DEVELOPING SOCIAL CAPITAL WITHIN COMPANIES THROUGH ENTERPRISE 2.0

Master´s Thesis
in Marketing

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Table of contents

1 INTRODUCTION 7

1.1 Workplace social media 7
1.2 Purpose of the study and research questions 9
1.3 Structure of the study 9
1.4 The approach of the study 11

2 STRUCTURATION, DIMENSIONS AND OUTCOMES OF SOCIAL COLLABORATION 13

2.1 Social capital 13
2.1.1 Structuration of collaboration 13
2.1.2 Dimensions of social capital 14
2.2 Social collaboration 18
2.2.1 Enterprise 2.0 18
2.2.2 Agency 2.0 22
2.2.3 Enterprise 2.0 solution 24
2.2.4 Community-level action 29
2.3 Outcomes of social collaboration 31
2.3.1 Trust 32
2.3.2 Social identity and identification 33
2.3.3 Knowledge 34
2.4 Theoretical framework 36

3 EMPIRICAL RESEARCH 39

3.1 Qualitative case research strategy 39
3.1.1 Comparative case study method 40
3.1.2 Company A 41
3.1.3 Company B 41
3.1.4 Company C 42
3.2 Data Collection and Analysis 43
3.3 Quality and limitations 45

4 STRUCTURATION OF SOCIAL COLLABORATION IN THE CONTEXT OF THE CASES 47

4.1 Company A 47
4.1.1 Social capital 47
4.1.2 Social collaboration 50
4.1.3 Trust, identification and knowledge 55

4.2 Company B ... 60
4.2.1 Social capital ... 60
4.2.2 Social collaboration ... 64
4.2.3 Trust, identification and knowledge ... 71
4.3 Company C ... 76
4.3.1 Social capital ... 76
4.3.2 Social collaboration ... 78
4.3.3 Trust, identification and knowledge ... 83
4.4 Cross-case results ... 87
4.4.1 Social capital ... 87
4.4.2 Social collaboration ... 89
4.4.3 Outcomes ... 91
4.4.4 Concluding comments ... 95
5 DISCUSSION AND CONCLUSIONS ... 97
5.1 Theoretical discussion ... 97
5.1.1 Dimensions of social capital in the world of Enterprise 2.0 ... 97
5.1.2 The benefits and challenges of social collaboration ... 100
5.1.3 Trust, identification and knowledge as the outcomes of social collaboration ... 103
5.2 Managerial discussion ... 107
5.2.1 Top management support and open culture ... 108
5.2.2 Brand the group of your key champions ... 109
5.2.3 Integrate to business processes and measure ... 110
5.2.4 Launch and brand to give a meaning ... 111
5.2.5 Support enablement ... 111
5.2.6 Invest time and develop ... 112
5.3 Suggestions for future research ... 112
6 SUMMARY ... 114
7 REFERENCES ... 116
APPENDICES ... 122

Appendix 1 Operationalization table for the research ... 122
Appendix 2 Information on interviews ... 123
Appendix 3 Interview questions ... 124
Appendix 4 "Enterprise 2.0 cookbook" ... 126
Appendix 5 From a hierarchical to a dynamic and social community ... 127

List of figures

Figure 1 Structure of the study……... 10

Figure 2 The structuration process of collaboration…….. 14

Figure 3 Agency results from an agent´s interplay with the dimensions of social capital (Giddens (1984, 4); Makkonen et.al. (2011, 290))…… 23

Figure 4 Structuration of social collaboration…….. 38

Figure 5 Models to integrate IBM Connections to internal communications…….. 96

Figure 6 Individual social behavior in IBM Connections…….. 101

Figure 7 Relation between Enterprise 2.0, trust, identification and knowledge… 107

List of tables

Table 1 Tangible and intangible resources (Barney 1991; Peltonen 2007) 15

Table 2 Differences between the traditional and social structures..... 20

Table 3 Individual behavior in Web 2.0 (Heinonen 2011, 359) 24

Table 4 Cross-case results..... 95

Table 5 Enablers and barriers to Enterprise 2.0..... 100

Table 6 Benefits and challenges of Enterprise 2.0..... 103

1 INTRODUCTION

"*Watch your thoughts, they become words.*
Watch your words, they become actions.
Watch your actions, they become habits.
Watch your character, it becomes your destiny." - **Lao Zeo**

"*The real voyage of discovery consists not in seeking new lands but seeing with new eyes.*" - **Marcel Proust**

1.1 Workplace social media

Lewis E. Platt, the former President of Hewlett-Packard once said that, if HP only knew what its employees knew, it would be three times more productive (IBM 2012, Social Business Insights Blog). When giving his statement, the former President might have spoken in reference to the current situation where various companies find themselves surrounded by information abundance. Social media has brought forums, communities and various additional opportunities for sharing information, developing brand image and creating insights from captured data. Whilst external social media has been studied, hyped and integrated into companies´ strategies, an insignificant concentration has been put on internal social solutions or Enterprise 2.0 solutions, which companies provide to their personnel. For instance Gartner (2012) brought to our attention that an enterprise focusing solely on the benefits of external social media might end up underestimating the true potential embedded in social business. Moreover, the usage of Enterprise 2.0 solutions in companies is increasing (Gartner 2012; IDC 2011).

Therefore, this thesis focuses on workplace internal social media and its implications excluding applications such as Facebook, Twitter, LinkedIn and Slideshare. This distinction is made because external social media platforms are not used in business operations as they lack the ability to manage business kind of content (Lamont 2011, 7). However, studies and literature written on consumers´ social media consumption – such as Heinonen´s (2011) study on individual social media behavior - will be exploited. Individual social behavior forms on the basis of the dimensions of social capital which work as structures that guide individual behavior (Nahapiet & Ghoshal 1998; Giddens 1984). Individual behavior leads to community-level action, that is, social collaboration, which creates outcomes such as trust, identification and knowledge. In this thesis the process, which binds the dimensions of social capital, individual behavior, community-level action and outcomes together is called the structuration process of social collabo-

ration, which is based on Giddens` (1984) Structuration Theory and Nahapiet´s and Ghoshal´s (1998) Social Capital Theory.

One type of an Enterprise 2.0 solution is IBM Connections. It is the market leader of Enterprise 2.0 solutions with a 13.7 percent market share followed by Jive with an 8.5 percent and Communispace with a 7.8 percent share (IDC 2012, 2). IBM Connections provides a people-centric collaboration approach to knowledge sharing via profiles, blogs, wikis and user communities (Ruponen 2012). Bayer MaterialScience (Lamont 2011, 6-10) used it to create a social community in order to stay competitive. In their case, IBM Connections increased productivity and the amount of innovations. A people-centric approach is one of the key factors that differentiates IBM Connections from document-centric solutions – for instance from Microsoft´s Sharepoint solution. A document-centric approach focuses on how to categorize, store and find information from documents, whereas a people-centric approach focuses on supporting people by giving them a platform where they can interact, communicate and connect with others (Mell 2012). Additionally, document-centric platforms are not regarded as social solutions (IDC 2102, 2).

Studies have been made on how virtual communities and Web 2.0 technologies affect the formation and development of knowledge, trust and identification. Ho, Kuo and Lin (2012) studied how technology, identification and trust affect knowledge sharing. In addition to Ho et.al. (2012), Ardichvili, Page and Wentling (2003) and Ardichvili (2008) have reviewed and distinguished motivations and barriers to knowledge sharing in virtual communities. Ardichvili et.al. (2003) and Ardichivili (2008) found out that one reason for actively contributing and participating to knowledge sharing activities is that employees want to establish themselves as experts in virtual communities of practice.

Also Chiu, Hsu & Wang (2006) have studied the underlying motivations of individual knowledge sharing. They studied motivations by tapping both Social Cognitive and Social Capital Theory. Their research was quantitative and studied a Taiwanese virtual community called BlueShop. Social Cognitive Theory examines an agent´s behavior in social networks (Bandura 1999). It sees individual behavior as a dynamic and as a reciprocal interaction of personal factors, behavior and social networks. The core of the theory is that the actions of an agent are directed by self-efficacy and outcome expectations. This theory complements Giddens´ (1984) theory of how individual agency is constructed. Giddens sees that agency is a result from the interplay between the network (structure) and an agent. He also argues that eventually this interplay determines the agent´s behavior within that community. Giddens´ (1984) thoughts on agency will be touched upon in chapter 2.1 together with Nahapiet´s and Ghoshal ´s (1998) Social Capital Theory.

Chiu et.al. (2006) make the following acknowledgment in their study: "*This study examined only one aspect of knowledge exchange - knowledge sharing. We did not investigate individuals who participate to receive knowledge but do not share (contribute). While it can be argued that knowledge sharing is key to sustaining virtual communities, future research should examine why individuals choose to participate in a virtual community.*" In this thesis the virtual community space is IBM Connections. The development of knowledge is one outcome that will be studied as a result of participating to and using IBM Connections. The thesis also studies what kind of agency people have in IBM Connections. That is, how they actually use IBM Connections. It can be argued, that this study differs from the study of Chiu et.al. (2006), in the sense that it aims to find out how agency has evolved and will evolve through Enterprise 2.0. In short, this study reflects the past, present and future aspects of agency and social collaboration. Study is different from the previous studies as it depicts agency and social collaboration in an Enterprise 2.0 solution that is the current market leader.

1.2 Purpose of the study and research questions

The purpose of this thesis is to examine how social collaboration can be depicted and analyzed as a structuration process in an Enterprise 2.0 environment. Furthermore, the study seeks to reveal the results of the implementation of an Enterprise 2.0 solution as well as its future possibilities and challenges. As this thesis is limited to researching the Enterprise 2.0 environment at the workplace, it does not take into account the subcontractors or business partners of the interviewed companies. The research questions are:

1. How are the dimensions of social capital structured through collaboration?
2. How does agency form in Enterprise 2.0?
3. How does social collaboration emerge as a result of the interplay between agency and dimensions of social capital in an Enterprise 2.0 environment and creates outcomes such as trust, identification and knowledge?

1.3 Structure of the study

The study consists of six chapters. The second chapter is divided into four sections. The first section 2.1 studies dimensions of social capital that are inherent to the structuration of collaboration. Dimensions such as strategy, culture, groups and information solutions will be explained. At the end of the section dimensions of social capital are divided into tangible and intangible resources. The second section 2.2 studies Enterprise 2.0 by ex-

plaining the term, presenting the market factors of Enterprise 2.0 and providing insight on the experienced user benefits and challenges of social collaboration. The third section 2.3 studies trust, identification and knowledge as the outcomes of social collaboration. The final section 2.4 presents the framework of this study.

In the third chapter the method of the study is presented. This chapter offers also brief presentations on the three selected case companies A, B and C. The quality of the research is considered in the third chapter. Chapter four analyses the results sourced from the interviews by binding together the theory and interview quotations. The fifth chapter consists of discussion and conclusions. In the theoretical conclusions, the tangible and intangible resources of social capital are first elaborated on in accordance with the findings the subchapter 2.1. The theoretical discussion continues with evaluating the individual-level action or agency 2.0 and the community-level action. The theoretical discussion ends with making conclusions on the outcomes of social collaboration. The managerial conclusions elaborate on ideas to support the development of Enterprise 2.0. The sixth chapter consists of a summary. The operationalization table for the research, information on the interview participants, customer interview questions can be found from the appendices. *The following figure presents the structure of the study:*

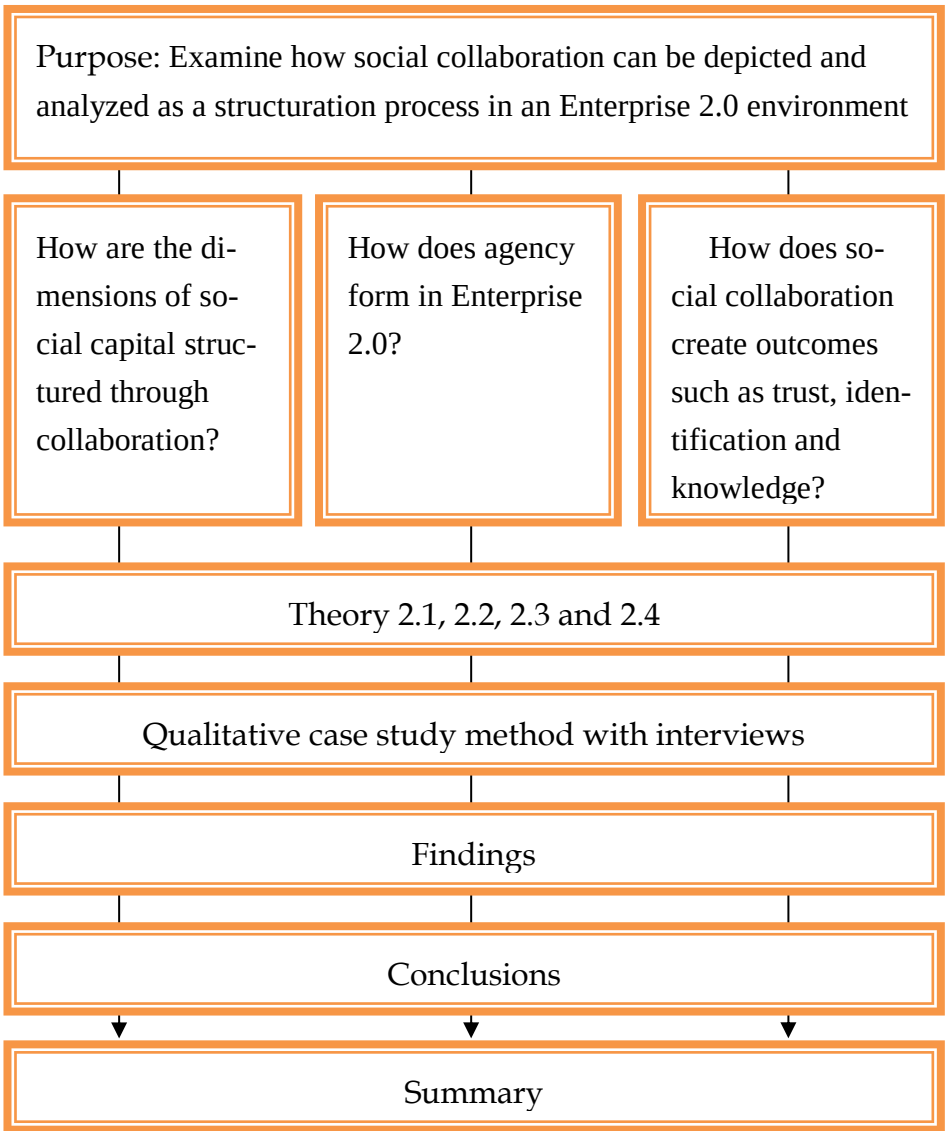

Figure 1 Structure of the study

1.4 The approach of the study

The key terms for this thesis are *social capital, agency, Enterprise 2.0 and social collaboration*. Nahapiet and Ghoshal (1998, 243-245, 250) argue that *social capital* is a set of resources obtained and created over time in a network of crosscutting and meaningful personal relationships. These resources provide the basis for collaboration in this kind of network or community. These communities offer a possibility for creating and using collectivity-owned capital that, indeed, can be exploited in various ways. Nahapiet and Ghoshal (1998) continue that social capital facilitates community´s development by providing efficient conditions for collaboration. Coleman (1988) sees that social capital is a form of rational action where extreme individual premises are rejected. Hence, social capital is a bundle of resources and actions that flow constantly and are inherent to collaboration.

According to Giddens (1984, 9) "*Agency refers not to the intentions people have in doing things but to their capability of doing things in the first place*." Therefore, agency actually implies power, which an agent has. Capabilities, which affect the formation of agency can be classified as intangible or tangible resources. Intangible resources such as culture, strategy and management together with tangible resources such as an Enterprise 2.0 solution and functions form the social structure. This argument is taken to form the basis for the agency, that is, individual behavior in this thesis. As a clarification, *people-centric Enterprise 2.0 solutions such as IBM Connections* enable employees to interact, communicate and connect in a different way in contrast to the document-centric platforms and email through which employees still nowadays prefer to conduct their daily work tasks (Mell 2012; Suarez 2012).

Enterprise 2.0 means that a company integrates social features like blogs and social networking into its intranet and information systems structure (Turban, Liang & Wu 2010). Through Enterprise 2.0, company provides social features to its employees in order to help them to use their social capabilities better (Ruponen 2012). Enterprise 2.0 can also be seen as a culture (Ardichvili 2008; Ruponen 2012). Enterprise 2.0 is subject to the development of Web 2.0 and Web 2.0 enabled virtual behavior (Tasner 2010).

An organization can be seen as a network, which consists of its employees, suppliers and customers (Mccarthy, Pitt, Campbell, van der Merwe & Salehi-Sangeri 2007, 246). Collaboration is defined to be a combination of people´s resources and their exchange process in that network (Ogunlade 2009, 29). Therefore, *social collaboration* is defined to be a form of collaboration that requires exchange and interaction between two or more actors within an Enterprise 2.0 solution (Turban, Liang & Wu 2010).

The selected qualitative research methodology is an extensive case study, where employees of different functions of three companies were interviewed using the method of a semi-structured interview. An extensive case study method was chosen because mul-

tiple companies were studied. Chakhovic (2011) states that an extensive case study research is characterized by the need of finding answers to both why and how questions.

A qualitative study methodology is used because the research questions explore factors such as trust, identification, knowledge and agency, which are hard to quantify. Furthermore, a qualitative study is well suited for studying the influence between two factors – in this study the influence between social collaboration and the development of social capital. In a semi-structured interview questions are specified to a theme selected in advance. This interview method puts more emphasis on the participant´s significance for the results. The semi-structured interview method is the most widely used interview method in Social Sciences as well as in Economics (Koskinen, Alasuutari & Peltonen 2005, 104, 105). This thesis contributes to the study of social capital, Structuration Theory and Enterprise 2.0.

2 STRUCTURATION, DIMENSIONS AND OUTCOMES OF SOCIAL COLLABORATION

This chapter studies the *structuration, dimensions and outcomes* of social collaboration. First the concept and dimensions of social capital will be assessed. Then the concept of Enterprise 2.0 and the outcomes of social collaboration shall be assessed. At the end of this chapter, the framework of the study shall be presented.

2.1 Social capital

The study of social capital has received wide attention in both Economics and Social Sciences. The origin of the term can be dated back to the beginning of the 20th century. James Coleman was the first to use the term systematically in 1988. After Coleman´s study, the term has become general and been studied in the business context as well (Iisakka 2004). The following sections 2.1.1 and 2.2.2 examine the structuration of collaboration and dimensions of social capital.

2.1.1 Structuration of collaboration

Nahapiet and Ghoshal (1998, 251) examine the kind of effect social capital has on the development of knowledge within a work community. They argue that social capital is community-owned capital that consists of three dimensions – structural, relational and cognitive dimensions. Each dimension has a unique effect on the conditions of collaboration. Conditions such as access to information, motivation and capabilities affect the degree of collaboration and its outcomes. Dimensions have a different effect on conditions. Nahapiet and Ghoshal (1998, 251) see that the structural dimension affects more the conditions of accessing information, whereas trust affects the motivation to share information. They emphasize that information technology such as email improves the conditions for accessing information thus, supporting collaboration.

Collaboration creates outcomes such as trust, identification and knowledge. Outcomes are the result of a structuration process through which social capital is created (Nahapiet & Ghoshal 1998, 251). Oh, Labianca and Chung (2006, 572) support the notion of outcomes. According to Oh et.al. (2006, 572), collaboration improves team effectiveness by providing a timely access to information thus creating basis for knowledge creation. Trust is also acknowledged to be a decisive factor affecting the effectiveness of communication in intra- and inter- group relations.

Like other forms of capital, social capital evolves in time and its evolution can be divided into three phases: past, present and future. Past illustrates social capital, which employees have created in the past. Present reflects the collaboration that is taking place in the present. The future reflects the outcomes created by collaboration. Essential for the development of social capital is the nurture of relationships, because if relationships are not nurtured, social capital can decrease or even run out. A curious point is that the more one consumes social capital , the more it increases. (Nahapiet & Ghoshal 1998, 257-258.) *The following figure summarizes the structuration process of collaboration.*

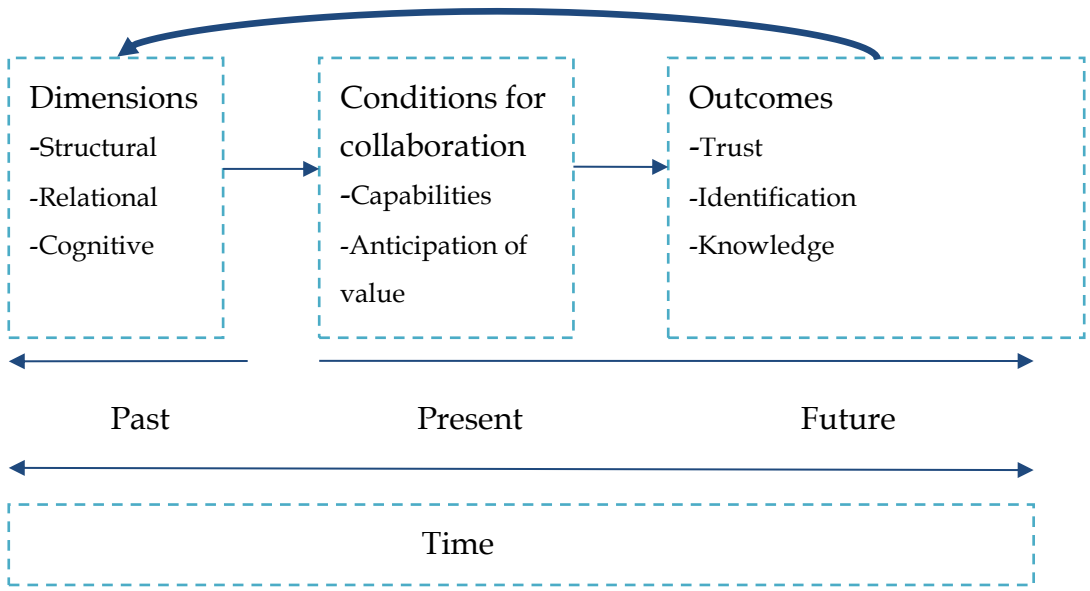

Figure 2 The structuration process of collaboration

2.1.2 Dimensions of social capital

Organization is a structure, which consists of different dimensions (Nahapiet & Ghoshal 1998, 251). These dimensions can be handled as resources (Giddens 1984, 14-15). These resources, in turn, can be categorized into three groups: physical capital, human capital and organizational capital (Barney 1991). Physical capital refers to the physical resources such as the technology used in the firm whereas, human capital to knowledge, insights and experience of individuals. Organizational capital refers to both the organization´s formal reporting structure and informal relationship structure. The more complex resource architecture company has, the more difficult it is for its competitors to mimic (Peltonen 2007, 27). In this thesis, physical and organizational resources shall be

handled as tangible resources, whereas human capital components shall be handled as intangible resources.

The following chart illustrates the above-mentioned distinction between tangible and intangible resources.

Tangible	Intangible
• Groups • Departments • Information technology (for instance Enterprise 2.0 solutions) • Community	• Strategy (For instance Social Business Strategy) • Culture • General knowledge, general trust and general identification

Table 1 Tangible and intangible resources (Barney 1991; Peltonen 2007)

2.1.2.1 Tangible resources

Tangible resources such as departments and information technology are resources that can be considered as being physical (Peltonen 2007, 72). Departments though have a human factor because they consist of people who work together to achieve the predetermined goals (Oh et.al 2006). It can be presumed that an employee working in the Marketing Department operates with different kind of tasks, knowledge and goals when compared to an employee working for instance in the Human Resources Department. Hence, employees interpret the structure such as a strategy or culture differently and, therefore, departments differ from each other in regards to their group social capital resources.

A group consumes the resources of social capital by collaborating within the group and with other groups (Oh et.al. 2006, 570-574). Hence, a group can have internal and external relationships. Oh et.al. (2006) suggest that a group which has the optimal amount of both internal and external relationships might be more effective than a group whose relationship structure is not at ans optimum level. This is because the group having the optimal amount of relationships has simply more resources such as knowledge and power to consume. In the world of Enterprise 2.0, group work is organized mainly through virtual communities (Turban et.al. 2010). These communities can be called virtual communities of practice (Ardichvili 2008). Members of virtual communities are differ from the general Internet users in the respect that virtual community members

have shared interests, needs, goals and practices (Chiu et.al. 2006, 1875). What is notable is that corporate culture, management, trust and knowledge affect the degree of collaboration in virtual communities of practice (Ardichvili 2008; Paroutis & Al Saleh 2009). In other words, intangible resources affect the way how tangible resources are consumed.

The resources or dimensions of social capital are consumed through collaboration, which, in turn, is dependent on the conditions established for its use. Information technology is one structural and tangible resource that supports the conditions for collaboration (Nahapiet & Ghoshal 1998, 249). One type of an information technology solution is Enterprise 2.0 solution. Enterprise 2.0 is argued to support virtual team collaboration and decision making (Turban et.al. 2011, 138-142). Collaboration that happens through Enterprise 2.0 solutions can be called social collaboration or collaboration 2.0. Social collaboration is characterized by a user-generated, flexible and dynamic context. Collaboration 1.0, on the contrary, is controlled by the enterprise. In collaboration 1.0 environment the push channels for information are traditionally email and text messages.

2.1.2.2 Intangible Resources

Intangible resources are not touchable. One intangible resource is strategy that can be defined as a plan consisting of activities that support the achievement of the future goals of an organization. With strategy, organizations aim to adjust to the changing environmental and market conditions. The goal of strategic planning is to create a competitive advantage. A competitive advantage is based on both external and internal factors. In order to build an external advantage, an organization has to be well-positioned in regards to its competitors, whereas an internal advantage focuses on the development of internal resources like *workforce, culture and knowledge.* (Peltonen 2007, 65-66.)

Structure must support open communication and learning if an organization wants to build a strong internal advantage (Peltonen 2007, 76), Culture of a learning organization is considered to be a resource-based model for developing internal advantage. The key characteristic of a learning organization is that people are encouraged and enabled to communicate and collaborate across all organizational levels. It is argued that an organization, which encourages its employees to learn and collaborate more, will be more competitive than its competitors due to a fast and high-quality decision making.

Strategy is normally used in discourses in order to create awareness and power to things and it often divides organization into two categories - strategic and operative (Peltonen 2007, 89-91). However, it can be that a strategy and its visions stay at the top management level and do not flow downwards to the mid and lower management, not to

mention the regular workers on the bottom of the company hierarchy. Jarzabkowski and Spee (2009, 69-73) see that this might result from the fact that human actors or agents are not sufficiently considered in most theories of strategy - not even in resource-based theory. They offer Strategy-as-a-Practice model, which differs from the resource-based views with its emphasis on human and social action in the production and reproduction of strategy.

Jarzabkowski and Spee (2009, 69-73) see strategy as a socially accomplished activity, which is a sum of all the activities that the line of employees such as CEO, Middle Management and Engineer conduct. The SaaP model focuses on the flow of social activities through which work and strategy is accomplished. SaaP model does not categorize organization but on the contrary it handles organization as a social community.

Ardichvili (2008), Paroutis and Al Saleh (2009) and Pinho, Rego and Pina e Cunha (2012) have identified that organizational culture, trust and top management support affect the conditions of collaboration in Enterprise 2.0, that is, to the conditions of social collaboration. For instance Huy and Shipilov (2012) found out that top management´s activity in Enterprise 2.0 creates authenticity, which then, in turn, creates meaningfulness to social collaboration. They (Huy & Shipilov 2012, 77) found out in their survey that: ”*When it became known that the employees were not communicating with the executives but with their assistants, cynicism about social media initiatives set in among employees and became difficult to reverse*.” Executive or top management support is closely related to culture (Archivili 2008).

Coleman (1988) argues that *trust* is one of the most important assets of the structure, because without it, an organization could not work or even exist. According to Paroutis and Al Saleh (2009, 60), *general trust* is seen a prerequisite for the successful adoption of Enterprise 2.0 solutions. Management, culture and company performance affect the degree of general trust. General trust is therefore not an outcome of Enterprise 2.0, but a supportive factor, which affects the adoption and usage of the Enterprise 2.0 solutions. Hence, it can be argued that *general identification and knowledge* must exist as well. Nahapiet and Ghoshal (1998, 256) argue that *identification* results from the social identification process through which an employee inheres the values and standards of the group and organization. *General knowledge* is a combination of explicit and implicit knowledge that an organization and its workforce possess. Trust, identification and knowledge shall be elaborated more when assessing the outcomes of social collaboration.

2.2 Social collaboration

Social collaboration is defined as a form of collaboration that requires exchange and interaction between two or more actors in an Enterprise 2.0 environment (Turban et.al. 2010). In this part, it will be first explained what Enterprise 2.0 is and what market factors are driving businesses to embark on it. After providing the big picture, agency 2.0 will be explained by tapping into Giddens´ (1984) Structuration Theory and Heinonen´s (2011) theory on individual social media behavior. The user benefits and challenges of Enterprise 2.0 shall be presented at the end of this chapter.

2.2.1 Enterprise 2.0

Enterprise 2.0 means that a company integrates social features like blogs and social networking into its intranet and information systems structure (Turban et.al 2010). Through Enterprise 2.0, a company provides social features to its employees in order to help them use their social capabilities better (see appendix 3). Enterprise 2.0 can also be seen as a culture (Ardichvili 2008; Ruponen 2012, interview).

Enterprise 2.0 is subject to the development of Web 2.0 and Web 2.0 enabled virtual behavior. Tasner (2010, 7) sees that the development of social networking, user-generated content and ecommerce has made Web a service, which people consume on daily basis. The usage of Web 2.0 depends on the needs, which user has. Overall, activities in a Web 2.0 environment relate to social networking, having conversations, sharing documents and finding information and support.

2.2.1.1 Market factors and business outcomes of Enterprise 2.0

According to IDC (2010), market factors such as competition, social customer and workforce dynamics are leveraging the demand for social business, the objective of which is to increase transparency, agility and engagement both inside and outside the company. In the new competitive environment accompanied by Web 2.0 oriented customer, companies can experience rapid changes in their business environments even during short periods of time. At the same time companies seek to decrease both variable and fixed costs. These factors drive companies to find alternative solutions to organize their work. Virtual teams seem to be a productive way to reorganize work and gain fast-

er decision making in the continuously changing business environment (Turban et.al. 2011, 138).

In their survey the IDC (2011) found out that companies are increasingly integrating social solutions into their information system structure. Jon Mell (2012), the Europe Sales Leader of IBM Connections, confirms the same trend and argues that the integration of Enterprise 2.0 solutions is happening because businesses need to adjust to and serve the engaged and digital marketplace. Mell continues that successful Enterprise 2.0 projects have illustrated the benefits of having social solutions integrated into business processes. The acknowledged success has generated trust and faith toward social solutions and the concept of Enterprise 2.0.

Companies reflected also on the benefits gained from using Enterprise 2.0 solutions by revealing that after having started to exploit Enterprise 2.0 solutions they had indeed experienced gains in productivity (IDC, 2011). Enterprise 2.0 solutions increased productivity by enabling quicker decision-making and fostering internal and external relationships. Intralink´s webcast identified also the following benefits from having Enterprise 2.0 solutions (see Turban et.al. 2011, 143):

- lower costs (reduced document exchange costs by 30 per cent, *lower employee boarding costs and lower support costs)*
- increased efficiency (rapid decision making)
- share mission critical information with less risk (increased trust)
- strengthen data security and
- improve productivity by 20 per cent on document intensive-processes

2.2.1.2 Enterprise 2.0 as a culture

A company cannot presume that the implementation of Enterprise 2.0 solutions would be enough in itself to create a productive environment for collaboration. As Payne (2007, 24) states, people do not collaborate, because they are told to do it. Therefore, she argues that Enterprise 2.0 solutions may not work in a traditional, hierarchical command-and-control environment. Also Ardichvili (2008, 550) and Pinho et.al. (2012, 221) argue that the organizational culture has an impact on the adoption and use of Enterprise 2.0 solutions. Hence, they see that the culture and leadership style affect the adoption of these solutions. Pinho et.al. (2012,221) argue that the lack of recognition and incentive systems creates barriers to collaboration, whereas positive leadership and rewarding participation facilitate collaboration activities. Pinho et.al (2012, 221) also suggests that good internal communication and coordination support social collaboration.

Consequently, it can be argued that culture is a vital factor in getting out the maximum of Enterprise 2.0 solutions. According to Payne (2007, 25) the benefits gained through using an Enterprise 2.0 solution depend on the adopted collaboration structure. Collaboration structure either supports or contradicts social collaboration. Payne (2007, 25) distinguishes two structures - traditional and social. The following table presents the characteristics of traditional and social collaboration structures.

Traditional	**Social**
• Start point: project/organization	• Start point: users
• Structure before use	• Structure emerges with use
• top down	• Bottom-up
• Knowledge belongs to experts	• Everyone is knowledgeable
• Central control	• User control
• Formal	• Informal and easy to use
• Rigid	• Flexible
• Slow	• Quick
• Expensive	• Free or inexpensive

Table 2 Differences between the traditional and social structures

In a traditional structure, the structure hardly changes after it is enacted, because its command is controlled only by a handful of people. It is also presumed that knowledge is subject to a formal role, that is, a title and thus knowledge is evaluated on a formal basis. Leadership is characterized by command-and-control or top down dynamic.

In a social structure, the situation is the opposite: the structure emerges in use, information systems are designed to end users` needs and everyone is capable of developing and sharing knowledge. Consequently, a social structure and culture might support Enterprise 2.0 better than a traditional structure. However, hierarchy has a positive side – it brings clarity to responsibilities and thus reduces role stress (Payne 2007, 25). This suggests that Enterprise 2.0 initiative that constitutes an organizational and cultural change - in addition to the physical implementation of an Enterprise 2.0 solution - needs a hybrid approach, which is a combination of the traditional and social structure (see appendix 5).

In a hybrid model, culture, values and early adopters support the adoption and the use of Enterprise 2.0 solution. In order to expedite the adoption of Enterprise 2.0, company should find and incorporate the early adopters to the project, because the early adopters may help to lead the message of Enterprise 2.0 to non-users (Suarez 2012;

Payne 2007, 26). Through the course of the implementations of Enterprise 2.0 solutions, it has been noted that early adopters are usually newbies and techies (Paroutis & Al Saleh 2009, 53). Newbies are the new entrants of the workforce such as recent graduates and students. Newbies find it natural to collaborate through a 2.0 solutions mainly because they use the external social media applications such as Facebook on a daily basis. Techies are defined as the IT staff and other technically-oriented people.

For instance Bayern MaterialScience used the hybrid approach by piloting IBM Connections first with the R&D-department, consisting of 50 employees. According to BMS`s CIO Kurt De Ruwe (see Lamont 2011, 6) the initial piloting and the user-friendly interface of IBM Connections together formed the the most important reasons for the successful adoption of IBM Connections. In BMS, the user-base expanded from 50 to 2000 users within just a few months. Hence, the early adopters in Bayern were the R&D people. Bayern´s example demonstrates well that the early adopters can also be other groups than newbies and techies.

2.2.1.3 Challenges of Enterprise 2.0

Enterprise 2.0 has challenges as well. According to IDC (2011, 12) the main challenges of Enterprise 2.0 are:

- getting people to participate
- measuring the impact on business goals
- security threats
- allowing comments posted openly
- having people monitored what I do
- there is no company policy to guide behavior
- social solution does not have the functionality that I require.

Josh Green from Gartner (2012, webinar) also seizes the challenges, which companies have to deal with Enterprise 2.0. Green addresses the challenges by asking if enterprises are prepared to shift the leadership model away from the command-and-control mode and let employees speak openly with one another as well as integrate internal social media into workflows. IDC (2011, 1) provides an additional and interesting view to these challenges by arguing that the time spent on social media has been seen as a waste of time by corporate leaders. The perception has been that social media lowers productivity by reducing the time spent on the actual work.

However, IDC (2011) sees that the perception is changing. Even so, Timo Pentikäinen (2012) insists that Enterprise 2.0 solutions must not be viewed only as Facebook-type social media application, but as integrated-to-business processes in order to make the business more productive and competitive. With successfully integrating En-

terprise 2.0 solutions to business processes, Pentikäinen (2012) also believes that the prejudices toward Enterprise 2.0 solutions as being only internal social media saunas will fade away.

This section explained the notion of Enterprise 2.0, touched on the relation between corporate culture and Enterprise 2.0 and provided a view on the benefits and challenges included in Enterprise 2.0. The relation between Enterprise 2.0 and corporate culture is indeed valid and it was touched upon IBM´s newest CEO study (IBM 2012, CEO Study). IBM interviewed 1709 CEOs in 18 industries worldwide. 67 percent of the CEOs selected ethics and values, collaboration environment and mission as the three attributes on which they will primarily draw uon in order to manage the new, engaged business environment.

2.2.2 Agency 2.0

According to Giddens´ structuration approach (1984, 17-20) the tangible and intangible resources steer individual behavior by providing the individual a certain type of agency. Giddens defines this agency as the individual´s power to conduct actions within the structure. Giddens (1984) sees that organizations do not have an agency, but individuals do. In other words, only employees can act as purposive and knowledgeable agents, who perceive, interpret and act on the basis of the structure (Makkonen, Stenroos & Olkkonen 2010). Substructures like departments, information technology, strategy and culture affect the perceptions, interpretations and actions of an individual.

According to Giddens (1984), *perceptions* can be defined as outcomes of reflexive monitoring of both physical and social aspects – tangible and intangible resources. With *the rationalization of action* or interpretation, Giddens (1984) refers to the capability of an employee to maintain a theoretical understanding of the reasons for his/her actions. Interpretation is thus a process through which an individual converts perceptions to rationality, which then helps an individual to create the grounds for individual action. For Giddens (1984) actions effectively result from *the motivation of action as* motivation tends to have a direct impact on actions. Whereas perceptions and interpretations refer to the reasons for action, motivation refers to the wants that prompt it. For instance if A is asked to help B, A may perceive the request for help important or less important. Then A rationalizes the need for different level actions depending on the level of help. After this rationalization, A might be motivated to help B. The physical and social aspects such as social esteem and corporate culture can affect to A´s motivation to help B. (Giddens 1984, 5-7.) Different motivators such as expertise and reputation steer individual knowledge sharing (Kimmerle, Wodzicki & Cress 2008, 395). People

may want to achieve social esteem, that is, higher reputation and career achievement by collaborating (Sabetzahed & Tsui 2011, 82). The following figure summarizes agency.

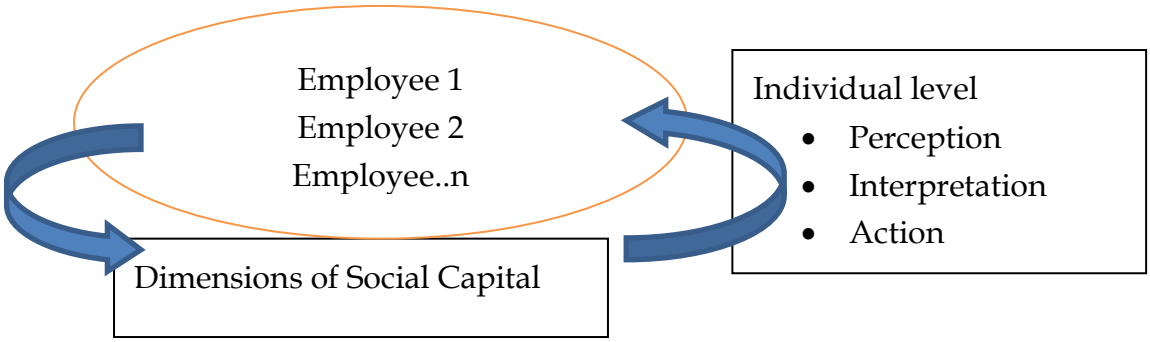

Figure 3 Agency results from an agent´s interplay with the dimensions of social capital (Giddens (1984, 4); Makkonen et.al. (2011, 290).

In this thesis, agency 2.0 refers to individual behavior and action in within an Enterprise 2.0 solution. Individual Web 2.0 behavior has been assessed by categorizing web users to different user categories according to how actively or passively consumers behave online (Heinonen 2011, 357). For instance Valck, Bruggen and Wierenga (2009) have categorized virtual community members to six categories according to members´ participation patterns. Core members are the most active members of virtual communities. In addition to retrieving and supplying information, core members actively participate in discussions. The second group is called Conversationalists. The members of this group actively retrieve and supply information, but not so much as core members do. However, Conversationalists actively participate to conversations and discussions, which characterize their participation patterns the best. Third group is the Informationalists, who mainly retrieve and supply information. The fourth group is the Hobbyist, whose members are mainly interested in updating and maintaining their personal pages in the community. Functionalists form the fifth and largest group. Functionalists are mainly interested in retrieving information. Opportunists is the sixth and least active group whose members only retrieve marginal content. (Valck et.al. 2009, 193-194.)

In turn, Heinonen (2011) has discovered three types of activities that people do in Web 2.0. These activities are consumption, participation and production. The individual activities, which employees perform within Enterprise 2.0 solutions create the collective action, that is, social collaboration. Consumption, participation and production determine the degree of social collaboration: the more these three modes of activities are pursued the better the level of social collaboration (Levy 2009, 122).

This categorization illustrates users´ social input. Consumption occurs when a user reads content posted by other web users. Participation happens when a user comments

the updates and creations of other users. Production occurs when a user writes a blog or produces elaborated content. A user´s social input is based on motives. Shao (2009) suggests that there are three motives that drive users´ social input – information, social connection and self-expression. Shao (2009) also found out that consumption is mainly related to the need for seeking and gathering information, participation to the need for having social interactions and production to the need for expressing oneself.

It is notable that users can conduct all three activities simultaneously, but results show however that only few users actually create content in Web 2.0 (Heinonen 2011). Hence, Web 2.0 behavior is usually a combination of two activities, consumption and participation. The situation is similar with motives – all motives can also simultaneously affect to Web 2.0 behavior. Heinonen (2011, 359) found out that users are more active in consuming content and participating into conversations than producing content. The following table summarizes individual Web 2.0 behavior:

Behavior category	Action example
Consumption	Reading and observing content
Participation	Taking part into conversations
Production	Keeping own blog

Table 3 Individual behavior in Web 2.0 (Heinonen 2011, 359)

In this study consumption is defined as actions, the intent of which is to find and gather information from communities, files, profiles, activities, blogs, wikis and feeds of IBM Connections. Participation occurs when a user takes part in conversations, contributes to activities and comments status. Production occurs when a user sets up a community, an activity or a blog entry. Production occurs as well when a user provides ideas and opinions, which are based on knowledge obtained as a result from consumption and participation. In the end, participation and production are very similar types of action. Every individual action contributes to social collaboration.

2.2.3 Enterprise 2.0 solution

The following section introduces IBM´s market leading Enterprise 2.0 solution IBM Connections (IDC 2012, 2). IBM Connections is a social solution, which is designed to support individuals and teams in their daily work by providing a reachable, social and collaborative environment. As Antti Haapasalo (2012), Timo Pentikäinen (2012) and Jukka Ruponen (2012) state "IBM *Connections is all about social networking, accessing valuable and correct information, increasing social learning, supporting R&D and*

innovations and working together in the same space beyond different time zones. Companies have needs to fasten and ease collaboration between people especially globally due to the cost and time pressures – the key to assessing these needs is to get people under the same environment, make them act within it and benefit from the community-level actions. IBM Connections provides social environment that consists of activities, communities, file sharing, blogs, wikis, microblogs and profiles."

The features/applications of IBM Connections version 3 are

- Home page
- Profile
- Forums
- Activities
- Communities
- Blogs
- Wikis
- Social networking
- Files, Tags, RSS and Social Bookmarking

2.2.3.1 Home page and Profile

The home page provides a view, where employees can browse recent status updates, posts and follow discussions. With the help of the home page, employees can stay aware of what is happening in their social network (IBM Connections 2012, product website; Ruponen 2012).

Every employee has a *profile*. Profile offers information about the role, function and reporting chain of an employee. Employees can upload a profile picture to their profile. In addition, the profile provides information about the employee´s recent activities, status messages, community memberships and personal network. Employees can also upload their CVs to their profile and tag them or be tagged by others in order to be found more easily (IBM Connections 2012, product website).

The profile is the essence of an employee´s informal identity, because it shows who the employee is and what he/she is doing. "*Profile is the first thing you open, when wanting to get to know your colleague. And not just his/her position and function, but really what he/she does and how could that colleague maybe help me directly or indirectly through his/her personal social network*." (Suarez 2012)

A profile also includes the status board, which is a message board for comments. For instance Suarez (2012) uses the message board a lot to keep his social network informed

about where he is and what he is doing. He also asks questions through it: *"The great thing with message boards is that you can open a conversation with others in no time even though you would not have them in your network. In IBM Connections, your profile is open to everyone."*

2.2.3.2 Communities and Activities

Community is space for community members to run their daily activities (Ardichvili 2008). The success of virtual communities depends on how actively the community members participate into the community-knowledge sharing activities. Community gathers all community members to the same space. Community members can be members or owners in IBM Connections (IBM Connections 2012, product website; Ruponen 2012). In communities, users can create forums, activities, blogs and wikis. They can also upload files, folders and bookmarks to communities. Thus, the community application includes all applications of IBM Connections.

Communities can be closed, moderated or open. Usually work team communities are closed, because the discussions, files, blogs and activities can contain for example sensitive customer information. Usually open communities are communities whose goal is to keep all employees informed about product and solution news and offer a hub, where the ones who are interested in the subject can learn and meet experts. (Ruponen 2012; IBM Connections 2012, product website)

Activity is an application, which users can use to coordinate projects such as events, campaigns and bids. Activity consists of entries. Entries help users organize their work in an activity. Users can upload files, post comments and create bookmarks to activities- The activity owner can designate with whom the activity is shared with. An activity can be a standalone and only shared with a few people, community-related, or open to everybody. People can also assign to dos to each other through the activity feature. (Ruponen 2012; IBM Connections 2012, product website.)

2.2.3.3 Blogs

A blog is a web diary (Levy 2009, 124). Blogs can be subject-oriented or personal and cover various topics ranging from politics to technical contents (Razmerita, Kirchner & Sudzina 2009, 1028). In IBM Connections, blogs can be open or included in communi-

ties. Users can write, read and comment blog entries. IBM Connections also has a feature called Ideation Blog, which allows users to vote for and discuss ideas. After voting, the ideation blog puts ideas in order according to how many votes/likes ideas have received. Ideation blog is a community application. (Ruponen 2012.)

Nardi (see Razmerita et.al. 2009) has discovered five reasons why people use blogs:

1. to update others on activities and whereabouts
2. to express opinions
3. to find opinions and receive feedback
4. to write openly what one thinks
5. to release emotional tension

Zerfass and Bogosyan (see Razmerita et.al. 2009) also found out in their study that while blog writers are extroverted, blog readers are consumerist. They also found out that bloggers including writers and readers are interested in sharing knowledge and reading new information. Blogs may be a good channel to share knowledge, keep people updated and hence support learning and create transparency. Paroutis and Al Saleh (2009, 55-60) support these suggestions. They studied employee´s motivations and reasons for their willingness to use an Enterprise 2.0 solutions. The results suggest that the improved communication and personal knowledge management are factors that support the usage of an Enterprise 2.0 solutions. The following quotations illustrate the findings of their study:

1.1 ‘‘*It was also about sharing information – at TechCo I frequently get called up to ask if I've seen x or y problem before, so I can now just point people at my blog.*’’

1.2 ‘‘*I originally started blogging to note down useful things I'd learned in my job that evolved into writing about what I'd been doing, so the blog became a journal and a record.*’’

1.3 ‘‘*Since I work on-site with our customers I don't always see other colleagues as often as I might like, so keeping a blog enables the rest of my team to keep up with my activities(and I can follow the blogs of my team mates).*’’

1.4 ‘‘*In the ever-changing world, it's helpful to build a level of credibility tied to you as an individual. I've built professional connections world-wide that would not otherwise exist, as a result of my blog.”*

However, an open nature of Enterprise 2.0 can have factors that do not motivate people to participate. Paroutis and Al Saleh (2009, 56) found out the following potential barriers to participation:

- Lack of support or recognition from the organization
- Information overload
- Having own ideas acknowledged by others

- Lack of trust (the quality of information, use of information)

The following quotations from Paroutis´ Al Saleh´s study (2009, 56) describe the reasons for the barriers:

1.1 *‘‘The risk is that you spend time contributing to them and that people do not use information you publish’’.*
1.2 *‘‘When people take credit for your ideas. There is enough of that going around!’’.*
1.3 *‘‘I think there is information overload and much of it is useless. Blogs have a connotation of people talking about silly and trivial things in their private lives’’.*
1.4 *‘‘There is too much information you have to filter it’’.*

Paroutis and Al Saleh (2009) interviewed individual employees of a large multinational company called TechCo. Blogs are not as popular as wikis for instance at IBM (Suarez 2012). There are around 25 000 blogs at IBM. As an interesting note, blogging came to IBM in 2003, when Wikis in 2006.

2.2.3.4 Wikis

Wiki is a structure website, which allows user to create and edit text (Levy 2009, 124). Wiki is acknowledged to be a good platform for teamwork because it allows users to create content together. A social software consulting company *Consult Co* uses wikis internally and with its clients (Payne 2009, 27). According to the company, wikis have eased internal communication, project management, reduced costs and improved the satisfaction of clients´ needs. *Consult Co* also stresses that there are no guidelines to guide the usage of wikis.

Improvement-org (Payne 2009, 27) has found out that increased trust and the easy usability of wikis are factors that greatly affect users´ motivation to use wikis. Hence, wiki appears to be a good tool for collaboration. IBM is a good example of a company that has gained extensive benefits from using its social business solutions (IDC, 2011). IBM has also been supporting wikis among its workforce for a long time (Scarff 2006, 26). Wiki is still the most used function of IBM Connections inside IBM (Mell 2012) and IBM generates over 1 million page views of wikis every day (Suarez 2012).

2.2.3.5 Forums, Files, Tags, RSS, Social Bookmarking and Networking

Forum is a function that can be included in communities. Through forums users can ask questions, change ideas and benefit from the expertise of other. (IBM Connections 2012, product site; Ruponen 2012).
Files is a file sharing application through which users can download, edit and share files (IBM Connections 2012, product website). Hence, it also includes features, which are characteristic to document centric platforms. Files can be shared with users, activities and communities.

Tags are used to create a connection between data and a theme, or, a category. In IBM Connections tagging is realized personally and by typing, and not on the basis of pre-defined set of values. For example if the document or activity deals with a theme such as social business, a user can just write social business to the tag section. (Ruponen 2012). Hence, tagging in IBM Connections is realized according to Folksonomy, not Taxonomy (Levy 2009, 125).

RSS works as a channel for binding and filtering information (Levy 2009, 125). IBM Connections enables the use of RSS or Really Simple Syndication (IBM Connections 2012, product website).

Social Bookmarking is a function through which one can share website links. In IBM Connections, a user can post bookmarks to message boards, activities and communities (IBM Connnections 2012, product website). IBM Connections offers also *Social Networking capabilities*. Users can invite others to join their personal network. IBM Connections also suggests new network contacts to users. Suggestions are based on the user profile (Pentikäinen 2012). According to Levy (2009, 125), all aforementioned functions fall into the category of social networking

2.2.4 Community-level action

Community-level action is a sum of the individual actions, which individuals do. Consumption, participation and production (Heinonen 2011) affect the degree of community-level, that is, the degree of experienced social collaboration.

2.2.4.1 Wisdom of crowds as collective action

The goal of Enterprise 2.0 is to create a dynamic and collaborative work environment, where people have a wide access to knowledge and people (Gartner 2012). In other

words, it tries to remove barriers from accessing information and people situated in different organizational levels and functions (Payne 2007). Nahapiet and Ghoshal (1998, 249) state that having an access to parties and information is the first essential thing in providing the grounds for collaboration. In IBM Connections, the access refers to users´ ability to view profiles, write to message boards, read blogs and retrieve information from communities. Social collaboration evolves and becomes more valuable, when it is participated more widely into (Levy 2009, 122). Hence, participation and reciprocity influences the network. In an Enterprise 2.0 environment, users create, categorize and share information, when in the past these actions were carried out by content managers and experts.

Nahapiet and Ghoshal (1998, 251) distinguish *the anticipation of value from collaborating* as one factor, which affects the conditions of collaboration. With it, they want to say that employees need to see collaboration proving worthwhile. Wisdom of crowds has been seen as the true anticipated value of Enterprise 2.0 (Razmerita et.al. 2009, 1026). The notion seeks to study and explain how a large crowd of people solves problems, fosters innovation, makes wise decisions and even predicts future better than few elite ones. The force of the wisdom of the crowds was successfully proved in IBM´s Innovation Jam, where over 150 000 employees and business partners communicated through advanced information technology in order to take IBM´s latest technologies to the market (Turban et.al. 2009, 123-4). IBM´s Innovation Jam is a good example of *crowdsourcing.* Crowdsourcing is a method of sourcing new ideas (Simula & Vuori 2012).

2.2.4.2 End user motives for collective action

People are motivated, if they see a real benefit resulting from the collaborative action (Nahapiet & Ghoshal 1998). Sabetzahed and Tsui (2011) studied the effect that motives have on knowledge sharing in online social communities. They studied motives such as social esteem, social trade-off and social culture (norms) and found out that these had a moderately positive effect on social collaboration. Hence, these factors are neither strong enough solely to affect social collaboration nor too weak to neglect it. However, they argue that social platforms provide the much needed means and strategies to overcome that positive neutrality.

Ardichvili (2008, 550) categorizes motivational factors ito personal benefits, community-related benefits and normative benefits. Personal benefits are benefits that relate to status and career advancement. Overall, personal benefits are related to emotional, intellectual and material gains. Community-related benefits relate to benefits, which the community provides. Such benefits are security, support and identification. Communi-

ty-related benefits increase especially trust. Normative benefits relate to values created by social collaboration. Such benefits are openness and reciprocity.

IDC (2011, 3) found out that end users see Enterprise 2.0 solutions providing them the following benefits:

- It is easy to use (personal benefit)
- It makes me productive (personal benefit)
- It makes me more knowledgeable (personal benefit)
- It makes collecting feedback and information-gathering easier (personal benefit and community-related benefit)
- My customers/employees insists on engaging through social software (Normative benefit)

Ardichvili (2008, 550) suggests that there are four factors that work as barriers to participating in Enterprise 2.0 solutions. Interpersonal factors such as fear of criticism, procedural factors such as lack of best practices, technological factors such as lack of user experience, and cultural factors such as in group orientation as well as power agency, work as barriers to the personal use of Enterprise 2.0 solutions. Ardichvili (2008, 550) recognizes power agency as one of the biggest reasons for the reluctance to share knowledge in virtual communities of practice. In the case of power agency, knowledge is not shared because people are afraid of losing their power, which they see emerging from their personal knowledge. Suarez (2012) argues that power agency is a fierce barrier to Enterprise 2.0 still today.

IDC´s study (2011, 12) supports the existence of these barriers as well. In the following list the challenges are classified according to Ardichvili´s (2008) barrier types. Users associate the following challenges with Enterprise 2.0 solutions:

- Getting people to participate (cultural)
- Finding the time to use another tool (technological, procedural and cultural)
- Allowing comments posted openly (interpersonal)
- Having people monitor what I do (interpersonal and cultural)
- It does not have the functionality that I require (technological)
- It is not integrated with other systems (technological)
- There is no company policy to guide behavior (procedural and cultural)

2.3 Outcomes of social collaboration

Several outcomes of social capital and collaboration have been distinguished. For instance Oh et. al. (2006, 572) and Nahapiet and Ghoshal (1998, 251) both argue that col-

laboration creates outcomes such as higher individual knowledge, trust and identification. Outcomes are experienced more densely if conditions for a continuous collaboration are appropriable. Like argued before, the mix of intangible and tangible resources have an effect on the conditions of collaboration.

For instance Ho et.al. (2012) have studied which kind of effect knowledge management system, social identification and trust have on organizational online sharing. In their study they found out that the above mentioned factors do affect knowledge sharing in organizations, and that trust is the most important of these factors. Their study was a quantitative study. A qualitative study has been also made on how Web 2.0 technologies affect knowledge sharing within organizations. For instance Paroutis and Al Saleh (2009) found out, when studying the use of Web 2.0 technologies at TechCo, that trust is the most determinant factor for participating into knowledge sharing activities in Enterprise 2.0. Hence, in the following subsections, trust, identification and knowledge shall be scrutinized as the three main outcomes of social collaboration.

2.3.1 Trust

Coleman (1988) argues trust to be one of the most important assets of the structure, because without it, an organization could not work or even exist. Ruuskanen (2001, 3) agrees and even identifies trust as one of the most important outcome of social capital. He argues that trust decreases distrust and improves communication within the organization or group. By doing so, trust can increase team effectiveness by reducing the time spent on decision-making (Oh et.al. 2006, 572-573). Miztal (see Nahapiet & Ghoshal 1998, 254) defines *trust* as the belief that somebody´s actions will be fortunate from one´s own point of view. Both Nahapiet and Ghoshal (1998) and Oh et al. (2006) see that in relationships, which are high in trust, people are more willing to share information and collaborate, because they know that the given favor will be returned by another.

The relation between trust and team effectiveness is interesting because there can be identified a two-way interaction between them. Interaction results from the fact that trust expedites collaboration and respectively, developed collaboration creates trust (Nahapiet & Ghoshal 1998, 253). The evolvement of trust depends partly on the structure, where the particular collaboration takes place. Coleman (1988), Oh et.al. (2006) and Nahapiet & Ghoshal (1998) recognize that the more dense the structure is, the more trust exists. Density refers to the level of how interconnected people are to each other. In other words, group is dense when its actors are interconnected with reciprocal relationship and capitalize actively on the resources, which they have created over time in those relationships. An excessive density can, to some extent, exclude the group from

external and innovative information. Density is too excessive when group´s communication is mainly internal. For example if a group does not have external reciprocal relationships with other groups, a group is characterized by an excessive density (Oh et.al. 2006, 573).

According to Paroutis and Al Saleh (2009, 60), general trust is seen as a prerequisite for the successful adoption of Enterprise 2.0. General trust is trust, which is created in the long term through the transparency of the management´s actions, a company´s culture and the general performance of the company. General trust is, therefore, not an outcome of Enterprise 2.0, but rather a supportive factor that helps in its adoption.

Paroutis and Al Saleh discovered (2009, 60) that trust is the key determinant in determining whether or not to take part in Web 2.0 platforms. In addition to general trust, there are two other types of trust: benevolence based and competence based trust. Concerns over the misuse of information and lack of reciprocity can be associated with benevolence based trust, whereas the quality, reliability and relevance of information can be associated with competence based trust. Paroutis and Al Saleh (2009, 60) state that social collaboration leads to a higher level of trust in organizations. Also Ho et.al. (2012) see trust as an outcome of social collaboration.

2.3.2 Social identity and identification

Nahapiet and Ghoshal (1998, 256) state that social identity is a social capital resource that supports the evolvement of trust. An employee has a social identity, when he/she perceives him-/herself as a member of a group or an organization. Social identity is formed in an interplay between an employee and a group or an organization (Kimmerle et.al. 2008, 383-87). Nahapiet and Ghoshal (1998, 256) call this interplay a social identification process, whereby an employee inheres the values and standards of the group and organization. An employee that has a high sense of social identity is argued to have a strong belief in an organization´s vision, strong willingness to put in a strong effort to fulfill that vision and desire to be a member of an organization in the future (Kimmerle et.al. 2008, 383).

Ho et.al. (2012, 7-11) argue that the same reciprocity exists between social identity and social collaboration as does between trust and social collaboration. General social identity must be in place, before any outcomes can be received. For example a group has general visions, standards, norms, rules and values with which an employee identifies himself/herself. The other side of the sword is that the quality of an Enterprise 2.0 solution affects the formation of social identity. For example the quality of these tools defines how well an employee can work. The solution can affect the community member´s speed to realize work tasks, learn and network.

According to Luis Suarez (2012), *Social Business Evangelist at IBM*, social identity is mainly based on an informal role. This is because the formal role presents only the hierarchical position, which an employee possesses in the organization and therefore does not reveal the real actions or social relationships through which the actual work is realized. Oh et.al. (2006) support Suarez´s thoughts about informal roles being more important in building a group´s and an individual´s social identity. However, Oh et.al. (2006, 570-575) see that the influence, which formal roles have on the formation of social identity, should not be rejected totally. Individuals positioned in higher positions in the organizational hierarchy have more power in terms of decision making and providing political support. Also, leaders are more experienced and tend to have a higher identification to the organizational goals and visions.

Informal roles are created and developed through social networking (Oh et.al. 2006, 570). According to Suarez (2012), informal roles present themselves as profiles in IBM Connections. Hence, profiles present an employee´s social identity. The profile shows an employee´s photo, formal role or title, expertise, department, and contact information. By profiling and creating transparency to employees´ social identities, IBM Connections helps employees for example to identify expertise and thus find accurate and valid support. Paroutis and Al Saleh (2009, 55-56) support the mentioned benefits gained from using Enterprise 2.0 solutions and point out that social solutions ease communication and the realization of work tasks by giving employees a platform, which helps them to stay informed about activities of other employees and create their own credibility for example by participating to communities. *Ho et.al. (2012, 9) add that the appropriate fit between user characteristics and an Enterprise 2.0 solution result in greater enjoyment at work.* It can be expected that employees want to do work with similar, user-friendly, platforms such as Facebook, Twitter and LinkedIn that they use outside the office. Hence, the workforce´s demands for Enterprise 2.0 solutions are changing along with the development of external social media platforms (Gartner 2012).

Hence, social identity consists of formal and informal roles. Formal role is static and does not develop through social networking, whereas informal role does. Social identity and identification also affect the experienced trust within organization. Ho et.al. (2012, 10) stated that the more engaged people are, the more willing they are also to employ and express themselves physically, cognitively and emotionally.

2.3.3 Knowledge

The value of organizational knowledge is increasingly growing as the nurture and development of corporative knowledge seems to be the key for creating competitive edge

in the long term (Gartner 2012). A resource-based model notes this value proposition and suggest that there are four resources supporting the nurture and development of knowledge. These are: *financial, physical, human and organizational* resources (Peltonen 2007, 72-75). Financial resources refer to equity, physical to hardware, human to the workforce´s experience, know-how and education and organizational to culture and trust. Enterprise 2.0 makes it easier to capture, manage and develop organizational knowledge (Jackson 2010).

Knowledge is valuation, insight and understanding what information means or suggests. Therefore, knowledge is a human thing and is based on information, which, in its turn, is based on data. For example a spreadsheet on the raw sales figures of a product is a piece of data. When the raw sales figures are processed by using analytics tools and illustrated with the help of a chart or graph, the data turns into information. In the following step, for instance sales manager applies knowledge to make a decision based on that information originally sourced from a CRM system. In the context of this study, knowledge is parallel to know-how. (Benson & Standing 2008, 3; Venkitachamalan & Busch 2012, 357.)

The most common way to touch on knowledge is to categorize it into explicit and tacit knowledge. Explicit knowledge is knowledge that is codified to documents and files, and therefore it can be accessed easily (Nahapiet & Ghoshal 1998, 247). Venkitachamalan and Busch (2012, 357-359) see that organizational knowledge is mostly explicit. Tacit knowledge is a form of knowledge that is shared and created in interactions with colleagues. Venkitachamalan and Busch (2012, 357-359 continue arguing that tacit knowledge is individual. When tacit knowledge is shared and used, it contributes to the organizational knowledge. Nonaka and Takeuchi (see Peltonen 2007, 73) have recognized that an employee absorbs tacit knowledge of others by listening and observing – through social learning. Tacit knowledge becomes explicit when it is typed down for instance to the message board of an Enterprise 2.0 solution, but the typing does not necessarily turn tacit knowledge to totally explicit knowledge, because it needs to be contextually understood and applied (Venkitachamalan & Busch 2012, 360). Brown and Duguid (2000) offer a more specific view on how explicit and tacit knowledge supports work. According to them, explicit knowledge offers a predictable environment, whereas tacit knowledge is the basis for knowledge creation – for example for innovations. Also the difference between explicit and tacit knowledge is described by linking explicit knowledge to processes and tacit to practices or to the way how work is done (Venkitachamalan & Busch 2012, 359).

Hansen, Nohria and Tierney (1999) suggests that there are two *knowledge management strategies*, which to choose from – *codification and personalization strategy*. Codification strategy focuses on capturing explicit knowledge in order to make it distributable within the organization. In turn, the goal of personalization strategy is to facilitate

and encourage tacit knowledge sharing among employees by providing them a solution, which supports their communication and social networking. Jasimuddin, Klein and Connell (2005) suggest that codification and personalization strategies should be unified in order to fully benefit from explicit and tacit knowledge. By doing so, an organization can increase its performance and growth (Venkitachamalan and Busch 2012, 358-359). IBM Connections is an example of an Enterprise 2.0 solution, which fulfills the needs of both codification and personalization strategies by providing an environment, where an employee can both share files and conduct social networking activities.

Document-centric solutions such as MS Sharepoint are more capable of providing codification than social networking features. Bayern MaterialScience´s decided to implement IBM Connections in order to help its employees work together more effectively and closely in a community environment (Lamont 2011,6). Kurt De Ruwe (see Lamont 2011, 6), the CIO of BMS, argues that BMS selected IBM Connections because they wanted to go beyond documentation and codification. BMS integrated MS Sharepoint and Microsoft Outlook to IBM Connections. It can be argued that both knowledge types are essential to competitiveness. However, tacit knowledge is more important than explicit knowledge for the long term competitiveness (Venkitachamalan & Busch 2012, 359).

2.4 Theoretical framework

Every organization has social capital, which is unique depending on the business environment. Social capital consists of structural, relational and cognitive dimensions (Nahapiet & Ghoshal 1998). These dimensions were categorized to tangible and intangible according to their type since the study seeks to depict what kind of effect tangible and intangible resources have to the formation of *agency 2.0* or individual-level action in an Enterprise 2.0 environment. *Agency 2.0 refers to the actions* that an individual employee does in IBM Connections. Agency 2.0 was studied through Heinonen´s (2011; see table 3) framework, which illustrates individual web behavior. The framework helps to depict the individual-level action in IBM Connections. It is essential to understand the dynamics of *agency* 2.0 in order to understand *social collaboration or collaboration 2.0.*

Social collaboration is defined to be a form of collaboration that requires exchange and interaction between two or more actors in an Enterprise 2.0 environment (Turban et.al. 2010). Collaboration is traditionally seen as an exchange process, where resources are changed intentionally (Ogunlade, 2009). *Social collaboration can be also uninten-*

tional (Pentikäinen 2012). When an individual does actions within the social solution, information is produced all the time. Hence, every action creates a mark, which others can follow. Levy (2009) states that the vision of social collaboration is that everyone can contribute. Wisdom of crowds has been seen as the true anticipated value of Enterprise 2.0 (Razmerita et.al. 2009, 1026). The notion seeks to study and explain how a large crowd of people solves problems, fosters innovation, makes wise decisions and even predicts future better than few elite ones. Social collaboration enhances the more it is participated into (Levy 2009).

Social collaboration is argued to create outcomes such as trust, identification and knowledge. Paroutis and Al Saleh discovered (2009, 60) that trust is the key determinant in deciding whether or not to take part in Web 2.0 platforms. Paroutis and Al Saleh (2009, 60) also state that social collaboration leads to a higher level of trust in organizations. Also Ho et.al. (2012) see trust as an outcome of social collaboration. Ruuskanen (2001, 3) argues that trust decreases distrust and improves communication within the organization or group. In this thesis trust relates to communication and information and to their reach, level and quality. For instance the more people and groups communicate the higher level of trust they have.

An employee that has a high sense of social identity is argued to have a strong belief in an organization´s vision, strong willingness to put in a strong effort to fulfill that vision and a desire to be a member of an organization in the future (Kimmerle et.al. 2008, 383). Ho et.al. (2012, 10) stated that the more engaged people are, the more willing they are to employ and express themselves physically, cognitively and emotionally. Social identity is based on informal and formal roles. An informal role presents what people actually do, whereas formal roles only tell an employee´s hierarchical position. According to Luis Suarez (2012) social identity is formed mainly on the basis of the informal role, which an employee has. Oh et.al. (2006) support Suarez´s thoughts about informal roles being more important in building group´s and individual´s social identity. Ho et.al. (2012, 9) add that the appropriate fit between user characteristics and Enterprise 2.0 solutions result in greater enjoyment at work. In this thesis, *identification relates to employees´ overall engagement and capability to conduct daily work tasks*.

Knowledge is valuation, insight and understanding what information means or suggests (Benson & Standing 2008, 3). Therefore, knowledge is a human thing and is based on information, which, in its turn, is based on data (Venkitachamalan & Busch 2012, 357). Hansen et.al. (1999) suggest that there are two knowledge management strategies, which to choose from – codification and personalization strategy. Jasimuddin et.al. (2005) suggest that codification and personalization strategies should be unified in order to benefit fully from explicit and tacit knowledge. In doing so, an organization can increase its performance and growth (Venkitachamalan and Busch 2012, 358-359). Awareness of what is happening in the workplace or in a team can be considered as

knowledge as well. *In this thesis knowledge refers to awareness, learning and knowledge sharing.* Structuration process of social collaboration is dynamic (Nahapiet & Ghoshal 1998) and hence the outcomes flow back to the initial structure. *The framework of the study is the following:*

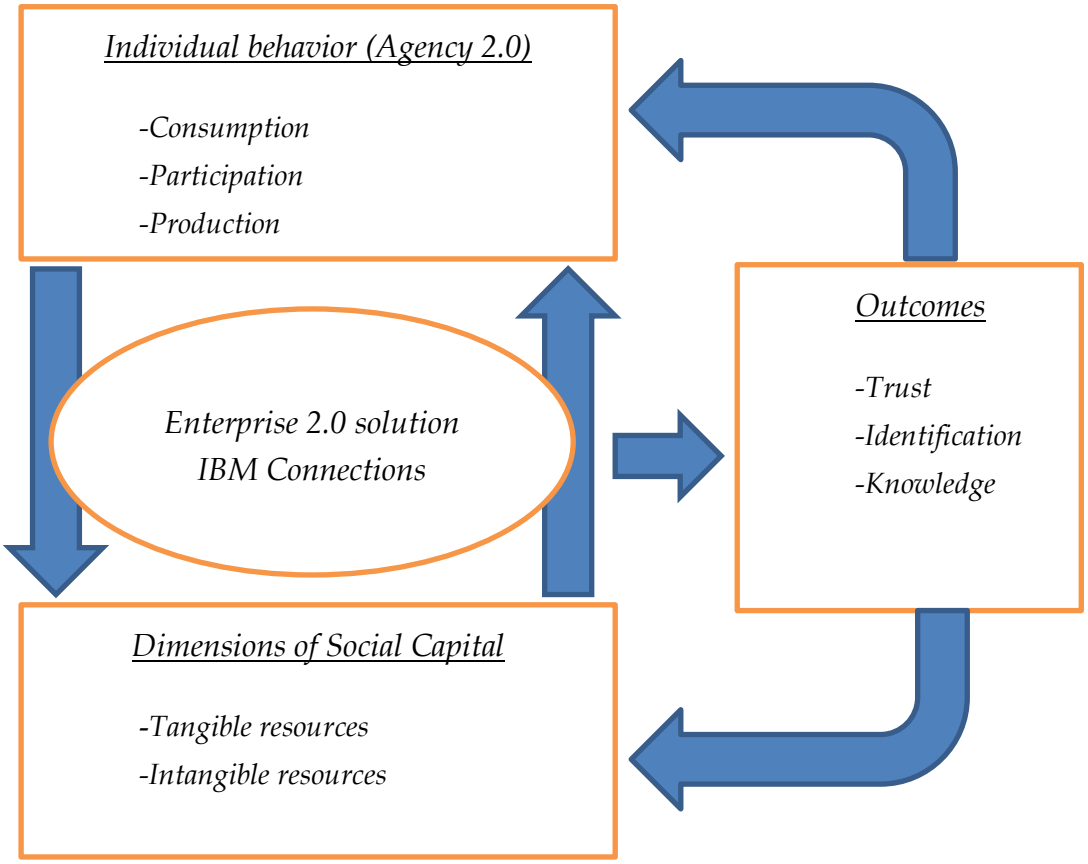

Figure 4 Structuration of social collaboration

3 EMPIRICAL RESEARCH

This chapter presents the methodology used in the study, information on case companies, the data collection method and the study´s limitations.

3.1 Qualitative case research strategy

Qualitative study is most often described by contrasting it to quantitative study (Eriksson & Kovalainen 2008, 4). When quantitative study emphasizes numbers and causation, qualitative study values meanings, context and interpretation (Chakhovich 2011). Qualitative study is therefore characterized by subjectivity, whereas quantitative by objectivity. However, it should be recognized that qualitative and quantitative study should be seen as complementary instead of rival methods. (Hirsjärvi, Remes & Sajavaara 2009, 136). The choice between different research methods depends on the aim of the study (Silverman 2000, 1). In order to fulfil the purpose of this thesis, an extensive qualitative case study was chosen. Argumentation for this choice will follow.

A qualitative research aims to gain a comprehensive picture on the phenomenon under scrutiny by finding and revealing facts instead of verifying existing claims (Hirsjärvi et.al. 2009, 161). Therefore a qualitative study requires a deep understanding of the studied context in order to support the conclusions (Eriksson & Kovalainen 2008, 4). In turn, quantitative research is incapable of dealing with the social and cultural construction of its variables and its conclusions are based on proving or rejecting hypotheses. The context of the study refers to the place and time where the study takes place (Chakhovich 2011). Qualitative methods are deemed capable of producing rich and detailed descriptions of situations and actions that happen within the context. In consequence, qualitative methods provide basis for better understanding the social and cultural structures and processes upon which business is based on. In turn, contexts vary in terms of their nature and the received data. Therefore, context and contextual data can be seen as factors that bring subjectivity to the results of a qualitative study decreasing its objectivity and generalizability. A qualitative study has been criticized for a lack of reliability and validity (Silverman 2000, 9).

According to Ghauri and Gronhaug (2005, 202) "*…qualitative research is particularly relevant when prior insights about a phenomenon under scrutiny are modest, implying that qualitative research tends to be exploratory and flexible of ´unstructured` problems due to modest insights*." This implies that qualitative methods are well suited when exploring phenomenon whose exploration has been modest so far. Knowledge sharing in an Enterprise 2.0 environment and the factors affecting it have been studied by Paroutis and Saleh (2009). Also Ho et.al (2012) performed a quantitative study on

knowledge sharing and its determinants. As well Chiu et.al. (2006) and Ardichvili (2008) have explored the determinants of knowledge sharing in virtual communities of practice. Hence, study has been quite modest on the relation between Enterprise 2.0 and social capital.

Social capital results from collaboration and is argued to create benefits such as trust, identification and knowledge to community, where collaboration takes place. Social collaboration is collaboration that happens through social solutions (Turban et.al. 2011). The qualitative study method was chosen because the phenomenon of Enterprise 2.0 is relevantly new. In addition, in order to reach an in-depth understanding of the dynamics of social collaboration in an Enterprise 2.0 environment, the determinants of it and its results, both social and cultural factors needed to be studied in a business environment, where social collaboration indeed takes place.

3.1.1 Comparative case study method

Methods are specific research techniques and are often divided into methods of data collection and data analysis. Interviews and observation are methods of data collection, whereas thematic and narrative analyses are methods of data analysis (Eriksson & Kovalainen 2008, 16). It is a matter of the chosen methodology and purpose of the research which method or methods should be applied. Many qualitative studies such as case studies often combine observation with interviewing (Silverman 2000, 98).

The chosen case research strategy is a comparative case study. Case study is best suited to a study whose aim is to describe and depict a specific phenomenon (Hirsjärvi et al. 2009, 134-135). “Why” and “How” questions are the norm for case study interviews (Yin 2009) Case studies have been quite popular for some time. For example Paroutis and Al Saleh (2009) used a qualitative case study method to study TechCo´s Web 2.0 solution. Eriksson and Kovalainen (2008, 116) propose that case studies are popular because they have the capability of presenting complex and dynamic business issues in an understandable way. A comparative case study is used when there is an aim to find out similar and distinctive characteristics between the chosen cases (Chakhovich 2011). Silverman (2000, 106) suggests that the chosen case or cases should be compatible with the purpose of the study. In this study, the compatibility factor between the case companies is the Enterprise 2.0 solution, IBM Connections. Instead of choosing one case company, the writer decided to choose three case companies in order to create a holistic understanding about the phenomenon and hereby aim to meet the demands of the validity and reliability of the study, which will be discussed further.

For the purposes of the thesis and its methodology, the three case companies were interviewed. Case companies are presented anonymously, because so was proposed on the behalf of the writer and agreed. Short descriptions of each case company are given in the following three sections. In the descriptions industry, size, the Enterprise 2.0 environment and recent trends shall be provided for each case company. The descriptions are based on both primary and secondary data sources.

3.1.2 Company A

Company A is an IT company, which offers software solutions and consultant services in the Nordics. It is specialized in web commerce and social business solutions and employs approximately 200 people. It is headquartered in Finland and has side offices in Helsinki and Tampere. In 2012 it expanded its operations to Sweden and Poland and founded side offices to Stockholm and Wroclaw. What is notable is that Company A has experienced vast growth in the number of employees in the past three years due to company acquisitions. Company A has been using IBM Connections for three years.

Major change happened when the company´s management decided in the winter of 2010 that IBM Connections will replace the company intranet. In April 2011 IBM Connections replaced the old intranet. In spring 2012 company developed IBM Connections with one common portal main page, that is, a home page for the latest news, most popular blog entries, popular tags and latest activities. The portal main page is the page to which every user lands to when opening IBM Connections. Together with IBM Connections, company A is using other IBM Collaboration Solutions such as IBM Notes email and IBM Sametime instant messaging. IBM Connections is available for mobile devices. Other solutions exist as well. For example coders use Confluence actively because it supports coding activities better than IBM Connections.

All in all five interviews were carried out in Company A. The people who were interviewed were a Development Manager, a Client Manager, a Portal Solutions Manager, a Human Resources Manager and a Software Developer. All interviews were conducted in Helsinki. Three interviews were done in face to face meetings and two by using video conferencing techniques.

3.1.3 Company B

Company B develops and provides technology solutions for the sustainable use of the Earth´s natural resources. The company is the global leader in minerals and metal processing technology. It has operations in all continents and employees about 3 800 peo-

ple. Over decades the company has developed several breakthrough technologies and holds a large number of patents. Its headquarters is located in Espoo, Finland. Company also offers solutions for the chemical industry and the utilization of alternative energy sources.

The company started using IBM Connections as their official Enterprise 2.0 solution in December 2011. Before IBM Connections, company used Yammer as their unofficial Enterprise 2.0 solution. The company decided to replace Yammer with IBM Connections because it wanted to secure information ownership and create a more secure environment for commanding and sharing business sensitive information. Yammer is a social solution that is run only outside a company´s firewall. Company B has a company-wide intranet. In addition to IBM Connections, the company is using Lotus Notes email and IBM Sametime solutions. IBM Connections is available for mobile devices as well.

Company B is subject to fast growth, which shows in the number of new employees recruited per year. An organizational change was realized in 2010, which affected the structure of some departments. The aim of the organizational change was to bring cohesion to the department structure. The organization´s age structure has also become younger in the past few years due to many new recruits.

3.1.4 Company C

Company C is a global leader in household appliances and appliances for professional use. It sells more than 40 million products to more than 150 markets every year and has operations in every continent. The company is based in Italy. It focuses on meeting the real needs of consumers and professionals by offering innovative products, which are based on extensive consumer insight. Company C employs round about 58 000 people. The company has multiple brands that it produces, markets and sells.

Company C started using the first version of IBM Connections in November 2010. Now it is using the version 3.0, which has all the applications described earlier. IBM Connections is available for mobile devices. The company has a company intranet called Egate to which IBM Connections is integrated into. The company is using Lotus Notes and IBM Sametime solutions as well. Company will upgrade IBM Connections to version 4.0. In addition to these solutions the company is using Microsoft Sharepoint. Company will integrate MS Sharepoint to IBM Connections in version 4.0.

Over the last five to ten years the company´s strategy has been to minimize the number of brands and create synergy to minimize costs. Also, the company has concentrated in innovation and getting closer to the customer. The company has gone through changes in its operations and culture. The company made a decision in 2010 to launch a project to create more dialog within the company. Social Business is part of that initiative.

3.2 Data Collection and Analysis

In business research, in-depth interviews are the primary source of empirical data (Eriksson & Kovalainen 2008, 78-82, 125). There exist different interview techniques and interviews can take place face to face, by telephone or online. This study used the semi structured interview technique. A semi-structured interview is outlined to a theme, issue or topic. The challenge of the semi-structured interviews is that the interviewer needs to make sure that all the topics are covered. This can in some cases prevent the participants to touch on topics that might be interesting for the theme. However, the semi structured interview gives space for having a fairly conversational and open interview. Hence, it is considered as an efficient interview technique (Koskinen, Alasuutari & Peltonen 2005, 104, 105).

The interview questions can be open and closed when using the semi structured interview technique (Eriksson & Kovalainen 2008, 83-84). Hence, questions and their style can vary. Open questions encourage more speech and give the participant more control, which helps the participant to produce more detailed answers. Questions can also be between these two, simple or complex, direct or indirect, neutral or leading and primary or secondary. An example of an open, a closed and hybrid question used in this thesis are:

- Open: "Describe your daily use of IBM Connections?"
- Closed: "In which function do you work in?"
- Hybrid: "Mention three functions of IBM Connections, which you use the most and why?"

The three main themes for this thesis are social capital, agency and social collaboration. Several interview questions were designed and elaborated according to these main themes in order to create a deep understanding of social collaboration and its outcomes. The two first parts of the interview studied the dimensions of social and agency 1.0. The third and fourth part studied agency 2.0 and social collaboration. The fifth part the outcomes of social collaboration. *The operationalization table (see appendix 1) and interview questions (see appendix 3) are located in appendices.*

Before the actual interviews took place in the selected case companies, the researcher had several meetings and interviews with IBM´s Social Business representatives during spring 2012. The researcher also had a couple of interviews with the IBM´s Social Business representatives during the interviewing process in August and September 2012. The researcher consulted representatives in order to increase his knowledge of the

theme and to have support in the selection of case companies. Some of these interviews were recorded. The interview questions were different with IBM´s representatives than with the representatives of the three case companies. The list of all the IBM´s Social Business representatives, who brought their knowledge to this thesis are listed below:

- Luis Suarez, Social Business Evangelist, IBM ES
- Jukka Ruponen, IT Architect and Innovator and, IBM FI
- Antti Haapasalo, IBM Collaboration Solutions Sales Leader, IBM FI
- Jon Mell, IBM Collaboration Solutions Sales Leader Europe, IBM UK
- Timo Pentikäinen, IBM Collaboration Solutions Technical Expert, IBM FI
- Pekka Rinne, IBM Collaboration Solutions Sales, IBM FI
- Luis Benitez, Social Software Product Manager , IBM US

The actual interviewing process with the case companies began in June 2012 and lasted till the end of September 2012. A list of the participants is located in appendices (see appendix 2). The first interviewed company was company A and the interviews with its participants took place in Helsinki. Five representatives of company A were interviewed. Interviews with company B began in August 2012 and took place in Espoo. Five representatives were interviewed from company B. The third case company is C. Interviews with C took place in September 2012 and were carried out by telephone. In the end, 12 interviews were carried out in the three case companies. Eight out of 12 were face to face interviews and the rest were done by using telephone and video conferencing techniques. All interviews were recorded. The quality of all of the interviews was good. Participants found the interview questions accurate and to the topic. All the participants used IBM Connections so the solution was familiar, which eased the realization of the interviews. The tone of the interviews was open and positive. There was plenty of open conversation during the interviews. The participants also provided criticism. All five interview themes were covered in every interview.

The participants were selected together with the case company and the researcher. First the researcher contacted the person who was the owner of the social business initiative of the case company. The owners were proposed to the researcher by the representatives of IBM Finland. After the first contact, the researcher sent the framework of the study to the participant, proposed a day for a meeting and also told that there would be a need to interview round about five people. After having the first interview with the owner, the researcher arranged the interviews with the persons proposed by the owner. The owner of the case company took care of the introduction, which made it easier to get interviews. All participants were positive towards the subject and did not refuse to take part in the study.

Choosing the method for data analysis begins with the research questions (Eriksson & Kovalainen 2008, 90). The researcher needs to decide if the research questions need

detailed and sophisticated methods of analysis. In qualitative analysis the sourced data is usually first segmented to parts and then reassembled to a whole (Boeije 2010, 76). The aim of the analysis is to search patterns in data and ideas that explain their existence (Bernard & Ryan 2010, 109). In a qualitative study, the search of a meaning is usually a search of a pattern (Stake 1995, 78). Patterns exist when there can be recognized consistency within certain conditions. If consistency is found, it is usually a mark of correspondence or similarity.

There are two ways to present the findings: a thematic or chronological way (Eriksson & Kovalainen 2008, 128). This thesis uses the thematic way of presenting the themes social capital, social collaboration and outcomes – i.e. according to the structure of the study. All themes were covered in the interview and the captured data was also categorized according to the interview template. Analysis began in the beginning of September 2012. Every interview was written open out to help analysis. In total, 20 hours of recorded data was gained from the interviews. The analysis process was conducted in the same order as the case companies were interviewed. Therefore the data of company A was analyzed first and the data of company C last. The theoretical and managerial implications are presented later.

3.3 Quality and limitations

The quality of a research relates to the correspondence between the study findings and the scrutinized phenomenon (Boeije 2010, 168). The quality of the research can be assessed through reliability and validity (Eriksson & Kovalainen 2008, 290-292). Reliability refers to the degree of consistency, whereas validity means truth (Hammersley 1990, 1992). “The question of reliability is related to the establishment of a degree of consistency in research in the sense that another researcher can replicate your study and come up with similar findings” (Eriksson & Kovalainen 292, 2008). Reliability illustrates the operations of the study such as the data collection (Yin 2009, 40-45).

Validity can be divided to internal and external validity (Eskola & Suoranta 2003, 2013). Internal validity refers to how well the results of the study illustrate the phenomenon under scrutiny (Chakhovich 2011), whereas external validity defines the domain to which extent a study´s findings can be generalized (Yin 2009, 40-45). Therefore validity assesses how accurately the findings represent the phenomenon referred to, if the findings have evidence and if the results can be generalized. In social sciences and business research reliability, validity and generalizability create a framework which can be used for evaluation (Eriksson & Kovalainen 2008, 290-292.) All researche has limitations

and is not perfectly designed. Discussion about limitations of the study shows that the researcher understands this reality. (Marshall & Rossman 2011, 76.)

The reliability of the study has been supported by qualitative interviews. All in all 12 interviews were conducted and recorded so that others could use them. The data sourced from the interviews was typed down, categorized according to the five main themes and analyzed through the five themes. The anonymity of all participants and companies is secured when presenting the findings of the study because so was agreed before any interviews were realized. The anonymity also secured a safe environment for the participants to attend the interviews and express opinions. Enterprise 2.0 is also a topical theme.

The validity of this research was supported by pre research and the amount of empirical data. Before aligning the theme, the researcher had interviews with the experts of social business from IBM in order to understand the world of Enterprise 2.0. Researcher also studied IBM Connections by using and reading product presentations about it. In the beginning of the study, researcher read plenty of articles that regarded structuration, social capital, collaboration and the implications of knowledge sharing in work communities. Hence, it can be argued that the research has a strong internal validity because 1) *its theory is based on theories that are used in the previous research made on Enterprise 2.0,* 2) *the findings are aligned with previous studies,* 3) the *researcher did a solid background work to the phenomenon,* 4) *all the participants use IBM Connections* and 5*) people from different organizational levels and departments were interviewed.*

External validity refers to the generalizability of the research. The results of extensive case study research cannot produce generalizations that hold for a certain population. However, the results can be generalized to theory. (Eriksson & Kovalainen 2008, 125.) The results of this thesis support theories of social capital, structuration, collaboration and Enterprise 2.0 because the results are in align with these theories. Even though any generalizations cannot be made to a certain population, the researcher wants to point out that the three case companies are different in nature, because they differ from each other in the terms of their size and the field of business. In the light of the results, it seems that the size or the field of business do not affect the theoretical results. One factor that limits the generalization is that only European people were interviewed and 11 persons from the participants were from Scandinavia.

It is notable that some of the interviewees knew better how to address social business because of their background. For instance company A uses and sells the solution and therefore the participants were more familiar with the capabilities of the solution than the participants of company B and C. All participants deemed the interview questions to be clear and relevant to the topic. Hence, challenges in this sense did not occur.

4 STRUCTURATION OF SOCIAL COLLABORATION IN THE CONTEXT OF THE CASES

In this chapter the findings of this study are presented in sections. Social capital covers themes one and two, social collaboration themes three and four and outcomes theme five. The findings are presented in the same order as the interviews were carried out. Hence, first the findings of company A shall be presented. Then the findings of company B, and in the end the findings of company C.

4.1 Company A

Company A is an IT company, which offers software solutions and consultant services in the Nordic countries. It is specialized in web commerce and social business solutions and employs approximately 200 people. It is headquartered in Finland and has side offices in Helsinki and Tampere. In 2012 it expanded its operations to Sweden and Poland and founded side offices to Stockholm and Wroclaw. What is notable is that Company A has experienced vast growth in the number of employees in the past three years due to company acquisitions. Company A has been using IBM Connections for three years.

4.1.1 Social capital

Like other forms of capital, social capital develops in time and its evolution can be divided into three phases: he past, present and the future (Nahapiet & Ghoshal 1998). Its development depends on the community, where it is consumed and created. As explained, social capital consists of resources and turns into outcomes through collaboration. As explained in figure 2, there are conditions that affect the level of collaboration. These conditions can motivate or hinder individual action, that is, agency (Giddens 1994), which consequently affects the nature and degree of collaboration. Conditions for collaboration are dependent on intangible and tangible resources such as management, culture, departments and information technology (Nahapiet & Ghoshal 1994; Barney 1991).

When the participants were asked about the intangible resources such as culture and management, the following answers were received:

"*In our company there has always been an open and positive environment between employees and management. For instance we have always had an open office space.*

Neither have I ever had to deal with situations where somebody would have resisted sharing information." – Client Manager

"*CEO is an open person and has always known how to communicate." – Software Developer*

Hence, it can be noted that tangible resources such as an open office space might be associated with openness. Also the management style, which is regarded as an intangible resource in this thesis, affects the way how employees find culture and management. The following quotation illustrates how changes in management and organizational structure create meanings to individuals.

"*I have been here for some time now and experienced managerial and structural changes that the growth has brought with it. It is right to say that from 2009 on, when the new management stepped in, culture has been characterized by openness." – Portal Sales Manager*

Nahapiet and Ghoshal (1998) mention that one condition for collaboration is an easy access to people and information. Also Pinho et.al. (2012) state that lack of sufficient tools may act as barriers to knowledge sharing and hence to collaborative actions. As stated earlier, email is still the most used tool for personal communications (Mell 2012). On the basis of this information, participants were asked to describe their work ways before IBM Connections. Following answers were received:

"*Let me give you an example of how the bid process was carried out. Before IBM Connections, we opt to communicate verbally as much as we could but if it was required to send new document versions, we did that mainly by email. Then we elaborated versions verbally or by email. A point to remember is that back then we were all in the same office. We also had other tools such as Wikis and Confluence. Also Intranet existed back then. All in all I feel that IBM Connections has reduced the frustration that the old work ways created because in the old environment for example document versions were held in different places.*" *– Portal Sales Manager*

On the basis of the upper quotation, the preferred way to communicate was by face to face. Even though the old established work ways such as email (Paroutis & Al Saleh 2009) were seen frustrating, they were the most used tools in internal communications. The old established work ways were experienced difficult and inefficient - especially with big client projects. The following quotations describe these difficulties:

"*In the old environment with a big client project, the communication was mainly carried out by email. And you can imagine that how much a big project generates email. Information about the project existed also in many places such as web servers. It was difficult, if you had to incorporate a new person to the project, because you had to collect the project information for that person from long email chains and other places. Of course you can go through that and realize the bid process by using the old ways. However the case is that if you have to go back to the case and find information on why some thing was done like it was, it is really hard, because everything is mixed because information and conversations exist in various places.*

"What comes to my mind from email is pure inefficiency. Having 200 emails in your inbox and not knowing instantly to which emails you should actually react to and to which not. Then it happens that you go through the most of them. The CC field is also problematic because the respondent does not know whether that email is important and whether it needs to be or not read, because you are just a CC after all." *– Client Sales Manager*

One intangible resource is strategy, which can be defined as being a plan, which consists of activities that support the achievement of organization´s future goals such as growth (Peltonen 2007). When the Development Manager was asked about why IBM Connections is nowadays the primary tool for communication and collaboration, the following answer was received:

"*Having discussion by email is painful. When I started in the company in 2009, we had just merged with other company. After that we have grown, and are now growing by 15 people in a year. As we begun to grow, we started to think what would be the intranet that supports our needs, because a mid-sized company which seeks to grow might not afford to hire an administrative person to run internal communications. The first version of IBM Connections was in the company at that time already and some employees used it to blog about seminars. CEO also had a blog there as well. We wanted to create lively content instead of content that would be controlled by someone.*

So in December 2010, we decided to replace the intranet with IBM Connections. After considerations, it was the strategic roadmap, which was natural to embark on. We launched IBM Connections in January 2011 as our official company intranet. We have been customizing it in order to make it more compatible to our needs. A major upgrade happened in spring 2012 when we added the portal main page to IBM Connections. The main page shows the users the latest news and blog entries among other things. The new main page was realized because the feedback was that it is a bit difficult to notice

what is new and popular and what is not. So we made it easier to the user to find recent content. We will bring soon other tab to the main page which shows what is happening on company´s Social Media sites. This tab will be called Social."

Enterprise 2.0 was thus a strategic decision to company A. Company A has also followed the hybrid approach in their Enterprise 2.0 initiative by taking into account the end user needs when developing internal communications and the solution (Payne 2007).

4.1.2 Social collaboration

According to Turban et.al. (2011, 141) "*Collaboration 2.0 refers to the deployment of Web 2.0-based social software tools and services, such as wikis, blogs, forums, RSS feeds, opinion polls, community chats and social networking, to facilitate enterprise collaboration*." Hence, social collaboration is collaboration that happens through Enterprise 2.0 solutions.

When company A´s *Human Resources Manager* was asked about the role that IBM Connections has in the current work culture, the following answer was received.

"*The role of IBM Connections in our work culture is to 1) be a channel for internal communications, 2) bring unity and a feeling of community between offices 3) act as a forum from where an employee can find support to the daily work tasks.*

I could not make it without DOME (company name for the IBM Connections Enterprise 2.0 environment). It has supported the work culture and its expansion to side offices really well. For instance it has helped us to recognize expertise within our organization and fastened the onboarding of new employees. "

Enterprise 2.0 supports culture and works as an enabler. Levy (2007) has noted that the dynamics of the Web 2.0 environment affect to the perceived outcomes of social collaboration. In this study, that Enterprise 2.0 environment is IBM Connections. *Development Manager* describes the 2.0 environment of company A in the following way:

"*There are round about 200 communities and most of them are public. Among the 200 communities we have communities, which are designated to the purposes of corporate communications. These so to say "formal communities" are listed to the content map to help employees to find them.. For example Human Relations community has a blog which they use to communicate about their activities. As well Financial Depart-*

ment has their own community and when our CFO has something to share, he shares it by writing a blog. We also have a top management blog. CEO writes his own blog as well. Teams also blog about their weekly team meetings. The team leaders have their own community, which is a closed one. The user activity is round about 90 per cent measured on a monthly basis. And 50 percent of employees use Connections on a daily basis. Discussions are performed daily. For instance discussion on whether we should change the company name or not was conducted in Connections openly. Every employee has CV in IBM Connections as well."

It seems that user activity affects the overall user experience in Enterprise 2.0 as Levy (2007) implied. Also it can be noted that Enterprise 2.0 needs moderation in the adoption phase. One way to moderate is to set up formal communities from which users can start to download and read material.

After the researcher had understood the Enterprise 2.0 environment, the participants were asked about their daily actions, which they conduct in IBM Connections. Also they were asked to categorize their daily actions according to Heinonen´s (2011) framework. The following quotations provide insight to individual´s behavior and their collaborative actions in company A.

"*My work demands that I observe what people and communities do in order be aware of what is happening and what are the "hot topics". I also manage some communities. I use the solution to communicate with other employees.*

So what I do first is that I check how people are doing by checking status updates. Then I go to check the News main page and after that my own Widget page just to be sure that I do not miss anything. After these I continue to some of the 45 communities which I´m an owner or member of. If I have something to post to these communities, I might create a blog or wiki. For example we have brought our strategy visible through a sub community. Through this sub community we communicate our strategy and vision to employees. While communicating strategy and vision, we also create new strategy. We also discuss company values there. For instance every team had a discussion and the results of those discussions were posted to that sub community in form of a wiki so that it would be visible to everybody what all teams are thinking about strategy and vision. I participate to discussions through posting and commenting status updates and blogs. I also share files. So my activities are a mix and regard document management and communication." *– Development Manager*

"*I follow the news stream from the Discover section. HR´s role and duty is to be aware of what is happening in the community. I do not subscribe notifications to my email. I comment actively but only when it is needed. Sometimes I might just post emotional content such as what is the recipe of a good chocolate cake or what I have learned from IT today. I manage the HR Community. I am an active blogger and I create blog entries for instance to that community For example the blog that I created on our Summer Days, received 546 views and 43 comments. I am also responsible of educating the new recruits to use IBM Connections. I tell them for instance to join the HR Community straight away and show them where the IT support wiki is. HR Community includes, among a lot of other things, an employee handbook which has information for instance to whom to give/send your tax card to.* " – *HR Manager*

Hence, it can be noted that individual behavior in Enterprise 2.0 solutions starts with consumption, continue to participation and end with production. Also Managers tend to use the solution as a means to stay aware of what is happening in the work community. The same trend with behavior continued with other participants of company A. It also was found out that the Activities application had saved time in the bid processes.

"*I start with checking out what my network is doing by checking status updates. If there are some interesting discussions going on, I participate by commentating. Then I update my personal status and tell what I am doing today. I do not do that every day, but I do it every time when I am going to have a client meeting because it sometimes generates really good conversations, which helps me to receive good tips from other client representatives and maybe can my knowledge on the client. If I have some files under work I upload them to IBM Connections and ask people to comment them. We also do a lot of work with bids through Activities. I always check the bid activities which I have to see if I have some to dos there. If there is a new employee in the company, I go and check the profile. Activities work really well and save approximately 20 per cent time in bid processes compared to the old mail based environment" – Client Manager*

"*I normally use IBM Connections three or four times in a day. I usually see what others have produced there for instance in form of blogs. Then I check if my team members have written things that regard our projects. After that I read the status updates to see what people are talking about and what is happening. I also comment updates if there is something that I want to comment. For instance if some team member has succeeded in something, I comment that status update to give a positive feedback. I update my status at least once a day. I really like that crowdsourcing possibility – just post an idea through status update before you go to have a lunch and when you come back to your laptop you have received comments and ideas. I am*

also an owner of one Solution Community, where I post new content to, share files, create a new blog entry and educate Sales people and Consultants about the solution area. Our portal team has its own community as well. We share team meeting memos there and use wikis for instance to plan vacations. In terms of consumption, participation and production, my activity sphere is a mix. We also use activities when carrying out bids. Activities are really good in especially projects that last for a short time. I personally feel that by doing bids with the team through Activities is about 20 per cent less time consuming compared to the old environment. Also the quality of the offers is better because you receive support from your peers. It is easy to comment and throw ideas in activities. All in all we use communities a lot." – Portal Sales Manager

In addition to the users, whose individual behavior was a mix of consumption, participation and production, there was a user that used IBM Connections mainly to retrieve information. The following quotation implies that Enterprise 2.0 solution suits also well for activities which regard only consumption.

"*I do not use IBM Connections that much for doing my daily work because we use another solution called Confluence for our purposes because it is better in managing information in more structured way. Through IBM Connections I seek solutions to hardware problems and usually that information is easy to find. I also see the News main page, latest blog entries and read the management blog. I also read blogs, which are focused on technology. I subscribe the Commerce Development Community. I also usually find information about reimbursement and Human Resources. One community which is really good is the IT support community, which has a really clear and nice structure. Also our team has its own community where we have our team meeting memos documented and we do project management there also. Our team is located in Helsinki and Jyväskylä. The main reason to use IBM Connections is to keep me updated about what management has to say about our strategy, vision and possible problems. It is very insightful and productive to read those things by your own and not to have them told you in team meetings. The CEO blog that they promote there is really interesting to read because he writes about things that employees are discussing and gives his opinion and thoughts to them" – Software Developer*

Social collaboration occurs when employees act in the social network, which consists of communities, activities, blogs and so on. Individual agency determines the community-level agency and eventually the level of perceived social collaboration or as Levy (2009) says, the dynamics of the network. When the interviewed were asked in a more

detailed manner about their social collaboration activities, the following answers were received:

"*Maybe the best example of that kind of social collaboration is HR monthly meeting and the value discussion in the strategic sub community. In the HR monthly meetings we always use wikis to prepare the meetings in advance by placing relevant material there. So when the meeting takes place, we know pretty well what we want to go through. This has really brought efficiency and quality to the meetings. And it is easy to continue from there on because there is a memory mark of what we have done.*

The other thing is that strategic sub community which was created to communicate and develop the corporate strategy and values. We also boosted it with the monthly value discussion. First we created nine core company values and then we asked people to recommend persons who are in align with one of those values. Then every month management chooses one winner on the basis of the given proposals and rewards the winner with an iPad. The incentives are important but I emphasize that money has not been the key to make Dome a success. Though, in the beginning we rewarded the evangelists for their development work." – Development Manager

Hence, Enterprise 2.0 solutions can act as a channel to communicate and create strategy. In company A, strategy can be regarded as a socially accomplished activity. Company A has few offices around the Nordic countries. In Finland there are four offices. One part of Company A´s vision was to make the company more transparent and accessible. This is also considered as being one of the results that Enterprise 2.0 elements can provide (Paroutis & Al Saleh 2009). One of the participants describes how accessibility and transparency show in reality as follows:

"*The interesting thing is that in Dome people discuss about clients. You can also see discussions going on the new potential customers and their solutions, new projects and how the business is doing.*

The new projects are the most intriguing ones for me and Dome has made them visible. The new projects are not necessarily endorsed consciously. For instance, if I noticed a project that I would like to be part of, I could instantly start asking my manager if I was able to take part to it. So Dome provides a solid basis to individuals to act proactively in these kinds of situations. It is rewarding to be able to ask questions, get answers and see what is happening in the company." – Software Developer

Hence, Dome provides interesting and actual content to users, which is one of its purposes. Also *Portal Sales Manager* provided an example of how social collaboration capabilities help Sales Teams to organize work around bids.

"*When a request for quotation (RFQ) is received, we create an activity to where we put all RFQ related documents. Then we plan and allocate the RFQ workload through the To Do –function. After To Dos are marked as completed, we can carry on with the bid. To dos bring coordination to the project. Normally 2-3 people take part to smaller bids, whereas in larger bids there are 5-6 people involved.*
Activity is surely the best thing that Dome has brought with it. With Activities we are able to coordinate projects that are not organizationally clear, that is, you might have to incorporate people from different departments and office locations to the bid process. In Activities it is easy to add new members to the bid process. It also decreases frustration and saves time when you have information and workflow in one place.
Other good example is the Solution Community that I am responsible of. I use it to keep my team and the consultants up to date of the solution. I am the active producer there. I post blogs and files to there."

It seems that Enterprise 2.0 solution provides managers more capabilities to manage their team´s workflow. Also, it seems that Communities is a good way of communicating with teams and support learning.

4.1.3 Trust, identification and knowledge

Coleman (1988) argues trust to be one of the most important assets of the structure, because without it, an organization could not work or even exist. Trust develops communications and information exchange (Ruuskanen 2001, 3) and increases team effectiveness by reducing the time spent on decision making (Oh et.al. 2006, 572-573). In addition, Paroutis and Al Saleh discovered (2009, 60) that trust is the key determinant in deciding whether or not part in Web 2.0 platforms. Also they discovered that top management support affects the participation in Web 2.0 platforms. In this thesis trust is related to communication and information as well as their reach, level and quality. The following quotations highlight how Enterprise 2.0 affects trust.

"*Transparency has developed - we have a better understanding of the employees and their thoughts. According to our employee study, which is made once a year, employees feel that internal communications has improved. In my opinion, this not only a result from the adoption of IBM Connections, but as well from the open culture we have de-*

veloped. All in all IBM Connections supports and develops social and open culture with its characteristics. I believe I share more information today. I would be lazy to use other tools." *– Development Manager*

"*The employee study shows that internal communications has got better. Employees are happy to the open and informative nature of the internal communications. So they are satisfied to the way how things, even quite confidential ones, are informed and spoken. Dome clearly supports our culture and has helped us to spread the company culture to other office locations as well. For me it is the best tool I have experienced and I could not work without it. About the trust? Yes I feel that I share more information thanks to Dome because it makes producing content more informal and making it easier to share and create information." - HR Manager*

Hence, Enterprise 2.0 supports the development of trust by creating transparency. However, Enterprise 2.0 does not create an open culture. On the contrary, an open culture supports the adoption and use of Enterprise 2.0. The following quotations illustrate for instance how Enterprise 2.0 can support the development of an open culture.

"*It helps to create a healthy environment. Before Dome I did not know who the members of the top management team were or what they wanted to say. Nowadays I know who they are, what they do and what they want to say. So I have an image of them. For example there were conversations about the incentive system some time ago to where for instance the CEO participated. He touched on the incentive system in his blog and commented the conversations around it. So in this company employee related matters are discussed openly*." *– Software Developer*

"*I share more information thanks to Dome. The company culture has always been characterized by openness. Dome supports openness and creates company culture. For instance the status updates are not always business related but more personal. People can post how frustrated or disappointed they are or something like that. Through status updates we also have created new words to our company language." – Portal Sales Manager*

An employee has a social identity, when he/she perceives him-/herself as a member of a group or an organization (Nahapiet & Ghoshal 1998). The social identity is formed in interplay between an employee and a group or an organization (Kimmerle et.al. 2008, 383-87). Nahapiet and Ghoshal (1998, 256) call this interplay a social identification process, whereby an employee inheres the values and standards of the group and organization. An employee that has a high sense of social identity is argued to feel a strong

commitment towards a company (Kimmerle et.al. 2008, 383). IT systems have shown to have an effect on social identification as they provide a tool through which an employee can act and build their social identity as a member of a particular community. Ho et.al. (2011, 9) add that the appropriate fit between user characteristics and Enterprise 2.0 solution can result in greater enjoyment at work. In this thesis social identity and identification refers to employees´ perception on how well they can fulfill oneself at work and how well they perceive themselves as being a member of the company through Enterprise 2.0 solution.

The participants responded the following when they were asked how Dome supports their daily work.

"I really like writing and Dome gives me a chance to do it. I write blogs and update my status. The thing is that I can write with my own style without anybody wanting to correct me or something like that. To be able to express yourself openly develops the company culture. I could not live or to be able to do my job in a same way without Dome.

Dome helps you to identify yourself better and to find people who have similar interest areas as you do. You can also build your expertise through it. To take all the benefit from it, one must be active there." *- HR Manager*

"*Dome affects positively to my work satisfaction. It is an easy tool to use and makes it possible to do my work more efficiently. Like the bid process that I mentioned earlier. I feel that nowadays it is easier to ask questions than before because instead of consuming your time thinking to whom to allocate the question, you can ask it publicly in Dome. You see some experts also taking a stand in Dome who did not do that earlier. It also gives me satisfaction to see who have downloaded some of the files I have uploaded there.* " *– Client Manager*

Hence, Enterprise 2.0 gives more possibilities for employees to express themselves and do their work more efficiently. In the light of the next quotation, it seems that it enables employees to build up their social identity by making themselves and their work more visible to others.

"*In terms of the bid process, Dome has reduced frustration and time. It also supports my work as a manager so that I am able to conduct social listening. That is, I can observe how my team members are feeling and act upon it. If there is a moment to cheer, I cheer by giving congratulations. If there is a bad moment, I give support. Social listening does not replace face to face management but supports it well."* - Portal Sales Manager

"*I had not used Enterprise 2.0 tools earlier in my career before Dome. I have noticed that it inspires people because it is easy to learn and use. For me it gives a space to observe what is happening and possibility to take part. It also gives a chance to be proactive. For instance Dome gives a solid forum for company´s internal development projects. By doing so, internal development projects have more chance to develop when everybody has a possibility to take part to them. Without Dome I would be lazy to communicate because I would not have an appropriate channel to do so. In addition, my daily work would not be visible to others and that would require me to demonstrate my work in other ways. Now I have a channel to fulfill my work and role as a manager. I sometimes even use Dome on iPad in the evening when I am at home." – Development Manager*

The most common way to touch on *knowledge* is to categorize it into explicit and tacit knowledge. Explicit knowledge is knowledge that is codified to documents and files, and therefore easily accessible (Nahapiet & Ghoshal 1998, 247). In turn, the tacit knowledge is a form of knowledge that is shared and created in interactions with colleagues and is individual (Venkitachamalan & Busch 2012, 357-359) When tacit knowledge is shared and used, it contributes to organizational knowledge. Nonaka and Takeuchi (see Peltonen 2007, 73) have recognized that an employee absorbs tacit knowledge of others by listening and observing – through social learning. Resource based model suggests that there are four resources supporting the nurture and development of knowledge: financial, physical, human and organizational resources (Peltonen 2007, 72-75). Financial resources refer to equity, physical to hardware, human to the workforce´s experience, know-how and education and organizational to culture and trust. By applying appropriate knowledge management strategies, an organization can increase its performance and growth (Venkitachamalan & Busch 2012, 358-359)

"*First of all the tacit knowledge is constantly codified there through status updates, blogs and wikis. Dome has an ability to develop knowledge of people and the daily activities. By browsing a profile of an employee and uploading one´s Curriculum Vitae, you get a good picture of one´s daily work and expertise. Status updates increase learning. I always update my status when I am going to a client meeting because it often generates discussion through which I get valuable information. Dome makes me more consciousness than before because I nowadays I know better what is happening around me.*

About Dome affecting to company´s competitiveness, I believe it affects the competitiveness by providing overall consciousness, innovation and efficiency. Dome brings efficiency to my work by saving time for instance in bid processes. Dome also supports innovation because we can create new processes in an open way. A while ago there was discussion on the incentive program and somebody had thrown a suggestion about the

new incentive system. In the end CEO made a decision to implement the new incentive system. His decision was based on the discussion. This would not have happened without Dome." *- Client Manager*

"*Management´s blog and CEO´s blog are the things that I am interested in. By reading them I am much more aware of the business in general. It helps me also to find information on the things I want to have information on such as new projects, solutions, travel allowance and clients.*" *– Software Developer*

Hence, Enterprise 2.0 develops knowledge by increasing the employees´ awareness of people, projects and management. The following quotations illustrate how Enterprise 2.0 might ease the retrieval of knowledge or crowdsourcing within organizations.

"*Dome offers new channels to acquire knowledge. Crowdsourcing is possible and happens in Dome as we spoke earlier. What I notice is that people are more eager to apply their knowledge and write down information. In status updates there are a lot of relevant content. I also feel that I am more up to date with events and information. I hear and see more than in the past." – Portal Sales Manager*

All in all, it can be stated that Enterprise 2.0 has created trust, identification and knowledge within company A.

The following quotations illustrate what kind of expectations are set for IBM Connections.

"I believe that we will continue acquiring companies in order to expand our business operations to abroad. I think that Connections will support expansions by giving an opportunity for the new employees to get quickly on track of the corporate culture. By that way their onboarding time will reduce and that gives you an advantage. We have already proven that with the domestic new employees. Connections also played an important part when the last two mergers were in process since communications and discussion on the mergers went through it."- Portal Sales Manager

"Small coincidences can make a difference in business as well and Connections supports the emerge of coincidences. For instance if sales person is about to meet a customer and writes a status update on the meeting, some other person can take part by giving a constructive information onto the sales person´s wall. That is agility." - Development Manager

Enterprise 2.0 might therefore ease employee onboarding, the expansion of corporate culture and bring flexibility to the daily workflows.

4.2 Company B

Company B develops and provides technology solutions for the sustainable use of the Earth´s natural resources. Company is the global leader in minerals and metal processing technology. It has operations in all continents and employs approximately 3 800 people. Over decades the company has developed several breakthrough technologies and holds a large number of patents. Its headquarters are located in Espoo, Finland. The company also offers solutions for the chemical industry and the utilization of alternative energy sources. The company started using IBM Connections as their official Enterprise 2.0 solution in December 2011.

4.2.1 Social capital

According to IDC (IDC 2009), market factors such as competition, social customer and workforce dynamics are leveraging the demand for social business, the objective of which is to increase transparency, agility and engagement of the company. Gartner (2012, webinar) suggests that the demand for Enterprise 2.0 tools is increasing for two reasons: companies feel that Web 2.0 tools are an efficient way to do work and employees want to have similar kind of tools at work as they do in private live. Alongside the use of Web 2.0 platforms, workforce is getting younger as the baby boomers retire and the younger generation steps in (Jackson 2010, 908). As the workforce changes, companies need to think about how knowledge will be maintained within the company for future use. Web 2.0 tools can facilitate knowledge capture and inter-generational knowledge transfer.

The following quotations illustrate the factors, which led company B to acquire IBM Connections.

"*Before Yammer and IBM Connections, some groups were asking for Enterprise 2.0 tools. These groups wanted to have smoother collaboration spaces than Lotus Notes Team Rooms. At that time we evaluated some Enterprise 2.0 solutions including IBM Connections, but did not find a business support to make the investment.*

Then employees started to use Yammer, which expanded rapidly within the company and had multiple users and a lot of activity. People saved information and promoted events there. Some of that saved information was that critical that it should not have been stored on a public tool like Yammer. The version that Yammer offers on the web page is the free version to where users log in with an email address. When Yammer was in use, it was not clear to us who owns the company data stored in Yammer. The user rights did not give a solid answer to the data ownership and privacy of Yammer. In IBM Connections it is the opposite because it is an internal service and does not create any implications with the data ownership and privacy. Data ownership and privacy are vast concerns because our company owns a vast number of Intellectual Property Rights (IPR), which we constantly aim to harness and develop. In the end, Yammer showed us that there was a vast need for Enterprise 2.0 solutions.

IBM Connections followed Yammer. It is secure and easy platform to use and adapt to. The object of IBM Connections is to reduce email, offer smoother collaboration spaces to employees and a tool that supports the way how younger workforce does work. The problem with the email is that it is personal and you get drowned to it. With Lotus Notes Team Rooms the problem is that they are stiff and formal. Instant messaging tools like IBM Sametime are very efficient but do not work really well when one wants to communicate productively beyond different time zones. With IBM Connections we support communications, learning and innovation beyond different time zones. Today round about 2000 employees use it so the user activity is 50 per cent. There are about 200 communities from which 69 are public and 129 closed. We launched IBM Connections silently because we wanted to have content available there before making it fully live. We do not have any arranged education on IBM Connections. Usually education is arranged from demand." - Collaboration Solutions Manager and IT Expert

Hence, company B wanted to secure safe way to conduct their information sharing and provide a long term social solution for its workforce that is getting younger and younger. Social capital resources affect the adoption of Enterprise 2.0 solutions. Resources such as culture and technology can act as enablers or barriers (Ardichvili 2008, 543, 550). One acknowledged cultural barrier for knowledge sharing is Power Distance, which means that people are unwilling to share their knowledge because they feel that knowledge gives them power, and if they would share it, it would reduce their power and make them less competent. The established structures affect the formation of the individual agency or the way how employees do work (Nahapiet & Ghoshal 1998; Giddens 1984). Paroutis and Al Saleh (2009, 57) found out in their study that the old work ways act as barriers for using Enterprise 2.0 solutions because old ways are familiar and safer to users.

The following quotations further illustrate the social capital resources of company B:

"*In Yammer management was very active, but in IBM Connections they are not. People use databases plenty here. For example when we had meetings around the new Intranet integration with the IT department, I had to point out several times why IBM Connections´ community feature could not be suggested to teams as the primary alternative instead of the databases of Lotus Notes. Databases are popular but tyou need service desk´s support and time to set up one,. When Yammer was taken down, people were not happy as they thought that the company had taken a good platform away from them. It took approximately six months to fulfill that social gap with IBM Connections.*

The younger employees, who actively use Facebook and other social media tools, have welcomed Connections very well. On the contrary, the seniors feel that social tools are mainly a waste of time and opt for databases, which is a shame, because they would have a lot to give if they shared their knowledge more openly. I believe people are afraid of posting and sharing in a case of posting incorrect information that eventually could hurt them or the company. In addition I feel that knowledge is treated as being power here and communications is not that open as it could be. Power agency was the first thing I noticed when I first came to this company. There can be various reasons for that but I feel that having been a state owned company in the past has its effect still on the ways how people react to knowledge sharing. IBM Connections should be promoted more and IT could support it by not giving an alternative of databases so much. Connections gives you a platform that enables informal and efficient communications." – *Internal Communications Manager*

Hence, old established work ways are strong in company B. Also it can be noted that power agency is present and acts as barrier to knowledge sharing. The following quotation continues assessing the old established communication channels such as Intranet, factors that affect knowledge sharing and perceptions on IBM Connections.

"*We are a global company. Our product line was reorganized in 2010 and some departments were emerged. The people of my department are located in Finland, Sweden and Australia. On daily basis, we communicate through email, instant messaging and face to face. I receive too much email on basic things and I get drowned to it. I would like to conduct all R&D activities and communication through our community. In past you were able to remember things, but nowadays it is hard to keep up with everything because there is so much happening all the time. By using email, you store your memory there and that way it comes inaccessible to others and is hard to redeem.*

The current Intranet is horrible because of three things: 1) people who create content there think that everybody will recognize and find it. 2) Search is not working 3) It is really difficult to find information.
When IBM Connections came, we set up a community called Smelting Seed. Its aim is to combine the worldwide knowledge and create seeds for the future growth. The community also provides a platform for the Smelting management to communicate to other departments. I believe we would have a lot to give to other departments and vice versa.
We have had difficulties to get the community working as we would have hoped to. It is an open community and there is not enough trust to generate activity. People are afraid to take action because they feel that for instance the content they post there is unnecessary or irrelevant making them to lose their credibility. They also fear that if they post something, it leaks, because of the community´s open nature. I believe that in general these barriers are mostly cultural issues. It is a little weird that our top management is not active or visible there. If they were active, it would inspire the workforce. I would like to see our company getting closer to the same kind of work atmosphere and spirit as you see in some smaller firms like startups" *- Research & Development Manager*

"*My manager is really positive and inspired about social tools. Me as well. I use Facebook and other social media tools frequently for personal and business purposes. When you use external social media, you understand the purpose of Enterprise 2.0 tools better. Human Capital is actively using Connections.*
I communicate to abroad daily. My manager for example is based in Dubai. I communicate still mainly by email, instant messaging and telephone. IBM Connections is right now more a channel for information/document sharing than a space where conversations take place. We at Human Capital department have decided that our closed community is a space for communicating and sharing information on internal matters such as processes. This is easier compared to the past when we mainly used Lotus Databases and conference calls to keep on track of things.
People do not yet recognize IBM Connections or its value well, which is in my opinion partly due to its unsuccessful launch. We do not have any organized education. I would like to have an organized education session for an every new employee even though the use of Yammer was solely driven by users and was not structurally supported. There are different users and for younger workforce these platforms might be easier to adapt to. The role of the top management is important in having Enterprise 2.0 solutions to generate value. For example I was one of the people who arranged a management forum and we had a Connections community for it to discuss about agenda and work on the three-day-event. Then I received a question from one manager who asked me that how his/her assistant can go and download files. The initial idea was that the managers personally have a chance to affect the forum´s agenda. In the end, it is a good demonstra-

tion of different perceptions that people have on 2.0 solutions. This manager saw it as another system for formal processes and not as a social place where you can act with your own name and identity." – Human Capital Manager

The top management´s role seems to be a supportive factor in terms of knowledge sharing, but it appears that managers also delegate work to their assistants in IBM Connections. In addition, power agency and silent launch have slowed down the adoption of IBM Connections.

4.2.2 Social collaboration

The aim of Enterprise 2.0 solutions is to provide a platform where people, processes and information preside and act (Ruponen 2012, interview). By providing a social platform, companies intent to improve efficiency (Intralink Webcast, see Turban et.al. 2011). Enterprise 2.0 applications such as blogs and wikis make knowledge sharing and collaboration more informal by giving users the control to share and act within the social space instead of having central control (Payne 2007, 25). Central control refers, for instance, to a situation where managers have to first accept an employee´s desired knowledge entry (Ardichvili 2003, 70-72). This kind of restrictiveness with knowledge sharing can occur due to corporate security restrictions. Informal roles are created and developed through acting socially in the company environment (Oh et.al. 2006, 570). Informal relationships are therefore relationships through which work is actually accomplished. An informal role is not hence associated only to an employee´s title, but to the activities, an employee conducts every day. "*Informal roles and knowledge sharing are really valuable concepts because those really tell others what one does and how can he/she help others. What is important to remember is to appreciate and recognize informal roles which employees have*" – Luis Suarez IBM. Informal roles are considered to be important for creating group social identity Oh et.al. (2006).

The following quotation illustrates the social collaboration environment of company B:

"*In addition to providing a secure platform for in-house knowledge sharing and collaboration, one aim of IBM Connections is to reduce the amount of email by taking the discussions to blogs, forums and wikis. Also IBM Connections provides a platform where people can act informally and socially over different time zones and business units. We are now integrating IBM Connections to the company intranet to make more visible and accessible.*

We do have ethical guidelines to usage. In the beginning we did not want to have moderation like education because we felt and still feel that the growth of social platforms is driven by users. This has been the case because some groups have inspired about the solution once they have seen other groups using it. Communications department is the primary administrator of IBM Connections. The most used applications are communities, profiles and files. The most active departments are Communications, Human Capital and one product line called Smelting.

The user activity is round about 50 per cent. In total there are about 200 communities from which 69 are public and 129 closed. The number of communities has been growing a lot recently." – Collaboration Solutions Manager and IT Expert

"*The activity and people are more transparent in the Human Capital network nowadays thanks to IBM Connections. Our community is a closed community. In the beginning activity picked up rapidly and maybe got a bit out of hands. People created separate wikis and blogs which led to a situation where information was not easy to find anymore. Now we are structuring content again in our community. One person is a responsible for structuring content and its aim is to make the community easier to use for the users. People do not use tags because they do not understand the importance of tagging."- HC Manager*

It seems that social solutions need briefing in the beginning to support the adoption of Enterprise 2.0. On the contrary, owners of Enterprise 2.0 do not want to make the learning process too structural because they feel that Enterprise 2.0 should be driven only by users. The following quotation illustrates how for instance face to face conversations may be a powerful way to share knowledge on Enterprise 2.0 as well and how evangelism takes place by community-level motives.

"IBM Connections makes it possible that everyone can contribute and produce content. If you want to post something to Intranet, the text must be revised and approved before it can be published. In IBM Connections there is no need to control content by revising it, which enables users to act informally. Here corporate communications is conducted mainly through Intranet and it is regarded as the primary tool for finding information and communicating. People should realize that IBM Connections is as well a public and approved channel for conducting corporate communications like Intranet is and has been.

During the summer I promoted IBM Connection successfully to two groups. These groups began the usage by creating private communities, where they share their meeting agendas and notes. Face to face conversations have been a good way to promote IBM Connections and get people to use it. Though, our Chief Financial Officer got frus-

trated due to the difficulties which he/she experienced with login. I believe he/she is not using IBM Connections right now. I find myself as being an advocate of IBM Connections inside our company. I for example create communities from demand." - *Internal Communications Manager*

In order to better understand social collaboration in company B, the participants were asked to describe their daily usage of IBM Connections by categorizing their usage according to Heinonen´s (2011) concept. The following quotations illustrate the participants´ daily use of IBM Connections in terms of consumption, participation and production.

"*Our group does not use as a process tool because we have other existing tools that we use for normal process work. We use it mainly for the purposes of communication. The community feature is good because they can be open or closed. There are also features that we do not use and presumably will not use such as activities.*
I am one of the founders of the Smelting Seed community. I daily visit the community. I do not use the other features so actively. Because of my role, my daily usage consists of finding and producing information. I believe it is a mixture of consumption, participation and production. I seldom update my status. I have not yet discovered the benefit of status updates. What is the aim with people telling where they are and what they do? *Status updates should be valuable in terms of content*." *- R&D Manager*

"*I use features such as files, blogs, profiles and status updates. My daily usage is characterized by production and participation. I sometimes think that what the point is with for example updating the status and telling that I am in Berlin. I am not that good in writing to Facebook either. When I write, I should write something reasonable. I would hope that the user interface would be more intuitive because it is sometimes hard to find your way there*." *– Collaboration Solutions Manager*

Hence, the use of IBM Connections may differ depending on the department and job role of the interviewee. The following quotation illustrates how document sharing activities happen in IBM Connections and how it is now more a place for information sharing than for daily conversations.

"*Files feature is the feature that I use the most. Then I have created bookmarks. For instance I share IT guides through files and save project documents there. Files is a good feature since you can see who have downloaded the files that you have uploaded there.*

"My daily usage consists of all of the three mentioned usage types. I follow what is happening in IBM Connections. On behalf of my role, I produce system related content on those systems that I am responsible of. I sometimes also take material to community spaces.
IBM Connections is not that intuitive platform in my opinion. I would like to see its user interface resembling public social media tools such as Facebook because employees are already used to them. Though, it may be hard to make it as intuitive as Facebook because it is a quite wide platform with all the features that I feel that are essential to Enterprise 2.0 platforms." IT Expert

"IBM Connections is now more a place for sharing information than having daily conversations. So it is more a place for sharing files than sharing and elaborating ideas. I share files too. People use status updates quite little. There are not blogs so much either or at least that is the image that I have.
I like communities because usually you find the latest information from communities. I follow those communities that are related to my work. So I do not go to the communities of different product lines to learn about their activities so often. However one time I read a blog about Smelting Seed´s future development steps and I felt enlightened.
My daily activities consist of consumption, participation and production. When I open Connections, I first read status updates. Then I do activities around sharing or collecting information I usually collect information on projects. After those two, I visit my communities and the communities that I follow. I also write and comment status updates and observe what is happening. Conversations do not take place here. I believe that it is so because people do not want to write with their own name. It was the same thing with news on Intranet. It took a lot of time before people started to comment the news on Intranet with their own name. I do not mind writing with own name." - HC Manager

It appears that the users´ daily activities are a mix of consumption, participation and production. Hence, if compared to external social media behavior which mostly consists of consumption and participation for the majority of users (Heinonen 2011), behavior in Enterprise 2.0 is more multifaceted. The following quotation illustrates the pain points with Intranet and knowledge sharing.

"We have a community for Communications. I share information there. It is an open community. If I took the project information to Intranet, anybody could not find it. We share also articles in the Communications community and communicate about our web and media projects.

I do not always write my status. Sometimes I only observe what others are doing. I also visit some communities like Smelting Seed and Finnish Young Professionals. I have found an interesting material from those communities, which I used to make a news article to Intranet. Through the community feature I believe we have succeeded to communicate better to the employees." - *Internal Communications Manager*

All in all, communities seem to be an effective and easy way to run internal communications. Also it seems that the open nature of Enterprise 2.0 gives more capabilities to users to touch on knowledge that would not be available for them in an email or database based environment.

Nahapiet and Ghoshal (1998, 251) distinguish the anticipation of value from collaborating as one factor, which affects the conditions of collaboration. With it, they want to say that employees need to see collaboration proving worthwhile. IDC (2011, 3) found out that the end users of Enterprise 2.0 solutions saw that 2.0 environment provided them the following benefits:

- It is easy to use
- It makes me productive
- It makes me more knowledgeable
- It makes collecting feedback and gathering information easier

These benefits can be personal, community-related and/or normative (Ardichvili 2008, 550). Ardichvili (2008) sees that the benefits, which people experience from participating to virtual communities of practice, work as motivational factors. Technological and cultural factors can force or hinder user motives.

The following quotations illustrate the experiences, which company B´s employees have from working collaboratively within IBM Connections:

"There are a couple of communities, were budgets and ideas are shared around activities. For example I am part of the group who will be arranging a student reunion event. We share event information and delegate actions in the student reunion community.
In addition to communities, it is easy to do things collaboratively through the status update feature. We are a large company and often attend to fairs. A while ago I needed to find experts to a fair. Instead of using the old way to find the suitable people from different systems, I posted the question in my status. Status updates differ. It was easy and efficient. To find the right people by using the old systems is hard and painful.
IBM Connections has brought new ways to do work. These ways have proven to be efficient. For instance I am an unofficial superior to one employee based in Finland. His/Her official superior is based in Dubai. I had a personal development discussion with him/her some time ago but I was not able to document the discussion and results to

the personal development system because I am not the official superior of him/hers. What we did was that we set up a closed community where we manage his/her tasks, schedule and other matters. People who need to have information have only access to this community. I documented the discussion and results to this community and tomorrow I will have a look at the results and transfer them to the personal development system with him/her official superior. I could have sent many emails to the key persons, but I did not, because it would have been laborious. Laborious because to me emails come often from the same people so it is not that easy sometimes to control the communication flow in email. In IBM Connections yes, because you have a clear view to the ongoing discussion."- HC Manager

Hence, it seems that IBM Connections supports the daily workflows by providing alternatives for carrying out daily tasks and channels to communicate. Internal Communications Manager continues by describing his/her experiences.

"With IBM Connections it is easier to share and find information. I have found interesting content from a couple of public communities. For my efficiency and enjoyment, it is good to find interesting stories that can be posted to intranet´s news site. In those communities where I have sourced information, content is timely and insightful. This increases the quality of my work.
It is also efficient when people can comment documents productively already in IBM Connections. By this way, I do not need to receive ten single documents to my inbox and then make the requested changes. The common comments view decreases parallel work and increases quality.
I use IBM Connections also when working with project workshops. When I am in workshop, I nowadays make all the notes to community or publish them in the news feed. I save a couple of hours by doing so. I would be even more efficient if got my mobile client working and could post while travelling."

It appears that IBM Connections also provides time saving in routine tasks. The following quotation by R&D Manager confirms that Enterprise 2.0 solutions provide a new way to present information and create awareness.

"Wiki has been a good tool. We have all our product information visible in our community in form of wikis. By going to the wiki, you see all the products, and additionally the persons who are responsible of each product. By this way, you find the right person who can give you information and answers. The profiles are linked to each product wiki.
All in all I feel that the community has created a sense of a community. I mean that we recognize and know the people who are part of our community."

Ardichvili (2008) has discovered that there exist barriers to knowledge sharing in virtual communities. IDC´s study (2011, 12) supports the existence of these barriers. IDC´s study found out the following challenges in using Enterprise 2.0 tools:

- Getting people to participate (cultural)
- Allowing comments posted openly (interpersonal)
- It does not have the functionality that I require (technological)
- It is not integrated with other systems (technological)

R&D Manager describes the barriers as follows

"*We have had difficulties to get the community working as we would have hoped to. It is an open community and there is not enough trust to generate activity. People are afraid to take action because they feel that for instance the content they post there is unnecessary or irrelevant making them to lose their credibility. They also fear that if they post something, it leaks, because of the community´s open nature. I believe that in general these barriers are mostly cultural issues.*
I would hope that our member would publish their product development ideas in our community sooner so that the community members would be able to brainstorm them before they are documented to another system. It is not that easy because we get additional fees if the new ideas succeed. Therefore some people may protect their ideas by publishing ideas after they have filed them to another system which is not integrated to IBM Connections. This is odd because in IBM Connections you work with your own identity all the time.

Hence, it seems that some employees are not so familiar with the capabilities and dynamics of the solution. Also it seems that power agency works as a strong barrier to knowledge sharing.

"*Barriers are the lack of transparency, lack of top management support, strong old work ways and power agency*." *– Internal Communications Manager*

In addition to power agency, lack of top management´s activity and old work ways such as email and databases affect the degree of social collaboration in company B. What is notable is that the key users recognize enablers and barriers and are motivated to tackle them.

4.2.3 Trust, identification and knowledge

Paroutis and Al Saleh discovered (2009, 60) that trust is the key factor in determining of whether or not to take part in Web 2.0 platforms. There are two types of trust: benevolence-based and competence-based. Concerns over the misuse of information and lack of reciprocity can be associated with benevolence-based trust, whereas the quality, reliability and relevance of information can be associated with competence-based trust.

The following quotations illustrate how people see Enterprise 2.0 solution affecting to the development of trust in company B:

"*A technology company has challenges in internal social media, because a vast deal of our operation is also focusing on product development and IPR. I believe the situation would be different if we concentrated only on producing cheap products. We are a market leader because we provide good products and we want to develop them constantly. People realize this and that is one reason why they do not maybe want to share potentially sensitive information to 4500 people. They fear that information would be misused. We have operations in Asia also and there the rate of employee variation is quite high. Closed communities though give you a possibility to tackle these fears. Lack of use is also one thing that affects the development of trust. If people used IBM Connections more, it would create trust. I believe that the described factors set a challenge for the development of internal social media and trust in technology companies*." – *R&D Manager*

"*Yes I believe I share more information nowadays thanks to IBM Connections. Also Human Capital Community has brought transparency to our group. A while ago one group member posted that she was on a business trip in Chile, which was new to me and to others. This is primarily because it is easy. For instance status updates give you a good channel to post questions. Very few update their status. I would really like to see more reciprocity in IBM Connections. With reciprocity I mean, that people commented others´ status updates, give feedback and so on. In order to achieve higher user activity, IBM Connections needs to have interesting information.*

I do not want IBM Connections to come just a repository of unstructured content. There is a risk that the irrelevance of information grows. There should be guidelines in closed communities for when to use blog, wiki or activity for posting content." – HC Manager

It seems that Enterprise 2.0 supports trust by providing valuable information on colleagues. On the contrary, it seems that Enterprise 2.0 in itself does not change the culture automatically to an open one and that the development of competence based trust

might be negatively affected by information overload. The following quotation illustrates how communities can work as information hubs.

"*I do not know if I share more information nowadays, but I do it faster because it is easier with IBM Connections. Maybe I do. Also I know that information is easier to locate for others in IBM Connections than in Intranet. There are a couple of communities that produce interesting information. Communities is the feature where groups begun and in my opinion it is the best feature. People do not want to comment with their own name. For example when we set up a poll in one community, we did not receive any feedback or answer. That was a shame but illustrates the reality. Maybe we went too far.*" *– Internal Communications Manager*

It seems that the solution is capable of supporting the development of trust in the work community but traditional culture and work ways slow the development. It also appears that the lack reciprocity, that is, give a comment to a blog or status update, decreases the perceived level of trust among users.

As presented in chapter 2.1.3 social identity consists of formal and informal roles. Formal role is static and does not develop through social networking, whereas the informal role develops through social networking. Social identity and identification also affect the level of trust within the organization. (Oh et.al. 2006.)

An employee that has a high sense of social identity is argued to feel a strong commitment towards a company (Kimmerle et.al. 2008, 383). IT systems have shown to have an effect on social identification as they provide a tool through which an employee can act and build up his/her social identity as a member of a particular community. *Ho et.al. (2011, 9) add that the appropriate fit between user characteristics and Enterprise 2.0 solution result in greater enjoyment at work.* Ardichvili also (2008, 550) argues that status and career advancement and reputation enhancement can constitute motivating factors i.e. factors that motivate an employee to attend virtual communities of practice.
The participants reflected social identification as follows:

"*For me IBM Connections makes possible to make my work more productively and variedly. For instance I can find interesting topics to make a piece of news just by going to communities. Also the way how I work with workshop notes is a new way to do things. It is my role to redact news and improve communication. IBM Connections provides features that improve content production and communication. The individual way of doing things and improvement in communications are the two things that IBM Connections can establish. I try to support people to use IBM Connections when they have a need to publish a piece of news or a notification. By this way they can do it by themselves. It brings efficiency.* "*– Internal Communications Manager*

"*I believe that IBM Connections supports my work by making my work and profile more visible to others. I believe that others feel similar. Social networking is easy to do here. Communities and profiles ease recognition also. Status updates and profiles are my favorite features. Profiles and status updates make it easy to get a picture of what people do.*

It is important for the Human Capital Department to be visible because its role is to support personnel and secure that all information that regards personnel is available. I believe that it makes me, my work and department´s work more visible to others when I for instance post information to the Finnish Young Professional community. I am very happy that the company provides this social solution." – Human Capital Manager

It seems that IBM Connections provides more capabilities to employees to conduct their daily work tasks. The development of identification is also a future objective to company B. The following quotation illustrates this and the adoption of the tool by groups.

"*What we really hope is that people would find the right people and knowledge when they need. Profile is a good feature because it eases recognition and brings transparency to people´s daily work. Adoption is strong with the people who are open in character and ready to learn about new solutions. Also we have noticed that people who use IBM Connections are interested in trying out different options, and they also propose new ideas. For instance Human Capital, Smelting Seed and Communications Department are the most active user groups here. Maybe people working for IT department are not so into these solutions."- Collaboration Solutions Manager*

R&D Manager continues with elaborating identification.

"*Of course Web 2.0 has affected the demands that people set for their employers in terms of tools and culture. People always separate work and life balance, where work is maybe serious and life is fun. But could we say that there is only one balance, which is life balance. What I want to say is that work can be and should be fun.*
We have a quite innovative environment even though it is a bit bureaucratic and old fashioned. When I came to this company the average age of employees was 46 years. Now it is a lot lower and workforce gets younger and younger all the time.

The interesting thing though is that the older workforce did not experience IBM Connections hard to use or anything like that. Maybe generations does not vary that much in terms of the adoption of Web 2.0 tools as thought. " '

It seems that it takes time for a large and traditional company like company B to overcome power agency and adopt social and open work culture. However, it seems that there might not be such a big difference in motivation to adopt Enterprise 2.0 solutions between older and younger generations.

Knowledge is recognized to be one the most important assets – or even the most important asset – which an organization has. Enterprise 2.0 solutions are argued to support knowledge management. Knowledge management strategies covered in this thesis are personalization and codification strategy. The former aims to improve the development of tacit knowledge, whereas the latter is focused on developing explicit knowledge.

The following quotations reflect the participants´ thoughts about IBM Connections affecting the development of knowledge.

"*Well for sure I have been able to learn about new things. For instance when I read one blog, which told about Smelting´s future development, I felt enlightened. Also a common social space creates more awareness. For example a while ago I happened to read a status update of my colleague where he/she said that he/she was on a business trip in Chile. I cannot know everything what my colleagues do, but with the help of him/her status update, I was aware. That time I did not have anything special to send to Chile but if I had, it would have been easy to contact and ask my colleague to pass the thing forward.*
I use also the Files feature to share documents. Also community has proved to be a good place to share information in a way that people recognize it. What I hope to happen in future that when people for example in Chile are designing education material, I or Helpdesk would not be the only ones to receive their questions on the material, but they would know to contact somebody that works in the same time zone such as Brazil. By that way they would really use their social network, save time and be more efficient."
Human Capital Manager

It seems that IBM Connections has developed knowledge by increasing users´ awareness of each other work tasks and enabling to tap into information more broadly. Knowledge is still not yet developing as much as it could due to for instance power agency.

"*Yes I have learnt and found information, which I have passed forward. I have discovered good stories to share from the Smelting Seed and the Finnish Young Professionals communities. What I hope is that our experts participated into conversations and communities so that the younger workforce could learn from them. I feel that this does not happen because people are scared to comment with their own name or they just do not*

want to share their knowledge in fear of losing power. I believe that knowledge sharing and conversations are limited also because people know that some of our external consultants have an access to IBM Connections.

Community can be directed to free time or culture as well. We have one community that has tips and information on the restaurants of Helsinki. Foreigners have praised that community." - *Internal Communications Manager*

"*Yes it is easier to share knowledge. To be able to tap into knowledge more often, the network must be more active. Wikis are a good way to share information. We share product information through Wikis in our community. Other departments could definitely learn from us and vice versa*." - *R&D Manager*

"*Yes, knowledge is seen as being power here, but is that not the case in every company more or less? To tackle that you need first the solution, that can support your company to create more open culture. Also our company aims to hire people that are willing to share knowledge. Our company wants to be more transparent and open!" - IT Expert*

Knowledge is developing thanks to IBM Connections, but could develop more if people would have the courage and will to share their knowledge. All in all, it is fair to state that Enterprise 2.0 is a cultural more than a technological change.

Participants were also asked what expectations they have in the future towards Enterprise 2.0. The following answers were received:

"*I would hope that in the future it would be a place through which you could see what people are actually doing. People also need to realize that IBM Connections drives a vision of openness and is not just a tool. Now the user activity limits to Europe. More users are needed to make IBM Connections work. The top management support and role is also essential in promoting the solution and vision inside the company. IBM Connections needs content that interest employees. Every new employee should go through an education session as well. I have planned to set up an education program for this.*

What would be great to have is culture education community where people could learn from different cultures. I think that kind of community would be very useful." - *HC Manager*

"*People attach emotions and give meanings to social platforms as the Yammer and its removal demonstrate. I hope that IBM Connections would become a place which is full of conversation and meaningfulness. To have work, free time and people mixed here is*

my wish. Also role based views would help. For instance the views could be different to managers than to others.
One of the many things that IBM Connections could provide in the future is to give the blue collar people who do maintenance with the machinery a chance to check the installation guide on video or download a manual or photos on site by using Connections. That would increase efficiency and integrate IBM Connections to business." ***– Internal Communications Manager***

"*IBM Connections could be extended to cover our suppliers and partners. We had a portal solution, which aim was to ease communication with subcontractors and partners, but it failed. The vastest reason for failure was that people changed positions. So they left and moved to another positions. It did not ease communication. Maybe it was an attempt that was too premature to realize.*" *– R&D Manager*

The hopes for the future of company B are realizable and aim to empower the workforce. It would be interesting to see how for instance the blue collar people adapt to the solution. It also will be interesting to see how IBM Connections would help external relationships if it is expanded to partner and supplier relationships.

4.3 Company C

Company C is a global leader in household appliances and appliances for professional use. It sells more than 40 million products to more than 150 markets every year and has operations in every continent. The company is based in Italy. It focuses on meeting the real needs of consumers and professionals by offering innovative products, which are based on extensive consumer insight. Company C employs round about 58 000 people. The company has multiple brands that it produces, markets and sells. Company C started using the first version of IBM Connections in November 2010.

4.3.1 Social capital

Market factors such as social customer, competition, brand awareness, economic conditions and employee empowerment are external issues that drive businesses to change (IDC 2010, 4-5). More than half of the CEOs, general managers and senior public leaders see that human capital (people inside the organizations), customer relationships and innovations are the key resources to sustained economic value (IBM CEO Study 2012). Empowering people through values was held important among the CEOs. C-level peo-

ple want to create more open and collaborative cultures by encouraging them to connect and learn from each other. Companies also want to treat customers as individuals. That is why they are investing in analytics. Social media will become a more important channel in customer relationships: second only channel face to face meetings. The third need to address the key resources is to amplify innovations with partnerships. Majority of the interviewed CEOs want more than to improve operations with partners. They want to anticipate and create innovations. CEOs saw that people need to be connected and the best way to do it is using adequate technology.

With strategy, organizations aim to adjust to the changing environmental and market conditions (Peltonen 2007, 65-66). Accommodating to changes was also in the core of company C`s new strategy. *Community Manager* describes company´s business environment as follows:

"*We are focusing on producing in household appliances and appliances for professional use such as vacuum cleaners and refrigerators. We are a traditional European company. Company has acquired other companies and extended its operations to other continents. Now we are a global company whose aim is to provide innovative products to our customers. Our company employs 58 000 people.*

I would say that over the last 5-10 years the company strategy has been to minimize the number of brands in order to support the company brand, to find synergy in production to save costs and to get closer to consumers in order to understand their needs and wants better. So we have and still are going through a lot of shifts – an operational and a cultural shift to name a few, where social platform is really important.

We launched IBM Connections in November 2010. That time the business request was to have more dialogues inside the company in order to give more inputs to things. We talked very much of about how we can change the way we are doing business. We talked about how social approach can help us to leverage innovations. We wanted also a change to the way how we communicate. So instead of pushing out information, we wanted to pull out and co-create information."

Hence, there were many issues, which company C took into account before acquiring IBM Connections. The number of virtual groups in the companies has risen because of the increased globalization (Turban et.al. 2011, 137.) With virtual teams, companies aim to able rapid decision making and to lower costs among other things. The *CRM Expert* of company C describes his daily work environment as follows:

"As member or leader of several projects, I daily interact with colleagues from different parts of the world, communicating through the phone or via emails, and sharing images, text documents, charts and videos. As a project member I expect to be informed

about the evolution of the project, that's why, when I'm the project leader, I try to share updates with the members. Bad or missing communication often contribute to project failures."

Hence, virtual groups seem to be the way how companies aim to organize work. Also it seems that one employee can be a part of several virtual groups or projects. Communication is seen to be a very important factor when organizing work in a virtual world.

4.3.2 Social collaboration

Social tools are one way to adapt to the changing business environment (Turban et.al. 2011, 138). Companies for instance need to address the needs of a mobile and global workforce. Through social platforms, companies might make employees feel more engaged and make them more productive (IDC 2011, 6). Solutions and their readiness are factors that affect the adoption of Enterprise 2.0 solutions (Turban et.al. 2011, 148-150). Top management support and culture affect also the adoption and use of Enterprise 2.0 solutions (Ardichvili 2006; Turban et.al. 2011; Paroutis & Al Saleh 2009).

Community Manager describes the Enterprise 2.0 environment and its development as follows:

"*We had the first versions of IBM Connections running in 2010. We upgraded to IBM Connections 3 in the end of 2011 and focused on promoting profiles. In my opinion, Communities is the easiest tool to sell to companies.*

The most used feature is profiles. Round about 35-40 percent of the white collars do some actions in IBM Connections on a monthly basis – in other words they click into Connections, read a blog, view a community and so on. IBM Connections is integrated to the company intranet and you can access Connections from there. I personally love the activity feature.

When IBM Connections was introduced, the activity picked up well with 100 users joining per day but then slowed down. We set up eight key communities before the implementation. The overall user activity is now something like 35 per cent so in overall there are 18-19 000 users. There is the group of core users and ambassadors, which are driving the usage of the solution. Before integrating Connections to intranet, the activity was 5 per cent. After integration it raised to the 35 per cent.

The top management could do more as only two or three of the top management group have posted or done something small. There is no blog action. This has been a disappointment since they could do more. It is obviously a setback. I believe it is due to

the views on how to do corporate communications – that is to communicate through intranet news for instance and have their quotes there. So the traditions are working as barriers. On the other hand, on the vice president level managers are more active having dialogs and so on.

To be honest, I think People are still working like they work. They are sending emails to each other and like that. So in terms the way we do work, I believe we have not found a big shift yet. But if you talk about me, I use the activities feature instead of sending an email, because with an activity information stays in one place. Though, what I can see online is also that employees have started to commentate and receive answers after posting to forums. It proves that crowdsourcing works.**"**

It seems that even though company introduces social tools to employees, it does not mean that employees start automatically to use them. The *CRM Expert* continues by providing a comparison to other used tools, information on the top management´s activity and role and the factors that may affect the user activity.

“"From the communication´s point of view, IBM Connections is much better than emails and more user friendly than Sharepoint. Compared to Sharepoint also the user management is easier. We still use Sharepoint quite a lot, though. For example we use it as bugtracking system, and to track requests about different IT tools.
One problem about the implementation of IBM Connections is that some people see this as an additional work to do: reading blogs, commenting, following up activities require some user efforts, but in the long run this will pay back.
Top management's role is crucial. Top managers must state that communities, with all the related features, are working tools, and the time spent using them is not considered wasted. They must understand the tool, talk about it, and use it themselves, being an example for others.
Most people are not "Following" the communities they are part of, therefore they miss the updates. Interaction with communities still goes through email notifications.
Another factor that is limiting the use, is that people are a bit scared of publicly posting their comments to communities and blogs. In fact, somebody is not commenting on the communities, but via email, destroying the value of the communication."

It appears that some employees may see social solutions as an additional task and that top management´s role is important in tackling task-related of perceptions. One factor that appears to be a barrier to adoption of social tools is that employees are not familiar with the capabilities of social solutions.

In order to understand better the social collaboration in company C, the participants were asked to describe their daily usage of IBM Connections by categorizing their us-

age according to Heinonen´s (2011) framework. The following quotations illustrate the participants´ daily use of IBM Connections in terms of consumption, participation and production.

"*My daily usage is a mix so my daily actions cover all the mentioned types. I start my day by using the mobile application before I get to work. So before I get to work, I go to my wall to see if I have any messages. Then I go to check the news about the things I follow. Then I go to the regular home page. Finally I check my emails and calendar.*

I also monitor what is happening in IBM Connections. If someone posts a comment to a news article, I pass it on to the Head of Communications who for example then assess the need and maybe asks sales leader to respond that question. Every time that happens, it gives a signal that the dialogue is important. We value dialogue and we are listening.

My team, internal communications, has a community where we have blogs and presentations. We share also our holiday schedule there. I am also a member of the Sametime community, because we have a Sametime project going on." – *Community Manager*

Individual behavior seems to be a mix of consumption, participation and production in Enterprise 2.0 solutions. Mobility appears also to be a way to ease adoption and usage of social solutions. The *CRM Expert* continues by describing how he started using IBM Connections and what he does there:

"I was ready in touch with our Community Manager in 2010 when the first phase of IBM Connections project started. Sharepoint was already there but I was looking for something more communication oriented that would have been more effective than Sharepoint. Our Community Manager told me that he was working with a social enterprise solution and invited me to join him on that project. We also looked at some other options such as Yammer, but ended up to choose IBM Connections.
I use IBM Connections every day mostly to get information from other communities or projects I'm interested in. I receive daily or weekly email notifications with their updates. I also produce content on different communities at least once a week. I use them to communicate with other project members, aligning them on what is going on, what are the things which we are developing, trying to involve them in discussions on future developments, and suggesting new features.
As an early adopter, I created several communities also for other departments, and I happily support those that would like to start their own.
Unfortunately, after the initial excitement, many of those communities die."

It seems that early adopters´ behavior is a mix of three behavior types and that they find social solutions before anybody else. They are also willing to take a part to Enterprise 2.0 projects in the long term and do not see it as an additional task to do but as an meaningful thing.

Social collaboration can be depicted as being a flow of actions where resources get shared and used within a social solution like IBM Connections or Yammer. Timo Pentikäinen (2012) who is *Technical Specialist* in IBM Collaboration Solutions at IBM Finland says that collaboration happens naturally in IBM Connections when user is using it since every user action creates a mark to other users. Recommendations, which user gets within IBM Connections are induced by tags (Ruponen 2012). Tagging as a knowledge categorization principle emerges from folksonomy. (Mcafee 2006, 25). In tagging, users give tags to documents and to themselves as they want. Jon Mell (2012, interview) from IBM states that IBM sees that social should be integrated to everything what people do. IBM Connections can be integrated to email, Microsoft Office and to MS Sharepoint with applications. "*By this way we integrate social to tools such as email that are traditional*."

CRM Expert tells his expression of the integration application which he has embedded into his email client:

"What I find very useful is the integration plug in to Lotus Notes, where I see the stream of status updates of the people I´m following in Connections. This is extremely useful because it gives me the possibility of having those updates always under my eyes, and to interact with them in a timely manner.
I think this widget is not yet available to everybody, but for sure it will boost the usage of Connections, since Lotus Notes is the most used tool, and almost always up on our monitors."

It seems that by integrating social solutions into traditional tools, company can support the adoption and usage of Enterprise 2.0. Enterprise 2.0 solutions create benefits through making people more knowledgeable and efficient. *Community Manager* describes his experiences about social collaboration and its benefits as follows.

"It is not that much of a small jam session. It is more sharing, posting and what is happening. When Internal Communications is posting group news now, I see that people create value by commenting news updates in a constructive way.

I think the best used case of collaboration is the Top Management Community. It is a closed community for our top managers. The purpose of this community is to display

information in a different way and to get closer one another. Top managers can get information there on the appointed managers and can access presentations.

The community is also used in conjunction with the top manager meetings. Managers can post questions there before quarter calls and also the material of the quarter calls is shared there. The community is the wheel of the communication which is going around our CEO to the top 200 managers. It is a big puzzle in making the management more comfortable with our Intranet. The community is getting good ratings. The Internal Communications is collecting the feedback from it.

We also have a community for the Intranet editors where we have used the Forum function for Questions and Answers. I use only the Forum function to reply to Q&As, not email. "

Communities seem to be an effective way to run communications and create engagement. Lack of top management support, user activity and functionality can work as barriers to Enterprise 2.0 solutions (Ardichvili 2008; IDC 2011). The respondents answered as follows when they were asked about the potential barriers:

"Top management's role is crucial. Top managers must state that communities, with all the related features, are working tools, and the time spent using them is not considered wasted. They must understand the tool, talk about it, and use it themselves, being an example for others.
The group of people that understand the value of this tool is still too small, and we need to expand it. Some users are more keen on using Sharepoint because it has features that are closer to the typical way of working (file sharing with folder structures, list of tasks, project management, etc.). For this reason, a deep integration of Connections with Sharepoint is highly suggested.
Communication is a fundamental aspect in each company, but just implementing a tool that stimulates it is not enough. It is important to teach people how and what to communicate. It's important to build the culture of communication, and then to support it with the proper tool.
Connections was introduced as an appendix of Egate (company intranet), and this, in the beginning, didn't give the right importance to it. Lately, with a complete restyle of the intranet tool, Connections has been positioned at the right level, reinforcing its importance."- CRM Expert

"Yes, the support of top management is important and they could more. For instance very few see value in status updates. Microblogging is hence more tricky to get working internally than externally. It needs leaders´ support to take off.

There are some technical issues. Every third week we experience outage and server problems. Integration is a challenge as well. Having more Facebook like feeds instead of having conversation feeds boxed would increase user experience. We will upgrade to IBM Connections 4 and it will have the Sharepoint integration. We will also bring Communities and Sametime externally available." – Community Manager

Top management´s role is important in the adoption and usage of Enterprise 2.0. Also the integration to the traditional communication channels such as Intranet and Email seems to make Enterprise 2.0 solutions visible, accessible and efficient to the users.

4.3.3 Trust, identification and knowledge

The participant described their perceived trust as follows.

"*Employee attitude survey shows that people are more updated about our strategy and understand where we are heading. Hard to say if this is thanks to how management is working. But what I can see online is that employees have started to add comments to articles. They are able to do that. Communities are important for communications.*

The top 200 managers trusted more. As I mentioned we have still a challenge with the status updates. People still go and share that info by email. I think that it is really important to show what you are doing now and with what you are working. " – Community Manager

"From my point of view, I have increased trust to other people thanks to Connections. IBM Connections is much better from the communications´ point of view than the other solutions." – CRM Expert

People-centric platforms hence support better internal communication that document-centric platforms and traditional tools such as email. Hence, Enterprise 2.0 supports the development of trust. However, it seems that employees find the old established work ways comfortable since most of them are not running their internal communication activities through the Enterprise 2.0 solution.

The participants describe the perceived identification in the following way:

"Yes of course I can do my job better now. I enjoy the mobile application and the ability to comment and write blogs. Also the employee attitude survey shows that people feel more engaged.

We do not have the Lotus Notes Client application up now and I think that is where the full efficiency comes from. I mean that one can for instance take an email and share it in an activity space with multiple people. Productivity comes from the email and connections integration." – Community Manager

"I fully support Connections because I believe in this kind of solution and ideology (Enterprise 2.0) in general. As for the CRM tool, also for Connections, having a common place where to share information and knowledge is extremely important for our company, and we need to have everybody on board to succeed in this. That's why I take every opportunity to talk about Connections with colleagues, describing the benefits they can get from it." - CRM Expert

Hence, it might be that the old established work ways turn up to be more efficient when they are socialized by integrating them to Enterprise 2.0 solution. Ho et.al. (2012, 9) add that the appropriate fit between user characteristics and Enterprise 2.0 solution result in greater enjoyment at work. **CRM Expert** answered the following when he was asked if people can have fun at work.

"Yes but it is dangerous (laughs). Dangerous depending on the culture. There are countries, or companies, where you are not supposed to have fun in the working environment. You are not paid to have fun - some may say. But in the end, having fun makes working days more enjoyable, employees happier, and productivity improves. Unfortunately this is not accepted everywhere."

Yet again, it seems that Enterprise 2.0 is more than a technological change and that users actually can have fun through using it. Hence, it seems that users tie meanings and emotions to Enterprise 2.0 platforms and that virtual relationships are meaningful.

Knowledge is a valuable internal resource and asset to companies (Peltonen 2007). The participants of company C were asked to describe how they feel that Enterprise 2.0 has supported organizational learning. Community Manager answered as follows:

"I know better what is going on and get closer to some business activities that are ongoing and I can participate. For example, CIO posted in a blog and asked input about innovation to innovation council. And of course I have given some input into that meeting. I think if I had not had that community and the membership of that community, which is an open it community, I could not have seen that blog and could not have contributed. Communities are working really well.

I am aware and I feel I can contribute in a new way. People also feel more updated, know better our strategy and the direction where we are going."

The *CRM Expert* gives the following answer when he is asked how IBM Connections has supported his learning:

"Yes, definitely I have learned more. No doubt."

IBM Connections supports users´ knowledge development by giving them access to their colleagues and valuable information such as information on company´s strategy and vision. It also seems that Enterprise 2.0 solutions support the development of knowledge by increasing employees´ awareness of different activities.

IBM´s Leading Through Connections study revealed that the top management people will aim to harness human capital, customer relationships and innovation in their companies in order to create sustained economic value (IBM 2012, CEO Study). Social tools bring measurable value when they are integrated to business processes (Ruponen 2012, interview). By integrating social to processes, company creates an environment where people, processes and information are available. CEOs saw that social tools play an important role in connecting people, information and processes (IBM 2012, CEO Study).

Community Manager describes the expectations that the company has on the social solution as follows.

"In general high expectations. Our company becomes more agile, faster in terms of how we do organize ourselves and how we do our stuff, how we will locate knowledge and experts and this kind of platform is key. How to make company more agile and faster also depends on how you can make the environment more fun. also connections to customers. to have open community space for customers and Sametime integrated and for customer service people to making it easier to interact with customers.

And if we can take this information and see it internally and pick up what is critical, what the consumers are thinking and doing, which we today don´t see. Of course it would be a great advantage"

Hence, companies seek for instance agility through Enterprise 2.0. *Community Manager* answered the following when he was asked to elaborate how he would present the described customer information in IBM Connections.

"It could be anything. With RSS Feed for instance. RSS would be sourcing information from customer service and display it only for those who need and want to see it such as Marketing and Customer Management people. The RSS feed would be on their start page. The strategy and openness inside and outside of the company is crucial."

The notion of the Wisdom of the Crowds (Razmerita et.al. 2009) seems to be the goal to companies who adopt Enterprise 2.0. IBM took this concept to action in July 2006 by arranging a large brainstorming session (Turban et.al. 2010, 124). Company C will do the same. By the time of the interview, Community C mentioned the following about their Innovation Jam.

"*We will do the first Innovation Jam in this Fall. It is hard to measure the soft benefits and I believe those hard benefits come from the Innovation Jam that we will run. There was a positive change in soft benefits because engagement and feeling of being more updated increased by 10 percent after IBM Connections was introduced.***"**

Innovation, Social Media and mobile are channels that will be utilized more intensively in customer relationships (IBM 2012, CEO Study). These channels for instance provide metadata that can be used to create more deeper insights about customers and hence understand better their needs and wants today, and more importantly, in the future (Ruponen 2012, interview). Social analytics play an important part in retrieving and benefitting from the customer metadata.

CRM Expert provides information on the social landscape of Company C and his desires on it**.**

"Social Media is important to us and more and more we are making decisions on how to act in and use social media space to develop our presence. I would see Connections as a place where to track and monitor activities done by our company and other brands, on social media platforms like Facebook, Linkedin, Twitter, with the possibility of interacting with them, or just visualizing. I'm thinking about an aggregator of social networks.

Connections should then give the possibility of discussing public posts, allowing the designated people to contribute with a shared and approved response. We have to care about or internal activities, but we don't have to forget about what is going on outside of our company. "

Hence, it seems that in the future external and internal social media platforms might support one another. *CRM Expert* highlights also that not everybody should be handed the possibility to take actions in the social media channels that company has. Also other future views were mentioned by *CRM Expert* such as IBM Connections´ extension to partner channels.

Not all employees should be able to participate or comment but all could see. Also other future views were mentioned by CRM Expert such as IBM Connections´ extension to partner channels.

"Other things how C could be used in five years is for sure related to the innovation in Social Media, integration to mobile devices, integration with Sametime and Lotus Notes. Sametime is developing now. We should have a platform which integrates every social aspect and take benefit of IBM as being the main and one supplier. Another important aspect of Connections should be the possibility of opening it to external users. We are closely working with a lot of partners which we share material with. Involving them in shared discussions and communities would be very useful, especially if this can be done directly inside Connections, instead of using other disconnected platforms."

It seems that companies, in overall, want to extend social platforms to their business partner and subcontractor relationships. Also by mirroring the thoughts of company C, project owners think that it is better to have one supplier than many suppliers if possible. Additionally, Enterprise 2.0 solutions should be more customizable in order to suit better to companies´ needs. It will be interesting to see how the channels of external social media shall be integrated to internal social media, and how these will support the dynamics of each other.

4.4 Cross-case results

4.4.1 Social capital

Enterprise 2.0 solution is one tangible dimension of social capital (Nahapiet & Ghoshal 1998; Barney 1991). In all case companies Enterprise 2.0 solution was seen as an enabler of social collaboration by the participants. For instance all participants felt that they had a chance to connect to and interact with other employees. The solution was found to be suitable for commanding business activities thanks to its wide set of applications. Some of the participants felt that the amount of applications made the solution harder to learn. Also some thought that the user interface of the solution is not intuitive. Participants also stressed that the user interface should have the same kind of characteristics that Facebook, Twitter and LinkedIn have and continued that the similarity with the external social media platforms might ease the adoption and learning process.

Group is a tangible dimension of social capital (Nahapiet & Ghoshal 1998; Oh et.al. 2006; Barney 1991). According to the results, needs and goals of Enterprise 2.0 vary group by group. To Human Resources Enterprise 2.0 solution is a solution that can be used for supporting business by making employee onboarding faster and providing use-

ful personnel information to employees. A good example of these activities is company A, which HR Manager arranges an hour training session for a new employee on IBM Connections. Company A´s one business unit uses also the Activities function in product education by assigning to dos to the new team member. Also Company A´s HR department has an open community, where employees can find useful personnel information. According to company A, the employee onboarding time has reduced thanks to IBM Connections.

The Research and Development Department see Enterprise 2.0 solutions as a platform for innovation generation. Company B`s R&D Manager set up a community called Smelting Seed, the aim of which is to generate discussion on the products of the product line and find seeds for the future. Though it must be noted that Sales had also used crowdsourcing in company A to gather ideas and solve problems, which is closely related to innovation. Internal Communications seeks to create transparency and improve communications with Enterprise 2.0. For instance Company A has top management blogs available and they have also created a community for strategy and value discussion. Furthermore, Company A´s and Company C´s employee surveys show that IBM Connections has improved the effectiveness of communications.

As Peltonen (2007, 65-66) argued, strategy is a set of means by which company aims to achieve the goals that is has set for a determined period. The decision of company A to move to using Enterprise 2.0 solution was promoted by the need to tackle administrative costs, provide user-generated content to the workforce, support daily work and ease the introduction of new workforce. Company B started their social business initiative in order to tackle the security risks that it experienced with Yammer, prepare itself to the changes in workforce dynamics and create a more open and collaborative work culture. Company C desired to support their operational and cultural shift. With Enterprise 2.0 it aimed to make communications more efficient, increase employee engagement and support innovation. Company C is also taking their social business initiative to the next level by arranging their first Innovation Jam. All in all, companies have included social to their resource based strategic roadmaps. What is notable is that Company A had operationalized strategic work through the solution by arranging strategy and value discussion in an open community. The managers of company A acknowledged that the community works as a means to support its strategic decisions.

Culture is the major difference between the case companies. Company A differentiates positively from company B and C. In Company A, where the user activity is significantly higher compared to B and C, top management is active and reciprocal in IBM Connections, whereas in B and C the activity of top management is close to zero. For instance in company A, top management writes blogs and takes part into discussions in IBM Connections. Company A differs also from the two other companies in respect to transparency, which is relatively higher compared to B and C. For instance A´s trans-

parency with strategy, business and client projects creates trust, enjoyment and effectiveness within the workforce. Also company A was the only company who had incorporated solution education to their employee orientation program.

In the light of the cross-case findings, barriers to participating into Enterprise 2.0 are power agency, lack of top management, lack of enablement and the old established ways to do work. The participants of company B and C saw that the lack of top management activity within the IBM Connections affects the overall user activity and the meaning that users and non-users give to the solution. If there is no support to or faith towards the solution, employees may see the solution only as an additional task to do instead of seeing it as a supportive tool for running work tasks and communication. Power agency was recognized as being one of the main barriers in company B and C. It seems that employees are hoarding information because they fear that they reveal important business information and/or just do not want to be active because they protect their personal information. Company B and C did not arrange any structured solution education to new or old recruits. Primarily solution education was on demand in company B and C. The lack of enablement hence works as barrier to participating Enterprise 2.0. Solution education should be part of the Enterprise 2.0 enablement programs.

The old work ways such as email and databases affect the conditions of social collaboration. Paroutis and Al Saleh (2007, 57) call this phenomenon history, which means that people feel comfortable with the old established tools because they do not see that much value in Enterprise 2.0 tools. Hence, they do not even see the worth in learning Enterprise 2.0 tools. Email and Intranet are still the primary channels for internal communications in company B and C. The participants recognized that people still work like they worked before IBM Connections. Some of the participants in company B and C felt that the amount of email has reduced a bit and emphasized that there are still a plenty of subjects that could be handled only in IBM Connections. In company A, all participants saw that the internal email has reduced moderately. Databases are still in active use in Company B and some of the participants felt that their existence slows down the adoption of IBM Connections because databases give the old and safe option to users even though the Communities feature of IBM Connections would satisfy the same needs faster and with less manpower. Company A´s participants saw that IBM Connections has supported an open and positive work culture.

4.4.2 Social collaboration

Heinonen (2012, 359) has distinguished three types of activities, which consumers do in social media, and these are consumption, participation and production. The participants saw that their individual-level action was mainly a mix of the three behavior types. The

use of IBM Connections started with consumption. Hence, participants started with checking out what was happening in their social network from their home page, if they had any messages on their profile board and/or if they had assigned to dos. After being aware of what is happening in their social network, they started to participate. Participation occurred in cases where for instance a participant posted a file or a bookmark to a community or commented status updates or blogs or took part into an activity. After participation, the behavior continued to production. Some participants produced content by writing status updates and blogs, others by producing elaborated content to communities or by setting up a new activity or new community.

For instance, in company A the HR Manager saw herself being responsible for running the HR Community. Being responsible for the community, drove her to produce content to that community. The application that she used to create content was the blog application, because she likes to write. In company B, the Research and Developer Manager set up the Smelting Seed open community in order to induce innovation and improve communication both inside and outside the group. Usually his activities in IBM Connections were related to managing that community. What is notable is that Managers often ran and managed communities and activities. The Software Developer of company A used IBM Connections mainly for the purposes of consumption and participation. His case illustrates that Enterprise 2.0 solution can be an effective platform for running internal communications. He used IBM Connections mainly to read management blogs, latest news, solution blogs, be aware of new projects and find information, whereas for the actual work he used another solution called Confluence. He stated that his motivation to use IBM Connections is that it provides topical, useful and interesting content, which makes him more knowledgeable. To be more knowledgeable is one motivational factor for participating in Enterprise 2.0 solutions according to IDC´s study (2012). Though, it must be pointed that company A has its corporate news on a portal which is based on IBM Connections. Hence, that portal news main page works as an Intranet in company A.

Social Collaboration creates benefits and has its challenges. In the light of the study results, the users experienced similar kind of benefits from participating in Enterprise 2.0 solutions as did Intralink´s webcast (see Turban et.al 2011, 143). First users saw that especially email and databases were counterproductive. In company A for instance Client Manager and Portal Sales Manager had reached increased efficiency in a bid process with the help of the activity application. With the activity, they stated that they had reduced the time spent on the bid process by 20 per cent compared to the old tools such as email and databases. Also they felt that the quality of the bids had got better because IBM Connections had improved the circulation of the successful bids. Most of the Company A´s participants felt that IBM Connections had improved employee onboarding and reduced the amount of email. Company B´s Collaboration Solutions Manager

and Expert saw IBM Connections strengthening data security and enabling sharing mission critical information with less risk. On the other hand, R&D Manager thought that the latter one was not accomplished yet but stressed that the cultural issues were the reason, not the capabilities of the solution. Company B´s Internal Communications Manager saw also IBM Connections reducing time when working with workshops. HR Manager experienced also that IBM Connections has made her team more transparent and stressed that some work activities were more flexible to realize thanks to communities. Company C´s Community Manager highlighted that the top management community has created benefits for the top managers by making it easier to share information. CRM Expert of company C felt that IBM Connections has eased communication activities in general in the company.

All case companies saw that the Search function of IBM Connections is not providing the search results they want from time to time which made them feel that information is a bit hard to find. Company C also experienced outages and server problems, whereas some company B´s employees had difficulties with log in in the beginning. All companies measured IBM Connections with user activity. So the companies had not included measurement such as the saved time in projects or the number of innovations to their measurement. None of the case companies did not experience challenges with the content policy or allowing people to comment posts openly. In company B, the research and Development Manager stressed the security threats that he associated with the fast employee variation in Asia. *The major challenge with company B and C was to get people to participate.* The reasons for the lack of participation were associated with organization culture and its elements such as the lack of top management support and activity, power agency and the old work ways.

4.4.3 Outcomes

Trust, identification and knowledge were selected as the assessed outcomes of social collaboration. The following three subsections make cross-case analysis on them.

4.4.3.1 Trust

There are two types of trust that affect the state of collaboration and communication: benevolence based and competence based. Concerns on the misuse of information and lack of reciprocity can be associated with benevolence based trust, whereas the quality,

reliability and relevance of information can be associated with competence based trust. (Paroutis & Al Saleh 2009, 60.)

The most significant rise in trust was experienced in company A. The employee attitude surveys of company A and C show that people feel more updated about company strategy and that they are closer to management. Also the participants of company A pointed out that top management blog, open communities, relevant and high quality information and reciprocity have brought transparency and made communications efficient. In company B some of the participants felt that IBM Connections develops the quality of information and has helped communications. For instance, the Internal Communications Manager was able to find content for creating news from one community. As well the Community Manager of company C was able to give an input to one meeting because he was a part of the IT community. He felt that IBM Connections has brought him closer to some business activities.

Concerns of misuse and lack of reciprocity were recognized as the main factors which slow down the development of trust in company B, whereas in company C reciprocity was the main factor. *Concerns with misuse* in company B were associated with IRPs and innovation as people might be afraid that IRPs and their innovation ideas would be compromised when published and elaborated in IBM Connections. With innovations the aspect was been kept odd, because in IBM Connections people have their profiles. *Reciprocity* in company B and C was associated with the overall activity in IBM Connections. Participants felt that the lack of reciprocity is frustrating and recognized that reciprocity would bring benefits such as agility and velocity to dealing with issues and questions. For instance the participants hoped that people would use status updates to share a question or give an answer to one. Also *the quality of information* was a concern in company B since HR manager had experienced the lack of quality in information in the early stages of IBM Connections. However she pointed out that the guidelines for structuring information has helped. The quality of information was a concern in company A since some participants said that the unstructured nature of wikis and communities make the environment a bit unclear. Company A´s one participant said that it would help if IBM Connections had the option to categorize communities to group, project and free time communities.

4.4.3.2 Identification

According to the results, social collaboration increases identification. In company A people said that they are more capable of doing their daily work. Managers felt that they know better what is going on in their group or community and can use IBM Connection as a means to manage people better. In addition, the participants felt that social collabo-

ration creates enjoyment and satisfaction by reducing frustration and giving better results in form of for instance more comprehensive conversations and decisions. Company B´s respondents felt that they are more capable of doing their work by tapping into information which was before unreachable and by being able to communicate better. In company C Community Manager and CRM expert felt that the current platform enables them to do their work better by being able to reach and participate more widely to activities within the company. Community Manager also stressed that the mobile application enables him to take part to activities while he is on the move and hence found it very useful.

Social collaboration gives people capabilities to do their job better. Additionally, it gives people the possibility to build their *social identity* by acting informally so to speak. For instance some participants said that they can make them more visible to their colleagues thanks to the profiles function and the overall character of IBM Connections. For instance HC Manager of company B said that the ability to post to communities makes her more recognizable to her colleagues. By doing so, she also felt that she presents the HC department and makes the department more visible to the workforce. She added that it is also more recognizable what colleagues are doing thanks to the status update and community feature. Development Manager of company A stated that IBM Connections gives a forum to internal development projects and makes her role more recognizable to others. She also said that it has created a better understanding of what people are working with. Nobody of the participants did use IBM Connections in hope of gaining career achievement.

Four out of the five participants at company A and all participants at companies B and C said that they are advocates of IBM Connections in their companies. At IBM, advocates are called Social Business Evangelists (Suarez 2012, interview). Users stated that they are more than happy to continue promoting IBM Connections inside their workplace because they have experienced benefits from using it and believe in the vision of Enterprise 2.0. Nobody did see the advocate role as an additional task. For instance CRM expert of company C felt that he received enjoyment by being an advocate. CRM expert explained that he received enjoyment through helping out others and being recognized as an advocate. He also said that to have fun at work is not seen as a good thing some cultures, but pointed out that the social networking feature of the solution had made his work more fun. Hence, cultural issues may hinder the identification. Advocates in company B and C felt that their companies need to put more effort to the internal promotion of IBM Connections.

4.4.3.3 Knowledge

All participants felt that their personal knowledge had increased thanks to social collaboration. The reasons for the increased knowledge were that information was easier to access and reach. Knowledge was also associated with *awareness.* Participants felt that they were more aware of what is happening around them. The employee attitude surveys made in company A and C prove that Enterprise 2.0 solutions have potential to improve awareness by making communication more efficient and transparent. Participants improved their knowledge by visiting communities, reading blogs and wikis and uploading files. Also they felt that they had contributed to the organizational knowledge by giving comments, sharing files and bookmarks and writing blogs. For instance HC Manager had increased her knowledge on one product line by reading a blog in the community of that product line, while Community Manager of company C had been able to give constructive input by being a member of the IT community.

Participants felt that for example that the Activities feature was providing added value by enabling to have project information in one place instead of having it in separate emails or databases. Participants thought that it was easier to stay track on things by using communities and activities to organize work. Participants saw that the files feature is an efficient feature for sharing documents. For instance Internal Communications Manager was pleased that the user has a comprehensive view to the comments made on the uploaded document. She said that Files feature had reduced time of document validation which was previously carried only through email. In company A, Portal Sales Manager had used status updates effectively for the purposes of crowdsourcing. Most of the participants estimated sharing more information than previously thanks to the solution.

Most of the participants see email frustrating. One reason for the frustration is that information and knowledge get lost and is hard to retrieve in email. For instance company A´s Portal Sales Manager and Client Manager saw email counterproductive when managing smaller projects like quotation projects. Counterproductive because it is hard to follow conversations and incorporate new member to the project by using email. Also HR manager and R&D Manager of company B saw email creating frustration. The problem according to them was to retrieve information since usually emails come from the same people inside the organization. In company B, intranet was seen to consist mainly on old information and as an inefficient place to share information.

Some of the participants felt that instant messaging has made communications and information sharing more effective within the company but does not have the same kind of a capability as IBM Connections to serve the communication activities which go beyond different time zones. Some of the participants saw risks with IBM Connections becoming another information repository. However, for instance HC Manager of com-

pany B saw that the content guidelines reduce that risk and that a too strong control would affect users´ motivation to use the solution.

4.4.4 Concluding comments

The enablers and barriers together with integration are more meaningful source to the differences. The following table summarizes the results according to the solution life cycle, user activity, most used applications, enablers and barriers.

Company, employees	Life Cycle	User activity	Most Used Apps	Enablers	Barriers
A, 220	2,5 years	90 %	-Profiles/Status updates -Communities -Activities	-Top management support -Culture -User activity -Reciprocity (Value discussion) -Efficiency in business related processes (Especially in the bid process) -Connections the main tool -Active education -Strategy	-Lack of functionality (Search, Community categorization)
B, 3 800	8 months	50 %	-Communities -Files	-Group of key users -Proven efficiency with key users -Apps support business environment (especially closed communities) -Generation Y -Strategy	-Lack of top management support/activity -Silent launch -Lack of enablement -Power agency -Old work habits -Culture -Connections is a task -Technical problems
C, 58 000	2,5 years	35 %	-Communities -Profiles -Activities	-Group of key users -Mobility -Apps support business environment (especially communities) -Proven efficiency -Strategy (Innovation Jam)	-Integration -Outages -Lack of education -Connections a task to do -Integration to business processes (e.g. Social Media)

Table 4 Cross-case results

As noted previously, company A has social intranet, which is built on IBM Connections. In company B and C IBM Connections is integrated to intranet. In company A IBM Connections is the core of internal communications. In companies B and C, the traditional intranet is the core of internal communications. The following figure presents two integration models for Enterprise 2.0 solutions. Company A uses model one and companies B and C model two.

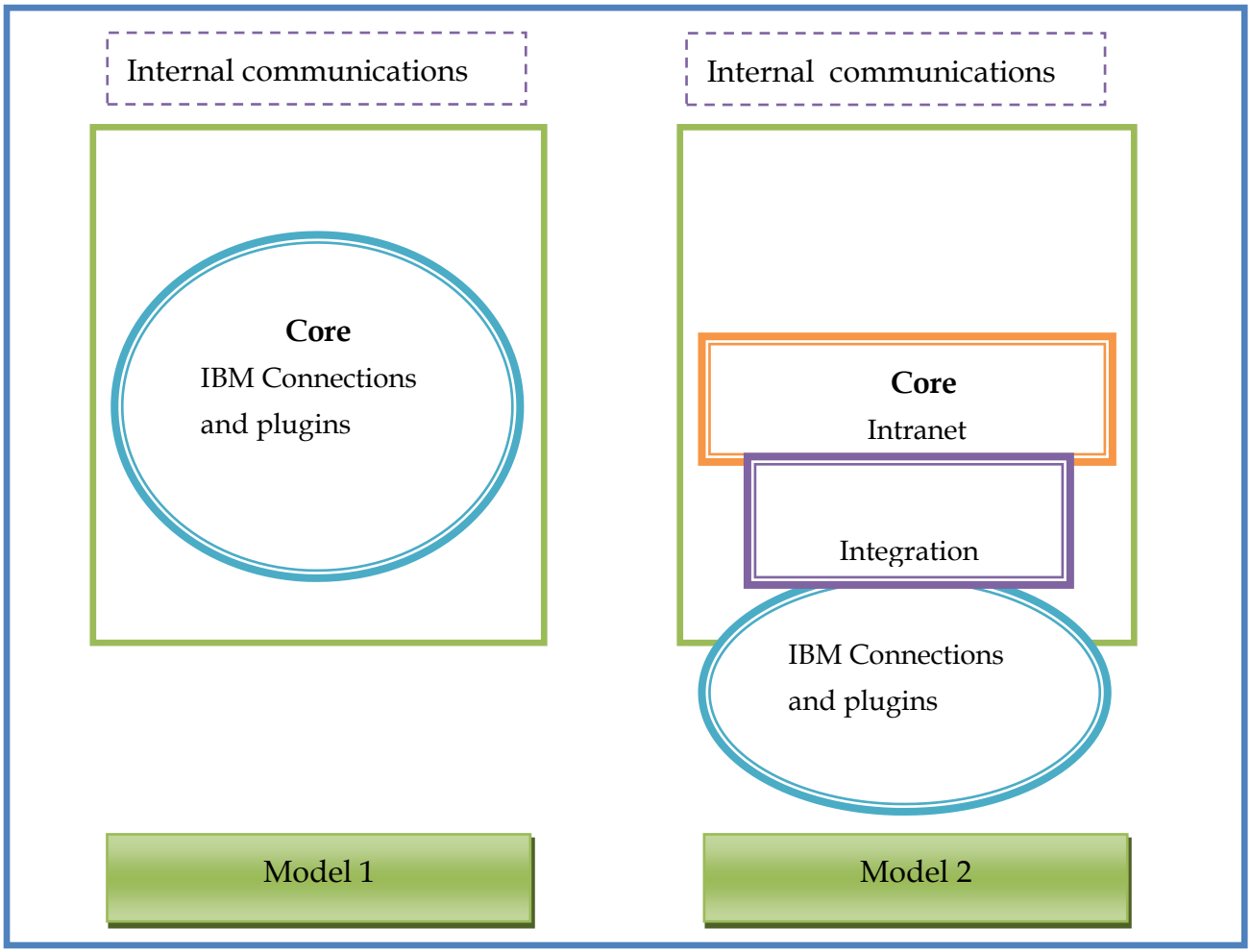

Figure 5 Models to integrate IBM Connections to internal communications

5 DISCUSSION AND CONCLUSIONS

In this chapter discussion and conclusions of this thesis shall be presented. First theoretical discussion will be conducted. Second the managerial implications will be presented. After the theoretical and managerial discussion, suggestions for the future research shall be presented.

5.1 Theoretical discussion

Theoretical discussion shall be conducted in three parts. The dimensions of social capital in the world of Enterprise 2.0 shall be first scrutinized. Then the dynamics, benefits and challenges of social collaboration will be discussed. In the end, the outcomes of social collaboration will be assessed.

5.1.1 Dimensions of social capital in the world of Enterprise 2.0

Nahapiet and Ghoshal (1998) see social capital as one of the most important forms of capital that companies have since it is argued to facilitate knowledge creation by creating positive conditions for collaboration. Conditions such as access to information, anticipation of value and motivation support individual knowledge sharing and collaboration within the work community. Nahapiet`s and Ghoshal`s (1998) framework formed the basis for this study as it has proven to be suitable for studying the development of different dimensions of social capital in virtual communities (Chiu et.al. 2006). The goal of the first research question was to distinguish how the dimensions of social capital structure through collaboration. According to Nahapiet and Ghoshal (1998) social capital consists of three dimensions: the structural, relational and cognitive dimensions. Structural refers to the space where the network ties reside, that is, to the community where the individual operates. Relational dimensions refer to trust, identification and knowledge that are considered fundamental to every community as they could not exist without those (Ruuskanen 2008). Cognitive dimensions consist of shared language and meanings, which guide individual behavior in the same manner that the structural and relational factors do. Hence, it can be coined that the dimensions of social capital evolve in time and affect the conditions of collaboration.

According to Giddens´ (1984) structuration process, structural resources guide individual behavior. Giddens (1984) argues that behavior depends on the capabilities that an individual has in the first place for doing things. The table 2 shared the structural re-

sources of social capital into tangible and intangible resources. Social solution and departments can be seen as being tangible resources, whereas strategy, culture, general knowledge, general trust and general identification are intangible assets. Ardichvili (2008) distinguished that corporation culture, trust and supporting tools are the main factors than enable knowledge sharing in virtual communities of practice. Also Paroutis and Al Saleh (2010) found out that history, trust and management support are the determinant factors of knowledge sharing when using Web 2.0 technologies. Trust is a wide concept that may refer to the quality of information and to the reciprocity that users experience with others in Enterprise 2.0.

According to the results of this study both tangible and intangible resources are inherent to the structuration of social collaboration. Consequently, the results are parallel to the findings of Ho et.al (2006), Ardichvili (2008), Ardichvili et.al. (2003) and Paroutis and Al Saleh (2009). The most important tangible asset according to the results is the *Enterprise 2.0 solution*, because it enables employees to collaborate socially and thus consume, share and create social capital. In other words, it gives users access and a transparent view to people and knowledge which in turn are inherent to social collaboration. The results of this study show that employees have a wider set of capabilities to connect to and interact with other employees thanks to Enterprise 2.0 solution. Also it was found out that IBM Connections is suitable for commanding business activities thanks to its wide set of applications. However, the amount of applications made it a bit hard to learn. Also the user interface of the solution was not felt as being the most intuitive one. It seems that if the Enterprise 2.0 solutions resembled more the external social media applications such as Facebook, Twitter and LinkedIn, they might be easier to learn and adapt to. Hence, the similarity with the external social media applications could make user experience more enjoyable and expedite the briefing process. *Overall, the solution was not seen as a barrier but as an enabler for social collaboration amongst the participants.*

Group was the second tangible resource that was studied because people can be expected to have differences in their personal goals, daily tasks and needs depending on which department they work in (Peltonen 2007; Oh et.al. 2006). The results show that for instance that for Human Resources Enterprise 2.0 solution is a solution that can be used for supporting business by making employee onboarding faster and providing useful personnel information to employees. The Research and Development department see Enterprise 2.0 solutions as a platform for innovation. Internal Communications seeks to create transparency and improve communications through Enterprise 2.0 solutions.

Ho et.al (2006) introduced the notion of intra- and inter-group relations and noted that groups who have strong intra- and inter- group relations are more likely to be more effective than groups that are more closured because they can tap into a wider set of knowledge and people. In the light of these results, Enterprise 2.0 solution gives a

quicker access to knowledge and people than the traditional tools such as email and databases. Hence, Enterprise 2.0 solutions help teams and their members in fostering their knowledge and relationships since they are more capable of tapping into knowledge and people of different functions than with the traditional tools.

Intangible assets such *as strategy and culture are inherent factors to social collaboration as they support highly the adoption and usage of Enterprise 2.0 solutions within companies.* As Peltonen (2007, 65-66) argued, strategy is a set of means by which company aims to achieve the goals that is has set for a determined period. Resource based strategy model sets the focus on the internal resources such as workforce, culture and knowledge. The results of this study show that the case companies had made the strategic decision to move to the world of Enterprise 2.0 in order to empower their workforces as well as support open culture and knowledge creation. Also this study shows that Enterprise 2.0 makes it possible to make strategic work social. This insight is parallel to the SaaP model introduced by Jarzabkowski and Spee (2009) who see strategy as a socially accomplished activity. Study also shows that a hybrid model, which applies both the bottom up and top down approach, which Payne (2007, 25) sees as the two alternatives for managing social solutions inside companies, is a compatible model for managing and leading Enterprise 2.0 environment. If there is too much guidance, user might feel that the structure is commanding. On the contrary, if there is not structure or guidelines at all, Enterprise 2.0 environment might turn up to be sensitive to misconducts. All in all company A´s approach to Enterprise 2.0 is characterized by SaaP and hybrid models.

Ardichvili (2008, 547) distinguishes *a supportive and open organization culture* as being one of the most important enablers to knowledge sharing in virtual communities. Top management support is one factor that supports knowledge sharing, whereas the lack of top management support acts as a barrier to knowledge sharing activities. One other major cultural barrier to participating into virtual communities is *power agency*. Pinho et.al (2012, 221, 228) argue that good internal communication, positive leadership and education facilitate knowledge management processes in organizations. *Positive leadership* refers to the way how management is carried out. Positive leadership aims to provide direction and vision and develop knowledge sharing assets, trust and mutual care. *The old established work ways* can also be seen as a cultural factor that acts as a barrier to social collaboration in Enterprise 2.0 environment (Paroutis & Al Saleh 2007, 57).

The results reveal that a *supportive and open organizational culture is one of the most important enabler of social collaboration. Especially positive leadership, good internal communications and enablement efforts such as education seem to support the adaptation and use of Enterprise 2.0 solutions.* An interesting insight is also that *the Enterprise 2.0 solution gives companies and managers new capabilities to conduct in-*

ternal communications and positive leadership. On the other hand, the lack of top management support and education, the old established work ways and power agency slow down the adaption and *use of the Enterprise 2.0 solution.* The following table presents the enablers and barriers to Enterprise 2.0**:**

Enablers	Barriers
• Top management support • Positive leadership • Supportive and open culture • Enablement (for instance education) • Enterprise 2.0 solution • Hybrid approach	• Power agency • Lack of top management support • Lack of enablement • Old established work ways (Email and databases)

Table 5 Enablers and barriers to Enterprise 2.0

The results show that *Enterprise 2.0 solution supports the development of a positive organizational culture by giving the employees and management more capabilities to support the positive and open culture.* Enterprise 2.0 solutions can change culture, but they do not establish it. *Hence, Enterprise 2.0 is at its utmost much more than a technological change. It is a cultural change. If an open and positive culture is in place, like in the case of company A, it is easier to manage the cultural change and make social business a successful one.*

5.1.2 The benefits and challenges of social collaboration

The second research question studied how agency is formed in an Enterprise 2.0 environment. The third research question aimed to find out how social collaboration emerges as a result of the interplay between agency and the dimensions of social capital in an Enterprise 2.0 environment creating outcomes such as trust, identification and knowledge.

According to Giddens (1984, 9) "*Agency refers not to the intentions people have in doing things but to their capability of doing things in the first place*." Giddens (1984) sees that organizations do not have an agency, but on the other hand individuals do. In other words, only employees can act as purposive and knowledgeable agents, who perceive, interpret and act on the basis of the structure (see Fig 3). Heinonen (2011, 359) has distinguished three types of activities, which consumers do in social media, and these are consumption, participation and production.

The results of this thesis show that individual behavior in an Enterprise 2.0 environment can be depicted on the basis of Heinonen´s (2011) categorization. Additionally, the results show that the individual behavior in Enterprise 2.0 is a mix of consumption, participation and production, and that the behavior continues with consumption, advances to participation and ends to production. Behavior can also end with participation and start again with consumption. Hence, behavior is in constant move. Also the results show that the all activity types contribute to community-level action, that is, social collaboration. According to the results, it also seems that an individual behavior is much more diverse in Enterprise 2.0 than in external social media, where individual behavior consists mainly of consumption-related activities (Heinonen 2011). The following figure illustrates the dynamics of individual social behavior in IBM Connections.

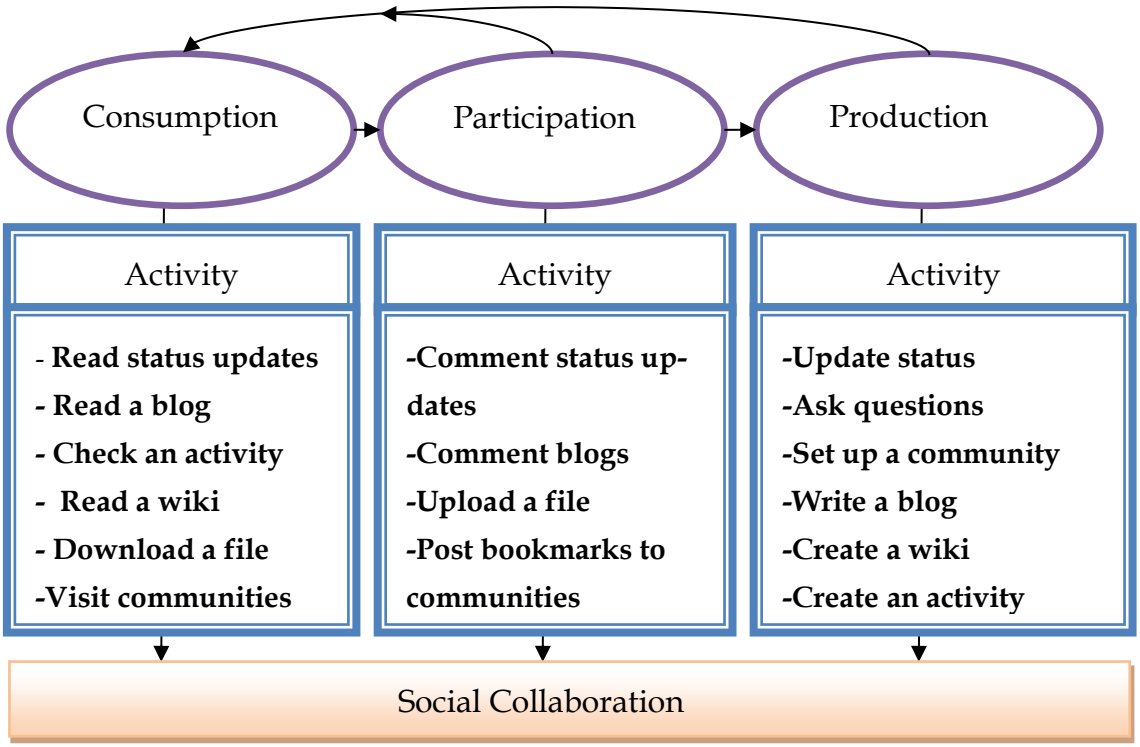

Figure 6 Individual social behavior in IBM Connections

The results show that IBM Connections supports the realization of all the mentioned behavior types. Also the results testify that individual motivations, roles and needs

guide behavior meaning that users for instance consume information on the basis of their interests, which usually are formed by their formal role. Developers for instance might like more to read blogs that handle technological issues. However, the findings show that employees are interested in the thoughts of top management, company´s strategy and company´s business status.

Social collaboration or collaboration 2.0 is a form of collaboration that happens through a social solution (Turban et.al. 2011, 142). In a study conducted by IDC (2011, white paper) companies reflected also the benefits gained from using 2.0 solutions revealing that they had experienced savings in regards to time spent on tasks and hence witnessed increased productivity. Intralink´s webcast identified the following benefits of having Enterprise 2.0 solution (see Turban et.al. 2011, 143):

- lower costs (e.g. reduced document exchange costs by 30 per cent, lower employee boarding costs, lower support costs**)**
- increased efficiency (e.g. rapid decision making)
- share mission critical information with less risk (e.g. increased trust)
- strengthen data security and
- improve productivity by 20 per cent on document intensive-processes

In the light of the study results, the users experienced similar kind of benefits as Intralink´s webcast found out (see Turban et.al 2011, 143). Especially email and databases were seen as being counterproductive. Enteprise 2.0 solution was said to reduce the time spent on tasks by 20 per cent, lower employee onboarding costs, reduce the amount of email, strengthen data security, enable sharing mission critical information with less risk. Also Enterprise 2.0 seems to create transparency within company and bring flexibility to the daily workflow and decision making. work activities were more flexible to realize thanks to communities. In addition to the aforementioned points, Enterprise 2.0 seems to be an efficient way to run and make internal communications and collaboration more efficient.

According to IDC (2011) companies experience also *challenges* with Enterprise 2.0 and these are:

- getting people to participate
- measuring the impact on business goals
- security threats
- allowing comments posted openly
- having people monitored what I do
- there is no company policy to guide behavior
- It does not have the required functionality (technological)

Enterprise 2.0 solutions are not perfect since the results of this study show that IBM Connections does not provide flawless functionality. Users felt that it search function could be better since it is sometimes hard to find wanted information. Also companies

experienced outages, server problems and difficulties with login especially in the introduction phase of the solution. All companies measured IBM Connections with user activity. So the companies had not incorporated measurements such as saved time or the number of innovations to their Enterprise 2.0 key performance indicators. Companies did not experience challenges with the content policy or allowing people to comment posts openly. In the light of the results, *the major challenge with Enterprise 2.0 is to get people to participate*. The reasons for the lack of participation in Enterprise 2.0 were associated with organizational culture and its elements such as the lack of top management support and activity, power agency and the old established work ways.

The benefits and challenges of Enterprise 2.0 are the following according to this thesis.

Benefits	Challenges
- Reduces costs	- Get people to participate
- Improves efficiency	- Measure business benefits
- Enables mission critical information sharing	- Security threats
- Improves productivity	- Functionality
- Strengthens data security	

Table 6 Benefits and challenges of Enterprise 2.0

5.1.3 Trust, identification and knowledge as the outcomes of social collaboration

One of the aims of this study was to found out how social collaboration affect s to trust, identification and knowledge within companies. Social collaboration is the result of individual-level action.

5.1.3.1 Trust

Ruuskanen (2001, 3) identifies trust as one of the, or even, the most important outcome of social collaboration/social capital. He argues that trust decreases distrust and improves communication within the organization or group. One of the key determinants to study the increase or decrease of trust is hence to assess if communication has improved or got harder within the company.

Paroutis and Al Saleh discovered (2009, 60) that trust is the key determinant to take part into Web 2.0 platforms. There are two types of trust that affect the state of communication: benevolence based and competence based. Concerns on the misuse of information and lack of reciprocity can be associated with benevolence based trust, whereas the quality, reliability and relevance of information can be associated with competence based trust. *In general, the participants of each company felt that social collaboration has improved trust in their companies. The most significant rise in trust was experienced in company A.* The results show that Enterprise 2.0 provides capabilities to employees to get closer the business activities of the company. It also can increase awareness, transparency, the quality and relevance of information and reciprocity within companies by making communications more efficient. Hence, it can be argued that social collaboration develops both benevolence based and competence based trust.

Concerns of misuse and lack of reciprocity were recognized as the main factors which slow down the development of trust in companies. *Concerns with misuse* was associated with high and valuable information such as information which is related to IRPs and innovation. *Reciprocity* was associated with the overall activity in IBM Connections. Participants felt that the lack of reciprocity is frustrating and recognized that reciprocity would bring benefits such as agility and velocity to dealing with issues and questions. For instance the participants hoped that people would use status updates to share a question or give an answer to one. Also *the quality of information* was a concern since some participants had experienced the lack of quality in information in the early stages of IBM Connections. However, it was noted that the guidelines for structuring information help to improve the quality of information. Also it seems that if Enterprise 2.0 solution had an option to categorize communities to group, project and free time communities, it would help in managing and following information.

5.1.3.2 Identification

An employee having a high sense of social identity is argued to have a strong belief in organization´s vision, a strong willingness to put in a strong effort to fulfill that vision and a desire to be a member of an organization in the future (Kimmerle et.al. 2008, 383). According to Luis Suarez (2012, interview), a social business evangelist, social identity is formed mainly based on the informal role, which an employee has. This is because the formal role presents only employee´s hierarchical position in the organization´s structure and therefore does not reveal the dynamics or social relationships

through which the actual work is realized. Oh et.al. (2006) supports Suarez´s thoughts about informal roles being more important in building group´s and individual´s social identity. Ho et.al. (2012, 9) add that the appropriate fit between user characteristics and Enterprise 2.0 solution result in greater enjoyment at work.

According to the results, social collaboration increases identification. People feel that they are more capable of doing their daily work since they can communicate better and for instance tap into information, people and business activities which were before unreachable. Managers felt that they know better what is going on in their group or community and can use IBM Connection as a means to manage people better. In addition, the participants felt that social collaboration creates enjoyment and satisfaction by reducing frustration and giving better results in form of for instance more comprehensive conversations and decisions. The results also show that the mobile applications bring added value to people´s daily work since they can part to activities

Social collaboration gives people capabilities to do their job better. Additionally it gives people the possibility to build their *social identity* by acting informally so to speak. For instance some participants said that they can make them more visible to their colleagues thanks to the profiles function and the overall character of IBM Connections. IBM Connections was seen also capable of giving a forum to internal development projects, making roles more recognizable to others and creating a better understanding of what people are working with. IBM Connections was not used only in hope of gaining career achievement.

In the light of results it can be stated that early adopters are likely to turn to advocates of Enterprise 2.0 and social collaboration in their companies. At IBM, advocates are called Social Business Evangelists (Suarez 2012, interview). The recognized early adopters stated that they are more than happy to continue promoting IBM Connections inside their workplace because they have experienced benefits from using it and believe in the vision of Enterprise 2.0. Nobody did see the advocate role as an additional task. Also it was found out that that to have fun at work might not be seen as a good thing in some cultures. Hence, cultural issues may hinder identification. Advocates felt that companies need to put more effort to the internal promotion of Enterprise 2.0 in order to make the concept more understandable to workforce, and hence more beneficial to users. All in all, *Enterprise 2.0 solutions add the experienced enjoyment at work by making work easier to carry out, more effective, reciprocal and fun. Identification can be seen also affecting the development of trust at the workplace. Hence, the results are in accordance with the findings of Ho et.al. (2012).*

5.1.3.3 Knowledge

Knowledge is valuation, insight and understanding what information means or suggests (Benson & Standing 2008, 3). Therefore, knowledge is a human thing and is based on information (Venkitachamalan & Busch 2012, 357). The most common way to touch on knowledge is to categorize it into explicit and tacit knowledge. Explicit knowledge is knowledge that is codified to documents and files, and therefore easily accessible (Nahapiet & Ghoshal (1998, 247). Venkitachamalan and Busch (2012, 357-359) see that organizational knowledge is mostly explicit and automatic because employees are aware of it. In turn, tacit knowledge is a form of knowledge that is shared and created in interactions with colleagues. They continue arguing that tacit knowledge is individual. When tacit knowledge is shared and used, it contributes to organizational knowledge. Tacit knowledge becomes explicit when it is typed down for instance to the message board of an Enterprise 2.0 solution, but the typing does not necessarily turn tacit knowledge totally to explicit, because it needs to be contextually understood and applied (Venkitachamalan and Busch 2012, 360).

The results show that social collaboration develops users´ personal knowledge. The reasons for the increased knowledge were that information was easier to access and reach. Knowledge was also associated with awareness. Participants felt that they were more aware of what is happening around them. Knowledge can be improved through visiting communities, reading blogs and wikis and uploading files. Hence, personal knowledge is created through activities which relate to consumption. Personal knowledge contributes to the organizational knowledge. Organizational knowledge improves when users share information, that is, make activities that are related to participation and production. Users participate and produce information by giving comments, sharing files and bookmarks, giving constructive feedback, writing blogs and setting up communities of practice. The activities feature was providing added value by enabling to have project information in one place instead of having it in separate emails or databases. Participants thought that it was easier to stay track on things by using communities and activities to organize work. Participants saw that the files feature is an efficient feature for sharing documents. Status updates seem also to be an effective way to conduct crowdsourcing within companies. All in all more information was shared thanks to the solution.

The old established work ways such as email is seen frustrating and counterproductive. One reason for the frustration is that information and knowledge get easily lost since information is hard to retrieve and stay track on by using email. Same problems occurred with Intranets, which were mainly seen consisting of old information. Counterproductive because it is hard to follow conversations and incorporate new member to

the project by using email. Instant messaging such as IBM Sametime make communications and information sharing more effective within companies but it does not have the same kind of capability as internal social media solutions have in serving communication activities beyond different time zones. Participants acknowledged that there is a risk with IBM Connections to become another information repository.

In the end Enterprise 2.0 solution supports the development of trust, identification and knowledge. Additionally trust, identification and knowledge support each other´s development. Also outcomes support the development of Enterprise 2.0. The following figure illustrates the relationship between the Enterprise 2.0 solution, trust, identification and knowledge.

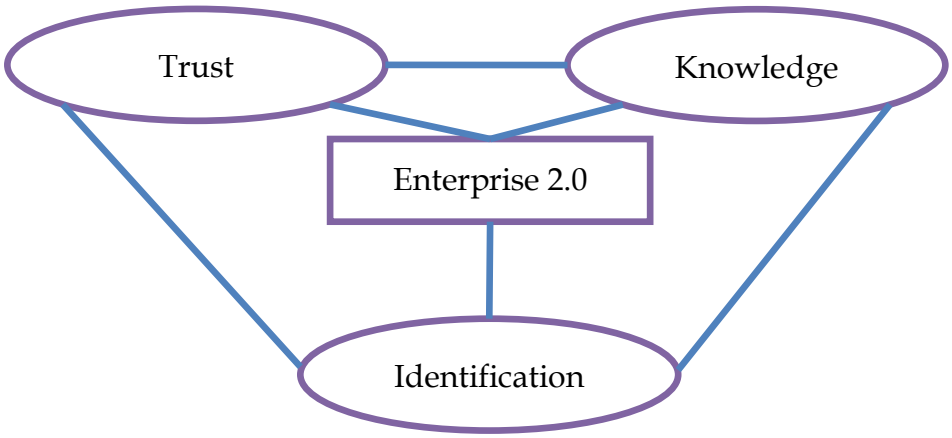

Figure 7 Relation between Enterprise 2.0, trust, identification and knowledge

5.2 Managerial discussion

The results of this study show that the open organizational culture together with the top management support are the two main factors which affect the success of Enterprise 2.0 solutions. If top management is not involved and actively showing the way to users, the Enterprise 2.0 solutions might be only seen as an additional task to do. Having analyzed the results of all case companies, company A differentiated from company B and C in both culture and top management support. All participants saw that social business is a cultural change which should be led as one and make people understand its idea and possibilities. Companies may also struggle with the implementation and adoption of Enterprise 2.0 solutions.

In addition the results show that people are more capable of doing their work through IBM Connections and that social collaboration creates trust and knowledge inside the

workplace. In order to make these solutions more effective and business related, participants saw that IBM Connections should be used also externally with partners. To point out, IBM Connections can be used externally and for instance company C will implement the external IBM Connections according to Community Manager. CRM expert of company C felt that IBM Connections should include tools to manage public social media. Speaking of which, the newest version of IBM Connections 4 includes Discuss This browser application through which user can easily post external content such as Facebook content to internal forums straight from the browser. The following sections represent tips to drive the activity to IBM Connections and create more active social collaboration.

5.2.1 Top management support and open culture

The results of this study imply that the top management support and open culture are important to the adoption of Enterprise 2.0. This is because Enterprise 2.0 solutions give users capabilities to communicate and collaborate more efficiently. However, all users do not take the benefit from Enterprise 2.0 solutions just because they are told to do so. They need example. Top managers can affect positively the creation of a more open culture by being active in Enterprise 2.0 solutions since their activity will inspire other users to follow them and their example. By doing, so they show that company supports and values dialog and openness.

Top managers can for example write blogs and take part to discussions and communities. For example in company A top managers such as CEO were active. CEO commented status messages and community posts, updated his status and blogged. The participants saw that the activity of top management is the main factor for the high user activity.

How about open culture then? In company A open culture was supported by sharing team meeting notes publicly and arranging discussions on values and strategy in open communities. Company A did not use any content guidelines. Participants in company A felt that Enterprise 2.0 solutions improve transparency and openness but they do not establish it. It is unlikely that Enterprise 2.0 solutions would emerge insults or offences in work communities. None of the companies had experienced issues with insults and only company B had once asked to delete a status update, which included prize information on a closed deal because that kind of information was against company´s business conduct guidelines. On the contrary managers in company A saw that IBM Connections has helped them to manager their people in a more profound way.

Hence, companies should utilize Enterprise 2.0 solutions as platforms which provide meaningful content to users in addition to the collaborative capabilities which they offer. Top managers can promote solutions by giving example and speaking of it in a bigger picture as an enabler more than tool. Otherwise Enterprise 2.0 solutions end up not having the proper emphasis inside the company. Managers also should consider giving incentives to people. Incentives can be embedded into the solution in form of Kudos sysstem which is parallel to for instance Foursquare´s badge logic or realized by giving for instance iPads to employees thanks to their active participation and results in IBM Connections. The latter is example was realized by company A. At IBM people have been able to get new positions through using IBM Connections. For instance Luis Benitez (interview, 2012) said that IBM Connections has helped him to get new positions because people have got to known him and his work through it. By participating in Enterprise 2.0 platforms, management can also help to draw the framework for appropriate content.

5.2.2 Brand the group of your key champions

Build a concept around the key champions or users of your company. In the beginning key champions are the early adopters. Most of the users who were interviewed for this thesis were early adopters. By making them a consistent and strategic group, you bind together the will and knowledge of these people and by doing so you ease the adoption, value creation and understanding of Enterprise 2.0 solutions. The group of key champions should consist of users from every department in order to understand how Enterprise 2.0 solution can be used in the specific company context. These users should be identified and incorporated to the Enterprise 2.0 project in early stages.

For instance IBM, which is recognized as the most successful social business company, has BlueIQ group, which consists of people who help fellow IBMers to benefit from social solutions (Nurturing BlueIQ, 2010). Key champions can design used cases, education platforms and promote solution´s capabilities inside the company. The most powerful way to promote Enterprise 2.0 solutions might be to bind it to a person. For instance at IBM, Luis Suarez is acknowledged as one of the top social collaboration experts. Luis gave up email due to individual reasons in 2007 and has since only used social solutions to carry out his work. In order to identify early adopters, companies should find out who are using actively and demanding similar applications such as Google Docs, Facebook, LinkedIn and Twitter. Early adopters can help in the launch, moderation and briefing of Enterprise 2.0 solutions. Key champions should set up a

community and suggest ways how to do daily work task through IBM Connections. For instance the Activity function can be used as a substitute for emails and meetings and communities for databases.

5.2.3 Integrate to business processes and measure

Social should be incorporated to everything what employees do in order to make the social business initiative a successful one. Email and word documents can be socialized by using IBM Connections´ IBM Lotus Client and Microsoft Office Client applications. For instance *CRM Expert* of company C felt that the IBM Lotus Client application is an efficient way to integrate social to the daily workflow. Also Community Manager of company C felt that IBM Connections and email integration brings efficiency to employees in a visible manner. IBM Connections was integrated also in company intranets in company B and C. As a matter of fact, Community Manager of company C said that after integrating solution to intranet, user activity rose significantly.

Another example how to bind IBM Connections to business processes is to do business activities through it. For instance sales teams of company A had used the activity function successfully in executing bid processes. Client Manager and Portal Sales Manager stated that the execution of bid processes in social collaboration environment had increased the quality of bids and reduced the execution time by 20 per cent compared to the old work ways. In company B HC Manager was able to carry out a personnel development discussion task more productively compared to the old way with the help of the communities function. Internal Communications Manager of company B had increased her efficiency by sourcing stories through communities and redacting workshop material through the files function.

However, none of the companies had not measured and shared these used cases within their companies in a structured way even if they should. All companies measured user activity and the number of new posts. Writer´s opinion is that crowdsourcing helps to emerge results that link to business processes. For instance the key users could try to source hard results such as saved time through a community function and ask for new ideas in the same community through an innovation blog function. Best examples should be demonstrated and shared. Both hard and soft benefits should be appreciated and measured. Soft benefits such as increased engagement can be studied through employee attitude surveys like company A and C have done.

5.2.4 Launch and brand to give a meaning

In the light of the results, a proper launch is really important when introducing Enterprise 2.0 solutions to the workforce. For instance company A had launched IBM Connections properly whereas company B and C opt for a silent launch. In the launch phase of IBM Connections in company A incentives were shared to early adopters such as designers. In addition to introducing key communities in the launch phase of the solution, company A also promoted these communities. Top management was also active already from the beginning. Also education was arranged and incorporated to the orientation program designated to new employees. In company B and C the launch was arranged silently. B and C also set up key communities but did not arrange a structured education on the solution. A proper launch should explain what an Enterprise 2.0 solution is and how it helps company and its employees to create better results. Solution should not be handled as an additional tool but as an enabler that helps employees and company to work better. What should be remembered is that Enterprise 2.0 solutions should work smoothly when introduced. Otherwise users might lose interest to them due to functional problems such as login difficulties, which happened at least with one user in company B.

An interesting insight is that company A had named IBM Connections differently and all participants of company A called IBM Connections with that brand name. In companies B and C, IBM Connections was only IBM Connections. According to results people give meanings and tie emotions to Enterprise 2.0 solutions. For instance in company B workforce was disappointed when Yammer was pulled down. Internal Communications Manager of company B thought that if Yammer had never existed or if the introduction of IBM Connections had been straightforward, excitement towards IBM Connections would have been significantly higher till to date.

5.2.5 Support enablement

The results of this study show that IBM Connections is an efficient Enterprise 2.0 solution for the demands of different businesses. Company A is a mid-sized company, whereas B and C are large and global companies. Hence, the range of its applications serves well collaboration in different environments. However, the wide range of applications means that the solution is not maybe experienced as being the most intuitive platform. Consequently people need education to Enterprise 2.0 solutions. Also social

solutions need to be moderated. The group of key champions is the group that should coordinate the moderation.

Structured education should be especially offered to new employees and to employees who have not used 2.0 solutions before. Such a structured education is not necessary to the early adopters because they will found their way. For instance HC Manager of company B had learnt IBM Connections by simply trying out its features. Education eases adoption by removing barriers from learning.

5.2.6 Invest time and develop

In order to make Enterprise 2.0 solutions worth, companies need to invest to them. According to the results, employees do not want to have only a Facebook-like social sauna but a solution that supports their daily workflow. Companies should take time before they acquire Enterprise 2.0 solutions to determine what they want to achieve with it and how these needs will be achieved in their own environment. Solution suppliers should provide support to the client side. Client side teams should consist of people from different business departments such as Human Relations, Communications, Information Technology and Research and Development. Solution supplier side should consist of technical, sales and consultant people.

Companies may also want to develop their Enterprise 2.0 solution together with their employees. Company C would have liked to develop their Enterprise 2.0 solution further to make it to suit their needs better, but the customization was a quite expensive one to carry out. Hence, Enterprise 2.0 solutions should be customizable.

5.3 Suggestions for future research

Future research should focus on the hard benefits of social collaboration. Hard benefits such as reduced time and number of innovations affect the Return on Investment (ROI) of Enterprise 2.0 solutions. Hard benefits should be studied by using quantitative methods. Also future research should focus on the inactive users of Enterprise 2.0 to understand better the challenges and barriers that the inactive users see for their participation in Enterprise 2.0 solutions.

Future research should additionally study how Enterprise 2.0 solutions could support talent and innovation management as well as business partner relationships. Future research could also study precisely what kind of an effect external social media has on the

adoption of Enterprise 2.0 solutions and how the usage of Enterprise 2.0 solutions affect the company´s external communications.

6 SUMMARY

Whereas the external social media has been studied, hyped and integrated into companies´ strategies, an insignificant concentration has been put on the internal social solutions, which companies provide to their personnel. These solutions are called Enterprise 2.0 solutions. Therefore, the purpose of this thesis was to examine how social collaboration can be depicted and analyzed as a structuration process in an Enterprise 2.0 environment. Furthermore, the study sought to reveal the results of the implementation of an Enterprise 2.0 solution and the future possibilities and challenges of it. The study was limited to the internal social environment of the company. Thus, the study did not take into account the subcontractors or business partners of the interviewed companies.

The three research questions aimed to fulfill the purpose of this thesis. The first research question sought to find out what dimensions are inherent to the structuration of social collaboration. The first research question defined the tangible and intangible resources of social capital. This distinction between tangible and intangible resources was necessary in order to study the effect that for instance management, culture and Enterprise 2.0 solution have on individual social behavior or agency 2.0, which consequently affects the degree of social collaboration within the companies. The second research question aimed to find out and describe how the individual agency is constructed in an Enterprise 2.0 environment. The second research question was answered by mainly exploiting the theories of Giddens (1984) and Heinonen (2012). This question provided the basis for examining the individual-level agency, which was then scrutinized on. After the elaboration, the individual-level action in an Enterprise 2.0 environment was defined agency 2.0. The individual-level actions performed through an Enterprise 2.0 solution lead to the community-level action – social collaboration. Social collaboration was studied by assessing the market factors, which drive companies to adapt to Enterprise 2.0, the benefits and challenges of Enterprise 2.0 and the features of the market leading Enterprise 2.0 solution IBM Connections.

The third resource question aimed to find out what kind of outcomes social collaboration creates. Outcomes such as trust, identification and knowledge were the outcomes that were assessed. The framework of the study illustrates the structuration process and dynamics of social collaboration. After the theoretical part of the study, the chosen methodology, case companies, data collection, data analysis and quality and limitations of the study were presented and assessed. The empirical research methodology provided the basis for the findings, which were presented through five themes: social capital, agency 1.0, agency 2.0, social collaboration and outcomes. At the end of the findings, the cross-case results (see table 4) and an integration model (see figure 5) were present-

ed. The theoretical and managerial conclusions were provided after presenting the findings.

The overall conclusion is that Enterprise 2.0 helps employees do their work more efficiently by providing them a collaborative environment that is flexible, knowledgeable, versatile, social, user driven and transparent. The most important enablers of social collaboration (see table 5) are top management support, positive leadership, an open culture, an Enterprise 2.0 solution, enablement and a hybrid approach. In turn, the most powerful barriers to social collaboration (see table 5) are power agency, lack of top management support, lack of enablement and old established ways of working. Company A had more enablers and fewer barriers than companies B and C.

Individual social behavior in Enterprise 2.0 solutions consists of consumption, participation and production. Every type of behavior contributes to social collaboration. According to the findings, individual social behavior in IBM Connections starts with consumption. Then behavior continues with activities which relate to participation. After participation, behavior proceeds to production. After participation or production, behavior starts again with consumption (see figure 6). The benefits of Enterprise 2.0 solutions (see table 6) are the reduction in costs, enablement of mission critical information sharing, improve productivity and strengthened data security. The challenges of Enterprise 2.0 solutions (see table 6) are getting people to participate, measuring business benefits, security threats and functionality.

Social collaboration improves trust, identification and knowledge. The improvement of trust is subject to a higher degree of transparency, reciprocity, information quality and information sharing, all of which social collaboration creates. Lack of reciprocity decreases trust in an Enterprise 2.0 environments. The improvement of identification is subject to employees being more capable of doing their daily work. Also social collaboration develops identification by supporting the development of informal roles. The improvement of knowledge is subject to a higher degree of awareness of, access to and retrieval of knowledge. Trust, identification and knowledge support each other´s development. In the future it will be interesting to see how for instance talent management software such as Kenexa will boost social business initiatives (IBM 2012, Kenexa).

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APPENDICES

Appendix 1 Operationalization table for the research

Purpose of the research	Research questions	Theoretical framework	Examples of interview questions
Examine how social collaboration can be depicted and analyzed as a structuration process in an Enterprise 2.0 environment and reveal the results of Enterprise 2.0 solution implementation and the future possibilities and challenges of it.	How are the dimensions of social capital structured through collaboration?	Chapter 2.1. Dimensions Structuration	How would you describe the organizational culture before IBM Connections?
	How does agency form in Enterprise 2.0?	Chapter 2.2 Agency Enterprise 2.0 IBM Connections Wisdom of Crowds	What do you do daily in IBM Connections? How have you used IBM Connections to collaborate socially?
	How does social collaboration create outcomes such as trust, identification and knowledge?	Chapter 2.3 Trust Identification Knowledge	How has IBM Connections supported your learning?

Appendix 2 Information on interviews

Company	Role	Interview date
Company A	Development Manager	11.6.2012
Company A	Client Manager	15.6.2012
Company A	Portal Sales Manager	21.6.2012
Company A	Human Resources Manag-er	26.6.2012
Company A	Software Developer	28.6.2012
Company B	Collaboration Solutions Manager	23.8.2012
Company B	Information Technology Expert	23.8.2012
Company B	Human Capital Manager	30.8.2012
Company B	Internal Communications Manager	4.9.2012
Company B	Research and Development Manager	14.9.2012
Company C	Community Manager	1st interview 11.9.2012, 2nd interview 12.9.2012
Company C	CRM Manager	21.9.2012

Appendix 3 Interview questions

Theme 1 Social capital dimensions

- In which field of business does your company operate?
-How many employees does your company employ?
-Where does your company operate?
- In which function do you work?
-What is your role in that function?
-How would you describe the organizational culture before IBM Connections?
-Why did the company acquire IBM Connections?
-What outcomes does company seek with IBM Connections?

Theme 2 Agency 1.0

-How would you describe top management?
- How would you describe the ways to do work before IBM Connections?
-Did these ways a. motivate to share information, b. help to work at the maximum level and c. make it easy to find information?
-How was IBM Connections implemented?
-What is your relation with social tools such as Facebook, Twitter and LinkedIn in general?

Theme 3 Agency 2.0

-How actively do you use IBM Connections?
-What do you do in IBM Connections when you use it?
-How would you describe your daily use according to consumption, participation and production?
-How would you describe the functionality of IBM Connections?

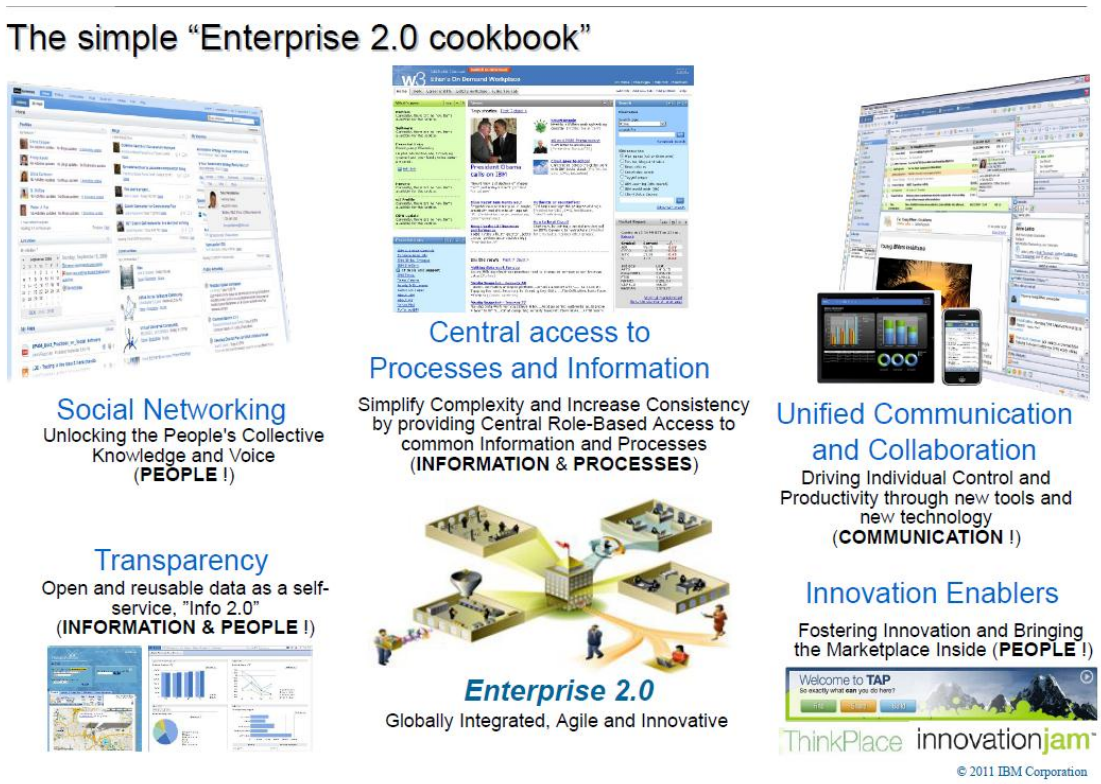
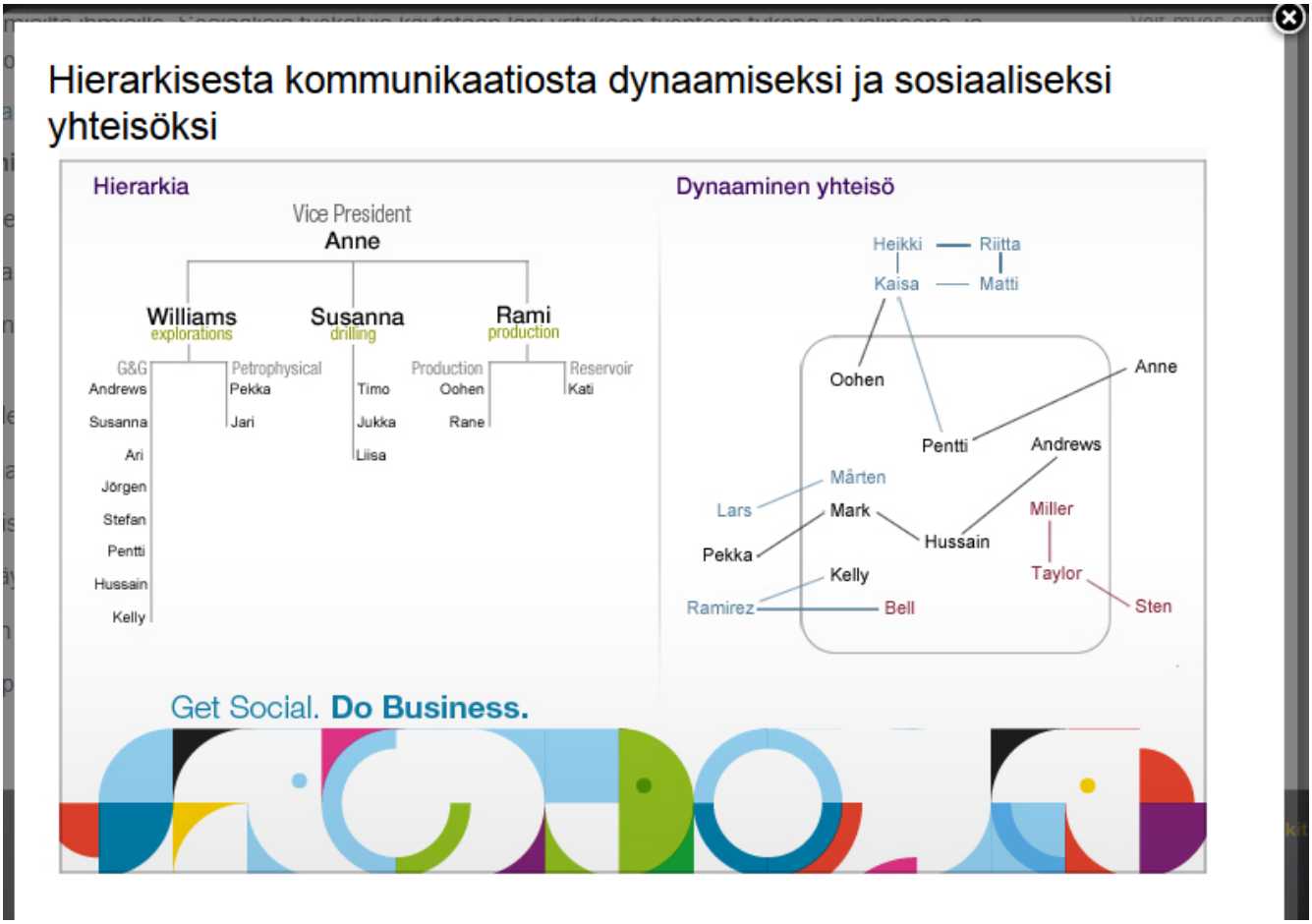
Theme 4 Social Collaboration

-Would you give an example how do you use IBM Connections in team work?
-What benefits does IBM Connections bring to team work?
-What challenges does IBM Connections bring to team work?
-Which are the three applications you use the most?
-Has IBM Connection supported social networking?
-Have you been able to use your social network in a productive way? And if not, why have you not been able to do that?

Theme 5 Outcomes

- Do you share more information thanks to IBM Connections?
-Do you trust more to information thanks to IBM Connections?
-Do you think that IBM Connections makes your daily work more efficient? If yes, would you describe how? If not, why not?
-Do you find more relevant information thanks to IBM Connections?
-Do you enjoy working through IBM Connections?
-Do you think that IBM Connections develops your personal social identity and recognition within the company?
-Do you find the people you are looking for through IBM Connections?
-How does IBM Connections affect company´s competitiveness?
-What expectations do you have for IBM Connections?

Appendix 4 "Enterprise 2.0 cookbook" (Ruponen 2011)



Appendix 5 From a hierarchical to a dynamic and social community