks to the new online collaboration tools, the workflow can be hasten and much more efficient. They enable new ways of sharing ideas and team working, thus deepening the company’s pool of knowledge. Furthermore this phenomenon describes the change in corporate culture towards more trust, openness and transparency: this is a required prerequisite to promote and demand the exchange of knowledge across locations and organizational structures. In order to support the whole process a new leadership style, focused on mentoring and coaching of networked team, has also to be developed.

¹⁰ http://andrewmcafee.org/2006/05/enterprise_20_version_20/

As shown by a global survey conducted in 2011 by McKinsey¹¹, the adoption rate of social media technologies inside companies is growing fast, even if at half the speed in comparison to consumers. The trend is clear: on one side more and more companies are implementing internal social collaboration tools and on the other side employees are getting used to social media in their private life, thus gaining insights and knowledge about web 2.0 dynamics that can be spent also inside the company. Looking at the results of the survey, we can see how companies that have networking and new technologies in their DNA are the ones that invest and embrace E 2.0 principles the most: on top there are high tech and telecommunication companies, but also most of manufacturing and energy companies (more than 62% of them) use successfully at least one of the social technology tools. Worth to notice is how the perceived benefits are steady growing: companies manage to master social technologies with time and harness tangible benefits year after year. Improvements don't come right when the new tools are implemented, but they reach full potential when employees understand how to fully exploit them: the whole company have to become a networked company and employees have to adopt a new way of working in a process that may require some time. This is one of the reasons why fully networked companies aren't the majority but are the ones gaining the most benefits from the implementing enterprise 2.0 technologies.

A key role is played by the so called Interaction Worker¹²: we define this role as an employee that performs a non standardized work, such as tasks that require a higher degree of interaction with other workers, creative problem solving and independent judgement skills. To fulfill these tasks, access to a wider pool of knowledge is also needed, together with a higher education and specific training. This high profile employee is necessary to boost the adoption rate of social tools and to shape the integration process in order to better fit the existing organization structure.

¹¹ "How social technologies are extending the organization," *The McKinsey Quarterly*, November 2011

¹² "The social economy: Unlocking value and productivity through social technologies", *McKinsey Global Institute*, July 2012

What makes enterprise 2.0 so successful among companies is the possibility to unlock new value both across and inter organizations. The fields where we can apply these new technologies are many: from product development to marketing and sales and customer care. Great improvements can be made in research and development processes. Easier social collaboration enables faster communication across the company: ideas and feedbacks are discussed into larger, cross-divisional online communities. This approach allows to extend the knowledge pool to all workers that have specific knowledge about a relevant topic: product managers can gain useful insights and feedbacks also from colleagues not directly involved in the process; in some cases the manager can open the community also to external members: tapping a broader group of people may boost the possibility to gather innovative ideas, even directly from the customers. We can say this is essentially the same concept as crowdsourcing, only applied and developed for a specific company function. Also the teamwork can gain great benefit from these tools. Where before every communication could only happen through emails and telephone calls, now the best way to work together is forming a virtual community. Using wikis, employees can gather all the useful information in one place and update them each time there's an important change. Blogs can be used to keep colleagues up-to-date about the project development and the next steps. A common repository is the best place where to save important files and share them with other colleagues who are interested in the topic: they're always available, people can add comment and even edit them. Forums are a great place where to start discussions, address problems and post solutions: the knowledge shared is saved and made available for future reference to everybody. The most straightforward application of social tools is related with marketing. Market researches are based on connections and communications with customers and potential ones. One of the first scopes of these tools is to enhance the ability of the company to communicate also with external partners and it's clear how much the implementation of social technologies can boost the efficiency of market analysis. Companies can reach a broader audience, engage with new and existing customers to a deeper level, get valuable feedbacks on marketing campaigns, check the brand image and keep competitors initiatives under control. Through social platforms are possible to profile and target really specific customers and deliver personalized advertising, thus increasing brand awareness and creating engagement. The quality and depth of company

communication can greatly benefit from this possibility. Another field where social tools can be integrated almost without big structural changes is customer care and support. Closer interaction with customers means better understanding of end users problems and, most of all, faster and more reliable solutions. Online support forums are the nowadays standard for most companies because of one fundamental characteristic: a knowledge database created using forums is dynamic, ever growing and searchable. Not only people can look for help with new problems, but they also can search for already posted solutions: this structure is much more efficient than the traditional systems, like hotlines for example, because, with time, all the available solutions are gathered in one place which is accessible to everyone. Considering the matter at a company-wide level, the biggest leap forward in terms of value is the improved connection between employees. Being able to connect with everybody inside the company, to work and exchange knowledge across different divisions without barriers, brings collaboration to a whole new level, sparks innovative thinking and creative problem solving. These are key features for a company that wants to grow and develop in an even more competitive and open environment.

Enterprise 2.0 technologies aren't totally risk free though. There are several potential threats that can influence a successful implementation. According to many reports¹³, among the internal risks we can address data security: the push towards openness and transparency, where not properly controlled, may lead to leak of confidential information also outside the circle of accredited people. There are different classes of confidential data and the ones that are classified as strictly confidential can't be shared with everyone inside the company. Another concern for managers is the productivity drop due to the distraction brought by social networking. Most of them believe that employees would get involved in time consuming activities that aren't directly related to their position (cost-center driven thinking) or that they may waste time browsing external social networks (Facebook and Twitter above all), with a consequent productivity decrease. Opposite approach to the problem can be taken: either denying

¹³ *Annual social technologies survey*, McKinsey Global Institute, 2012

“The social economy: Unlocking value and productivity through social technologies”,
McKinsey Global Institute, July 2012

completely the access to external networks or opening it completely. Many argue that embracing openness would bring many more advantages in the long term because it enhances communication and collaboration. On the other side there are also external threats connected with enterprise 2.0 adoptions. The biggest one is leak of critical information outside the company. Intellectual properties and know-how (aka tacit knowledge¹⁴) are one of the most valuable assets for knowledge based companies and managers can't allow letting them leak out. Priority for manager is to train collaborators to new security procedures and for IT departments is to build a stable and secure infrastructure that grants security standards. Another risk is the possibility of being attacked on social media. Brand reputation is one of those immaterial assets crucial for an efficient market positioning of the company: a damaging campaign on social media can have serious consequences on the whole company marketing strategy. On the internet comments and information spread much faster and companies have to learn how to face critics expressed through social platforms because they have a terrific audience: interactions with customers, whether they're praising or complaining, have always to be carefully crafted.

2. Enterprise 2.0 @Bosch

In the precedent chapter we analyzed the core Enterprise 2.0 aspects. In the following we want to present how the management strategy to implement the enterprise 2.0 initiative.

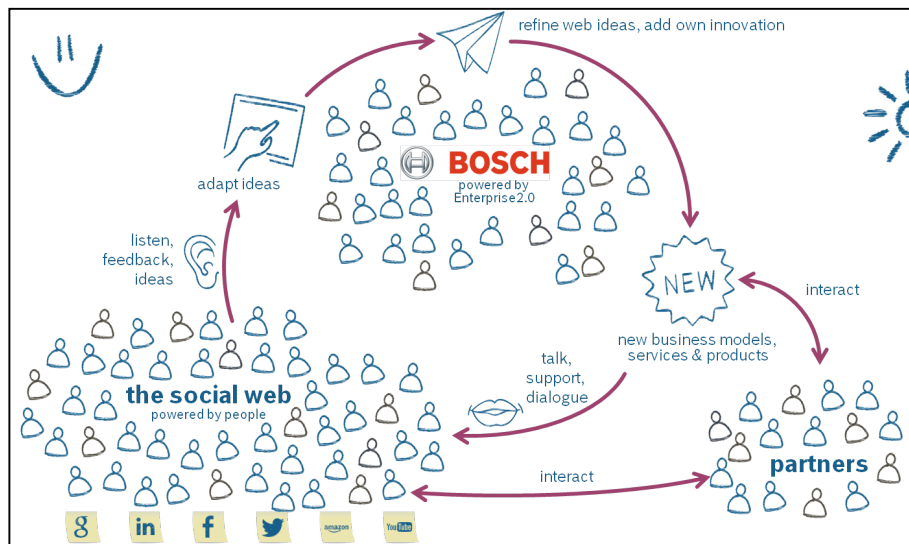
The following statement comes from the Bosch online portal:

“Enterprise 2.0 (E2.0) denotes the application of social business software in a corporate culture that promotes and demands the exchange of knowledge across locations and organizational structures. In evolving toward E2.0 we are seeking to make both our communications and the collaboration between associates, with customers, and with

¹⁴ „Making Knowledge the Basis of a Dynamic Theory of the Firm“, *J.-C Spencer*, Strategic Management Journal, Vol 17, 45-62

other stakeholders faster, more flexible, more direct, and more efficient. As E2.0 we will increase our speed and our customer satisfaction, in line with the BeQIK mission to “get better faster”. We also wish to increase both our attractiveness as an employer and our innovative strength.”

This scheme well summarizes the intent of the initiative:



Bosch wants to generate added value through networking. Using social networks, Bosch is creating a flexible, open, and transparent organization that includes all associates, partners and customers in a highly connected environment. The goal is to generate new and better solutions for the customers and faster, barrier-free cooperation.

In the “Big Picture” above you can clearly see how Bosch is represented only by people: there are no business units, departments or countries, only one big Bosch group. This is the ultimate consequence of the implementation of an enterprise 2.0 culture: collaboration through informal networks, where people communicate and share knowledge overcoming the boundaries of the traditional organization.

There are then other big possibilities for new business models extending the collaboration and E2.0 approach to the external partners: deeper interaction will lead to more valuable and successful partnership. This doesn't mean open all Bosch internal networks to external partners, but only share a common virtual space where to collaborate easier using the new common tools.

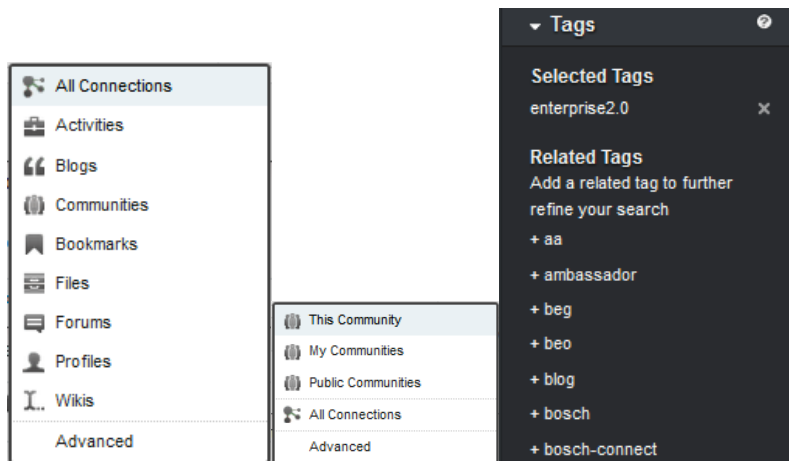
Another meaningful aspect of E2.0 culture is the ability of interacting with the whole social web in a more organic way. Especially in B2C departments, listening directly to the customers, being able to receive live feedbacks, giving support and managing brand reputation online are core activities nowadays; communicating via social networks even internally is a step forward in terms of understanding social web dynamics. The next steps, adapting ideas from customers, refining, developing and adding the Bosch innovative vision, can be much faster and effective thanks to the social business.

According to McAfee, there are six key components¹⁵ upon which this new paradigm is built: they are the basic 2.0 structure blocks and we can find all of them applied to Bosch Connect and consequently to the Support 2.0 project.

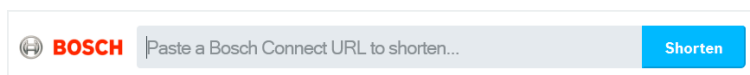
Search: the ability to find and reuse previously created knowledge is the first and most valuable functionality of an Enterprise 2.0 system. The whole amount of wiki pages, blog entries, forum posts and files has to be easily searchable and available to the vast majority of people inside not only of the community, but also of the network. The easier a worker can perform a successful search, the faster he can retrieve useful information, thus saving time and boosting productivity. Inside of Bosch Connect the search functionality deep integrated and is possible to perform a search at different levels:

- You can sort the search according to the application type (activities, blog entries, communities, bookmarks, files, forum posts and topics, profiles, wikis)
- For each application is then possible to limit the search range (i.e. run the search only inside a specific community or between the ones I'm member/owner of or just through the whole network of public ones)
- To refine the search, people can even sort the results selecting tags. Once a tag is selected, the system automatically suggests new ones that can be related with the ones given.

¹⁵ Enterprise 2.0: dawn of emergent collaboration



Links: to give a structure to the content the links are an important guide. Similarly to Google PageRank system, the pages that are mostly linked become more relevant inside the network. A so created structure evolves with time, reflecting the changes made by the users. This is only possible when a large group of people can create new pages and links. In Bosch Connect every user is allowed to create new wikis, blogs and communities and share them within the network: everyone can build links and add new blocks to the growing knowledge base. There is even a URL shortener dedicated for Bosch Connect ([http://bos.ch/...](http://bos.ch/)) that helps users to easier share long links.



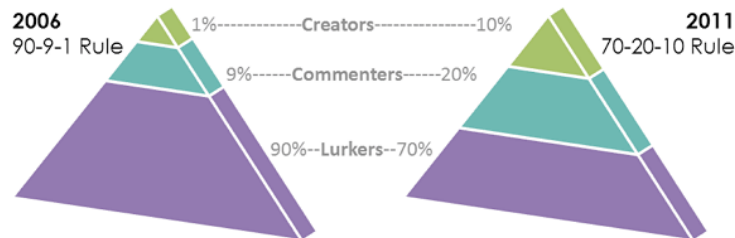
Authoring: the key scope of the tools available in an enterprise 2.0 environment is to allow users to contribute. Blogs for inform and share knowledge, wikis for team working and forums to get and give support: the intranet is shaped by the contributions of its users and these authoring tools give people the chance to elicit them.

Despite the increasing easiness of use of the tools and growing presence of social networks in our lives, there still are barriers to totally open collaboration. As the Participation Inequality Rule¹⁶ states,

“In most online communities, 90% of users are lurkers who never contribute, 9% of users contribute a little, and 1% of users account for almost all the action”

¹⁶ <http://www.mngroup.com/articles/participation-inequality/>

This was mostly true in the first online communities, but the trend now seems to change in a more interesting direction: according to an empirical research from the online community Socious, the engagement ratio in an online community tends to follow a 70-20-10 rule¹⁷:



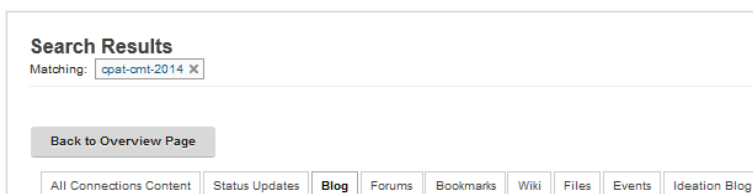
This can be explained because, with time, people are getting more and more used to social networks (especially in their private life): they're getting more comfortable with the idea of sharing online and openly expressing their opinions. We can notice how it's still easier for users to comment and edit content than creating it, but it's a clear progress comparing this to the past years. And the target within Bosch Connect is to further improve this ratio bringing it to almost no lurkers and an almost even number of commenters and creators.

Tags: the huge and ever growing amount of content created in the network has to be somehow organized in order to be searchable and useful: a good categorization system needs to be put in place from the beginning. There are different possible approaches to this issue, but one is particularly adapt to Enterprise 2.0 technologies. In this kind of environment, the management tries not to give fixed, preconceived notions about how to use of the new tools: for example, the way the content should be categorized is let for the users themselves to be decided. There is no preconception; those new aspects are left to emerge with time and use. Regarding the Bosch Connect use case, users have the possibility to attach tags (a simple one-word description) to each piece of content, whether it is a blog post, a wiki page or a forum post: the categorization structure

¹⁷ <http://info.socious.com/bid/40350/Is-the-90-9-1-Rule-for-Online-Community-Engagement-Dead-Data>

emerging with this system is a folksonomy (developed over time by folks). This is the opposite approach of taxonomy, where the categorization scheme is defined in advance by a restricted group of experts. Even if it could bring redundancy problems, the biggest advantages of this system are that it will reflect the real structures and connections that users actually use and it will make easy keeping track of specific content.

For example, to keep track of all the content related to a series of meetings, the tag “cpat-cmt-2014” was created and attached to every blog entry, wiki page, event page and forum post that was relevant for this occasion. As a result, to retrieve all the possible info about it, users only have to search for that specific tag:



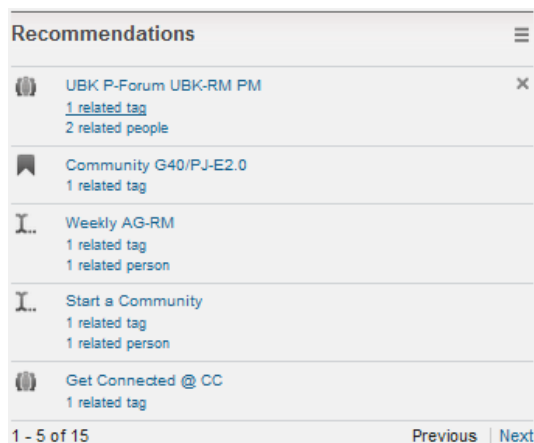
This way, people have a powerful and flexible tool to keep knowledge organized and visible even after long time.

Another powerful functionality enabled by tags is the research of experts. Each profile, just like every other application in Bosch Connect, can be tagged. By assigning tags to your profile, you describe your skills, job role, interests, and education to others in your organization. Tags describe what you do and what you care about. You can tag your own profile and also assign tags to other people's profiles. Tags that you assign to your profile are displayed in the tag collection in your profile page; it includes only the tags that have been added to your profile by you or others. The tag collection in the Directory page includes the most popular tags that have been added to the profiles of people in your organization. One of the main goals of Bosch Connect is to put people with different expertise in contact: before the introduction of Enterprise 2.0 technologies this could have been done only through international meetings or friends suggestion; now if I need to find a person with a specific expertise, within a specific department/location, speaking a particular language, all I have to do is search in Bosch Connect using the right tags and get in touch with that person with just one click.

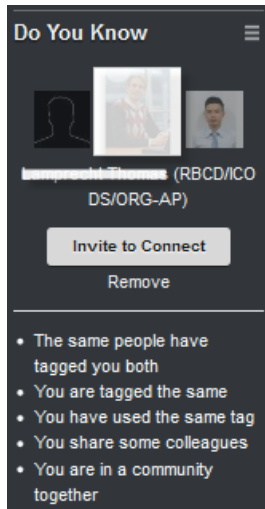
Extensions: Enterprise 2.0 systems can make the categorization smarter and more efficient by running algorithms that can automate pattern matching inside the network.

This will bring the user personalized recommendations about pages and content he may be interested in. In Bosch Connect there are recommendations at different levels:

- on the personal homepage there's a "Recommendation Widget" that shows content from different applications that might be interesting based on existing community membership, network connections, tags, and so on. The widget displays a randomized list of public and private content that has been recently added or updated in the different applications. The recommendations made are based on your relationship with existing public and private content.



- On the personal profile page there is a so called "Do You Know" widget: it recommends people for you to add to your network based on your existing connections, tags, organizational relationships, and actions that you have taken in the different applications. The widget recommends people for you to connect to and provides information about how you are already related to those people. For example, you might share the same manager, you might be a member of the same communities, or you might have used the same tag. You can use the information provided by the widget to help you decide whether to add a person to your network. If the person interests you and you want to connect with them, you can add them to your network directly from the widget. You can remove the recommendation if you decide that you do not want to connect with them.



Signals: information overload can be a big problem to face for users. Despite all the categorization and organization of the content, if not managed correctly, the flow of information can make the user feel overwhelmed.

Information overload is a well-known problem that exists since long before the advent of Enterprise 2.0 technologies. Already 40 years ago Peter Drucker addressed the problem in his essay “The Effective Executive”¹⁸:

“Most of the tasks of the executive require, for minimum effectiveness, a fairly large quantum of time.”

Despite the fact that the attention fragmentation at that time was even less intense (internet wasn't born yet and mobile phones wasn't there either), the most common reaction in front of the problem was the same as the one of many workers today: multitasking. The tendency to perform different tasks simultaneously, starting a new one before finishing the one we're working on. In front of the flood of news, updates, reports and posts, the majority of people try to handle everything at the same time, always keeping an eye on the news feed and email inbox, without really focusing on one single task for long time. This approach clash with what Drucker and many other

¹⁸ Peter Drucker, The Effective Executive, Oxford, UK: Butterworth-Heinemann, 1967, pp. 28–29

studies¹⁹ address: multitasking is an obstacle to productivity, especially when facing complex issues.

“The root of the problem is that our brain is best designed to focus on one task at a time. When we switch between tasks, especially complex ones, we become startlingly less efficient”

This problem can be faced making good use of Enterprise 2.0 applications. With the tools available in the system, people can filter all the information they receive and focus only on the relevant topics. The technology that best fits this need is RSS²⁰ (acronym Really Simple Syndication). It is a web content syndication application that enables to publish frequent updates, called “feeds”, about a websites: each feed is a regularly updated summary of web content, along with links to full versions of that content. Using then an RSS reader program people don’t have to manually check the website: they can subscribe to a specific web page so that the browser constantly controls it and automatically sends a short notice (containing a summary and link to the new content) when an update is available. This technology is deeply integrated inside Bosch Connect: for each single page of the network is possible to subscribe an RSS Feed, whether it is a blog entry, a wiki page or a forum post. Just like the search functionality, also the RSS feed application can be set at different levels:

- Community feed: to get notifications about everything happens inside a specific community, no differentiation regarding the application
- Blog/forum/wiki feed: to get notifications about a single application inside a single community, no differentiation regarding the topic

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http://www.mckinsey.com/insights/organization/recovering_from_information_overload

<http://hbr.org/web/2009/september/death-by-information-overload>

²⁰ <http://www.rssboard.org/rss-specification>

- Tag feed: to get notifications about a specific topic; it can also be filtered by application or community
- Single entry feed: to get notification about a very specific blog entry/forum post/wiki page

These are the six main technologies defining an Enterprise 2.0: all of them are present and deeply integrated into Bosch Connect.

Common aspects to all of them are easiness of use and user-centric approach. The tools has to be as much clear and intuitive as possible, they don't have to require any coding skill (html or similar) and have to be flexible. The network will grow and really start to work only if it will reach a critical mass of active users: to achieve this goal the aforementioned characteristics are essentials. End users have to feel comfortable to use the new tool, barriers have to be reduced to the minimum and there has to be room for improvement and experiment. The tagging system is a perfect example of this idea: it's a very powerful and flexible tool that gives the user the freedom to shape it the way suits better to his need (tags reflect real structure and are not defined before). A fine-tuning of the whole system can be made after the rump up phase, when a good number of users joined the platform and actively use it on a daily basis.

Speaking about barriers to knowledge sharing, we had a brainstorming with some influencer, early adopters and most relevant community managers inside Bosch Connect on the 14th May 2014.

To guide the discussion we provided a quick introduction about the topic, quoting Riege's work, and defined the framework: we wanted the participants to bring their own experience on barriers to knowledge sharing, in order to have a feedback on the categorization we used in this thesis.

The final result confirms and reflects almost entirely our work.

Among the individual barriers, lack of trust, different background and lack of social networking competence play a big role as sharing inhibitors. As clearly understandable from a first look at the picture, the organizational level is the one where workers found most barriers to overcome. Poor management support, inadequate recognition, unclear communication and a company culture not totally open: all these aspects are highlighted

as holding back and slowing the adoption of an enterprise 2.0 environment. As far as the technological barriers are concerned, there is a widespread understanding of the current developing phase of the system: Bosch Connect is far from fully integrated and there are many aspect that can be improved. The most urgent, according to the community managers, are deeper integration, clearer guidance on communication channels usage and an even user-friendlier environment.

2.1. Social business principles @Bosch

When looking on certain change processes in organizations and the associate hype cycle, the bottom of the curve could be very deep, which means the change process is painful for the organization. In order to have a flat hype cycle, it's always helpful to give the effected people some kind of safety fence in form of target pictures or guidelines. One part of this safety fence for the transformation towards a highly connected company are the Social Business Principles. They should give the employees a clear picture of the way Bosch wants to go and the result we want to achieve.

These principles were developed first, bottom-up by the E2.0 evangelist, and then discussed with focus groups in different workshops. After that, the principles were challenged by leadership and top management levels and finally approved by the board of Bosch in May 2013. With the launch of Bosch Connect at the beginning of September 2013, the Social Business Principles were circulated to all Managers SL2+ via the video and the brochure Social Business @Bosch.

The aim of the social business principles is to address the uncertainty caused by changes in new ways of working and the social web culture. Moreover, they are formulated as an entrepreneurial mission and describe how the Bosch organization wants to collaborate within Social Business. The focus lies on enabling agile networks and teams.

The Social Business Principles provide guidelines on how to act, are applicable for Social Business inside and outside the company and supplement the existing Bosch values. These principles were initially developed by the E2.0 project team Enabling Enterprise 2.0 and the steering committee by identifying the barriers for self-organized cooperation. This initial draft was benchmarked with other companies (including Cisco,

IBM, BASF), research abstracts (including Deloitte, IBM CEO Study) and external experts. In May 2013, the Social Business Principles were confirmed in a workshop with the Bosch management board and are now available as a guideline for all management levels.

The 8 principles are the following:

- **Listen and engage:** to listen actively to what people have to say, and engage in social business conversations. We use the insights we gain to create new business opportunities and to improve customer and associate satisfaction.
- **Collective intelligence:** we believe in the power of networks. We use input from our colleagues and external stakeholders to spark creative ideas for better products, services, solutions, and decisions.
- **Self-organization:** wherever appropriate, teams organize themselves, and assume collective responsibility for the results of their work. We harness the power of communities to act on customer demands and create a more flexible company.
- **Exploration:** we are not afraid to explore and try out new things. We dare to tread unfamiliar paths and are open to unconventional ideas. If things go wrong, we don't blame others. We want to be fast, and our learning cycles are ongoing and thorough.
- **Sharing and learning:** we are happy to share our experience throughout the Bosch organization. In an atmosphere of social collaboration and co-creation, we continuously learn, adapt, and improve.
- **Ease of use:** our working environment is intuitive and user-friendly. The entire organization uses Bosch Connect as common social business platform, which makes our daily work more enjoyable and more efficient.
- **Transparency as default:** as a matter of principle, information is open and accessible for all associates. Communities encourage openness, yet comply with all laws and policies concerning intellectual property and sensitive data.

- **Recognition:** we create a social business environment based on mutual respect, in which each single voice is heard and valued. In this environment, input is judged on its merits. Serving the best interest of Bosch is all that counts.

2.2. Key Application areas



The aforementioned principles and technologies apply to 6 different areas: 3 internal and 3 external

- **Customer & consumer, partners:** the goal is to improve customers' enthusiasm and engagement with interactive and social marketing campaigns; to enable a faster market trends analysis, thus achieving a stronger customer retention, examining big data coming from social platforms; to bring more flexibility when reacting to new market demands and new business opportunities; to increase sales and profits delivering new or improved service offers thanks to a more precise customer profiling and targeting.
- **Employer branding:** the idea is to increase attractiveness for current and future (e.g. digital natives) associates providing a cutting edge social technology and an inspiring working environment; to make recruiting activities more efficient and effective, evaluating candidates keeping also in consideration their social profiles.

- Stakeholder reputation: fundamental is to keep a positive reputation and brand image. This can be achieved building-up advocates and improving issues and crisis management online.
- Internal collaboration: one of the areas where enterprise 2.0 could bring the most valuable improvements. It can be possible to increase efficiency and speed, to improve process-integrated knowledge management, to enhance project management; to reduce not only process times, but also e-mail load and travel costs
- Internal communication: enterprise 2.0 tools allow to better colleagues identification and profiling thanks to users profile. This aspect is the key that will lead to higher motivation and engagement between community members: knowing better your colleagues builds trustful relationships and facilitates effective knowledge sharing. Open wikis and blogs can speed-up information flows and dramatically improve information management.
- Internal idea management: the company innovative strength can be secured and exploited to the fullest. Improved agility and flexibility are key organizational and communication features to provide drastic process optimization.

2.3. *Community Manager Role*

Among the many new roles assigned to support the introduction of the Bosch Connect system, we are going to focus on the one that has a central role in our use case: the community manager. The management provided an official description of the role, addressing responsibilities, tasks and skills.

Responsibilities: most relevant ones are developing, setting-up and maintaining the assigned communities on Bosch Connect. Community managers are also in charge of managing the network connections between their own communities and other communities that can be relevant in terms of topic and potential collaborations: they have to actively curate and develop the network of connected communities. They are the

spokespeople in contact with others E2.0 project manager, E2.0 ambassador and use case owner.

Tasks: community managers have to run and support their communities on Bosch Connect and foster continuous improvement and evolution. Not only the setup of the communities have to satisfy to the requirements of the use case owner, but also the community architecture has to develop according to the use case concept. The virtual community is a dynamic environment and the community managers have to keep it updated. Essential task is to enable training for community members or, where it is not possible to handle it directly, provide links and contacts with other communities that can do it. Connection curation is another key task. Exploring and linking to related communities with similar topics and targets is an important activity that keeps the community updated and encourages active participation. Community managers need to exchange their experiences with other community managers in order to build an ever-growing database of good practices, guidelines and solutions; therefore they have to participate in Experience City and Community Manager Community.

Knowledge / Skills: essential prerequisite for being a community manager is a deep understanding of objectives, benefits, content and usage of enterprise 2.0 tools, functions and mechanisms. People who perform this function act as role models for all other users, so they have to embrace all the social business principles, have a profound knowledge of the whole organization, its hierarchy and its internal processes. Dealing with community members also implies having a strong social competency: ability of managing conflicts between users and basics of virtual moderation are key skills for effective community managers. Other helpful skills are the ability to work in team and being a really proactive member inside Bosch Connect.

Within Bosch there is a further distinction between two Community Manager roles: the junior and the senior one. Difference between them is training and experience.

Junior Community Managers have the task of managing up to 5 communities, with focus on maintenance, moderation and housekeeping. Content production, moderation of posts and comments are part of their core activities: they should trigger community members' engagement and involvement. They work together very closely with the Use Case Owner in order to set up and develop the community according to the concept guidelines. They also recognize community activities and community evolution through

KPI measurement and evaluation. They are in touch with the area's Senior Community Manager for further assistance; they consult them for advices about possible improvements. They know how the community life cycle develops and support it through all phases. Training is one of their main responsibilities under two perspectives: they have to provide trainings for community members and they also have to participate to Experience City and Community Manager Community for knowledge and good practices exchange.

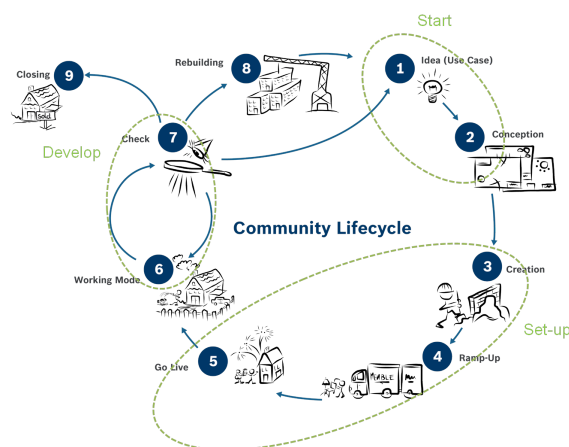
Senior Community Managers are the ones who passed the CCM (Certified Community Manager) training; in addition the aforementioned ones, they perform the following tasks. They manage and support one or more communities (multi-community management) operatively on Bosch Connect. They take care of the whole community creation process and its evolution: from the concept to the final setup (professional, technical and social concept and environment) corresponding to the requirements of the use case owner. Due to their experience, they act as consultants for managers and departments: they give strategic advices about feasibility and effectiveness of the implementation of topics, tasks or processes on Bosch Connect. They are the ones who actually define which KPIs to keep into consideration and how to measure them: they file reports about community results, highlighting best practices, lessons learned and success stories. One of their priorities is to identify multipliers and influencers as well as E2.0 Ambassadors and E2.0 Experts, in order to constantly grow the network. A Senior Community Manager can also take over the mentoring for one or more Junior Community Managers.

Analyzing both roles, we can sum up which are value added tasks performed by efficient community managers: supporting communities to be successful, productive and growing, thus creating added value for both users and members; taking care that there's no other existing community with identical or similar content in order to avoid to "re-inventing the wheel"; taking care of community housekeeping; train, involve and engage the community members and motivate everyone to follow each other and get connected; getting connected with similar other communities, working together and exchange experience, thus driving the firm on its way to become a highly connected company; having a strong passion for making work a better place, and attempting to go against work stereotypes, by creating a positive environment that opens up work and

makes it more human; having a strong belief in the power of ESN (Enterprise Social Network) to help people break free from their job descriptions, connect with others, learn much more about their colleagues and their organization as a whole; gaining motivation from helping others bring their own passions to life and become successful, as well as a sense of achievement from enabling people to release themselves from the old fashioned way of working and find pleasure in their work; commitment to help others break free from the traditional hierarchies and silos and share a feeling of community.

2.4. *Community Lifecycle*

One of the main tasks of a community manager is to follow the community lifecycle to develop a structured and working community. To better understand it we could look at the whole lifecycle like a process of building a house: different subsequent steps from the ground to the final stage.



Start

- 1. Idea** - the starting point is the idea: a draft of the vision of which the goal to accomplish with the community is. The basic idea can come from a single person or a whole group, what is fundamental then is the discussion: it has to be checked and discussed until a realistically implementable concept is developed. A key prerequisite is that it has to be an original concept: people should check if there are already communities dealing with the same topic and, when possible, combine efforts and help developing the existing one. Given the huge number of

associates, in the long-term would be a problem dealing with an ever-growing number of communities, so efforts should be put into avoiding duplicates.

- 2. Community concept** – the second phase is designing the community concept. Before starting a good and precise planning is needed. Key aspects to keep into consideration are the purpose of the community, the target group we aim to, which will be the type of content shared in the community and, if we plan to handle content from a lot of different sources, we have to write a consistent tagging guideline. One of the most important aspects is the design: the homepage should contain precise information about how-to-find-what because community members, to be willing to actively use the community, have to understand at a glance how the community works; the structure has to be as intuitive and user-friendly as possible. The name of the community should be descriptive and easily searchable within the Bosch Connect search engine. Only once these steps are planned and approved, the next phase can begin.

Set Up

- 3. Community creation** – the operative phase. Opening the community, tagging the pages, uploading the first content, setting up the whole basic environment upon which the community will work.
- 4. Community ramp-up** – once creating the framework, the ramp-up phase is the one where the structure is better refined, the content is uploaded, links to useful sources are added and the different sections of the community are prepared for the users. An explanatory page “About us” is the good practice within the Bosch Connect environment: a page where to describe concept and purpose of the community.
- 5. Community go live** – the potential members are invited and the productive work is started. To better start a community, a small kickoff meeting is always recommended: the ideal way would be to meet in person all the members (good practice to overcome potential sharing barriers), but also a virtual meeting can work. During this meeting the community manager has to provide the first

useful information about the community (idea, purpose, etc) and the first content as well: members have to understand the scope of the community and be interested in working in it.

Development

- 6. Community working mode** - after the initial set up, in this phase the community is working accordingly to the plan. The community manager has now to perform his tasks: provide support, manage content, check the tags consistency, keep the members engaged and motivated to work in the community and moderate discussions. On the other hand members benefit from working in the community and using E2.0 tools.
- 7. Community check** – fundamental is to plan regular check-ups: monitoring the situation in the community is the key to keep it running in the right direction. Comparing the current state with the vision can highlight where corrections have to be made, asking community members' feedback is the easiest way to get precious feedbacks. After gathering insights about the current situation, it needs to be evaluated: only if everything is going accordingly to the purpose, nothing has to be changed; otherwise a new phase is needed.

Possible paths

- 8. Community rebuilding** - Communities are collaboration rooms for people: living spaces, that need to be maintained and nurtured, that evolve over time. From the time when initial idea was conceived, many requirements may change: form of work, new functionalities, target groups, new structure etc...in this the phase rebuilding the community (not from the basis but keeping the framework already in place) will keep it effective and useful for all the members
- 9. Community closing** - Could happen, after the evaluation done in step 7, that the analysis shows that the community is no longer required. Then the information in the community needs to be saved and the last step will be to shut it down.

3. Project framework

3.1. *UBK, G40/PJ-SPK*

The project we analyze in this thesis is developed inside the UBK division at Bosch. The acronym stands for Unternehmensbereich Kraftwerkzeug (Automotive Business Division). More specific, the department leading the project is the G40/PJ-SPK: it stands for Project of Standardization Processes Kraftwerkzeug. Given the strong diversity of the many departments involved in the division (from development to production, from purchasing to stocking), there has to be a shared base that enables horizontal communication between business units. Here comes the task of the department: the standardization of the processes inside the whole UBK according to shared value streams. The focus shifted from single department to cross department streams that follow the creation of value: Order to Cash (O2C), Produce to (P2P), Produce to Stock (P2S) and many others.

The aim of this department is stated in the vision and mission posted on the internal website.

Vision:

“We work for gaining competitive advantages for Bosch automotive by developing common best in class standards for selected processes areas within the value adding core processes. All our activities are based on the close collaboration with the global network of Process Experts. We are highly transparent in our planning in order to ensure that all our priorities are aligned to UBK Strategy.”

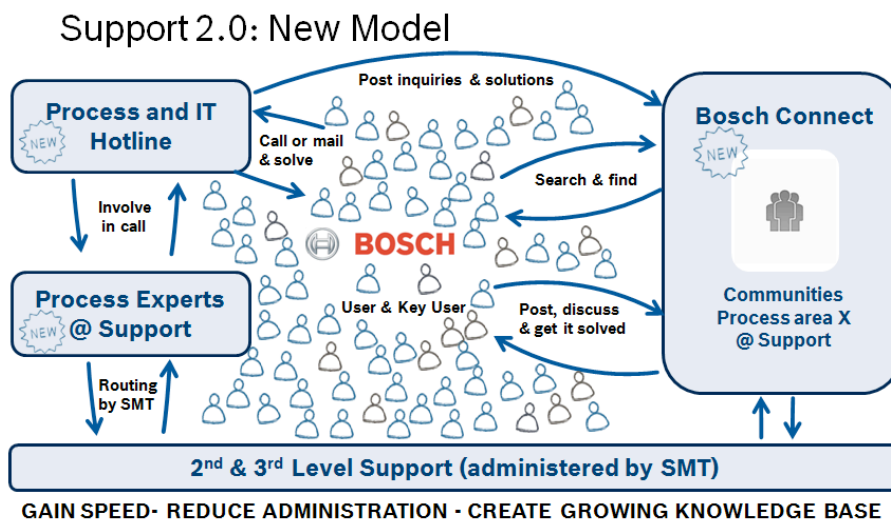
Mission

- *Catalyst for Process & IT Management*
- *Preconditions for fast decision making*
- *Lean, agile, flexible, open for future*
- *Tools & Methods Process Analyses & Mapping through VSDIA*

- *Develop ability to take ownership*
- *Provide IT-applications that are easy to use*
- *Make our schedules reliable – meet deadlines*

3.2. **Support 2.0 Initiative: CPAT @Support**

The project we focus on is named Support 2.0 @CPAT: the target of the project are the Core Processes in the Automotive Technology and the support activities related to them. With the new concept of Support 2.0 @CPAT the aim is to use enterprise 2.0 tools to improve speed and quality of the support channels and deliver a better service and user experience. The focus is on topics related to core processes in the Automotive Technology division, with very high attention on value-adding core process streams like O2C, P2S, P2P.



The new support concept can be structured in four deeply interrelated action fields. The first one is the support community on Bosch Connect. The implementation of an Enterprise 2.0 environment brings new opportunities of interactions between employees. It empowers collaboration, coordination and knowledge management, so

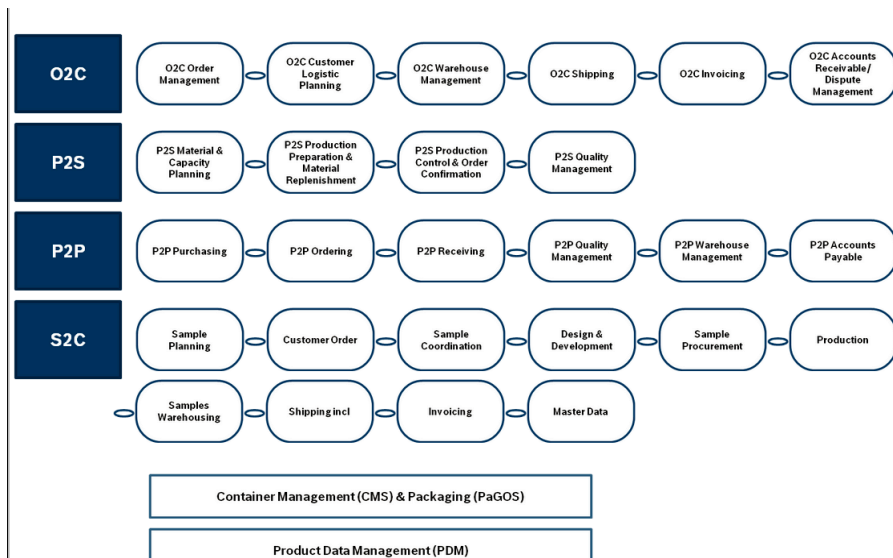
that every user can benefit from the knowledge provided by the whole community. Users get access to a global group of experts and can find the solution they need - either posting a new topic or reusing the content that other users already posted in the communities. Every member of the community can profit and contribute independently of organizational boundaries.

The main community “Core Processes Automotive Technology (CPAT) @Support” is the reference point for all support topics about CPAT. Directly linked to the main community there are sub-communities, each one focused on one specific process area. The structure reflects process chains and value streams (like O2C, P2S, P2P...) of UBK. In order to help users to find the right support community, on the homepage of the CPAT community we posted an overview of the whole structure: users can see at a glance all the connected sub-communities, click on the one that that is related to their issue and jump right in the support forum where they can start a discussion or look for a solution. The main community structure acts as a blueprint for all the sub-communities. Community managers defined the basic features that have to be included in each support community (blog, forum, wiki and files), the design of the homepage and the forum layout: design consistency across all communities is essential to guide users through the new support system. On the main homepage there are also links to the lists of community managers, process experts and CPAT agents. Every user can clearly identify who is the responsible person for a specific community, who is the expert available on a particular topic and who are the CPAT agents, a group of people trained specifically for providing support through the hotline about process chains related issues.



Homepage of the Support @CPAT community

Overview of all sub-communities



Thanks to the new 2.0 tools, users can either post their own inquiry or check the already available solutions posted in the forums. There is no need to re-invent the wheel over and over again: with a quick search a user can check if a solution for the problem is already online (in that case the problem is solved without further research) and, only when there is no track of the issue yet, start a new topic in the forum. Each entry is tagged properly and easily searchable for future reference. It is task of the community manager to check the correctness of forum topics and, when needed, moderate them. The discussion generated inside a forum isn't restricted to the members of the community: every user of Bosch Connect can contribute and involve in the conversation other users, thus improving the opportunity to find an expert who can solve the issue. Transparency and reuse are core features of communities. Every forum / blog / wiki entry is accessible to all Bosch employees and easily searchable. This community complements the activities of the process managers and their network of process experts and users: the final result will be an ever-developing knowledge base for processes and IT.

The second action field is the process and IT hotline. Aim of this new team is to highly improve the user experience about the support in the UBK area: they created a dedicated support channel for issues specifically related to UBK chain processes. When users call the hotline, the first level agent will act as a filter: he decides whether the issue is process related or not and, when it does, routes the call to the right CPAT agents. The agents are skilled and trained employees who attended advanced trainings about SAP processes and technical support. During the handover process, the first level agent is in

charge of passing all the relevant information to the process agent, so that the end user doesn't have to explain all the details of the problem one more time. The main difference between the standard hotline and the new one is the high level of interactivity of the latter: when there is no available solution yet, agents can look in the internal knowledge base, Bosch Connect or Bosch Learning Space. The knowledge base of these three databases together is a precious source that can provide fast and reliable replies thanks to its dynamic and growing nature. When a solution is still not found, agents can go even further and involve in the call a process expert: these people, given their wide experience in a specific field, can provide deeper insights about the issue and help to solve it. When a solution is finally found, the agent will proceed to create a topic in the right support community in Bosch Connect and even post a link in the concerning Bosch Learning Space course: this way the solution will be public and available for everybody. The whole process focuses on core aspect of enterprise 2.0 environment: transparency, collaboration, knowledge sharing. The knowledge base on Bosch Connect will grow exponentially and incorporate even those tacit knowledge notions that are usually hard to share across huge companies but that are the most useful.

The third action field is represented by Process Experts. They get involved in an extended first level support, when the process hotline agents call them to get further support from user departments. The idea is to get advices and insights from people who have a wide first-hand experience on the topic. An expert can be involved directly on call and directly provide a solution: this means higher efficiency, high speed and less administration in ticket management. Clearly process experts are reference points also in the support communities and can be involved in forum discussions by the community managers.

The last action field gathers the 2nd and 3rd Level Support. They deal with solving both hardware or software related issues when all previous steps in the support process fail to deliver a valid solution. The CPAT agent fills out a ticket and forward it to the next support levels: from this point on the issue will be treated with the classic SMT system and solution groups. Of course there is always the possibility to create a new forum topic and start a discussion with other colleagues.

The breakthrough brought by this new system is the barrier less knowledge sharing environment. Knowledge can flow between key players, business units and countries.

All the contributions are gathered in one place, thoughtfully organized and made available so that everybody can profit from them. The shift from the previous technology is the ability of the system to grow and develop together with the company and users skills.

3.3. *Training initiatives*

One of the most important initiatives carried on together with the support community is the training of the community managers. The project management not only defined the structure of the community but also nominated all the key players (community managers, process experts and CPAT agents) and it is its task to provide useful materials and organize training initiatives. According to the development phase of the project, there are different levels of training. The first measure aims to establish a relationship of trust and collaboration between community managers and project management: each community manager directly talks with the head of the project and gets to know the basics about the new support model, how to start running its community and other essential information. On a second level we organized videoconference trainings. There was the possibility to attend trainings focused on community management topics, ranked from basics to advanced. There were three training modules of 60min, each one taking place once in the morning and once in the afternoon in order to give the facilitate the participation of colleagues from Asia, India and U.S.A. The whole initiative was deployed in Bosch Connect, using only enterprise 2.0 tools. We posted on the calendar section of the CPAT community a dedicated page for every event, with meeting details, summary of the topics and the link to the wiki page regarding the specific module. The wiki page act as gathering point for all the attendants of the training: here we posted minutes of what we discussed in the training, links to the sources (like blog articles or other useful websites) and users could even comment and provide further feedbacks. All the pages regarding the training modules have a specific tag, so that it will be easy in the future to find them again.

Here the summary of the modules:

- 1st Module: Community Management Training @CPAT - Intro E 2.0

Topics of this module are meant to be an introduction to the enterprise 2.0 environment, like: what is Enterprise 2.0, social business @Bosch: adding value for the business, introducing a social media tool, challenges and cultural change, overview of basic Bosch Connect functionalities, what makes the “2.0” in Support 2.0 for CPAT.

- 2nd Module: Community Management Training @CPAT – Basics

This second training focuses on the basics of community management. Topics discussed: the power of a personal profile, network contacts, following people and communities, handling information overflow, where to post what, tagging guidelines, search via tags, how to moderate topics in a Forum and adding/inviting members to your community.

- 3rd Module: Community Management Training @CPAT – Advanced

On the last module we presented advanced features for running efficiently a community. Subjects of the discussion: handling events, wiki, blog & Co - which function should I use for what content, notifications, RSS-Feeds, community member engagement, community manager technics, growing into the role of a Community Manager in Support 2.0 in CPAT.

An important element of the initiative is the so-called “missions”. We wanted to provide an easy and engaging way to put into practice the topics discussed in the modules, so, after each one, we posted a list of tasks that users should complete before the next training: these tasks are related to key arguments, important technics and useful tips taught during the meetings. Those who completed them earned a badge that would be shown near their name in the official community managers’ page.

The learning cycle is constantly developing, so it is necessary to provide continuous feedbacks and check the growth rate of communities. For these reasons, there are frequent calls and meetings to inform all key players about status updates, evolution of the project, development of the support communities and training updates.

4. Use Case Analysis

The scope of this thesis is to determine the most effective way to implement the enterprise 2.0 concepts to the Support 2.0 project. After researching and comparing the different approaches emerged from the literature, we decided to check if we could find empirical evidences of common aspect highlighted in those papers inside our specific use case. In order to get this kind of feedbacks we submitted to all the key players of the project (senior and junior community managers, process experts) a survey aimed to test their knowledge about web and enterprise 2.0 themes, their social networking training and their perceptions about the implementation of the new system.

4.1. *Survey Structure*

The survey is built with the online platform Inquiry²¹, using a proprietary server structure and layouts: the software enables deep controls on survey distribution and data analysis and is the standard within Bosch. The survey is focused on four main topics, divided into different sections: knowledge about general enterprise 2.0 themes, usage of Bosch Connect, community management technics and open feedbacks about the system implementation. The possible reply methods vary according to the nature of the query: from closed to open questions, from multiple choices to open feedbacks.

In the first section we want to get a general idea about the composition of the survey. The participants give information about themselves: age, gender and how many years of experience they had within Bosch. In addition to these basic questions, we tested the knowledge about enterprise 2.0 general meaning. One of the questions is “Enterprise 2.0: What does it mean to you”. Participants could provide multiple answers, choosing among the following widely known terms: sharing, open, cloud, information, participation, connection, international, network, community, social, e-learning, blog, knowledge management and others (with the possibility to fill out a blank space). With the last question of the section we asked to provide a self-assessment about the awareness of the aforementioned 2.0 concepts: “How good do you consider your

²¹ <http://www.inworks.de/software/inquiry-survey-server>

knowledge about Enterprise 2.0?” Instead of a numeric scale between 1 and 5, we give the participants the possibility to choose between a set of smileys: this system provides an immediately recognizable evaluation scale and there are fewer chances the participants misunderstand it. We adopted the smiley set in all other sections of the survey as well to achieve consistency and build a coherent structure.

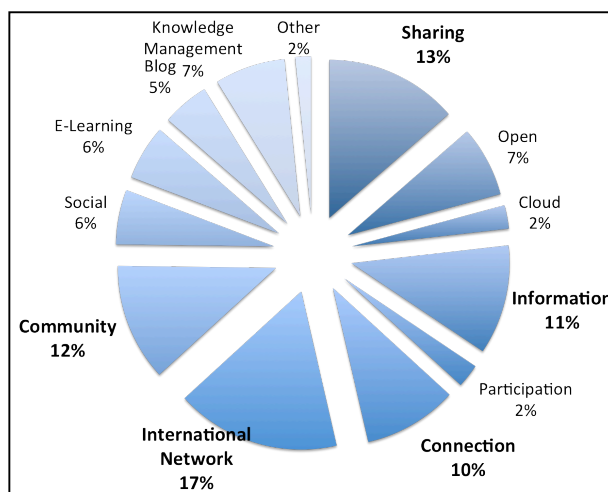
The second section of the survey is dedicated to the usage of Bosch Connect: as a matter of fact, one of the key information we need to tune up the network is to understand how the users actually use it to perform their daily activities. The first questions are focused on the experience of the participant on working with Bosch Connect: we asked how long he is using Bosch Connect (the official rollout took place on Q4 2013, but many early users had access up to one year in advance) and how many communities he is owner and member of. The other two questions aim to get feedbacks about the usage rate of the system and its implementation. One is “How often do you use Bosch Connect?”: this can point out how much the social network is embedded within the workflow and how relevant it became for users in their daily activities. The second one is “For which activities do you use Bosch Connect?”: we want to understand which are the most used tools in order to give community members a better user experience. They could choose one or more activities among the following: find experts, get support, stay up-to-date, read news/blog, write a blog, moderate a community, check forums, responding on notification and others (with the possibility to fill out a blank space). We listed the most relevant activities and functions enabled by an enterprise 2.0 environment.

The third section of the survey focuses on community management. The first three questions relate to the background of the participant regarding the training: for us is really important to understand if and how much training about community management topics our key players had, because it can reveal if further theoretical training is needed. The simple and direct questions are “Did you attend any training about Bosch Connect or Community Management?”, „If yes, how many hours of training did you have?” and „If no, do you think a training session about community management would be useful?”. Quite interesting to analyze is the last one: a negative response could suggest many different causes, from diffidence towards an effective theoretical training, to a feeling of certainty about its own knowledge in this field. The next question is specific

about what we called “community technics”: among all the tasks a manager can perform, we choose the 10 most relevant for running effectively a community; these can also be seen as the basic building blocks for community management. They are: open new topics, edit existing topics, tag a blog/wiki page/forum topic, search by tags, notify other people, moderate a discussion about a topic in a forum, upload a file, marking a question as "answered", moving topics in other communities/forums, adding/inviting people/colleagues. For each one of these technics we asked the participants to express a self-assessment using the smiley scale, just like we did in the first section of the survey. The responses will be useful once a new training will be put in place because we will know which technics can be considered weak spots and we can work to reinforce them. The last two questions of the section regard barriers and drivers to knowledge sharing. We listed 8 barriers and 6 drivers we analyzed in the literature review and asked the participants to rate, which are the main barriers and drivers for knowledge sharing according to their experience. Since these two questions are a bit more complex and theoretical, we provided a brief description of each element. The barriers (reasons why member can feel restrained to collaborate and share) are: no trust (no direct contact with other members, credibility and accuracy of the source to be proven), no recognition (no formal credit for the contribute you give), no time (no dedicated time for sharing in the daily workflow), no training (lack of knowledge on how to use Bosch Connect tools), background differences (culture, ethic and educational level vary a lot between different countries), formal working environment (no space for open and spontaneous sharing), no managerial commitment (no push from the top to use the system), unclear guidelines (no clear indication on how to use the tools). The drivers (reasons why members can feel willing to contribute) are: leadership (expectation and tasks of direct superior to make use of Bosch Connect), recommendation (peers/colleagues are recommended to use special communities for knowledge sharing and knowledge finding), performing review (integration measurement of knowledge sharing as one goal in employees performance review), recognition (visibility in Bosch Connect as "Expert" or "Top Contributor"), pioneering (being a pioneer for a new enterprise 2.0 driven sharing process), workflow integration (embedding knowledge sharing in day to day activities). These questions are fundamental to get an empirical evidence of the theories we analyzed in the literature review, thus giving us the opportunity to eventually overcome

the barriers, exploit the drivers and tune up the community structure for the Support 2.0 @CPAT project. We left the last section of the survey for the open feedbacks: we encouraged each participant to express his opinions about the implementation of the enterprise 2.0 concept in our project.

4.2. Survey statistics and results



The survey was submitted on 3rd of June and remained active for two months. The community managers of the Support @CPAT community who took part to the survey are 26 out of 28, more than 90%, and most of them are males, 80%. Worth noticing is age distribution: one third of participants are under 30 and 26% are above 45 years old: on one side this could be

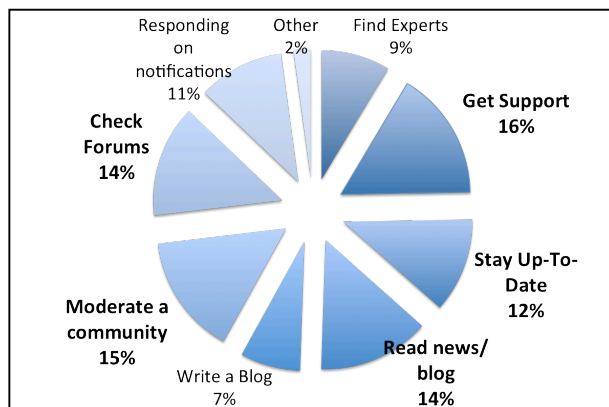
explained addressing the easier approach of younger generations with social software and web 2.0 tools in general; on the other one this emphasizes how much experience and knowledge play a fundamental role in a support environment. As a matter of fact 20% of the participants have more than 20 years of experience within Bosch, whereas the majority, almost half of the target, worked up to 9 years for the company. The meaning of enterprise 2.0 is blurred and there is no universal definition: it suggests a set of technologies and the implementation can be different for each use case. Our community managers have a quite precise idea of what it means for them and for Bosch Connect. Among all the possible answers to the fourth question, the ones that received more preferences are “international network”, “sharing”, “community” and “connection”: the trend suggested by those answers shows how our key players already embrace the vision of an international, dynamic and interconnected company. The next, but harder, step will be to share this vision with the rest of the users. 85% of participants believe their knowledge about enterprise 2.0 topics to be good or even very good: this

figure confirms the previous information, showing how confident community managers are about their role and training.

Regarding the usage of Bosch Connect, we see that 65% of participants have been using the platform for at least 5 months: this reveals that many community managers also were early users and beta testers, thus gaining deeper knowledge about the functions and features of the network. Looking at the ownership and membership figures, we can see that 81% of participants manage at most 2 communities, whereas the number of communities they are member of is much bigger, the average is between 5 and 10. This is easily explainable because being a member of a community could mean not being active and only receiving notifications; on the contrary, being a community manager requires such an amount of time, energy and commitment that it is not productive nor effective trying to manage too many communities. The time spent on Bosch Connect is growing, but for the moment most of our key players, around 55%, use the platform between once and three times a week. We have to keep in consideration though, that almost 40% check Bosch Connect at least once a day: these users already got used to enterprise 2.0 tools and integrated them in their daily workflow. They are influencers that can push

the adoption process forward and inspire other users to embrace the new system too.

Among all the possible activities that can be performed within a 2.0 environment, the ones that community managers of our project prefer are strictly related to the nature of the support community: getting support,

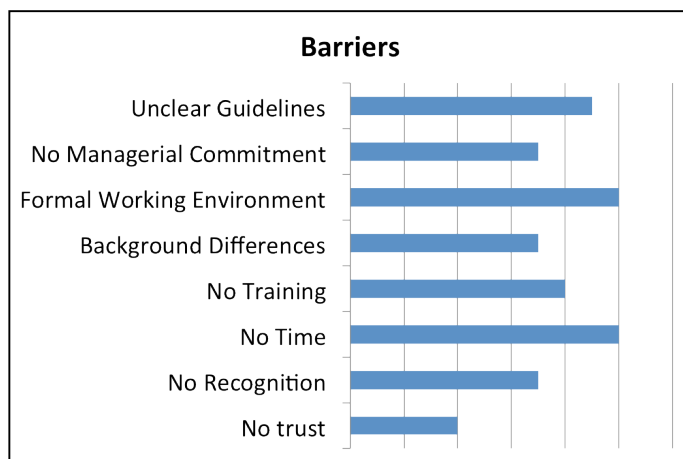


moderating the community, checking forums, reading news/blogs; these four together account for the 60% of the overall performed activities. This figure isn't incoherent: it is clear that the most useful features for a support community, forum and blog, are the ones that are perceived as most important and effective. Especially at the in the early stages, when the knowledge of the system is still superficial, users need to make the

community working as soon as possible: here the necessity of mastering the basics first, leaving advanced features for the next steps.

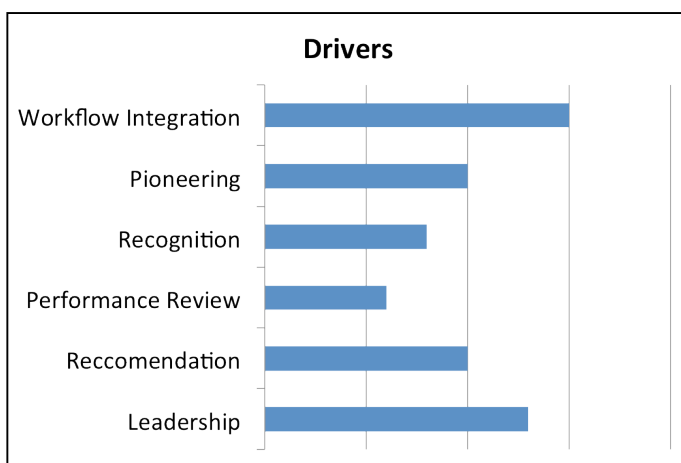
Looking at the questions regarding the trainings, there are few noticeable figures. Among all the key players, 77% of them had at least one training session of two hours about Bosch Connect; all those who didn't take part to any training agree that it would be useful to attend at least one. This reveals that community managers understand the importance of specific training about a topic as complex as enterprise 2.0 and, those who didn't have it yet, consider it a valuable resource. Mastering community management technics is essential to run successfully a community and especially when dealing with a support one, because it needs a lot of maintenance. The survey demonstrate how much community managers are familiar with basic features and tools but struggle a little bit when it comes to advanced features. Managing forums is something that everybody claims to know really well: open/edit/tag topics, involve other experts and sharing files are all activities that are commonly considered as essentials and indispensable but also quite easy to perform. A lack of preparation is perceived instead when dealing with more advanced tasks like moving topics into other communities or moderating forums. These are tasks that require not only deeper knowledge of the tools but, especially in the case of moderation, also good social skills to get along with other colleagues in an stressful situation and manage to solve conflicts in a virtual space. Even considering these more problematic aspects, we can say that participants gave overall a really positive feedback on technics: average level of knowledge can be deemed satisfying for the first phase of the project.

Analyzing then the questions regarding barriers and drivers to knowledge sharing we can search for an empirical evidence of theories we examined before in the literature review.



According to the replies of the participants, the main barriers that hinder enterprise 2.0 adoption are the too formal working environment, which leaves no space for open and spontaneous communication, the

lack of time, specifically dedicated to knowledge sharing activities, and then there are situations where the unclear guidelines lead to misunderstanding poor productivity. We can see a pattern in these replies: they are all relating with workflow organization and structure. Introducing such a radical system implies many challenges. One perspective reflects the management need to structure the process and control its development: the risk here is to establish a too formal working environment and obstruct free knowledge sharing, which is the real added value of an enterprise 2.0 system. The other perspective keeps in consideration the effective integration of the new tools in the daily tasks. An already tight workflow usually leaves no free time to dedicate to social networking and knowledge sharing activities: this means that managers start considering the time spent browsing the social network as a value adding activity and encourage the use of the web 2.0 tools. Of course the lack of clear guidelines about the correct behavior and usage of the network can be an element of constraint: an enterprise 2.0 environment is completely transparent, everyone is recognized for his contributions and the topics are strictly working related. Users feel more secure when they know exactly how they should move the first steps inside a new environment.



Analyzing the replies about the perceived drivers of knowledge sharing, two of them stand out because of the relevant number of preferences: workflow integration and leadership. The first one refers to a fast, precise, reliable and efficient integration inside the company: enterprise

2.0 tools not only have great potential of revolutionize the whole company, but are also really flexible and adaptable, so that they can fit perfectly to the existing structure and work seamlessly across all the business units. A real integration does not make the user perceive the whole enterprise 2.0 concept like an add-on: 2.0 tools have to be gears of the mechanism, not just a cover that could be dismissed in few months. The second main driver pointed out by key players is leadership: in a plan of deep integration a big phase can be fulfilled thanks to a strong commitment of the management. At the

beginning a top-down approach is more effective: management can establish guidelines, set objectives and communication strategy and act as example for the rest of the employees. Once the network reaches the critical mass and the users understand the potential of the tools, the push towards new solutions and innovative tools applications will come from the users themselves.

In the last section we let the participants express their opinions about the implementation of the new system and encourage them to give honest feedbacks about possible tweaks of the community structure and system tune-ups. We report here some of the most significant answers.

“People need to not be afraid to just "DO IT". Such a different concept than the structured Bosch Engineering approach. We don't need more classes on rules and guidelines, we need to do it. We need to live it. Once people get involved and see it work, they will use it.” This community manager addresses the fundamental barrier of a working environment that is still too formal. Since Bosch is born as an engineering company, its culture is always been strongly hierarchical: the drastic change influenced by enterprise 2.0 implementation implies changing both company culture and employees attitude towards openness and knowledge sharing. A change that will take some time to let us reap its fruits.

“BC / the idea is good but the tool itself has severe problems (different functions in different modules, some functions (eg 'notify') only available in some modules) and too much marketing; not enough usable content; too much hype and keyplayers don't get the time to use it.” This user highlights other flaws that compromise the full potential of Bosch Connect. The lack of consistency across all the 2.0 tools is one aspect, even though the network is at its first release (within Bosch) and many improvements will come with updates in the following months. Another aspect is the content: a shared knowledge network can be useful only when pieces of contents are actually shared between users. This is a consequent phase and it starts only when a critical mass is reached. The last mentioned aspect is the lack of time, one of the barriers we already analyzed: tight daily schedules are often addressed as the main problem because there is no time left for learning and getting used to the system. Despite easiness of use and integration, an enterprise 2.0 environment has a learning curve and it is steeper if the user is used to work in a totally different way: it takes some time to master web 2.0

tools and the management has is in charge of providing the right training for it. The consume of time, however, is limited to the first phase of the implementation process: once fully adopted the new system, the improved process effectiveness will lead to consistent time saving.

The results of this survey are in line with our expectations. The development of the community and the training of the key players led to the building of a stable foundation for the support community. There are, however, flaws and open issues that still block the full potential of the project: most are related to culture change and lack of proper training, but all of them can be easily addressed and solved with a decisive action from the management.

4.3. *Practical applications and concrete measures*

Intertwining literature and survey results we can deduce useful measures that can be put in place to enhance user experience and effectiveness of the support community.

First aspect to keep into consideration is the community members engagement: when users feel part of the community they are much more willing to collaborate and share knowledge. When users are motivated to interact with the community, they will learn how to work in a 2.0 environment faster and hoe to make valuable use of its tools. To achieve a similar result community managers could set up dedicated wiki pages or a blog where to post good practices examples, which show the potential of Bosch Connect applied to a concrete case; they could make available all sources of information about the community and other relevant topics inside a single page: useful and easier to find; keep the email to the minimum and make Bosch Connect the first communication channel; value offline meetings and meet face to face with the most influent community managers, then involve the most skilled ones, convince them to be participate actively and to be role models; add some elements of gamification²² to the communication strategy: applying gaming mechanics boosts creativity and motivate users to achieve

²² http://blogs.gartner.com/brian_burke/2014/04/04/gartner-redefines-gamification/

goals in a more interactive and fun way. Essential for a good outcome of the process is the ability of storytelling²³: the new environment and the new tools have to be presented in a persuading way, so that all employees manage to understand implications and advantages of such a different concept of working. Despite all the possible measures, the management should keep in mind the aforementioned Participation Inequality Rule: there will always be a part of the network that remain idle and the expectations about adoption should be adjusted according to this phenomenon.

The second aspect that can boost both support community and whole system usage is the top management engagement. Explicitly mentioned as one of the main drivers to knowledge sharing, a clear leadership guide can make the difference. A top-down approach enables to deliver to the users precise directions on how to use the tools and how to meet strategy goals through social networking and to push for a deeper integration of the tools in the daily workflow. Moreover the top management would act as a role model itself, motivating and convincing many other employees about the advantages and improved effectiveness of the system. This leadership style requires continuous dedication and more resources than other ones and it is challenging but, at the same moment, it wins the majority of the knowledge sharing barriers.

5. Conclusions

Reviewing the development of this thesis we can say the initial hypothesis were right. In the second chapter we analyzed the evolution steps that led to the preponderance of social technologies in today's business strategies, observed which are the key features and main strength/weak points. An extensive analysis was performed to evaluate the most relevant barriers and drivers that enable the success of the platform. The third chapter focused on the application of enterprise 2.0 tools and technologies within Bosch. We started from an overall overview of the common characteristics of enterprise

²³ „Storytelling That Moves People“ ,Robert McKee and Bronwyn Fryer, 2003, Harvard Business Review

2.0 and we check their implementation to the specific Bosch case; we analyzed how the company culture integrate values and propositions typical of 2.0 technologies and how they created new job roles to embrace and manage this new system. We described how the enterprise 2.0 concept is applied to the support process and how it changed its structure, functionality and scale thanks to the improvement coming from the new tools. The survey is a key part of the thesis because it measures the users perceptions about the system: we manage to have first hand opinions from the people that are actually driving the change.

The red thread we can deduce from the development of this thesis is the deep influence that the management has in the successful implementation of Bosch Connect. The huge perspective change needed for switching from a strictly organized to a 2.0 working environment has, in the first place, to be endorsed and supported from the top. If the company culture embrace innovation and open communication, which is Bosch²⁴ case, then the management has the possibility and the appropriate tools to drive the change. Among of all the issues emerged from literature and our use case, the ones that have a bigger impact on the success of the project can be positively and directly influenced with action from the management using a top-down approach. Given the social nature of the network, example and contribution are the most valuable resources: employees will be encouraged to use it when the management lead the adoption, provide guidelines and show best practices. Only demonstrating credibility, adoption by the whole organization can be inspired²⁵; implementation is a gradual process and the change it brings can mostly rely on promotion and inspiration.

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http://www.bosch.com/en/com/sustainability/corporatemanagement/global_culture/values/values.php

²⁵ Kuettnner, T., Diehl, R., Schubert, P. (2013) Change factors in Enterprise 2.0 initiatives: Can we learn from ERP?. Institute of Information Management, University of St. Gallen

References

Chui, M., Miler, A., Roberts, R.P. (2009). Six Ways To Make Web 2.0 Work. McKinsey Quarterly

Bughin, J., Chui, M., Miller, A. (2009). How Companies Are Benefiting From Web 2.0. McKinsey Quarterly

O'Reilly, T. (2005). Not 2.0?. O'Reilly Radar, Retrieved from <http://radar.oreilly.com/2005/08/not-20.html>

McAfee, A. P. (2006). Enterprise 2.0: the dawn of emergent collaboration. MIT Sloan Management Review, 47(3), 21–28.

McAfee, A. P. (2006). Enterprise 2.0, Version 2.0. Andrew McAfee's Blog, retrieved from http://andrewmcafee.org/2006/05/enterprise_20_version_20/

McAfee, A. P. (2011a). Shattering the myths about enterprise 2.0 (Research Brief No. 13(1)). Cambridge, MA: MIT Center for Digital Business. Retrieved from http://ebusiness.mit.edu/research/Briefs/mcafee-xiii_may11.pdf

Koch, M. (2008). CSCW and Enterprise 2.0 - Towards an Integrated Perspective. Proceedings of the 21th International Bled eConference . Bled, Slovenia.

Kuettner, T., Diehl, R., Schubert, P. (2013) Change factors in Enterprise 2.0 initiatives: Can we learn from ERP?. Institute of Information Management, University of St. Gallen

McKinsey Global Institute. (2012). The social economy: Unlocking value and productivity through social technologies. New York: McKinsey Global Institute.

Miles, D. (2010). Putting Enterprise 2.0 to work (White paper). AIIM. Retrieved from www.aiim.org.

Miles, D. (2011). Social Business Systems - success factors for Enterprise 2.0 applications (White paper). AIIM. Retrieved from www.aiim.org.

Malone, T. W., Laubacher, R., Dellarocas, C. (2010). The Collective Intelligence Genome. MIT Sloan Management Review, Vol. 51, No. 3, pp. 21-31

Drucker, P. (1967) The Effective Executive, Oxford, UK: Butterworth-Heinemann, pp. 28–29

Levy, M. (2009). WEB 2.0 implications on knowledge management. Journal of Knowledge Management, Vol. 13, No. 1, pp. 120–134.

Miller, M., Marks, A., & DeCouloude, M. (2012). Metrics that matter: Social software for business performance (White paper). Westlake, Texas: Deloitte University. Retrieved from <http://dupress.com/articles/metrics-that-matter/>

Riemer, K., Steinfield, C., & Vogel, D. (2009). eCollaboration: on the nature and emergence of communication and collaboration technologies. Electronic Markets, Vol. 19, No. 4, pp. 181–188.

Somers, T. M., & Nelson, K. (2001). The impact of critical success factors across the stages of enterprise resource planning implementations. Proceedings of the 34th Hawaii International Conference on System Sciences .

Paulin, D. and Suneson, K. (2012), "Knowledge Transfer, Knowledge Sharing and Knowledge Barriers - Three Blurry Terms in KM", *Electronic Journal of Knowledge Management*, Vol. 10, No. 1, pp. 82-92.

Sorensen, C., Kakihara, M. (2001). Knowledge Discourses and Interaction Technology. Department of Informations Systems London School of Economics & Political Science London, Great Britain

Spender, J.C. (1996). Making Knowledge The Basis Of A Dynamic Theory Of The Firm. *Strategic Management Journal*, Vol. 17, pp. 45-62

Robey, D., Schwaig, K.S., Jin, L. (2003). Intertwining Material And Virtual Work. *Information And Organization*, Vol. 13, pp. 111-129

Paulin, D., Winroth, M. (2013). Facilitators, Inhibitors, and Obstacles – a Refined Categorization Regarding Barriers for Knowledge Transfer, Sharing, and Flow. Department of Technology Management and Economics, Chalmers University of Technology, Gothenburg, Sweden

Riege, A. (2005), "Three-dozen knowledge-sharing barriers managers must consider", *Journal of Knowledge Management*, Vol. 9 No. 3, pp. 18-35.

Schleimer, S. and Riege, A. (2009), "Knowledge transfer between globally dispersed units at BMW", *Journal of Knowledge Management*, Vol. 13 No. 1, pp. 27-41.

Chini, T.C. (2005), *Effective Knowledge Transfer in Multinational Corporations*, Palgrave Macmillan, Gordonsville, VA.

Li-An Ho, Tsung-Hsien Kuo (2013). How system quality and incentive affect knowledge sharing. *Industrial Management & Data Systems* Vol. 113 No. 7, 2013 pp. 1048-1063, retrieved from www.emeraldinsight.com/0263-5577.html

Wolfe, C., Loraas, T. (2008). Knowledge Sharing: The Effects of Incentives, Environment, and Person. *Journal Of Information Systems*, 22(2), 53-76

Srivastava, V. Why are Workers Resistant to Sharing Knowledge? La Trobe University, Melbourne

Nielsen, J. (2006). The 90-9-1 Rule for Participation Inequality in Social Media and Online Communities. Nielsen Norman Group, retrieved from <http://www.nngroup.com/articles/participation-inequality>

Schneider, P. (2011). Is the 90-9-1 Rule for Online Community Engagement Dead? [Data]. Socius, Online Community Blog, retrieved from <http://info.socius.com/bid/40350/Is-the-90-9-1-Rule-for-Online-Community-Engagement-Dead-Data>

Morey, D. et. al. (2002) “Knowledge Management – Classic and Contemporary Works”, *MIT Press*, pp. 112

Cheng M.Y, Ho J, S. Y, Lau P. M. (2009). Knowledge Sharing in Academic Institutions: a Study of Multimedia University Malaysia. *Electronic Journal of Knowledge Management* Vol. 7, No. 3, pp. 313 - 324

Kuettner, T., Diehl, R., Schubert, P. (2013) Change factors in Enterprise 2.0 initiatives: Can we learn from ERP?. Institute of Information Management, University of St. Gallen

Deshpande, Ajay (2013). Making Social and Collaboration Systems Work. *CIO Insight*. 10/10/2013

Masterton, S., Watt, S. (2000). Oracles, Bards, and Village Gossips, or Social Roles and Meta Knowledge Management. *Information Systems Frontiers* 2:3/4, 299-315

Larsen, K., McInerney, C. (2002). Preparing To Work In The Virtual Organization. *Information & Management* 39, 445-456

Dean, D., Webb, C. (2011). Recovering from information overload. McKinsey Quarterly, retrieved from http://www.mckinsey.com/insights/organization/recovering_from_information_overload

Harvard Business Review (2009). Death By Information Overload. Retrieved from <http://hbr.org/web/2009/september/death-by-information-overload>